

**Birthing Business in the Bush: It's Time
to Listen**

Sue Kildea

**A thesis submitted in accordance with the
requirements for admission to the Degree of
doctor of Philosophy.**

**Centre for Family Health and Midwifery
University Technology Sydney**

March 2005

CERTIFICATE OF AUTHORSHIP / ORIGINALITY

I certify that the work in this thesis has not previously been submitted for a degree nor has it been submitted as part of requirements for a degree except as fully acknowledged within the text.

I also verify that the thesis has been written by me. Any help that I have received in my research work and the preparation of the thesis itself has been acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

Production Note:

Signature removed prior to publication.

Signature of the Candidate

ACKNOWLEDGEMENTS

Four years ago, my partner and I were sitting on the back deck looking out over our tropical garden during a magnificent wet season downpour. We had to decide if we would move 1500 kilometers from our home in Darwin, to Sydney, to undertake our PhDs. We had been planning an extended trip to Alaska, incorporating a visit to explore how it was the Inuit had managed to establish birthing services in very remote areas. However, the opportunity for PhD study in Sydney had arisen and the decision to make the move meant the trip would need to wait till the study was complete. Little did I realise that the next four years would be an amazing journey in it's own right.

Coming to Sydney and working with Lesley Barclay, at the Centre for Family Health and Midwifery, meant tumbling into a different world. The first year was overwhelming as we mingled with 'clever' people who seemed to have amazing knowledge of both national and international midwifery. Pat Brodie, Nicky Leap, Sally Tracy and Caroline Homer have all been fantastic role models whose encouragement, advice and nurturing have been much appreciated. They have all become great friends. There were opportunities to write grant applications (something I found exciting at first), partake in tendered work and learn, learn, learn. There were many times when I thought I had made the biggest mistake of my life, and regretted not taking the Alaskan option. The fortnightly student meetings, where many attended, provided the opportunity to learn about different research methods, and witness the trials and tribulations of other students, as we watched each other progress through our individual journeys. My thanks go to Lesley, Virginia Schmied and Marg Cook who were the 'supervisory team', guiding the student meetings and opening my eyes to the world of research. Special thanks must also go to the other students who participated in the meetings and assisted my progress. However, it has been the supervision from Lesley Barclay that has made the most impact on my work. She has the ability to make you believe that yours is the most important work in the world, coupled with her ever-present optimism and a superhuman speed with which she returns work. Additionally, in my second and third years, she provided the opportunity for consultancy in Indonesia. Together with the wonderful Judith Donoghue I was guided and mentored, and I met the most wonderful people. My second supervisor, Pat Brodie has been a friend

and mentor, who has provided strength, wisdom and encouragement and the important set of ‘fresh eyes’ when mine and Lesley’s were clouded and fatigued.

During my many trips to Maningrida there were many people who assisted and contributed to my research. Most importantly I would like to thank Molly Wardaguga who has been my mentor since I first worked in Maningrida. She agreed to be a co-researcher with me and guided the research, simultaneously teaching me about Aboriginal ‘ways of knowing’. Together we accomplished so much more than we would have in isolation. The other women who were closely involved in advising the research and who deserve individual thanks were Margaret Dawumal, Mary Mason, Deborah Wurrkidj, Elizabeth Gandabuma, Phyllis Dundudja and Dora Daiguma. A special thanks goes to all the people who told their stories and shared valuable time and information with me. Many people in Maningrida deserve my thanks, I would especially like to thank Ian Munro, whose hospitality and wise words of advice were ever present. Who would have thought you would get such great coffee so far from Sydney. The staff at the Health Centre have always been supportive and encouraging, giving generously of their time. In particular Hellen Matthews, has supported this research from the beginning, and whose insight and experience was considerable. I also thank the midwives, doctors, Aboriginal Health Workers and remote areas nurses who gave great feedback and were always happy to comment on the research. The staff at the Women’s Centre were wonderfully supportive, allowing me to use the Centre as my base each time I visited. Additional support was received from the Health Board and Bawinanga Aboriginal Corporation, with David Bond on hand with sage words of advice and Angie always able to sort out the money side of things. Staff at the Maningrida School and Health Centre were also often assisting with the logistics of the project; my thanks go to Isabelle Walker and Gai Wright. A grant from the Commonwealth Governments Rural Health Support, Education and Training scheme partly funded this research.

Each time I passed through Darwin I stayed with Sarah, Michael, Clancy and Margie and I thank them for their warm hospitality and friendship. Many thanks also to many of the staff at the Northern Territory Department of Health and Aged Care who assisted with the project. In particular Sandy McElligot, Sharon Weymouth, Leonie Conn, Jenne Roberts, Kim Johnson, Jeanette Boland, Ann Sanoti, Louise Clarke, Christine Connors and

Rosemary Lee. Special thanks goes to Juanita Sherwood in Alice, who is also doing her PhD, and as an Indigenous Researcher, was a supportive friend who offered ethical advice when I needed it most.

There are many people who were involved in the participatory action research groups and I cannot thank them personally due to confidentiality issues. However, I would particularly like to thank the Women's Health Educators who spent much time, energy and effort in supporting the research. Others friends who have been particularly helpful and supportive along the way include Libby Bowell, Ree Dunn, Chris Evans, Vivian and Christian Boosz and Sue Moore.

Thanks also to my family, who have always believed I would get there, with a big special thanks to my sister, Cate. She has been my graphic designer and taught me about websites and what looks good and works. She never failed to make a picture, diagram or presentation look impressive, not quite artist in residence but at times almost! Thank you Cate.

Lastly, I would like to thank my partner, who has travelled on this journey with me. She has been up when I was down, believed in me when I wanted to pull out, and contributed to my personal wellbeing more than any will ever know. Enormous thanks to you Sue Kruske.

Abbreviations

| | |
|---------|---|
| AARN | Australian Association of Rural Nurses |
| ABC | Australian Broadcasting Commission |
| ABS | Australian Bureau of Statistics |
| ACCHS | Aboriginal Community Controlled Health Service |
| ACMI | Australian College of Midwives Incorporated |
| AGPS | Australian Government Printing Service |
| AHS | Area Health Service |
| AHMRC | Aboriginal Health and Medical Research Council |
| AHW | Aboriginal Health Worker |
| AIATSIS | Australian Institute of Aboriginal and Torres Strait Islander Studies |
| AIHW | Australian Institute of Health and Welfare |
| ALSO | Advanced Life Support in Obstetrics |
| AMS | Aboriginal Medical Service |
| ANF | Australian Nursing Federation |
| AR | Action Research |
| ARRWAG | Australian Rural and Remote Workforce Agency Group |
| BAC | Bawinanga Aboriginal Corporation |
| CDEP | Community Development Employment Program |
| CMC | Computer Mediated Communication |
| CRANA | Council of Remote Area Nurses of Australia |
| DCITA | Department of Communications Information Technology and the Arts |
| DHAC | Department of Health and Aged Care |
| DHCS | Department of Health and Community Services, Northern Territory |
| DMO | District Medical Officer |
| FTE | Full Time Equivalent |
| GP | General Practitioner |
| HREOC | Human Rights and Equal Opportunity Commission |
| MEC | Maternity Emergency Care |
| MHP | Maternal Health Practitioner |
| NACCHO | National Aboriginal Community Controlled Health Organisation |
| NHMRC | National Health and Medical Research Council |

| | |
|---------|--|
| NRHA | National Rural Health Alliance |
| NT | Northern Territory |
| O & G | Obstetrics and Gynaecology |
| PAR | Participatory Action Research |
| PDF | Portable Document Format |
| PHC | Primary Health Care |
| PHCAP | Primary Health Care Access Program |
| PRHCIT | Project for Rural Health Communications and Information Technologies |
| QLD | Queensland |
| RAN | Remote Area Nurse |
| RANM | Remote Area Nurse Midwife |
| RAP | Remote Area Practitioner |
| RANZCOG | Royal Australian and New Zealand College of Obstetricians and Gynaecologists |
| RARE | Rapid Assessment, Response and Evaluation |
| RFDS | Royal Flying Doctor Service |
| RHEF | Rural Health Education Foundation |
| RHSET | Rural Health Support Education and Training |
| RTI | Regional Telecommunications Inquiry |
| SAHW | Senior Aboriginal Health Worker |
| SWSBSC | Strong Women, Strong Babies, Strong Culture Program |
| THS | Territory Health Service |
| TSI | Telecommunications Service Inquiry |
| TLO | Traditional Land Owner |
| UNFPA | United Nation's Population Fund |
| UNICEF | United Nation's Children's Fund |
| WHE | Women's Health Educator |
| WHO | World Health Organisation |
| www | World Wide Web |

Glossary

| | |
|---------------------------------|--|
| Agency affiliation | In computer terminology this refers to meeting the needs of the target audience. |
| ALSO Course | An international evidence-based educational program targeting the development and maintenance of skills for managing maternity emergencies. Available to midwives, general practitioners and obstetricians. |
| Balanda | A term commonly used in the 'Top End' of the Northern Territory of Australia referring to non-Aboriginal people. |
| Burarra | One of the larger language groups in the Maningrida region of Arnhem Land. |
| Computer Mediated Communication | The integration of computers with telecommunication technology (telephone, satellite, cable and digital) as a communication medium. |
| Forum | An Internet-based system that enables users to send or read electronic messages, files, and other data that are of general interest, which are addressed to no particular person; also called bulletin board, discussion board or interactive message board. |
| Galah session | Radio communication method where people keep in touch with others in the remote setting. |
| Ganma | A Yolngu word describing a metaphor, an Indigenous theory and a social theory explaining how the society works, a place where new knowledge is recreated. |
| Gunga | The term that is used to describe marijuana. |
| Information Technology | Applied computer systems - both hardware and software, often including networking and telecommunications. |
| MEC Course | A Maternity Emergency Care course developed by the Council of Remote Area Nurses of Australia for non-midwives. |
| Moderator | Persons responsible for monitoring a Forum on the Internet. Moderators usually include the Webmaster and nominated others who have the ability to give access to, and remove |

| | |
|-------------------------|--|
| | postings from the Forum. |
| Navigator | Computer terminology describing software and websites that assist in guiding people through the information that is available on the Internet to targeted areas. |
| Post / Posting | A post / posting is an electronic message that is posted on a Forum in response to a thread. |
| Reach | Computer terminology referring to the number of people who are sharing the information available on the Internet. |
| Remote Workforce Agency | Agency responsible for recruiting and supporting doctors in remote communities in the Northern Territory. |
| Richness | Computer terminology referring to delivering quality information. |
| Search engine | A computer program that retrieves documents, files or data from a database or from a computer network (especially from the Internet), eg. Google™ and Yahoo®. |
| Telecommunications | The science and technology of communication at a distance by electronic transmission of impulses, as by telegraph, cable, telephone, radio, or television. |
| The Centre | The lower half of the Northern Territory of Australia including Tennant Creek and Alice Springs. |
| Thread | A thread refers to a set of posts on a Forum. It is composed of an initial post about a topic and all responses to it. |
| Top End | The upper half of the Northern Territory of Australia including Katherine and Darwin. |
| Webmaster | The term Webmaster refers to a person who is responsible for the design and maintenance of a website. |

Terminology and Notes

Many of the definitions that appear in this thesis, particularly the information technology definitions, are derived from the Internet site: Dictionary.com (Dictionary.com, 2005). This site has been developed by the Lexico Publishing Group. It includes words from 11 different dictionaries, including Webster's Revised Unabridged Dictionary and The Free On-line Dictionary of Computing.

Indigenous Australians

There are many different Indigenous groups in Australia. Terms such as Aboriginal peoples, Aboriginal and Torres Strait Islander peoples and Indigenous have all been used in the literature. In this thesis I have followed the recommendations from 'Communicating Positively, A guide to appropriate Aboriginal terminology' (NSW Health, 2004) and I have used the term Indigenous with a capital as a form of respect. When speaking specifically about Aboriginal people from the Maningrida region and in the Northern Territory (NT) I have commonly used the term Aboriginal, though at times I have referred to smaller groups of Aboriginal people by their language group. When making international comparisons I have tended to use the term Indigenous and when quoting from other sources I have generally used the term that has been used in the source material. I have used the terms non-Indigenous and non-Aboriginal interchangeably, referring to all other non-Indigenous Australians. I have also used the term Balanda when referring to non-Aboriginal people in the Maningrida and NT area, as this is a term that is commonly used and understood by the residents of this region. Other terms that have been used to describe Aboriginal peoples from different regions include Yolngu, Tiwi, Koori, Ngaanyatjarra.

Title

The term 'Birthing Business', when used in this document, encompasses a broad definition of issues about birth that are important to Aboriginal women, their families and care providers. Similar to the Aboriginal holistic definition of health it includes more than just the 'physical issues' and it incorporates preconception through to the postnatal period. 'It's time to listen' is a phrase that is meant to encapsulate the need to 'listen' to Aboriginal women, community members, drawing on the available evidence and the

experiences of Indigenous peoples in other lands, in an attempt to introduce remote area birthing services.

Birth

When the terms 'birth' and 'birthing' are used as a verb, instead of the recognised verb 'to give birth', this is to reflect the terminology that is used in many Indigenous and midwifery communities in Australia.

Spelling

There was a lack of consensus on the spelling of many of the names and places in this thesis, particularly between language groups. An example of this would be the skin name that is spelt Ngarrichan in the Burarra language and Ngarridjdjan in the Eastern Kuninku language (Handelsmann, 1996). When appropriate I use the spelling that is recognised for the language group that I was describing. Linguists Murray Garde and Rebecca Green confirmed most of the spelling, with additional assistance received from Katie Cooper for the Burarra language. Hellen Matthews from the Health Centre assisted with the spelling of names. I sincerely apologise if any mistakes have been made.

Australian / United Kingdom spelling has been used throughout this thesis.

Northern Territory Health Department

During the course of this research the NT Health Department had a change of name from Territory Health Service (THS) to the Department of Health and Community Services (DHCS). In this thesis for ease of recognition when referring to this department I have used the more current term, DHCS.

Notes

All field notes are my own thoughts, ideas and notations unless otherwise stated. Due to the large size of the document it has been printed using Portable Document Format. At times this has resulted in unusual spacing between some letters, either reducing the space with letters running into each other, or giving the appearance of a space that is larger than normal. Though unfortunate, readability has not been compromised.

TABLE OF CONTENTS

| | |
|--|------------|
| ACKNOWLEDGEMENTS..... | II |
| ABBREVIATIONS | V |
| GLOSSARY | VII |
| TERMINOLOGY AND NOTES | IX |
| PROLOGUE..... | XXI |
| 1 CHAPTER 1. INTRODUCTION | 1 |
| 1.1 THE CONTEXT..... | 1 |
| 1.2 RESEARCH APPROACH..... | 4 |
| 1.2.1 Structure of the Thesis | 4 |
| 2 CHAPTER 2. LITERATURE REVIEW..... | 8 |
| SECTION 1: INDIGENOUS HEALTH AND REMOTE MATERNITY CARE..... | 8 |
| 2.1 OVERVIEW | 8 |
| 2.2 THE RESEARCH SETTING: REMOTE AUSTRALIA | 8 |
| 2.2.1 Demographics | 8 |
| 2.2.2 Defining Remote | 9 |
| 2.2.3 Health in Rural and Remote Australia..... | 11 |
| 2.2.4 The Maternal and Perinatal Health in Remote Areas..... | 11 |
| 2.3 ABORIGINAL AND TORRES STRAIT ISLANDER HEALTH AND CHILDBIRTH | 12 |
| 2.3.1 History | 12 |
| 2.3.2 Indigenous Statistics..... | 15 |
| 2.3.3 Indigenous Health Statistics..... | 16 |
| 2.3.4 Social Determinants of Health..... | 17 |
| 2.3.5 The Aboriginal and Torres Strait Islander Definition of Health..... | 18 |
| 2.3.6 National Aboriginal and Torres Strait Islander Health Strategy..... | 18 |
| 2.3.7 Aboriginal Control of Health Services | 18 |
| 2.3.8 Consumer Participation in Health Care Planning..... | 19 |
| 2.3.9 Communication and Cultural Safety | 20 |
| 2.3.10 Cultural Safety in Childbirth..... | 22 |
| 2.3.11 Maternity Services in Remote Areas | 25 |
| 2.3.12 Continuity of Midwifery Care in the Remote Setting | 27 |
| 2.4 RISK AND SAFETY IN CHILDBIRTH | 28 |
| 2.4.1 Place of Birth..... | 28 |
| 2.4.2 Home Birth in Australia..... | 29 |
| 2.4.3 Safety of Small Hospitals..... | 30 |
| 2.4.4 Safety of Larger Hospitals | 31 |
| 2.5 INTERNATIONAL COMPARISONS..... | 31 |
| 2.5.1 Canada..... | 32 |
| 2.5.2 New Zealand | 38 |
| 2.5.3 North America..... | 40 |
| 2.6 MATERNITY SERVICES IN THE NORTHERN TERRITORY | 41 |
| 2.6.1 Maternal and Infant Health in the NT..... | 43 |
| 2.6.2 Place of Birth..... | 44 |
| 2.6.3 The Grandmother’s Law | 45 |
| 2.6.4 Alukura..... | 45 |
| 2.6.5 Review of Birthing Services | 47 |
| 2.6.6 The Risk Equation..... | 49 |
| 2.7 THE REMOTE WORKFORCE | 53 |
| 2.7.1 Midwifery Workforce | 54 |
| 2.7.2 Obstetric Workforce..... | 56 |

| | | |
|---|--|------------|
| 2.7.3 | General Practitioner Workforce..... | 56 |
| 2.7.4 | Recruitment and Retention | 57 |
| 2.8 | HEALTH SERVICES IN THE VERY REMOTE AREAS | 60 |
| 2.8.1 | Council of Remote Area Nurses of Australia..... | 61 |
| 2.8.2 | Education in Isolation | 63 |
| SECTION 2. COMPUTER MEDIATED COMMUNICATION | | 66 |
| 2.9 | HEALTH CARE AND INFORMATION TECHNOLOGY | 67 |
| 2.10 | INFORMATION TECHNOLOGY AND HEATH EDUCATION..... | 68 |
| 2.11 | THE DIGITAL DIVIDE | 69 |
| 2.12 | THE HISTORY OF COMMUNICATION IN THE OUTBACK | 70 |
| 2.13 | REMOTE AREA NURSES – A HISTORY OF ‘TELEHEALTH’ | 72 |
| 2.14 | INFORMATION TECHNOLOGY IN RURAL AND REMOTE AUSTRALIA | 73 |
| 2.15 | ACCESS IN REMOTE AUSTRALIA | 74 |
| 2.16 | INFORMATION TECHNOLOGY IN REMOTE NORTHERN TERRITORY..... | 77 |
| 2.17 | CONCLUSION..... | 77 |
| 3 | CHAPTER 3. METHODOLOGY AND METHODS | 80 |
| 3.1 | OVERVIEW | 80 |
| 3.2 | A CASE STUDY APPROACH TO HEALTH SYSTEMS IMPROVEMENT | 80 |
| 3.3 | RAPID ASSESSMENT, RESPONSE AND EVALUATION..... | 81 |
| 3.4 | ACTION RESEARCH..... | 83 |
| 3.5 | PARTICIPATORY ACTION RESEARCH | 85 |
| 3.5.1 | Participation..... | 87 |
| 3.5.2 | PAR in the Remote Setting | 89 |
| 3.6 | EVALUATION..... | 90 |
| 3.7 | RESEARCH IN THE AUSTRALIAN INDIGENOUS SETTING | 91 |
| 3.7.1 | Indigenous Knowledge | 92 |
| 3.7.2 | Indigenous Involvement and Control | 92 |
| 3.7.3 | Reciprocity | 93 |
| 3.7.4 | Trust and Respect..... | 93 |
| 3.7.5 | Recognition of Participants..... | 94 |
| 3.7.6 | Survival and Protection | 95 |
| 3.7.7 | Issues of Power | 95 |
| 3.7.8 | Community Capacity | 96 |
| 3.7.9 | Community Consultation..... | 96 |
| 3.7.10 | The Role of Co-Researchers and Interpreters | 96 |
| 3.8 | NARRATIVE METHODOLOGY | 97 |
| 3.9 | COMPUTER MEDIATED COMMUNICATION | 98 |
| 3.9.1 | Research and Computer Mediated Communication | 98 |
| 3.9.2 | The Role of the Navigator..... | 98 |
| 3.9.3 | Online Communities | 101 |
| 3.10 | CONCEPTUAL FRAMEWORK FOR THESIS | 101 |
| 4 | CHAPTER 4. CASE STUDY ONE - THE RESOURCE LIBRARY..... | 103 |
| 4.1 | OVERVIEW | 103 |
| 4.2 | BACKGROUND..... | 103 |
| 4.3 | RESEARCH AIM..... | 105 |
| 4.4 | RESEARCH QUESTION..... | 105 |
| 4.5 | RESEARCH OBJECTIVES | 105 |
| 4.6 | CONSULTATION WITH CRANA | 105 |
| 4.7 | RESEARCH DESIGN | 107 |
| 4.7.1 | Ethics | 108 |
| 4.7.2 | Participants to the Research | 108 |
| 4.7.3 | Composition of the Team..... | 110 |

| | | |
|----------|---|------------|
| 4.7.4 | Data Collection..... | 112 |
| 4.8 | RESULTS..... | 114 |
| 4.9 | EVALUATION AND DISCUSSION | 117 |
| 4.9.1 | Reach..... | 117 |
| 4.9.2 | Agency Affiliation | 119 |
| 4.9.3 | Richness..... | 120 |
| 4.9.4 | Internet Access | 122 |
| 4.9.5 | Telecommunications Infrastructure..... | 122 |
| 4.9.6 | Contextual Factors | 126 |
| 4.9.7 | The Human Factor | 128 |
| 4.10 | LIMITATIONS OF THE RESEARCH | 129 |
| 4.11 | SUMMARY | 130 |
| 5 | CHAPTER 5. CASE STUDY TWO: REMOTE LINKS ONLINE COMMUNITY | 134 |
| 5.1 | OVERVIEW | 134 |
| 5.2 | BACKGROUND..... | 134 |
| 5.3 | RESEARCH AIM..... | 136 |
| 5.4 | RESEARCH QUESTION..... | 136 |
| 5.5 | RESEARCH OBJECTIVES | 136 |
| 5.6 | CONSULTATION | 137 |
| 5.7 | RESEARCH DESIGN | 137 |
| 5.7.1 | Participants to the Research | 138 |
| 5.7.2 | A Shared Purpose..... | 139 |
| 5.7.3 | Ethics and Policies | 139 |
| 5.7.4 | Data Collection..... | 142 |
| 5.7.5 | Evaluation..... | 143 |
| 5.8 | RESULTS..... | 144 |
| 5.9 | EVALUATION AND DISCUSSION | 147 |
| 5.9.1 | Remote Links Statistics..... | 147 |
| 5.9.2 | Barriers | 150 |
| 5.9.3 | Facilitators | 155 |
| 5.9.4 | Communication | 158 |
| 5.10 | LIMITATIONS..... | 159 |
| 5.11 | SUMMARY | 160 |
| 6 | CHAPTER 6. THE MANINGRIDA COMMUNITY | 163 |
| 6.1 | OVERVIEW | 163 |
| 6.2 | THE RESEARCH SETTING | 163 |
| 6.2.1 | The Maningrida Community | 163 |
| 6.2.2 | Personal context | 166 |
| 6.2.3 | Professional Context | 174 |
| 6.2.4 | Policy Context..... | 175 |
| 6.3 | AUTHORITATIVE KNOWLEDGE..... | 177 |
| 6.4 | INDIGENOUS KNOWLEDGE..... | 180 |
| 6.4.1 | Ganma | 181 |
| 6.5 | GAINING SUPPORT FOR THE RESEARCH | 182 |
| 6.5.1 | The Maningrida Community | 182 |
| 6.5.2 | Consultation with the Women | 182 |
| 6.5.3 | Consultation with Landowners and Community Organisations | 182 |
| 6.5.4 | Consultation with Molly Wardaguga | 183 |
| 6.5.5 | Consultation with the Practitioners..... | 184 |
| 6.5.6 | Department of Health and Community Services..... | 185 |
| 6.5.7 | Results of the Consultation | 185 |
| 6.6 | CONCLUSION..... | 186 |

| | | |
|----------|--|------------|
| 7 | CHAPTER 7. CASE STUDY THREE - BIRTHING BUSINESS IN THE BUSH WEBSITE | 187 |
| 7.1 | OVERVIEW | 187 |
| 7.2 | RESEARCH AIM..... | 188 |
| 7.3 | RESEARCH QUESTION..... | 188 |
| 7.4 | RESEARCH OBJECTIVES | 188 |
| 7.5 | ETHICAL CONSIDERATIONS | 188 |
| 7.6 | RESEARCH DESIGN | 190 |
| 7.6.1 | The Research Approach..... | 190 |
| 7.7 | METHODS..... | 197 |
| 7.7.1 | Field Trips | 198 |
| 7.7.2 | Planning the Research Questions and Interviews..... | 198 |
| 7.7.3 | Molly Wardaguga’s Objectives | 199 |
| 7.7.4 | Two Way Knowledge | 199 |
| 7.7.5 | Photos and Videos..... | 200 |
| 7.7.6 | The Data | 201 |
| 7.7.7 | Data Analysis and Presentation | 203 |
| 7.7.8 | Interpreters..... | 203 |
| 7.7.9 | Sampling..... | 204 |
| 7.7.10 | Funding..... | 205 |
| 7.8 | THE RESULTS | 207 |
| 7.8.1 | The Website..... | 207 |
| 7.8.2 | The Guide..... | 208 |
| 7.8.3 | The Poster..... | 208 |
| 7.8.4 | The Book | 210 |
| 7.9 | PROCESS EVALUATION | 211 |
| 7.9.1 | Language Representation..... | 211 |
| 7.9.2 | Techniques Facilitating Data Collection | 212 |
| 7.9.3 | Challenges Involved in Data Collection | 216 |
| 7.9.4 | Verifying the Data..... | 221 |
| 7.9.5 | Cultural Sensitivity and Security | 227 |
| 7.9.6 | Disseminating the Research..... | 234 |
| 7.9.7 | The Research Approach..... | 242 |
| 7.10 | LIMITATIONS..... | 247 |
| 7.11 | SUMMARY | 248 |
| 8 | CHAPTER 8. CASE STUDY FOUR - A PRIMARY HEALTH CARE GUIDE..... | 249 |
| 8.1 | OVERVIEW | 249 |
| 8.2 | RESEARCH AIM..... | 249 |
| 8.3 | RESEARCH QUESTION | 249 |
| 8.4 | RESEARCH OBJECTIVES | 249 |
| 8.5 | ETHICAL APPROVAL | 250 |
| 8.6 | RESEARCH DESIGN | 250 |
| 8.6.1 | The Research Approach..... | 250 |
| 8.6.2 | Participants to the Research | 251 |
| 8.7 | METHODS..... | 253 |
| 8.7.1 | Collecting and Validating the Data..... | 253 |
| 8.8 | RESULTS..... | 259 |
| 8.8.1 | The Guide..... | 259 |
| 8.8.2 | Content of the Guide | 260 |
| 8.9 | EVALUATION AND DISCUSSION | 260 |
| 8.9.1 | Formative Evaluation..... | 261 |
| 8.9.2 | Contextual Evaluation..... | 264 |
| 8.9.3 | Summative Evaluation | 268 |
| 8.10 | LIMITATIONS..... | 270 |

| | | |
|-----------|---|------------|
| 8.11 | SUMMARY | 270 |
| 9 | CHAPTER 9. DISCUSSION | 274 |
| 9.1 | OVERVIEW | 274 |
| 9.2 | PRIMARY HEALTH CARE | 274 |
| 9.2.1 | Cultural Awareness | 274 |
| 9.2.2 | Consumer Participation in Health Care Planning..... | 275 |
| 9.3 | INDIGENOUS KNOWLEDGE AS AUTHORITATIVE KNOWLEDGE | 276 |
| 9.4 | COMPUTER MEDIATED COMMUNICATION | 281 |
| 9.5 | THE RESEARCH APPROACH | 285 |
| 9.5.1 | The Indigenous Co-researchers | 287 |
| 9.5.2 | The Role of the Researcher..... | 289 |
| 9.6 | LIMITATIONS OF THE RESEARCH | 291 |
| 9.7 | CONCLUSION..... | 293 |
| 10 | CHAPTER 10. CONCLUSION | 293 |
| 10.1 | RECOMMENDATIONS | 298 |
| | REFERENCES..... | 301 |

TABLE OF FIGURES

| | |
|---|-----|
| Figure 1. ARIA areas of Australia (AIHW 2004b)..... | 10 |
| Figure 2. Northern Territory Health Services (DHAC) | 42 |
| Figure 3. Radio expert Alf Traeger and John Flynn testing the wireless set, 1925..... | 71 |
| Figure 4. Voice communication, Alf Traeger..... | 71 |
| Figure 5. Theoretical Framework | 102 |
| Figure 6. Diagrammatic representation of Case Study One..... | 107 |
| Figure 7. The diagram of the PAR project. | 110 |
| Figure 8. Entrance to the Resource Library as it Appears on the CRANA Website..... | 115 |
| Figure 9. Sections Available on the Resource Library..... | 116 |
| Figure 10. Example of the Links available on the Resource Library | 116 |
| Figure 11. Hits to the Resource Library | 117 |
| Figure 12. Icon Leading to the ‘What’s New’ Section..... | 122 |
| Figure 13. Entrance page to Online Community, explaining the project | 140 |
| Figure 14. Online Community Rules..... | 142 |
| Figure 15. Diagrammatic representation of Case Study Two | 144 |
| Figure 16. Remote Links Online Community | 146 |
| Figure 17. Threads under the Forum Topic Remote Ramble | 147 |
| Figure 18. Online Community: New Users, Posts and Threads | 148 |
| Figure 19. Initial posting on the Maternity Care in the Bush Private Topic Forum..... | 149 |
| Figure 20. Map showing where Maningrida is situated..... | 164 |
| Figure 21. Language Boundary Map for the Maningrida Region | 166 |
| Figure 22. Molly and her grandson..... | 169 |
| Figure 23. Helen Williams | 183 |
| Figure 24. Sue, Lesley and Women’s Health Advisor talking to Valda Bocmukagarra..... | 183 |
| Figure 25. Talking to Molly about being a researcher with Sue on..... | 184 |
| Figure 26. Descriptions of research cited on the Website: Introduction: How We Did It | 191 |
| Figure 27. The PAR cycle describing Case Study Three..... | 192 |
| Figure 28. Diagrammatic representation of Case Study Three | 192 |
| Figure 29. Molly Wardaguga | 194 |
| Figure 30. Margaret Dawumal and her grandchildren. | 194 |
| Figure 31. Deborah Wurrkidj..... | 194 |
| Figure 32. Phyllis Dundudja and her granddaughter Kerryantha. | 194 |

| | |
|--|-----|
| Figure 33. Dora Daiguma..... | 195 |
| Figure 34. Mary Mason and her daughter Kylie. | 195 |
| Figure 35 Elizabeth Gandabuma..... | 195 |
| Figure 36. Illustrating care during childbirth..... | 200 |
| Figure 37. Ndjébbana family, four generations..... | 202 |
| Figure 38. Nancy Gununwanga | 204 |
| Figure 39. The home page of the Website..... | 207 |
| Figure 40. ‘During birth’ section of the Website..... | 208 |
| Figure 41. Poster produced during the project | 209 |
| Figure 42. Design for book cover using artwork and photos from Maningrida..... | 211 |
| Figure 43. Percent of women interviewed by language group. | 212 |
| Figure 44. Talking to women from the Women’s Centre, Rocky Point..... | 214 |
| Figure 45. Shirley, Elizabeth, Dixie, Molly, myself and Mary at Ji-bena..... | 215 |
| Figure 46. Members of the PAR team and Lesley | 218 |
| Figure 47. Molly sitting in the wheelchair in the back the car..... | 218 |
| Figure 48. Taking the computer and poster around at night | 222 |
| Figure 49. Opening page of Story Telling - Sharing Wisdom..... | 222 |
| Figure 50. Checking the stories with groups of women at the Women’s Centre..... | 224 |
| Figure 51. Molly and Margaret checking the poster | 227 |
| Figure 52. Showing the Website and Internet to women in the Women’s Centre..... | 229 |
| Figure 53. Index highlighting ‘Women’s Only’ sections..... | 230 |
| Figure 54. Introduction to the Website | 231 |
| Figure 55. Aboriginal Ownership noted on Website: Introduction – Acknowledgements..... | 232 |
| Figure 56. Talking to the family | 234 |
| Figure 57. Box covering photos of women who had passed away..... | 234 |
| Figure 58. Showing the high school girls the Website..... | 236 |
| Figure 59. Diagrammatic representation of Case Study Four..... | 251 |
| Figure 60. Using PAR to develop the ‘ Website’ and Guide..... | 254 |
| Figure 61. Example of Clinical Audit Section in the Guide | 264 |

LIST OF TABLES

| | |
|--|-----|
| Table 1. Maternal mortality rate for women in Australia and New Zealand..... | 39 |
| Table 2. Number of health professionals per 100,000 populations in capital cities and remote centres | 54 |
| Table 3. Comparison of health facilities in Indigenous and non-Indigenous very remote areas | 61 |
| Table 4. Participants developing and evaluating the Resource Library..... | 112 |
| Table 5. Reflection and Action Used to Improve Agency Affiliation..... | 120 |
| Table 6. Participants developing and testing the Online Community | 139 |
| Table 7. Maningrida participants in the PAR team | 193 |
| Table 8. Participants in developing and evaluating Birthing Business in the Bush Website..... | 197 |
| Table 9. Articles in the Manayingkarirra Djurrang, Maningrida community newspaper..... | 235 |
| Table 10. Participants developing and testing the Primary Health Care Guide | 253 |
| Table 11. Reflection and action used to develop and improve the Guide | 262 |

ABSTRACT

The challenge of ameliorating or preventing the health problems of Indigenous Australians living in remote areas is compounded by the profound professional, cultural, social and personal isolation of the health professionals who work there. This isolation has direct effects on the recruitment and retention of health professionals to remote communities, and their ability to work effectively in this unfamiliar environment. The overarching goal of this research was to strengthen the capacity of these professionals to improve the quality of remote area maternity services in Australia and the experiences and outcomes for birthing women and their families. This was achieved by investigating a process of engagement with a wide range of stakeholders and utilising contemporary communication technology through the Internet. A case study approach was undertaken using participatory action research (PAR) with the elements of rapid assessment, response and evaluation methods (RARE). The research explored, described and analysed the development of resources aimed at decreasing isolation and increasing communication in the remote setting. Identifying the barriers, facilitators and utility of an information technology intervention was an integral part of the investigation process.

The first case study saw the development and evaluation of the *Maternity Care in the Bush Web Based Resource Library*, designed to decrease the isolation of practitioners from the educational resources and professional expertise available in current literature, guidelines and reports. The second case study targeted isolation from peers, with the development and evaluation of the *Remote Links Online Community*. This was designed to build partnerships between isolated practitioners, for the purpose of interactive peer support, information exchange and mentoring. The third and fourth case studies were guided by Aboriginal researchers and resulted in the development of the *Birthing Business in the Bush Website*, designed to decrease practitioners' isolation from cultural knowledge. An integrated component of this Website is the *Primary Health Care Guide to Planning Local Maternity Services*, designed to decrease the isolation of the health care practitioner from the community in which they are working. Issues related to conducting research in the Australian Indigenous setting have been explored, analysed and detailed.

Each case study contributed new knowledge and learning about the challenges and contemporary contexts of remote area maternity service provision in Australia. The use of PAR, and, most particularly, how this can be used in Indigenous research to produce goals that extended beyond the individual researcher's goals, has been described. The current difficulties associated with computer mediated communication, as experienced by remote practitioners, have been highlighted. The research has identified areas of need within the workforce that, if addressed, could contribute to improved health services.

Importantly, the research has documented, acknowledged, honoured and disseminated the voices of Aboriginal women, through the far reaching communication technology that is the Internet. Furthermore, the voices, concerns and conditions of remote maternity services providers were also documented and acknowledged. This workforce, often invisible and poorly valued, was assisted and supported to provide evidenced based, culturally appropriate maternity care, through the resources that were developed. To further progress the lessons taken from the research, recommendations have been developed and are listed in the Conclusion.

PROLOGUE

Reasons for Undertaking the Study

Prior to 1990, like most non-Indigenous people in urban Australia, I had had very little interaction with Aboriginal people. In 1990 I worked in the maternity unit of Alice Springs hospital in Central Australia. I was struck by the awkwardness and loneliness I observed in the women who came in from the remote communities to birth at the hospital. The overwhelming impression I felt was that they did not want to be in the air-conditioned hospital, which, even to me always seemed so cold and sterile. Many women seemed more comfortable sitting outside in the warm environment under the trees. From Alice Springs I moved to Derby in the Kimberley region of Western Australia where I worked for the Royal Flying Doctor Service (RFDS). In my position as a flight nurse I was responsible for assisting in the transfer of people from their remote communities and small rural towns, into the regional centre, for health and maternity services. I was also involved in the provision of primary health care services whereby the doctor and I would fly out to remote communities, usually for one day only to provide services. Some of the communities did not have a resident midwife and I would spend my time in the community providing antenatal care and doing Well Women's Checks¹.

It was in Derby that I began to understand more about the issues that were important to some of the Aboriginal women who were being removed from their communities for birth. I recall going out to communities to collect women who had previously been sent in to Derby to await birth, but for various reasons, had returned to their community before birth. I often found that by the time we landed in their community the woman had already birthed. We would then transfer a well woman and baby in to Derby for no apparent reason. Anecdotally, some people working in the health service said it was 'to teach them a lesson'. Since then I have worked in remote communities in Cape York Peninsula in Queensland and the 'Top

¹ Well Women's Checks included a general health check with breast, cervical, sexual health and chronic disease screening.

Prologue

End’ of the Northern Territory (NT). My particular area of interest in these remote communities has always been women’s health and childbirth. However, I also found working in the remote setting incredibly frustrating. Women would want to birth in their home communities, yet this was not permitted. As a midwife I understood the importance of having family with you during this time, yet I could see the remote communities were not adequately resourced to provide birthing services. Maintaining appropriate staffing levels was an ongoing battle, with extraordinarily high turnover rates. I believed that providing birthing services for women in remote communities could be done safely, possibly with better outcomes, than many of the women were experiencing in the regional hospital. In addition, I believed that it would have improved both the birthing experiences for the women as well as my job satisfaction as a midwife.

During this 12 year period four different Area Health Services employed me across Western Australia, Queensland and the NT. I was given no more than a two-day orientation in each area, even when signing a two-year contract in the NT. To date, I have never had any formal cultural awareness training. Initially I was acutely ‘under prepared’ for the cultural environments in which I worked. At times my learning curve was steep, and at other times, it was frustratingly slow. Aboriginal Health Workers (AHWs) have taught me many things about their culture and their communities, and to them I will always be grateful. This was on top of their already full workload and as such, it should not have been expected of them.

Maningrida is a community in the ‘Top End’ of the NT where I worked for two and a half years. Molly Wardaguga is a retired Senior Aboriginal Health Worker (SAHW) who became my mentor in this community. After completing my time working in Maningrida, in 1999, I worked in the NT Department of Health and Community Services (DHCS) in the Women’s Health Strategy Unit. As a policy officer in this department I undertook a consultation about birthing services with women from remote areas in the ‘Top End’. I have drawn on some of the quotes from this consultation to illustrate certain points in the literature review. My next role was as the Women’s Health Educator (WHE) where I was responsible for supporting women’s health and maternity services across the Darwin Remote Region. It was in this position that I decided to do my doctorate. I wanted to explore ways to improve services to

Prologue

remote Indigenous women. I realised that this required partnership with Indigenous women and decided to ask Molly Wardaguga if she would be prepared to work with me, thankfully she agreed.

My reasons for undertaking this research included a desire to strengthen the quality of remote maternity services for both the women and the practitioners. If Australian Aboriginal women win their battle to birth on their land, then I may have assisted to strengthen the environment for this to occur. By developing the resources that were the focus of the participatory action research (PAR) in the case studies, I also hope to shorten the learning curve of new midwives going out into these remote areas.

The principles of authoritative knowledge, Indigenous knowledge and primary health care have been used to examine the circumstances surrounding birthing for women in remote areas of Australia. Four case studies will be presented and critiqued within these frameworks. Each case study describes the development and evaluation of computer mediated communication strategies to reduce the isolation of the remote based practitioner. The first aimed to reduce isolation from educational resources (The Resource Library); the second to reduce isolation from peers (The Online Community); the third to reduce isolation from cultural knowledge (Birthing Business in the Bush Website); and the fourth aimed to reduce isolation from the community in which the practitioner is working (A Primary Health Care Guide to Planning Maternity Services in Your Community). All four resources are available via the Internet and the barriers and facilitators that influence the utility of strategies delivered in this way have been explored and described in each individual case study.

Subjectivity of the Researcher

The professional organisation that supports remote area nurses in Australia is called the Council of Remote Area Nurses of Australia (CRANA). I have been a member of CRANA for some time and was an active member of both the education committee and information technology committee. I was involved in writing the Maternity Emergency Course for non-midwives a multidisciplinary course with most participants being remote area nurses and Aboriginal health workers. This involves a self-directed learning package followed by a two

Prologue

and a half day workshop for 20 participants. I have been a facilitator for the five courses that have been held to date and this has given me the opportunity to meet with remote practitioners from around the country. I have had many conversations with them about my doctorate and information technology resources in remote areas. This has provided an opportunity to promote the resources on which I was working. During the course of the doctorate I became a state representative for CRANA (2003) and then in September 2004, I became the vice president.

1 CHAPTER 1. INTRODUCTION

1.1 The Context

Maternal and perinatal health of women living in remote areas of Australia is poor by national standards (AIHW, 1998; 2003d). This has significant immediate and long-term costs to the community and the health care system. There is increasing evidence that families who live in remote areas are not satisfied with the current policies of a health care system that requires women to travel long distances and be absent from their homes for weeks at a time for childbirth (Biluru Butji Binnilutlum Medical Service, 1998; Fitzpatrick, 1995; Kildea, 1999; NSW Health, 1998a). For many, childbirth this is a normal life event, and should not require relocation from their homes and families. A larger proportion of Indigenous families live in these remote areas when compared to the proportion who reside in urban areas (AIHW, 2003d) and there is much documented evidence to suggest current maternity services and relocation for birth are culturally unsatisfactory (Biluru Butji Binnilutlum Medical Service, 1998; Fitzpatrick, 1995; Kildea, 1999; NSW Health, 1998a).

The challenge of ameliorating or preventing the unique health problems of Indigenous Australians is compounded by the profound professional, cultural and personal isolation of the health professionals who live in these areas. This isolation has direct effects on recruitment and retention of health professionals to remote communities and their ability to work effectively in this unfamiliar environment (Goldman, 2001; NSW Health, 1998b). Additional concerns include the lack of preparation and training practitioners have to work in this cultural context and the declining clinical birthing skills and work satisfaction of maternity service providers as fewer women birth in their local communities (Barclay et al., 2002; Brodie, 2002; Lowell, 2001).

Overarching challenges associated with poor outcomes for remote dwellers include, reduced access to maternity services and the lack of culturally sensitive and socially responsive models of care. Provision of maternity services in remote areas is also problematic because of related factors including:

- the ‘tyrannies of distance’

Introduction

- difficulties associated with recruitment and retention of adequately prepared clinical staff
- inadequate support and resources for clinical services
- poor communication between care providers and the community
- isolation from peers
- a lack of cultural awareness in the service providers working in Indigenous communities
- midwifery education that does not prepare midwives for autonomous practice in the primary health care setting
- difficulties associated with the provision of ongoing support and education and
- the withdrawal of medical obstetric services from rural and remote areas across Australia

(National Rural Health Policy Forum & NRHA, 1999; NSW Health, 1998b; Standing Committee on Aboriginal and Torres Strait Islander Health, 2002).

The provision of remote area maternity services is complex. Additional to the above stated barriers are overriding political contexts. The first is the politics of Indigenous affairs in Australia and the second, the politics of childbirth and professionalisation in Australia. The authoritative knowledge currently directing the policies and practices of birthing in remote settings is not well grounded in evidence, but like other areas around the world, reflects the more powerful medical, political influence with its Western hegemonic view of risk and safety (Saxell, 2000). Anecdotal evidence suggests that many health providers and policy makers believe that it is far too dangerous, especially for primiparous women, to birth in remote areas that do not have onsite medical practitioners or facilities for caesarean sections. It is also believed that all Aboriginal women themselves are a high-risk group and therefore are much safer when birthing in regional settings. These beliefs are contradicted in other countries, with similar geographies and demographics, where birthing services are provided in very remote areas to Indigenous women whose health profile is poorer than national levels (Leeman & Leeman, 2002; Morewood-Northrop, 2000; Robinson, 1990). At the same time the authoritative knowledge around birthing that exists in remote Indigenous communities is not being

Introduction

acknowledged or incorporated into health service provision, and there is little to support the practitioners to work 'with' communities rather than just 'in' communities.

The overarching goal of this research was to strengthen the capacity of the remote maternity service provider to improve the safety and quality of remote area maternity services in Australia. As a consequence these measures aim to improve the experience and outcomes for birthing women and their families. In particular, my aim has been for the research to provide a conduit for the voices of Aboriginal women from remote areas, to illustrate and validate their experiences of maternity care, that are very different from women living in urban Australia. The broader issue of communication is a major theme threaded through the thesis, with information technology used as a tool to decrease the isolation of the remote practitioners.

Computer mediated communication involves the integration of computers with telecommunication technology (telephone, satellite, cable and now digital) as a communication medium (Lindloff & Taylor, 2002). The growth of computer mediated technology across the world has increased greatly over the last 30 years with technology improving rapidly (Lindloff & Taylor, 2002). The numbers of people accessing the Internet, and electronic health related information, are also increasing (Lindloff & Taylor, 2002). This sort of access to information is already breaking down the traditional 'control of information' between the health care professional and others (P. Evans & Wurster, 2000). Health care professionals are being challenged to think laterally about how they can make the Internet work for them through every level of the organisation, including educational preparation, service delivery and information provision (P. Evans & Wurster, 2000).

Proponents of the Internet describe it as a tool for increasing civic engagement and democratising knowledge, empowering communities that have otherwise been unable to enter the arena of producing and contesting knowledge (Norris, 2001). Though there are others that say the Internet will just be creating new inequalities, reinforcing existing differences in power and wealth in the form of a digital divide (Norris, 2001). This thesis presents case studies that have described the utility, barriers and facilitators of communication strategies using the Internet to address the isolation of remote area

maternity service providers and bring the cultural beliefs and birthing desires of Aboriginal women from the Maningrida region into the public domain.

1.2 Research Approach

The theoretical influences underpinning this thesis include Indigenous knowledge (Hughes, 2000; L. Smith, 1999) as authoritative knowledge (Davis-Floyd & Sargent, 1997; Jordan, 1997), primary health care, in particular consumer participation in health care planning (DHAC, 2000; WHO, 1978) and computer mediated communication (P. Evans & Wurster, 2000; Preece, 2001). The research drew on mixed methodologies to accomplish its aim. These included a case study approach, drawing on elements of the rapid assessment, response and evaluation (RARE) methodology (Trotter et al., 2001) and PAR processes (Ivanitz, 1998; Wadsworth, 1998). A range of research methods were used to develop strategies, presented in four case studies, to strengthen maternity services in remote areas of Australia. Each strategy had an evaluation framework, which was used to analyse the research process as it was developed. This resulted in a number of resources² being delivered through information technology. The barriers and facilitators to using information technology for health services improvement, together with the utility of the strategies for remote area practitioners, have been evaluated. An overview of the thesis follows.

1.2.1 Structure of the Thesis

Chapter 2. Literature Review

The literature review is presented in two sections. The first section describes the maternity services provided for people who live in remote areas of Australia; examines specific factors surrounding Aboriginal birthing and Aboriginal health in remote Australia and provides both national and international literature and evidence that support the provision of remote area birthing services. The literature review then provides an overview of current maternity services in the NT of Australia, where the research was undertaken. A critique of contemporary policy direction, workforce issues and existing educational support for remote area maternity service provision in the NT is presented. The concept of

² 1. A Resource Library, 2. An Online Community, 3. The Birthing Business in the Bush Website, and, 4. A Primary Health Care Guide to Planning Maternity Services in Your Community.

Introduction

risk and safety in childbirth has been examined, as these are the criteria on which services are designed, and are open to challenge.

The second section examines the history of communication technology in remote Australia and how information technology and the Internet are changing the lives of people around the globe. A description of remote area nurses interaction with communication technology in the past and how it has been used to reduce their isolation has been provided.

Chapter 3. Methodology and Methods

This chapter provides an overview of the methodology and methods used to perform the research though more specific detail is provided in each of the case studies as they are presented. A rationale for linking case study with PAR and RARE is provided. An overview of how participation was constructed in each case study is discussed based on the Wadsworth framework of four ‘conceptual parties’ to participation (Wadsworth, 1998). These conceptual parties include the PAR team, a critical reference group (CRG), the ‘researched’ and the ‘stakeholders’. The framework that was used for evaluation of each of the case studies has been described.

This chapter contains a section on conducting research in the Australian Indigenous setting, describing both ethical and Indigenous research principles (AIATSIS, 2000; Ivanitz, 1998; NHMRC, 2002). These principles guided the development of two of the four resources, the ‘Birthing in the Bush Website’ and the ‘Primary Health Care Guide To Planning Local Maternity Services’.

Chapter 4. Case Study One - The Resource Library

This chapter describes the PAR process involved in establishing and evaluating an Internet based resource library aimed at reducing isolation from current literature. The evaluation of this resource includes formative and summative data describing its performance on reach, agency affiliation and richness as well as information on barriers, facilitators and utility of an IT strategy in the remote setting (P. Evans & Wurster, 2000).

Chapter 5. Case Study Two - The Remote Links Online Community

This chapter describes the PAR process involved in establishing and evaluating an Online Community aimed at reducing the isolation of the health service practitioner from peers. This resulted in the 'Remote Links Online Community'. The emphasis in this chapter is also on formative and short-term summative evaluation (Billings, 2000), examining the capacity to influence isolation and peer support.

Chapter 6. The Maningrida Community

This chapter describes the contextual setting for Case Studies Three and Four. The geographical location of Maningrida, an Aboriginal community in Arnhem Land, with an overview of its history, people and languages are given. This chapter describes my original links to the Maningrida community and how the research came about. This chapter also introduces Molly Wardaguga, a retired Senior Aboriginal Health Worker, who worked as a co-researcher with me on Case Studies Three and Four. Indigenous knowledge (L. Smith, 1999) and authoritative knowledge (Davis-Floyd & Sargent, 1997), and their relationship to Indigenous research (Hughes, 2000), are discussed in relation to the case study.

Chapter 7. Case Study Three - Birthing Business in the Bush Website

This chapter describes the PAR process involved in establishing and evaluating a web-based resource that aimed to reduce isolation from cultural and clinical knowledge, for the health service provider. Information on cultural factors specific to birthing, as identified by the Aboriginal women from the Maningrida region, was documented. The resource includes specific information on clinical issues important to maternity care in the remote setting. The chapter concentrates on describing how the PAR process (Hughes, 2000; Hughes et al., 1994; McTaggart, 1999) was used with Indigenous research methods (Hughes, 2000; Hughes et al., 1994; McTaggart, 1999) to develop this resource. It also describes how the research process produced results that were unexpected, an outcome that is not uncommon in PAR (Kemmis & McTaggart, 2000).

The process evaluation used in this case study was the 'Thinking, Listening, Looking, Understanding and Acting As You Go Along' participatory approach, which is recommended for use in primary health care projects in remote Australia (Tjikalyi &

Garrow, 1996). This chapter also describes the dissemination strategy that was used to promote the voices of the Aboriginal women, in an effort to make their knowledge and ideas around risk and childbirth more noted in the Australian arena today.

Chapter 8. Case Study Four - A Primary Health Care Guide to Planning Maternity Services in Your Community

This chapter describes the PAR process used to develop a resource to assist remote area maternity service providers engage local women in developing a primary health care guide for planning maternity services in their community. This guide is available on the Birthing Business in the Bush Website and aims to decrease the isolation of the health care practitioner from the community in which they are working. The research process used to develop this Guide, with particular emphasis on formative, contextual and short-term summative evaluation (Billings, 2000), is described in the case study. The evaluation includes the practitioners' involvement and review of both Case Studies Three and Four.

Chapter 9. Discussion

This chapter synthesises the experience and findings from the previous chapters, outlining the key findings from the research and how this thesis has contributed to the body of knowledge pertinent to remote area maternity service provision in Australia. A discussion about the research approach demonstrates the learning generated through the research process. The limitations relating to performing PAR in the remote setting have been presented here.

Chapter 10. Conclusion

This chapter revisits the overarching research goal of strengthening remote area maternity services, outlining how the methodology met the aims of the research and the implications for practice. Recommendations for further research and practice development are stated here.

2 CHAPTER 2. LITERATURE REVIEW

SECTION 1: INDIGENOUS HEALTH AND REMOTE MATERNITY CARE

2.1 Overview

This chapter has been divided into two sections and describes the literature pertinent to the research setting. The first section provides an overview of Australian demographics with particular emphasis on the remote setting. The health of remote Australian dwellers and Indigenous Australians, a greater proportion of whom live in remote areas, is provided. A brief history of Aboriginal and Torres Strait Islander health, how it has been affected by colonisation, and the social and economic environment that many still live in today is provided. The chapter then highlights issues important to maternal and infant health and birthing services in remote areas. These issues include: cultural safety; communication with care providers; definitions of risk and safety in relation to place of birth; international comparisons; birthing in the Northern Territory (NT) and workforce issues. The second section provides a history of communication in the remote Australian setting and how communication technology has been used in the provision of health services and to support health care providers.

2.2 The Research Setting: Remote Australia

2.2.1 Demographics

Australia is a large country with 66.3% of the 19.4 million people living in the metropolitan region (90% of those in capital cities) and only 2.6% of the population living in remote or very remote areas (ABS, 2003a; 2003c; AIHW, 2003d; DCITA, 2003a). In the 2001 census, 458,520 people (2.4% of the total population) identified as being Indigenous Australians (ABS, 2003c). Though more Indigenous Australians live in metropolitan areas (30%), proportionally their numbers increase with remoteness from approximately 1% in the major cities to 45-100% in the remote and very remote regions (ABS, 2003a; AIHW, 2003d).

In the Northern Territory (NT) the demography is quite different to the rest of Australia with 21% of people living in remote areas and 24% in very remote areas (ABS, 2003a).

The NT is home to 12.5% (57,550) of Indigenous Australians who account for 29% of the total population (196,300) living there (ABS, 2004b).

2.2.2 Defining Remote

There are many different ways of defining 'remote' in Australia. People will often say 'out bush', 'the bush' or 'the outback'. Isolation and limited accessibility to services are synonymous with the term 'remote'. Accessibility is particularly limited across the 'Top End' of Australia during the wet season (December to April) when rivers rise making the roads impassable. The Australian Government has used several different methods to define 'remote' and these classifications will often be used to allocate both services and resources (J. Smith, 2004). The Accessibility/Remoteness Index for Australia (ARIA) classification that I describe here, was produced in 1997 by the Department of Health and Aged Care (DHAC, 1999a). The document allows clear identification and classification of areas in Australia that can be defined as 'remote', and is based on the road distance to goods and services that are considered 'normal' in metropolitan areas (AIHW, 2004b). The ARIA is a geographical approach to defining remoteness and does not take into account socioeconomic status, population size, or cultural factors (DHAC, 2001). The ARIA looks at the accessibility to 201 service centres and then gives a value to the locality depending on the distance to these service centres. These values are grouped into five categories:

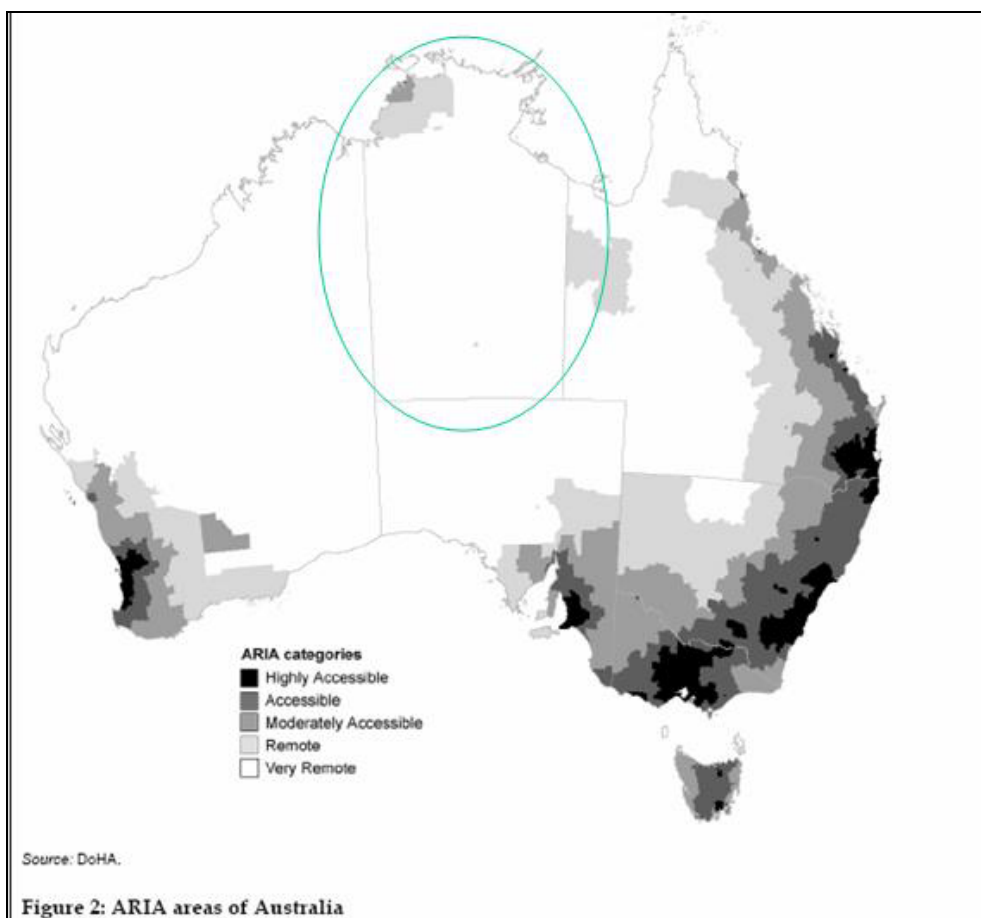
1. Highly Accessible (ARIA score 0-1.84) - relatively unrestricted accessibility to a wide range of goods and services and opportunities for social interaction
2. Accessible (ARIA score 1.84-3.51) - some restrictions to accessibility of some goods, services and opportunities for social interaction
3. Moderately Accessible (ARIA score 3.51-5.80) - significantly restricted accessibility of goods, services and opportunities for social interaction
4. Remote (ARIA score 5.80-9.08) - very restricted accessibility of goods, services and opportunities for social interaction
5. Very Remote (ARIA score 9.08-12) - very little accessibility of goods, services and opportunities for social interaction

(DHAC, 1999ap.19).

The ARIA was modified in 2001 to include a slightly different weighting scale for islands, values were modified from one to 15 and it was renamed ARIA+ (DHAC, 2001). In addition to this, ARIA+ included the maximum and minimum scores for each local statistical area, giving the areas greater definition (DHAC, 2001).

When the term ‘remote’ is used in this thesis I am referring to category four and five above (‘remote’ and ‘very remote’) with particular interest in the NT. The ARIA index has superseded the Rural Remote and Metropolitan Areas (RRMA) classification that used a different methodology and had seven different categories (AIHW, 2004b). Some reports in Australia are still using the RRMA classification and where these reports are quoted, the categories ‘six’ and ‘seven’ (‘remote’ and ‘other remote’) are roughly equivalent to the categories ‘remote’ and ‘very remote’ in the ARIA report (AIHW, 2004b). The ARIA areas in Australia can be seen in the figure below. The circle highlights the NT, which is classified as very remote or remote with only the capital, Darwin, being classified as ‘accessible’.

Figure 1. ARIA areas of Australia (AIHW, 2004b)



2.2.3 Health in Rural and Remote Australia

Current research in Australia shows that those who live in both rural and remote regions suffer poorer health than their urban counterparts, independent of the influence that Indigenous Australians have on these statistics (AIHW, 1998; 2003d; Dixon & Welch, 2000). Socio-economic disadvantage, decreased educational levels and unemployment, all important determinants of health, are associated with increasing remoteness (AIHW, 2003d; Dixon & Welch, 2000). Life expectancy is less in rural and remote regions and the incidence of disease, hospitalisation rates, smoking and risky alcohol consumption are all higher (AIHW, 1998; 2003d). These statistics worsen with increasing remoteness and are affected by the higher proportion of Indigenous people who reside there (AIHW, 1998). However this does not fully explain the health differential. Reduced access to services, lack of control over aspects of one's life, reduced transport options, a shortage of health care providers and greater exposure to injury and accidents are all contributors to the health divide (AIHW, 1998; 2003d; Dixon & Welch, 2000; C. L. Roberts & Algert, 2000).

2.2.4 The Maternal and Perinatal Health in Remote Areas

The fertility rate is another statistic that increases with remoteness. Women in rural zones have fertility rates 12-20% higher than the capital cities and in remote zones, the fertility rate is up to 40% higher than the capital cities (AIHW, 1998). Indigenous mothers account for approximately 3.6% of women having babies in Australia, with the proportion of Indigenous mothers increasing with remoteness (Laws & Sullivan, 2004; Trewin & Madden, 2003).

One study comparing maternity outcomes for rural and remote women with those for metropolitan women in New South Wales (NSW) showed that women in remote areas had a much greater risk of stillbirth. This was applicable to both Indigenous (OR 1.55) and non-Indigenous women (OR 1.66) (C. L. Roberts & Algert, 2000). Additionally these women were less likely to have any Western antenatal care prior to 20 weeks gestation and more had their first antenatal visit after 30 weeks (C. L. Roberts & Algert, 2000). The reason for this is not known but Roberts concludes that socio-economic disadvantage and declining access to maternity services could be associated with both the stillbirth rate for women in remote areas and the number of small for gestational age babies born to

Indigenous mothers. Additionally, women in remote areas were more likely to smoke cigarettes in pregnancy and smoke a greater number of cigarettes (C. L. Roberts & Algert, 2000), a factor related to poor maternal and fetal outcomes (Kramer, 1998). Some of the key issues influencing maternal and child health include poverty, a lack of access to culturally appropriate care, suboptimal quality of the care and lower educational level of mothers (Akukwe & Nowell, 1999).

A population-based approach to health requires all subgroups within the population to have available preventative, as well as curative health services (Akukwe & Nowell, 1999). Australia does not have the political or economic instability that often prevents developing countries from providing these services yet Indigenous Australians, particularly those living in remote areas, are a group who are not as well serviced as the general population (Akukwe & Nowell, 1999).

2.3 Aboriginal and Torres Strait Islander Health and Childbirth

2.3.1 History

The Aboriginal and Torres Strait Islander peoples are the original inhabitants of Australia (Kleinert et al., 2000). It is estimated that they have lived in this country for 40-60,000 years (Kleinert et al., 2000) with some estimations suggesting they may have been here for 120,000 years (Broome, 2002). European invasion and colonisation in Australia commenced in 1788 (Broome, 2002). The estimated Indigenous population at the time was at least 300,000 divided across 500 tribes (Broome, 2002). The subsequent interaction between Europeans and Aboriginal Australians has been well documented to have had detrimental consequences (Johnston, 1991a). Some early reports suggest that epidemic and endemic diseases, neonatal tetanus and septicemia were unknown prior to colonisation with maternal and fetal mortality very low (Callaghan, 2001). With colonisation came new diseases, loss of culture and difficulties in maintaining the hunter-gatherer lifestyle. By 1930 the Aboriginal population was reported to have decreased to 60,000 (Broome, 2002).

Since colonisation Indigenous Australians have been dispossessed of their land and suffered through various policies and legislation that had the intent of destroying their culture; these have been described in the Royal Commission into Aboriginal Deaths in

Custody Report (Johnston, 1991a). The ‘protection’ (segregation) policy (1890-1950’s) involved restricting the movements of Aboriginal peoples by placing them in missions and reserves (Johnston, 1991a). In the NT, all Aboriginal peoples were made wards of the State (Johnston, 1991a). This policy included removing children of ‘mixed race’³ and placing them in homes where they were taught European ways (Johnston, 1991a). It was believed that the ‘full-blood’⁴ Aboriginal peoples would ultimately disappear and the ‘mixed race’ Aboriginal peoples would eventually be ‘bred out’⁵ (Johnston, 1991a). The protection (segregation) policy didn’t achieve its aims and was replaced by policies of assimilation (1950’s-1960’s) and integration (1967-1972), encouraging Aboriginal peoples to adopt European ways and abandon their culture (Johnston, 1991a). The consequence of both the ‘protection’ and ‘assimilation’ policies were that many thousands of Aboriginal children were removed from their parents (Broome, 2002). These children are known as the ‘Stolen Generation’ and a national inquiry into the separation of Aboriginal and Torres Strait Islander children is documented in the ‘Bringing Them Home Report’ (HREOC, 1997).

During the 1930s the Aborigines’ Progressive Association was formed (Broome, 2002). They dubbed the 150th anniversary of the landing of the First Fleet as the ‘Aborigines Day of Mourning’ and started campaigning for equal rights, citizenship and better working and living conditions (Broome, 2002). However the battle for equal rights continues today as years of systemic discrimination and racism led to a ‘multi-causal cycle of poverty’, which was reinforced by a lack of self-determination, access to education, employment, housing and basic health services (Broome, 2002). There is evidence of white activists, particularly women’s groups, trade unionists, some literary critics and missionaries, supporting Aboriginal efforts to improve their conditions (Broome, 2002).

³ This term is not recommended for use however it is used in this context to describe the policy beliefs of the day relating to an Aboriginal child where one parent is Aboriginal (this was often the mother) and the other parent is non-Aboriginal.

⁴ This term is not recommended for use however it is used in this context to describe the policy beliefs of the day relating to people born of an Aboriginal mother and an Aboriginal father.

⁵ This term was used in the ‘Royal Commission into Deaths in Custody’ report

Throughout the 1960s many of the Australian states removed the restrictions on Aborigines and granted them full citizenship rights (Broome, 2002). In 1967 a referendum was held and a 92% vote gave Aboriginal peoples the right to be called citizens of Australia, and the Commonwealth government power to legislate for all Aboriginal peoples (Johnston, 1991a). In 1970 the Prime Minister, Mr. McMahon, stated that programs for Aboriginal peoples should:

“encourage and strengthen their capacity increasingly to manage their own affairs - as individuals, as groups and as communities at the local level” (Johnston, 1991aRcd.38.37a).

These were the beginnings of the self-determination policy 1972-1975. In the 34 years since the statement was made (progressing into the self management policy) progress towards these goals has been slow. Each new report documenting Aboriginal disadvantage⁶ has called for a process of reconciliation as a necessary step to eliminate the disadvantage and enable empowerment and self-determination of Aboriginal society to occur (HREOC, 1997; Johnston, 1991a; 1991b; National Aboriginal and Torres Strait Islander Health Council, 2000). In 1991 the Australian Parliament recognised the need for process of reconciliation and established the Council for Aboriginal Reconciliation, which is now a non-government not-for-profit organisation (Reconciliation Australia, 2004). In 1992 the High Court of Australia gave legal recognition to native title within common law with a native title act being passed in 1993 and amendments in 1998 (Broome, 2002). Aboriginal activists have stated that amendments have given too much power to pastoralists with lengthy legal battles, long delays and loss of native title on almost 7% of Australia's land ensuing (Broome, 2002). Reconciliation, land rights and health are three significant areas where the Indigenous populations of Canada, America and New Zealand differ greatly from Australia; this will be discussed in more detail later in this chapter.

The Royal Commission into Aboriginal Deaths in Custody Report has many recommendations on how Australia can improve Aboriginal health and well-being. The Specific recommendations pertinent to this thesis include:

⁶ For example: National Aboriginal and Torres Strait Islander Health Strategy, Bringing Them Home, Royal Commission into Aboriginal Deaths in Custody

- Many non-Aboriginal health professionals at all levels are poorly informed about Aboriginal people, their cultural differences ... institute specific training programs to remedy this deficiency;
- The primary health care approach to health development is highly appropriate in the Aboriginal health field, but health professionals are not well trained in this area ... This should be a special feature of the training of staff interested in working in localities where Aboriginal people are concentrated;
- Health care staff working in areas where Aboriginal people are concentrated should receive specific orientation training covering both the socio-cultural aspects of the Aboriginal communities they are likely to be serving and the types of medical and health conditions likely to be encountered in a particular locality;
- Effective communication between non-Aboriginal health professionals and patients in mainstream services is essential for the successful management of the patients' health problems. Non-Aboriginal staff should receive special training to sensitise them to the communication barriers most likely to interfere with the optimal health professional/patient relationship

(Johnston, 1991b).

These recommendations will be discussed further in this thesis. However, first I will outline some important points about Aboriginal health today.

2.3.2 Indigenous Statistics

Reporting on differences in health between the Indigenous and non-Indigenous populations of Australia relies on the accuracy of the data that is collected. Historical analysis and comparisons of health statistics are extremely difficult prior to 1971 when Indigenous Australians were not included in the Australian census. Currently (February 2005), there is a strategy being implemented by the Australian Bureau of Statistics, representatives from the Aboriginal and Torres Strait Islander communities and other key data collecting organisations, to try and increase the identification of the Indigenous population (ABS, 2001). At present the state and national perinatal data collections only record Aboriginality if the mother is Indigenous; those babies that are born to Indigenous fathers and non-Indigenous mothers are not recorded as Indigenous and thus not included

in this group (Day et al., 1999). There is no information on the Indigenous population in the state of Tasmania in the national perinatal collection (Laws & Sullivan, 2004) and the Australian Bureau of Statistics national mortality and morbidity reports exclude Indigenous data from the most populated states (in some cases only including 31% of the Indigenous population) due to concerns about the data quality (J. Smith, 2004). The 1996 census recorded a 33% increase in the Indigenous population since the 1991 census was collected and in 2001 there was a further 16% increase (ABS, 2001; 2003c). This is more likely to be related to increasing numbers of people recording their Indigenous status and more thorough data collection rather than a true increase in the population (ABS, 2001).

2.3.3 Indigenous Health Statistics

Despite difficulties and limitations in data collection, the difference in health status for Indigenous Australians, when compared to non-Indigenous Australians, is well known and well documented. In fact recent comparisons show that Australia's Indigenous population has worse health statistics and less access to health care than any other Indigenous population in comparable countries (WHO, 2000b).

In Australia, the life expectancy is approximately twenty years lower for Indigenous males (56 vs 77yrs) and females (63 vs 82yrs) (Trewin & Madden, 2003). Child, infant and maternal mortality are all higher as are adult and childhood morbidity (AIHW, 1998; Dixon & Welch, 2000; Trewin & Madden, 2003). Maternal mortality for Indigenous women (23.5/100,000) is significantly higher than it is for non-Indigenous women in Australia (7.2/100,000), with Indigenous status being recorded in 83% of the cases (Slayter et al., 2004). This figure represents an increase from 17.4/100,000 in 1994-96 and 23.2/100,000 in 1991-93 (Slayter et al., 2004). Two percent of maternal deaths (n=2) were in women whose place of residence was in remote or very remote Australia (Slayter et al., 2004).

The perinatal death rate for Indigenous babies (20.1/1,000) is over twice the rate for non-Indigenous babies (9.6/1,000) (Trewin & Madden, 2003) and the percentage of low birth weight infants is also double (12.9% vs 6.4%) (Laws & Sullivan, 2004). The rate of teenage mothers is almost five times higher in the Indigenous population, complications in pregnancy are more frequent and the percent of women who have had no Western

antenatal care is higher (d'Espaignet et al., 1997; Laws & Sullivan, 2004; NSW Health Department, 2001; Trewin & Madden, 2003).

The marked difference in health statistics does not equate to a corresponding difference in health care spending. Indigenous Australians have significantly less access to the medical benefits scheme (MBS) and the pharmaceutical benefits scheme (PBS) through reduced access to primary health care (Access Economics, 2004) and complex funding arrangements. Data per capita spending on health expenditure for Indigenous versus non-Indigenous people in rural and urban Australia is \$2,734 versus \$2,277 (Gray et al., 2002). When spending on hospital is excluded in these figures they decrease markedly (\$930 vs \$1351) (Gray et al., 2002). In 2003 it was estimated that an additional \$300 million per year would be required to achieve equitable health expenditure on Indigenous Australians (AIHW, 2004a). This would require an increase in only 0.5% of the \$72 billion spent each year on health in Australia. Although it can be shown that Indigenous Australians have significantly decreased access to health services, it is probable that this is not the only cause of their poor health statistics.

2.3.4 Social Determinants of Health

There is overwhelming evidence that a person's social and economic circumstances will strongly affect their health, with those further down the social ladder suffering higher rates of serious illness and premature death (Wilkinson & Marmot, 1998). Indigenous families have significantly lower incomes, home ownership and employment rates with national imprisonment rates 15 times higher than that non-Indigenous imprisonment rates (Indigenous 1746.3 vs 115.5 non-Indigenous) (AMA, 2003). Levels of education are much lower than the non-Indigenous population with the NT having the lowest number of Indigenous students reaching the grade three reading benchmark and approximately 20% difference in Indigenous versus non-Indigenous Year 10 retention rates (AMA, 2003). It is also known that social and psychological circumstances that cause stress, and a lack of control over one circumstances in life, are detrimental to health (Wallerstein, 1992; Wilkinson & Marmot, 1998). In fact it has been argued that unfavourable social conditions and ineffective self-management are greater determinants of health in disadvantaged populations than is a lack of access to medical care (Pincus et al., 1998).

These concepts are not new to Aboriginal Australians, who have always seen health in a broader context than that, which is solely related to disease.

2.3.5 The Aboriginal and Torres Strait Islander Definition of Health

The Aboriginal and Torres Strait Islander definition of health does not only relate to physical health but encompasses a holistic approach including the social, emotional, spiritual and cultural well-being of an individual, together with community capacity and governance (National Aboriginal and Torres Strait Islander Health Council, 2000). Thus, health programs must address all of these issues if they are to provide a service that is appropriate to Indigenous Australian peoples. Comprehensive primary health care has been identified as the most appropriate model of care for Indigenous Australians (National Aboriginal and Torres Strait Islander Health Council, 2000). Primary health care includes (culturally) appropriate, accessible health care with community participation in the planning, organisation, operation and control of the health service (WHO, 1978).

2.3.6 National Aboriginal and Torres Strait Islander Health Strategy

The National Aboriginal and Torres Strait Islander Health Strategy was endorsed in 1990. However, the official evaluation in 1994 found the strategy had never been effectively implemented, had been grossly under funded and lacked political support (Mayers, 2002). The National Aboriginal and Torres Strait Islander Health Council has subsequently developed the National Aboriginal and Torres Strait Islander Health Strategy, Draft for Discussion document, and recommend this document be adopted as a framework for furthering Aboriginal and Torres Strait Islander health in this country (National Aboriginal and Torres Strait Islander Health Council, 2000). One of the major recommendations documented in this strategy is to move towards Aboriginal community control of health services (Johnston, 1991b; National Aboriginal and Torres Strait Islander Health Council, 2000; Torzillo & Kerr). This is in line with the above-mentioned principles of primary health care and is already occurring in some parts of Australia and the NT (Banscott Health Consulting Pty Ltd, 2003; NACCHO, 2004; WHO, 1978).

2.3.7 Aboriginal Control of Health Services

The first Aboriginal Community Controlled Health Service (ACCHS) opened in 1971 in the Sydney suburb of Redfern (Saggers & Gray, 1991). Since then many more have been

established (n=129), 51 of which are in the remote setting (NACCHO, 2004). The national body representing these services is called the National Aboriginal Community Controlled Health Organisation (NACCHO). These health services aim to provide holistic primary health care and 80% of them provide a women's health service (NACCHO, 2004). Only one of these, Alukura, was established to provide birthing services, and this will be discussed in more detail later in the chapter.

A national initiative, the Primary Health Care Access Program (PHCAP) was introduced in 1999 with the aim of improving access to comprehensive primary health care services and increasing expenditure on Aboriginal health, to better meet the needs of Aboriginal peoples and increase community control (OATSIH, 2003). At the time of writing this thesis, the NT government is rolling out PHCAP in some areas, which will require a radical change in the delivery of health services, including the incorporation of greater Aboriginal community control (Banscott Health Consulting Pty Ltd, 2003). It is too early to say how the rollout of this program will affect Aboriginal Australians, health services and health care providers; however the theory behind it appears sound.

2.3.8 Consumer Participation in Health Care Planning

Whilst there is strong evidence to support the value of consumer participation in health care planning, as a key to successful maternity services in urban settings, little has been done to adapt these principles to remote areas or the Indigenous population (DHAC, 2000). Consumer participation in health care planning and building community capacity are two of the key aims of the NT Department of Health and Community Services (DHCS). This was reported in the Review of the NT DHCS, as having particular importance to the PHCAP (Banscott Health Consulting Pty Ltd, 2003). The report recognises the challenges associated with increased consumer participation in health care planning, noting its potential to assist in reducing the poor health outcomes currently experienced by the NT Aboriginal population (Banscott Health Consulting Pty Ltd, 2003). The NT government has consulted with Indigenous women regarding the provision of birthing services and several reports have been written (Biluru Butji Binnilutlum Medical Service, 1998; Kildea, 1999; NT DHCS, 1992) and will be described in this thesis.

Most recommendations however, have not been enacted, and many women in the NT remain unhappy with the provision of maternity services (Biluru Butji Binnilutlum Medical Service, 1998; Hunt, 2003; Kildea, 1999). Consumer participation in health care planning needs to be more than just consumer consultation. There needs to be community control and self determination with support and structures in place to drive the changes required from the consultations (Berkman & Kawachi, 2000; Devitt et al., 2001; DHAC, 2000).

Local Indigenous health boards are being established in many areas of the NT to provide leadership in local decision-making and priority setting (Banscott Health Consulting Pty Ltd, 2003). This radical change of administration and health service structure will have a dramatic effect on the way the non-Indigenous practitioner will practice. In many instances, neither the local health board members, nor the remote area health practitioners have the training or experience required to collaborate in such a partnership. Increasing community involvement and control in the planning and delivery of health services is considered essential for improving health services and outcomes (Berkman & Kawachi, 2000; Crawford et al., 2002; Devitt et al., 2001). This is not surprising, given the overwhelming evidence to show that lower socioeconomic status, with a lack of decision making control over one's circumstances in life, leads to higher morbidity and mortality rates (Wallerstein, 1992; Wilkinson & Marmot, 1998). Training practitioners and local communities needs to be a significant part of this strategy. A recent Commonwealth report recommends resource development to enhance consumer participation in health care particularly for remote consumers and providers (DHAC, 2000).

2.3.9 Communication and Cultural Safety

Inadequate understanding of the Aboriginal world view and cultural knowledge base, together with communication difficulties, are suggested to be central features of the inability of service providers to provide effective cross-cultural communication and health services (Eckermann et al., 1998; National Aboriginal and Torres Strait Islander Health Council, 2000; Trudgen, 2000). This miscommunication has at times been due to racism (Hughes et al., 1994), but can also be due to a 'complex mix of genuine goodwill and gross misunderstanding' (Mobbs, 1991). Trudgen, in the book *Why Warriors Lie Down and Die*, has suggested that to be truly effective as a health care provider one must learn

the local language (Trudgen, 2000). However, his book is written from East Arnhem where many communities speak the one Indigenous language. Other remote communities have several distinct languages that would take many years to master. In such communities, non-Aboriginal individuals have been advised against learning one particular language that may be seen to favor a particular group. The 2001 census reported 15% of Aboriginal and Torres Strait Islander people spoke languages other than English when at home and the proportion increased with remoteness to a total of 55% in the very in remote regions (Trewin & Madden, 2003). The recent review of health services in the NT has also recognised the importance of language training, recommending it be provided to health centre staff, along with cultural awareness training, on an ongoing basis (Banscott Health Consulting Pty Ltd, 2003).

One of the most important roles of the AHWs is to act as the cultural broker and interpreter. However these tasks add to an otherwise full workload and must be very frustrating and tiring as new staff can turnover frequently. Having worked side by side with AHWs in remote areas it is incomprehensible to me that there are not more employed in the regional hospitals, as it is rarely possible to work effectively without them. Thirty three percent of the births at Royal Darwin Hospital are to Aboriginal women, and the quote below describes how some of these women feel:

*“they are too frightened to say what they really want” – Tiwi woman
(Kildea, 1999p.72).*

Both women and service providers of maternity care at Royal Darwin Hospital have identified, in several different studies, communication and cultural misunderstandings as major causes of concern (Hunt, 2003; Watson et al., 2002a; 2002b).

One report in the NT found community members were frustrated that the health service providers lack social and cultural knowledge of the community suggesting regular sharing of information and community based engagement by the service providers would improve health outcomes (Lowell, 2001). The lack of (or limited) cultural awareness training, and not knowing how to access resources and knowledge already present in remote Aboriginal communities mean the health service providers are not always working collaboratively with community members. Lack of knowledge rather than lack of

motivation may result in poorly directed effort, misunderstanding, frustration and ‘burn out’, a common cause of staff loss.

The recent review of the government health services in the NT found an unacceptably high level of staff turnover. It was critical of the fact that many clinicians had not received training to ensure they understood the legitimate cultural views, values and expectations of Aboriginal peoples (Banscott Health Consulting Pty Ltd, 2003). Key recommendations to combat the high staff turnover were the introduction of a comprehensive induction program and innovative approaches to ongoing education, such as the creation of peer support networks (Banscott Health Consulting Pty Ltd, 2003). This situation is not particular to the NT. One project in New South Wales found that although some health staff in were well respected for their knowledge of the needs of the Koori⁷ population many others lacked cultural awareness and sensitivity, often to the point of being outwardly racist (Hughes et al., 1994). They suggested Koori’s were afraid of the health system believing they receive a different standard of service to the non-Indigenous population (Hughes et al., 1994).

2.3.10 Cultural Safety in Childbirth

One of the major recommendations made in the Declaration of Mothers Rights states “*Obstetric care must bear in mind the respect for the diversity of cultures and beliefs*” (Members of the World Association of Perinatal Medicine, 2001p.3). New Zealand’s efforts to encompass the cultural safety of the Maori into their maternity service seem to have progressed much further than those of Australia (Barlow, 2001; Health Funding Authority, 2000). Government policy in New Zealand is guided by the Treaty of Waitangi, which was signed in 1840, by many of the Maori chiefs and the British Crown (Duff & Marmont, 2002). This treaty obligates the government to work within a bicultural framework, where cultural safety in health care is a concept embedded in the education of all health care practitioners (Duff & Marmont, 2002; Nursing Council of New Zealand, 1996). The term cultural safety originated in New Zealand with Irihapiti Ramsden, who together with a group of Maori nurses in the late 1980’s, called for a more appropriate

⁷ Term commonly used to describe Aboriginal people living in New South Wales.

health service for Maori people. Based on attitude change, cultural safety education aims to educate the health professional to become open minded and non judgmental, (Jefferis, 2001; I. Ramsden, 1992). A thorough understanding of poverty and its impact on people, whereby you do not blame the victims of historical and social processes for their current situation, is a key philosophy of cultural safety (Jefferis, 2001; I. Ramsden, 1992). As attitude change cannot be forced, cultural safety relies on critical self reflection of the health care professional to evaluate their own attitudes, beliefs and values (Jefferis, 2001). By accepting their own cultural makeup, understanding the self, the rights of others and the legitimacy of difference, should further provide the health professional with the skills to work with all people who are different from themselves (Nursing Council of New Zealand, 1996). Cultural safety can only occur when differences in culture are recognised and respected and these differences are incorporated into health service delivery (Dowd & Eckermann, 1992).

Australia's lack of progress towards providing cultural safety for the Indigenous population is particularly evident in the area of childbirth, which in Aboriginal culture, is clearly delineated as 'women's business' (B. Carter et al., 1987; Maher, 1999). In Australia, the concept of cultural danger is described as occurring when Aboriginal culture, values and attitudes are not recognised and incorporated into the health care arena (Dowd & Eckermann, 1992). According to one author, where men are involved in the provision of childbirth services, the Aboriginal culture is being breached and this can be a cause of great shame and distress (Maher, 1999). Shame is a complex and sensitive concept well known to Aboriginal peoples but often misunderstood by the health care provider (Maher, 1999; Morgan et al., 1997). It encompasses feelings of guilt and can occur when an individual is singled out or is involved in actions not sanctioned by the group, or those that conflict with their cultural obligations (Maher, 1999; Morgan et al., 1997). An example of this is women being attended by men for childbirth procedures. Unfortunately, many hospitals find the provision of female health providers for everything to do with 'women's business' as 'just too hard to achieve' with few incentives provided to try and achieve this. Additionally, most do not offer interpreter services for Indigenous languages (though they will have many other interpreters available); it is difficult to find guidelines or policies covering cultural safety in maternity care for Indigenous women; and there are limited numbers of Indigenous people working

in hospitals (Biluru Butji Binnilutlum Medical Service, 1998; Kildea, 1999; NSW Health Department, 2000a; Senate Community Affairs References Committee, 1999). In my experience, simple things such as Aboriginal artwork on the walls, encouragement of squatting for birth, discussions of how to cut the cord and what to do with the placenta, and ensuring all staff have participated in cultural awareness training, are often absent from the birthing environment.

Rawlings (1998) argues that the birthing experience cannot act as a true rite of passage when women are not surrounded by those who care for her cultural and spiritual needs, even if her physical needs are being met. This point could be argued for all women. She provides the example of the Ngaanyatjarra⁸ women who grieve for the way the placenta is handled when women birth in hospitals (Rawlings, 1998). The quote below illustrates a similar belief stated by a Yulnu woman:

“smoking will close up and heal the soreness of childbirth... it should be available in hospital ... the placenta should not be burnt as the mother might then get a sickness in the womb, it is alright to freeze it till it can be buried by the families at home” – East Arnhem Aboriginal Health Worker (Kildea, 1999p.85).

Some women believe that when babies and mothers return from the regional centres they return in a weak state and need cultural ceremonies such as the ‘smoking ceremony’ to be performed to make them strong again (B. Carter et al., 1987). Failing to observe the relevant rituals and laws during pregnancy presents a grave risk to the health of both the mother and baby and the long-term health of her people. For Aboriginal women, separated from their land, language, culture and families during the birth of their children, removal to the regional hospital represents, an at times unacceptable risk (J. Roberts, 2001). Some Aboriginal women identify giving birth in the hospital as the cause of infant mortality. As a result of not being welcomed properly into the world, and the appropriate ceremonies not being performed, the baby’s weakened spirit gets sick (Mills & Roberts, 1997).

⁸ Women from a remote desert region in Western Australia

2.3.11 Maternity Services in Remote Areas

Despite a higher fertility rate, women in remote areas have significantly less access to maternity services (AIHW, 1998). The current policy determining service provision across Australia is that women should go into regional centres to birth their babies with the suggestion that this is the safest option for them. This has been a deliberate policy decision of progressive governments across all states and territories despite many government sponsored consultations making recommendations to the contrary (Biluru Butji Binnilutlum Medical Service, 1998; Kildea, 1999; King et al., 1998; NT DHCS, 1992). As a consequence of this policy, most remote areas do not have the infrastructure or the staff to support onsite birthing, in fact many do not have a resident midwife, though staffing situations change rapidly with turnover rates of 1-300% (Kildea, 1999).

It is clear that the model of care available in remote areas of Australia is not socially or culturally acceptable to women and their families, nor is it satisfying for the health care providers (Biluru Butji Binnilutlum Medical Service, 1998; B. Carter et al., 1987; Fitzpatrick, 1993; Kildea, 1999; NSW Health, 1998a).

“I would never leave my family at such a vulnerable time to come to town by myself to deliver my baby, and I do not think we should expect Aboriginal women to do it. It can cause bonding problems for the baby and the family”- Midwife (Kildea, 1999p.57).

Evidence suggests some women are not accessing antenatal, intrapartum or postnatal services in an attempt to avoid or limit their stay in a regional centre that is distant from their community (Fitzpatrick, 1995; Kildea, 1999). Important contributors to a positive experience of maternity care are often lacking, namely: continuity of care, choice of care and place of birth and the right to maintain control (C. S. Homer, P. Brodie et al., 2001).

Women are required to travel long distances for the birth of their babies and this can cause financial hardship and social disruption. Typically, pregnant women will leave their homes between 36-38 weeks gestation to await birth in the regional setting. The facilities in these settings vary but are usually very simple. Some offer hostel type accommodation and some will provide food and transport to the local hospital for antenatal visits (Kildea, 1999; King et al., 1998). Most women do not have the capacity to take their other children with them, as they would also need to bring someone to care for the children when they are in hospital. Women state they do not like to be away from their children for weeks at a

time as they cannot be sure they are being well cared for and this is a cause of great stress and worry (Biluru Butji Binnilutlum Medical Service, 1998; Eckermann, 1995; Fitzpatrick, 1995; Kildea, 1999).

“It is better to deliver in the community even if it is not as safe” – Aboriginal woman (Kildea, 1999p.62).

If women want support in labour from someone they know, they have to pay their flights and accommodation, although some states will pay for this under various conditions, for example women under 16 years (NT), sometimes for women having their first baby (NT) and for some Aboriginal women (Cape York, Queensland). The airfares from remote areas can be more than a fortnight’s income and additional costs include long distance phone calls and activities to relieve boredom (Kildea, 1999).

Consultations with women from remote areas have occurred in several states and territories and both the findings and recommendations are very similar. Women highlight the importance of personal safety, both in birth and when awaiting birth in the regional setting (Biluru Butji Binnilutlum Medical Service, 1998; Fitzpatrick, 1995; Kildea, 1999; King et al., 1998; NT DHCS, 1992). Women have identified choice, culturally safe birth (eg. being cared for women and appropriate care of the placenta), having family members with them during birth and their children nearby as being important factors that are currently missing from the birthing environment (Biluru Butji Binnilutlum Medical Service, 1998; Fitzpatrick, 1993; 1995; Kildea, 1999). Many Indigenous women report they would prefer to birth ‘on their own country’ (Biluru Butji Binnilutlum Medical Service, 1998; B. Carter et al., 1987; Fitzpatrick, 1993; 1995; Kildea, 1999; NT DHCS, 1992). Some women feel that their relationship to the land, established through the birthing experience, is vitally important to their culture and this may be compromised by birthing in hospitals where many do not feel ‘culturally safe’ when experiencing a ‘Western medical model’ of childbirth (Biluru Butji Binnilutlum Medical Service, 1998; B. Carter et al., 1987; Fitzpatrick, 1993; 1995; Kildea, 1999; King et al., 1998).

“You are born on country, you belong to that country and your spirit is there” – Coordinator of Gumilebirra Women’s Clinic (Biluru Butji Binnilutlum Medical Service, 1998p.39).

Women also express concern that the relationship of the new baby with its siblings and father would be better if they were nearby for the birth, citing concerns that siblings can

get jealous when their mother has been away from home and returns with a new baby (Kildea, 1999).

2.3.12 Continuity of Midwifery Care in the Remote Setting

The World Health Organisation states that a midwife is the most appropriate and cost effective person to provide care during normal pregnancy and birth (WHO, 1996). Australian studies have shown that reorganising services to provide continuity of care can be successfully achieved and produce cost savings (C. S. Homer, D. V. Matha et al., 2001; Kenny et al., 1994; Rowley et al., 1995). A randomised controlled trial by Homer et al (2001) undertook a comparison of hospital based standard care with community-based continuity of care provided collaboratively by midwives and obstetricians. In this study women receiving community based continuity of care had: significantly reduced caesarean section rates; lower numbers of admissions to the neonatal nursery; a higher perceived 'quality' of antenatal care with less waiting time; and, the mean cost of providing care was significantly lower: \$2,579 verses \$3,483 per woman (C. S. Homer, D. V. Matha et al., 2001; C. S. E. Homer, 2000; C. S. E. Homer et al., 2001).

There are currently some areas in urban and rural Australia, that are providing, or planning to provide, innovative continuity of care models (C. S. Homer, P. Brodie et al., 2001). Continuity of care and provision of birthing services in the remote setting does not exist currently in Australia. However, it can be found in the international context where financial savings, psychosocial benefits and improved clinical outcomes with lower intervention and transfer rates have all been demonstrated (M. Chamberlain, 1997; M Chamberlain & Barclay, 2000; Daviss, 1997; Leeman & Leeman, 2002; Rawlings, 2000; Tookalak, 1998). This will be described later in this chapter under the heading 'International Comparisons'. The author believes that the advantages described in both national urban and international rural and remote studies could occur here in Australia.

The concept of a social model of childbirth is not new and exists in many countries (Walsh & Newburn, 2002). Under a social 'women focused' model, women are cared for holistically and social support throughout the pregnancy, birth and post natal period is valued equally with clinical care. In this model, women are cared for locally if at all possible and continuity of midwifery care, community based care, one to one care in

labour, access to social networks and family are the focus rather than the screening, risk assessment, technology and clinical focus that typifies medicalised maternity care today (Walsh & Newburn, 2002). The medicalisation of childbirth is seeing rising levels of intervention, specialisation, operations and complications and as Johanson et al (Johanson et al., 2002) ask: has it gone too far?

Providing maternity services within these social models is possible for both low and high risk women. In fact, evidence suggests outcomes for high risk women, including their levels of worry, improve when they receive continuity of care (Farrell et al., 2002; C. S. Homer et al., 2002; Rowley et al., 1995). In the remote setting, these models may have far reaching effects for the community as was found in Canadian Inuit communities discussed later in this chapter. Progress towards birthing in remote areas would need political commitment, strong leadership, collaboration between practitioners, consumer involvement, ongoing management commitment and appropriate resources. How these factors came together to provide successful remote area maternity services in the international setting is explained presently. This is preceded by an exploration of risk and safety in childbirth.

2.4 Risk and Safety in Childbirth

2.4.1 Place of Birth

For many years there has been extensive discussion around the safest place to give birth. Recommendations from the 'Changing Childbirth' report in the UK are important to the Australian context:

"Safety is not an absolute concept. It is part of a greater picture encompassing all aspects of health and wellbeing. We believe that safety, encompassing as it does the emotional and physical well-being of the mother and baby, must remain the foundation of good maternity care" (Department of Health Expert Maternity Group, 1993p.10)

Historical evidence suggests that maternal mortality was lowest for homebirths attended by trained midwives and very high in countries where birth was attended by physicians and occurred in hospitals (Loudon, 2000). A recent meta-analysis reported in the Cochrane Library, and other studies, suggest there is no evidence that birth for low risk women is safer in the hospital setting when compared to birth at home attended by skilled

practitioners with appropriate referral mechanisms (Bastian et al., 1998; Campbell & Macfarlane, 1994; Olsen, 1997; Olsen & Jewell, 1998; Wieggers et al., 1996).

2.4.2 Home Birth in Australia

A small minority of women (0.3%) in Australia elect to birth in the home (AIHW, 2003a). Services have traditionally been provided in the private sector by independent midwives and a small number of general practitioners. Availability of homebirths services was significantly affected by the widespread withdrawal of available professional indemnity protection in 2001 (Maternity Coalition et al., 2002). Whilst medical staff received assistance in insurance protection by the federal government, independent midwives did not (Maternity Coalition et al., 2002). This resulted in many independent midwives withdrawing their services and increasing numbers of women giving birth at home without professional assistance (Maternity Coalition et al., 2002). The small number of independent midwives who have continued to provide homebirths services, have been forced to do so without professional indemnity cover (Maternity Coalition et al., 2002). Recent changes in the Health Care Liability Act recommend all health professions have appropriate liability cover that has led to further withdrawal of independent midwifery services (Maternity Coalition et al., 2002). Consumers have responded by demanding access to appropriately indemnified midwives for homebirth (Maternity Coalition et al., 2002). A coalition of consumers, midwifery and other organisations, have released the National Maternity Action Plan, which is calling for increased access to publicly funded community based midwifery services (Maternity Coalition et al., 2002).

Lack of safe, available homebirths services has led to increased pressure on health departments across the country to provide publicly funded homebirth services. Currently in Australia, there are only two sectors that offer publicly funded homebirth services, one in South Australia (Nixon et al., 2003) and the other in Western Australia (Thorogood et al., 2003). The NT Department of Health and Community Services announced in November 2000 that publicly funded homebirth would be introduced. A fee of \$1,500 is being charged to women electing to access the NT service that is restricted to the boundaries of Alice Springs and Darwin (NT DHCS, 2005).

2.4.3 Safety of Small Hospitals

Several studies have examined the safety of small hospitals with regard to maternal and perinatal outcomes. A recent Australian study challenges the view that small hospitals are not safe places of women with uncomplicated pregnancies to give birth (Tracy et al., 2005In Press). This research examined data from 750,491 Australian women who gave birth over the three year period 1999-2001, specifically examining data for the 47% who were 'low risk' (Tracy et al., 2005In Press). The study found neonatal death and stillbirth were less likely outside tertiary centres for all women, with a statistically significant decrease for multiparous women birthing in hospitals with 100-500 births per year (Tracy et al., 2005In Press). Low risk women birthing in hospitals with less than 100 births per annum had less inductions of labour, intrathecal analgesia, instrumental or caesarean births and neonatal nursery admissions (Tracy et al., 2005In Press). Another, less recent Australian study in the state of Victoria study found significantly better perinatal mortality in smaller hospitals for all but the lowest birth weight category, suggesting that smaller hospitals were able to detect and refer when necessary (Lumley, 1988). This study concluded that it was safe to continue offering maternity service in these small hospitals but recommended further research into this issue (Lumley, 1988).

Another study compared maternity outcomes for women from rural NSW with all births in NSW and showed infants from rural areas were less likely to be of low birth weight, preterm or hypoxic (Wollard & Hays, 1993). Additionally, there were fewer inductions, caesarean sections, and stillbirths in the rural units, which supported the argument that women were being managed appropriately and referred when necessary (Wollard & Hays, 1993). Some of these units were not equipped to perform caesarean sections and although the numbers of births in these units was small (10% of the births, n=606) there was no difference in neonatal deaths, stillbirths or perinatal deaths. However, the hospitals, which were not accredited for births, did not have such good outcomes, but these numbers were very small (n=38). This particular point is worthy of further discussion. There is no information in this paper regarding the care these women received. Evidence would suggest that the women who birth at unaccredited hospitals are more likely to be Indigenous and less likely to have accessed Western antenatal care (Haertsch, 2000; NSW Health Department, 2003). Some women will present in strong labour when it is too late to be transferred, even if problems are detected, and one of the reasons often

given for this is because they do not want to travel from home for birth (Fitzpatrick, 1993; Haertsch, 2000; Kildea, 1999). Drawing on international evidence, which is presented under 'International Comparisons' below, it is possible to argue that providing maternity services in these smaller units would improve the outcomes for these particular women. There is clearly a need for further research in this area in Australia.

2.4.4 Safety of Larger Hospitals

When discussing risk it is also necessary to look at what 'safety' means in the context of birth in Australian hospitals in general. Australia has one of the highest caesarean section rates in the developed world and intervention in labour is high by international standards (Senate Community Affairs References Committee, 1999). The World Health Organisation (WHO) recommends a caesarean section rate of 5-15% in the developed world (AbouZahr & Wardlaw, 2001). Recent Australian figures available show the rate was 23.3% in 2000 raising to 27% in 2002 (AIHW, 2003a; Laws & Sullivan, 2004). Caesarean births are not without risks and some studies suggest the death rate for women having an elective caesarean birth to be two to eight times higher than that for vaginal births (Bewley & Cockburn, 2002). Additionally, there are increasing reports of higher levels of maternal morbidity, decreased maternal satisfaction and postnatal depression associated with operative births, with subsequent births showing increased rates of ectopic pregnancy, haemorrhage and hysterectomy (Bewley & Cockburn, 2002; Fisher et al., 1997). It is possible that the lack of culturally safe models of care, social support in labour and continuity of midwifery care all lead to hospitals being 'risky' places for some women to give birth.

2.5 International Comparisons

International comparisons of the health of Indigenous peoples are difficult as there are differences in data collection methods. However some broad points can be made. The life expectancy of the Indigenous peoples of New Zealand, America and Canada is greater than that seen in Australia (Ring & Firman, 1998). Unlike Australia, all three of these countries have seen marked improvements since the 1970s (Ring & Firman, 1998).

2.5.1 Canada

There are striking similarities between the Indigenous populations of Canada and Australia. Both populations have a history of colonisation, assimilation, loss of land and rapidly changing cultures, especially over the last 50-100 years (Jasen, 1997; Johnston, 1991a; Smylie, 2001). This is particularly evident when comparing the childbirth policies and practices for those who live in remote areas. However the similarities have not continued to this day. Many of the Indigenous Canadian populations have regained control of their land, in some instances their economies, and in some places birthing (Jasen, 1997; Kaufert & O'Neil, 1990; Morewood-Northrop, 2000; O'Neil & Kaufert, 1995; Tookalak, 1998). Research from Northern Canada has shown that birthing facilities in very remote areas can offer a safe and viable alternative to routine transfer of women to regional centres. This will be outlined below following an overview of Canada's Indigenous populations.

Canada is a vast continent with a population of 30,007,094 (Statistics Canada, 2002). The proportion of Aboriginal peoples in Canada (2.8%) is higher than it is in Australia (2.2%). In the 1996 Canadian census 2.8% of the population self identified as Aboriginal with 3.9% stating they have Aboriginal ancestry, though like Australia, these figures could be an underestimate (Smylie, 2001). There are 50 diverse Aboriginal population groups in Canada including the First Nations (Native or Indian), the Inuit (Eskimo) and the Metis (Smylie, 2001). It is the Inuit population (41,085) that is discussed below.

Like Aboriginal Australians, the Inuit led a hunter-gatherer lifestyle (Smylie, 2001). It is thought they first came in contact with Europeans in the 16th century (Smylie, 2001). In the 19th and 20th centuries missionaries and explorers travelled north, bringing with them new diseases with which the Inuit had no previous contact (Smylie, 2001). This led to very large disease outbreaks particularly of tuberculosis (Smylie, 2001). This is similar to what occurred in Australia when the early explorers first had contact with the Australian Aboriginal (Johnston, 1991b; Smylie, 2001). Similar to Australia where Aboriginal people with leprosy were removed from their communities for many years (Broome, 2002), the Canadian Government removed these people from their families and communities to be cared for in the South (Smylie, 2001). Some were away for many years

at a time, losing contact with their families, language and culture, while others never returned (Kaufert & O'Neil, 1993).

By the 1950s the Inuit were moved to permanent settlements and started to lose their hunter-gatherer lifestyle. Over the next 40 years increasing political activity occurred with the Inuit fighting for control of their own land. In 1982 there was a vote to divide the North West Territories (NWT) and create Nunavut (Inuit owned and controlled land). It took a further 10 years of negotiating but in 1992 the boundaries of Nunavut were established. In 1993 the *Nunavut Act* was passed by Parliament and in 1999 the first election for the Nunavut legislative assembly was held (Smylie, 2001; Soublière, 2001). Descriptions on the Nunavut website suggest that times have changed for the Inuit and today they have takeaway food, rifles, snowmobiles, wooden houses and formal education with an unemployment rate of 80% (Soublière, 2001). They state that Inuit struggle with their identity and the connection between Inuit and the land has weakened, 'the Inuit's latest challenge in a land that has always been challenging' (Soublière, 2001). If we replaced the snowmobiles with the four-wheel drive, the above description could apply to many Australian Aboriginals.

The Canadian Aboriginal Health Issues Committee of the Society of Obstetricians and Gynaecologists is an organisation that was founded in 1994 (Smylie, 2001). In 2001 it released a policy statement as 'A Guide for Healthcare Professionals Working with Aboriginal Peoples' (Smylie, 2001). This guide contains the social, cultural and historical context of Aboriginal health across Canada, and sets out comprehensive recommendations for improvement that could easily be adapted to the Australian situation. Key points include:

- the importance of health practitioners understanding the history and sociocultural context of the Aboriginal communities along with the impact of colonisation,
- the need for holistic health services to be provided as close to home is possible,
- the importance of self-determination and mutual respect,
- the importance of culturally appropriate care and interpreter services,
- respect and integration of traditional beliefs and medicine, and,

- the importance of community directed health programs, services, participatory health research and education

(Smylie, 2001).

Inuit Birthing Practices

Historically, there does not seem to have been one single model of birthing for Inuit peoples (O'Neil & Kaufert, 1990). Consultations with older Inuit women suggest that there were many models of birthing practices depending on the circumstances surrounding the birth and the season (O'Neil & Kaufert, 1990). Some women had other women present, some had their husbands present and others birthed alone (O'Neil & Kaufert, 1990). There were beliefs about particular foods that should be avoided, herbs and berries that could be used in pregnancy and postnatally, and at times, shamans would be required to intervene if things were not going as expected (Morewood-Northrop, 2000; O'Neil & Kaufert, 1990). Throughout the 1960s and 1970s, many of the Inuit women were encouraged to attend the local health centres for birth where they were attended by non-Inuit nurse-midwives (O'Neil & Kaufert, 1990). Midwifery was illegal in Canada until 1994 where most of the nursing stations were staffed by nurse-midwives who had been recruited from the United Kingdom and Europe (Jasen, 1997). With the introduction of legislation in Ontario an exception clause admitted Indigenous midwives to work on First Nations lands without undergoing formal training or registration (Couchie & Nabigon, 1997). This ultimately resulted in an Indigenous training program being offered on the land at Six Nations (Ontario American border), (Couchie & Nabigon, 1997).

During the 1970s, the Canadian Government became concerned about the high mortality rates and potential for better outcomes if birth was moved from the home to the health centres. This progressed to women being flown south for hospital births that were thought to be safer (Daviss, 1997; O'Neil & Kaufert, 1990). Many believed that 'the need for obstetric care away from the home community was not fully appreciated by the Inuit' (Lessard & Kinloch, 1987). However, some of the factors thought to be contributing to the high mortality rates included poor housing, nutrition and hygiene together with the introduction of diseases such as tuberculosis, high levels of anaemia and loss of viable economies, were not able to be prevented by an evacuation policy (Jasen, 1997; Stonier, 1990). Like much of the documentation from Australian Aboriginal women (B. Carter et

al., 1987; Fitzpatrick, 1993; Kildea, 1999), the Inuit women describe loneliness, feelings of alienation, separation from their families and 'out-of-territory' birth certificates as being major concerns when birthing in southern hospitals (O'Neil & Kaufert, 1990). Both Indigenous populations lost control of their birthing experience as women were relocated to regional centres for childbirth, often many miles away by plane.

The Innulitsivik Maternity

In 1985 in the northern town of Puvirnituk (Povungnituk), in Northern Quebec, community members started to discuss the possibility of reclaiming birthing (Daviss, 1997). Local activism from the Inuit women's association, Pauktuutit, support from multidisciplinary health practitioners and political pressure led to the reestablishment of birthing services in the town (Houd et al., 2003). The birthing centre in Puvirnituk, '*The Innulitsivik Maternity*' services seven remote villages, with populations ranging from 250 to 1,200 (approximately 5,000 in total) (Rawlings, 2000). The local community choose women to become midwives and the training is provided on-site without the requirement to leave family and friends for further education (Rawlings, 2000). Nellie Tookalak has been a community midwife since commencing her training in 1991. When talking about the return of birthing to their community she particularly mentions the regaining of dignity, and self-esteem, and the fact that once again, the community trusts their own people (Tookalak, 1998). There have been seven midwives trained since the program began (Houd et al., 2003). Puvirnituk is four hours by plane to the nearest obstetric services and the perinatal mortality rate has fallen (8.6/1,000 to 3.6/1,000), based on the almost 1,500 births that have occurred since the birthing centre opened (Tookalak, 1998). Although the statistics are based on small numbers they are still encouraging. An average of 120 births occur each year, though this figure was higher before a neighbouring community established their own maternity centre (Rawlings, 2000). The number of women having an induction of labour has halved; episiotomies have decreased from 49% to 3.5%; the transfer rate for births has decreased from 91% to 9.4%; they have a 2.4% caesarean section rate overall (compared to the Quebec rate of 26.8%); and the ultrasound rate has decreased from 142% to 9% (Rawlings, 2000). Furthermore, they have found women having their first babies do not appear to have any greater risks than women having subsequent births.

One of the most important components of the Innulitsivik Maternity is highlighted by the quote below:

... the cultural aspect of birth is not a mere 'nicety' that can be appended to the care plan once all other acute obstetrical techniques are in place. It is essential to perinatal health... it is from within the culture and community that real positive changes in the health of the people begins (Stonier, 1990p.71).

Reasons cited for the success of the program include the education of the Inuit midwives and the multidisciplinary approach, evidenced in the weekly perinatal committee meetings where each woman who reaches 32 weeks gestation is discussed with recommendations made (Houd et al., 2003).

Inukjuak

Inukjuak, another remote community of 1,600 people, commenced training of midwives in 1993 and on-site birthing in 1998 (Houd et al., 2003). The student midwives offer caseload care with backup usually provided by a senior non-Inuit midwife who is also involved in their education (Houd et al., 2003). Increasing numbers of women are choosing to stay and give birth at the Inukjuak Maternity (44% in 1998 to 79% in 2002). This is due to personal choice and a change to policy in 1999 to allow primigravidas to stay for birth in the community (Houd et al., 2003). The main reasons cited for transfer were post partum haemorrhage and preterm birth (Houd et al., 2003). A five year retrospective survey found that 182 women from Inukjuak gave birth, 72.5% locally with 4.5% of women medically evacuated (Houd et al., 2003). Overall, 3.3% of births were preterm, the intervention rate was very low (caesarean 0.5% and vacuum 0.7%) and the perinatal mortality rate was 5/1,000 for all babies born by women from Inukjuak and 7/1,000 for all babies born in Inukjuak (due to one 29/40 precipitate birth at home) (Houd et al., 2003).

Nunavut

The west coast of Hudson Bay has eight communities in a radius of 225,000 square miles, one of these communities is called Rankin Inlet (Baskett, 1978). Each community has a population of 200 to 1,200 totaling 5,000. Until the 1950s the women birthed in their homes but following the establishment of the community health centre they were encouraged to birth there and be attended by nurse-midwives (Morewood-Northrop,

2000). As with other areas of the North, from the 1950s to the 1970s the Canadian Government encouraged women to fly south to the larger hospitals in a bid to decrease the high mortality rates (Morewood-Northrop, 2000). This had large economic, political and social ramifications for the families involved (Morewood-Northrop, 2000).

Dissatisfaction with this policy of flying out all pregnant women, concerns about land rights, babies having 'out of area' birth certificates, loss of traditional midwifery knowledge and community and political pressure led to a pilot birthing project for low risk women being conducted in the central arctic region of Rankin Inlet (M. Chamberlain, 1997; Morewood-Northrop, 2000). Another factor supporting the change process across the North appears to have been the open dialogue and debate around risk in childbirth (Kaufert & O'Neil, 1993). Who had the power to define risk, which risks were important and how risk was both constructed and manipulated were all openly debated (Kaufert & O'Neil, 1993).

A pilot study compared Rankin Inlet, which established a birthing centre for Inuit women, with another community, which followed the current policy of flying women to regional centres for birth (M. Chamberlain, 1997). The study examined the safety of births, the costs and the psychological needs of the families of 100 women over a 12-month period (1995-96). The results found the women had greater choice, less emotional and economic stress, better support in labour and there was more community involvement in childbirth issues (M. Chamberlain, 1997). A simple cost analysis showed 70-97% cost recovery, and projected greater cost savings if an ultrasound machine was available on site (M. Chamberlain, 1997). The study also saw an increase in the involvement of traditional midwifery expertise in the care of the pregnant women (Morewood-Northrop, 2000). During the period of the study, there were seven emergencies that occurred in the birthing centre, including premature labour, twins born at 29 weeks gestation, partial placenta accreta and maternal complications needing transfer (M. Chamberlain, 1997). The data showed these were unavoidable and all were managed efficiently and effectively (M. Chamberlain, 1997). The overall conclusions of this study suggested that birthing in isolated areas, if managed by experienced midwives, could be a safe, culturally sensitive, satisfactory event for the women, their families and the midwives (M. Chamberlain, 1997). These Inuit birthing models are now seen to be so successful that universities are

sending Bachelor of Midwifery students for clinical placements (Van Wagner, V., Canadian Midwife, Personal Communication, 2.05.03).

Canadian health professionals have also debated the safety of small hospitals as, like Australia, they have a vast country with many rural and remote regions. In 2000 the British Columbia Reproductive Care Program, whose goal was to optimise maternal, fetal and infant care, responded to requests to determine what level of maternity service was appropriate if there was no surgical service immediately available (British Columbia Reproductive Care Program, 2000). The peak organisations involved in maternity services were represented at a three-day consensus symposium to debate this issue that would effect many rural and remote communities (British Columbia Reproductive Care Program, 2000). The recommendations were comprehensive, and based on the evidence of several position papers. They offer a guide that could be adapted in many other rural and remote regions across the world. The overview suggests:

“Rural hospitals should, within a regionalized, integrated risk management system, offer maternity care to a low-risk population. The evidence suggests that a local, rural maternity service, even if limited in scope, offers better outcomes than no maternity service. While anaesthetic and surgical services are desirable, the available evidence suggests that good outcomes can be sustained without local access to operative delivery” (British Columbia Reproductive Care Program, 2000p.2).

Interestingly, research with non-urban women in Canada, has shown they believe they have little power or ability to make their voices heard in the planning and delivery of maternity services (Benoit et al., 2002).

2.5.2 New Zealand

In New Zealand 19.5% of the 53,037 births are to Maori women and 10.8% to Pacific peoples (New Zealand Health Information Service, 2004). While impossible to unravel ‘remoteness’ as a variable in the data, outcomes for New Zealand’s Maori and Pacific population, are significantly better than outcomes for the Australian Indigenous population as can be seen in the table below. Whilst there are still differences in outcomes for the Maori and Pacific peoples (perinatal mortality rate of 10.2/1000 and 14.8/1000 respectively) compared to non-Indigenous New Zealanders (9.9/1000), these differences are not as large as they are in Australia (New Zealand Health Information Service, 2004;

Trewin & Madden, 2003). The maternal mortality rate for Aboriginal women in Australia is more than three times the total Australian rate and the New Zealand rate, as shown below in Table One below. However the figures involve small numbers from both countries and must be interpreted with caution (New Zealand Health Information Service, 2004; Slayter et al., 2004).

Table 1. Maternal mortality rate for women in Australia and New Zealand

| | Australia | | | | New Zealand | | | |
|--------------------------------|-----------------------|-------------------------|---------------------------|------------------|-------------------|--------------------|----------------|-------------------|
| | Australian Indigenous | Torres Strait Islander+ | Non-Indigenous Australian | Total Australian | Maori | Pacific population | Non-Indigenous | Total |
| Perinatal mortality per 1,000 | 20.1* | 18.6* | 9.6* | 8.3 [^] | 10.2 [`] | 14.8 [`] | 9.9 | 10.4 [`] |
| Maternal mortality per 100,000 | 23.5~ | N/A | 7.2~ | 8.2~ | N/A | N/A | N/A | 7.1 [`] |

+ QLD data; * 1998-2000 (Trewin and Madden 2003); [^] 2000 (AIHW 2003a); ~1997-99 (Slayter, Sullivan et al. 2004); [`] (New Zealand Health Information Service 2004)

Another aspect of maternity services that differs between Australia and New Zealand, is that New Zealand has seen homebirth rates triple in the last 10 years and births in primary facilities increase from 13% in 2000 to 15.2% in 2002 (Hendry, C., New Zealand Midwife, Personal Communication 3.9.03). Studies in New Zealand suggest that referral practices in smaller hospitals are able to detect and refer women at risk, and their outcomes for low risk women in smaller hospitals are equal to, or better than those from the larger institutions (Matheson & Borman, 2001; Rosenblatt et al., 1985). Importantly, Rosenblatt and colleagues (1985) suggests there could be an advantage for normal birth weight babies to be born in smaller units (Rosenblatt et al., 1985).

In 1990, the New Zealand government reorganised funding for maternity care enabling midwives to offer maternity care within a publicly funded system. In 2000, the Health Funding Authority released a document entitled '*Maternity Services: A Reference Document*' that outlines many aspects of maternity care in New Zealand and the strategic direction for their maternity services (Health Funding Authority, 2000). It describes the history of maternity services in New Zealand and examines issues around funding, quality, access, and Maori Health (Health Funding Authority, 2000). The document states that they believe approximately 50% of women will need referral to secondary maternity services for birth but for the remainder of women, the evidence suggests that they will

have better outcomes if they do not have access to surgical interventions for birth (Health Funding Authority, 2000). This document specifically states that the infrequent crises that can occur in childbirth are not reason enough to close rural services. Instead they recommend a lead maternity carer, guidelines for referral, careful risk factor analysis, a skilled workforce with additional skills for managing unpredictable emergencies in the remote areas and ensuring adequate transport if needed (Health Funding Authority, 2000). These decisions are based on international evidence that suggests the average time from onset of a complication to maternal death is at least 12 hours, which is sufficient time for referral and transfer (WHO et al., 1997). The main case where this varies is that of postpartum haemorrhage, which can cause death within an hour, but which responds well to emergency care in the primary setting (WHO et al., 1997). Whilst experienced rural and remote maternity service providers will be able to identify rare emergencies that may have had a better outcome in a larger centre, the benefits of providing care in the rural and remote areas appear to outweigh these rare occurrences (Fitzpatrick, 1993; Kaufert & O'Neil, 1990; Kildea, 1999; O'Neil & Kaufert, 1990).

2.5.3 North America

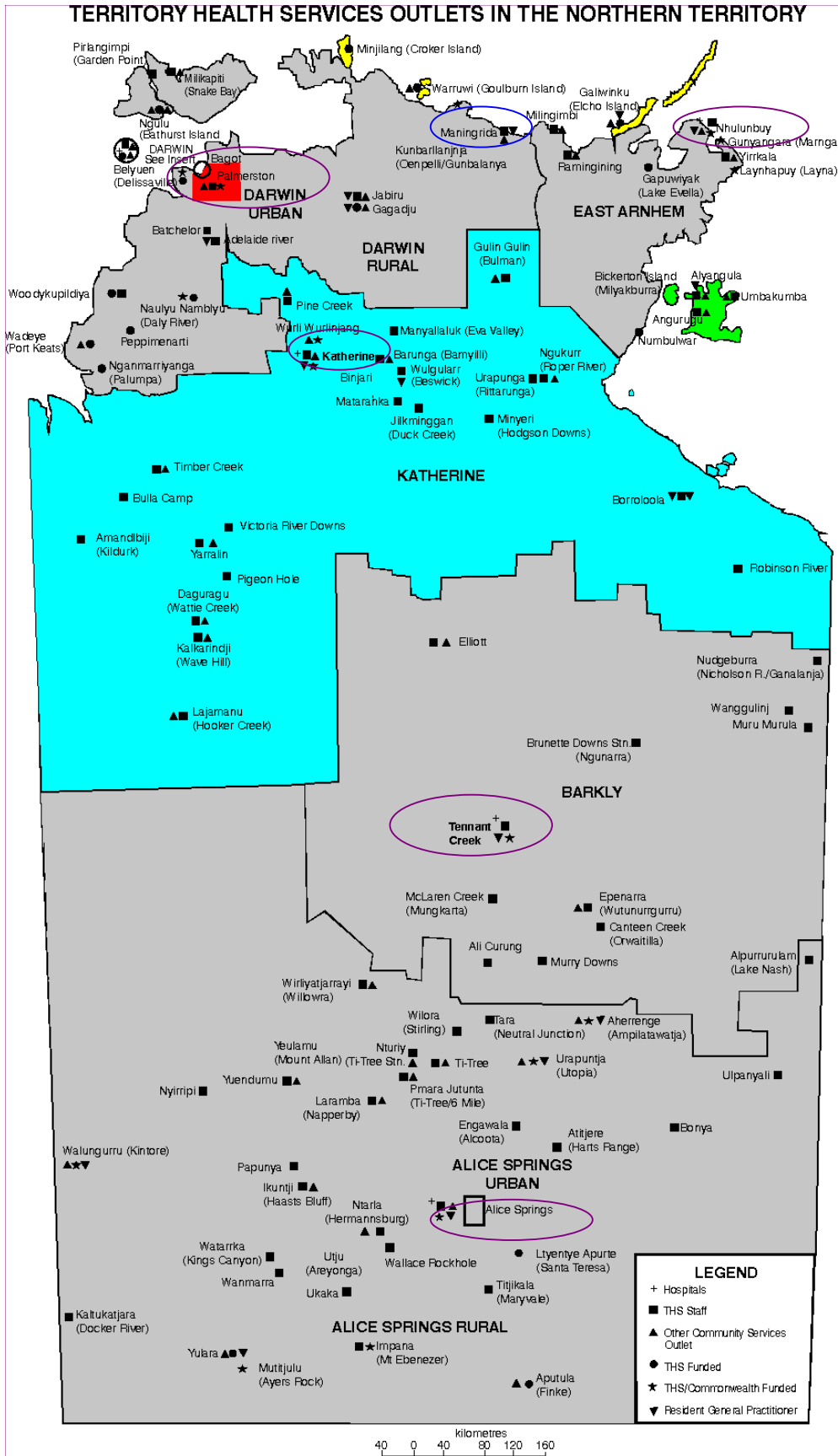
In North America, birthing services have been provided in rural and remote regions for the Navaho Indians for many years (Leeman & Leeman, 2002). A recent historical cohort study performed over a five-year period in America produced a clear argument for providing birthing services in rural areas that do not have on site theatre facilities (Leeman & Leeman, 2002). That the research studies a service for Native Americans makes it relevant to the remote areas of Australia. There were 1,132 women in the study population and the health outcomes for mothers and babies, were equivalent to or better than the national health outcomes despite a higher risk population (Leeman & Leeman, 2002). The results show a significantly lower caesarean section rate (7.3% vs. 20.7%), operative vaginal birth rate (5.4% vs. 9.4%), induction rate (13.8% vs. 16.9%) and augmentation rate (7.7% vs. 16.9%) when compared to the national rates (Leeman & Leeman, 2002). This study concluded that no women or baby had adverse outcomes as a result of not having on-site caesarean facilities; and, guidelines to allow women the option of birthing in rural units should be developed (Leeman & Leeman, 2002).

2.6 Maternity Services in the Northern Territory

The NT is sparsely populated with less than 1% of the Australian population (196,300) residing across 674 discrete communities and 1,349,129 square kilometers (17% of Australia) (Banscott Health Consulting Pty Ltd, 2003; Commonwealth of Australia, 2002; DCITA, 2002). Twenty nine percent of the population is Aboriginal or Torres Strait Islander and 71% of these live in the remote areas (Banscott Health Consulting Pty Ltd, 2003). Thirty eight percent of the births in the NT are to Aboriginal or Torres Strait Islander women (Laws & Sullivan, 2004).

Providing health services in such conditions is challenging and it is important to make the most of limited resources. Tertiary maternity services are located in Darwin, in the 'Top End' of the NT, and Alice Springs in 'The Centre'. Smaller hospitals, which provide services for normal births, and at times have facilities to perform caesarean sections, (dependent on staffing levels), can be found in Nhulunbuy, Katherine, and Tennant Creek. In the remaining health centres, seen in the map below, high levels of staff turnover (2-300%) and severe staff shortages influence service provision (Banscott Health Consulting Pty Ltd, 2003; K. Kelly, 2004). Many communities will not have resident midwives or doctors; relying on nurses, Aboriginal Health Workers and 'fly in fly out' services to provide maternity care. Figure 2 below provides a map of the NT with the major centres circled in pink and Maningrida in blue.

Figure 2. Northern Territory Health Services (DHAC)



2.6.1 Maternal and Infant Health in the NT

As already described, Indigenous women in Australia have higher rates of complications in pregnancy than non-Indigenous women (d'Espaignet et al., 1997). Research in the NT has highlighted specific clinical aspects of pregnancy care that could be improved. These include appropriate screening, treatment and follow-up of genital and urinary tract infections, anaemia and gestational diabetes (C. Evans, 2001; Hunt, 2002). Untreated genital and urinary tract infections are known to cause premature birth and consequent low birth weight (Brocklehurst, 2003; Smaill, 2003). Recommendations to target smoking in pregnancy, also known to cause low birth weight, have been made (Hunt, 2002). The high rates of hospitalisation of preterm and low birth weight neonates' results in unacceptable social and financial costs to families and health services, and long-term outcomes on the families can be significant (Gennaro, 1990). To address low birth weight it is necessary to decrease the incidence of preventable premature birth. One-way of doing this is to identify, treat and therefore reduce the incidence of infections and smoking in pregnancy.

Remote parts of the NT experience high rates of infant mortality and increased morbidity, in particular, respiratory and gastroenteritis infections, skin and ear disease (d'Espaignet et al., 1998). Malnutrition is a major contributor to the high burden of disease with 15-30% of remote Aboriginal children under five in the Top End being underweight compared to 3% of children Australia wide (D. Smith et al., 2001). Community oriented and led nutritional change in the first year of life could improve many of these outcomes. Research undertaken in the NT showed the Aboriginal community members and health service providers had significantly different understandings of nutrition (D. Smith et al., 2001). These include understandings of child growth, impact of illness on child growth and the time to introduce solid foods (D. Smith et al., 2001). Recommendations from this research suggest remote practitioners need to learn about the cultural world views of Aboriginal Australians that effect child rearing and nutrition in the first year of life (D. Smith et al., 2001). Once again this highlights the need for practitioners to have appropriate cultural preparation when working in this environment.

The Strong Women, Strong Babies, Strong Culture (SWSBSC) program was commenced in 1993 with the goal of improving Aboriginal birth weights in the Top End of the NT (D

Mackerras, 1998). The program, reliant on Aboriginal leadership, employed and trained community women to increase attendance for antenatal care, and introduced nutritional assessment and monitoring (D. Mackerras, 2001). Evaluation has shown that communities where the program has been established have an increase in average birth weight when compared to communities without the SWSBSC program (D. Mackerras, 2001). The program has not involved the practitioners directly; however, anecdotal evidence suggests that where the Strong Women Workers are working closely with the health centre staff, the health gains are greater than where they work outside the health system. Following a successful pilot study in three communities the program was expanded to a total of 14 communities with further evaluations planned (D. Mackerras, 2001).

2.6.2 Place of Birth

The proportion of women in the NT having babies in hospital increased from 27% in 1965 to 75% in 1979 (Holleley & Preston, 1984). Personal experience, and discussions with other health care providers, suggests that it was the policy of the Health Department, endorsed and enforced by the nurses on the communities, rather than the wishes of the women, that lead to the increased births in regional centres. The 1980 the NT Health Department Annual Report stated that it encouraged women to birth in hospital, particularly if there were any abnormalities present (Northern Territory Department of Health, 1980). At present in the NT there is no written government policy on where births should occur and in the absence of policy documents staff are encouraged to follow the Women's Business Protocol Manual (Congress Alukura and Nganampa Health Council Inc., 1999). The manual encourages health practitioners to refer women to birth in hospital and the percentage of women who gave birth in hospital in the NT has increased to 97.8% in 2002 (Laws & Sullivan, 2004). Although births in hospitals have increased, consultations with women (discussed below) suggest this is not their preferred option, and there were still 81 births in either the home or remote health centre in 2002 (Laws & Sullivan, 2004). Current plans for the introduction of homebirth services in the NT have not addressed the concerns of Aboriginal women, particularly those living in remote areas.

2.6.3 *The Grandmother's Law*

In the mid 1980s in Central Australia, a project was undertaken to consult with Aboriginal women to discuss their beliefs, practices and preferences around childbirth business, also termed 'borning'. Several hundred women from over 30,000 square kilometres, 60 different communities and 11 language groups were involved (B. Carter et al., 1987). A comprehensive document outlining: cultural beliefs and traditions around borning, examples of how current obstetrical practices are almost diametrically opposed to traditional practices and a list of recommendations to improve birthing services was one of the outcomes of this project. This document is titled *Borning: Pmere Laltyeke Anwerne Ampe Mpwaretyeke (we want to have babies in our traditional country), Congress Alukura by the Grandmothers Law* (B. Carter et al., 1987). The title of this document is a quote that has been stated many times by Aboriginal women in the NT.

Traditionally, Aboriginal women gave birth in the place where they were born, 'on country' with other women by their side (Callaghan, 2001; B. Carter et al., 1987). Young women learnt about 'borning' and the 'Grandmothers Law' from the older women during their first labour (B. Carter et al., 1987). Aboriginal women believe birthing is 'Women's Business' and intricately related to 'Aboriginal Law' and the 'Dreamtime' (B. Carter et al., 1987). The dreamtime explains creation and many of the rules and symbols are expressed in the myths and stories that are passed from generation to generation (Eckermann, 1995). The process of 'borning' is where the spirit of the land and the people come together, and the place where a person is born will then establish their relationship to the land (B. Carter et al., 1987). The spiritual connection to the land includes a responsibility to the land and an individual's health will be influenced by their ability to fulfill their obligations to this land and their society (Morgan et al., 1997).

This consultation led to the establishment of the Alukura Centre in Alice Springs, which currently provides women's health services to women from the Alice Springs urban and remote communities, incorporating antenatal and postnatal care.

2.6.4 *Alukura*

When Alukura was established, one of the goals was to provide birthing services that incorporated Aboriginal culture, Law and languages (E. Carter et al., 2004). The first birth

occurred in September 1993 however there have not been many since, 13 in 1994 – 95; 3 in 1995-97 and none since (Biluru Butji Binnilutlum Medical Service, 1998; E. Carter et al., 2004). The Alukura Centre performed a review of its services in 1998 and found there had been a 40% increase in client visits from 1995 to 1998, with approximately 30 % of these visits for antenatal or postnatal care or complications (E. Carter et al., 2004). There has been a corresponding improvement in the average weight of babies born to Aboriginal mothers in the Alice Springs urban area and an increase from 21% to 33% of women commencing antenatal care in the first trimester (E. Carter et al., 2004). Though these statistics cover a greater timeframe (1986 – 1995), the review showed that up to 98% of urban Aboriginal women from Alice Springs (119/122) received at least some, if not all, antenatal care at Alukura and it is possible that this care contributed to these improvements (E. Carter et al., 2004).

The review included interviews, group discussions and women's meetings and highlighted some of the reasons why birthing is not occurring on site (E. Carter et al., 2004). They suggest Alukura has never been appropriately funded to provide 24 hour service inclusive of maternity service providers and practical support such as food and laundry facilities (E. Carter et al., 2004). Additional concerns included the distance from town, family and shopping; the fact that younger women may want to bring their partners, which in accordance with the Grandmothers Law is not allowed at Alukura; and, that the hospital is perceived to be a safe place for birthing (E. Carter et al., 2004). The midwives working at Alukura can now offer continuity of care with a memorandum of understanding giving them visiting rights at the local hospital, and Alukura is planning to reintroduce birthing services in the future (E. Carter et al., 2004). It is possible that providing caseload midwifery, with midwives, AHWs and grandmothers working in small teams⁹ rather than providing 24-hour cover, would mean that fewer staff would need to be employed. One of the most interesting findings in the review was the support from other health care providers, many of whom had initially opposed the Alukura as being a duplication of services and potentially harmful to mothers and babies (The Aboriginal and Torres Strait Islander Research Agenda Working Group of the NHMRC,

⁹ Where each woman is allocated to a team who provide continuity of care to her throughout the pregnancy, birth and postnatal period.

2002). Perhaps the same response might occur if birthing services were established in the remote setting.

2.6.5 Review of Birthing Services

A Review of Birthing Services in the NT was conducted in the early nineties (NT DHCS, 1992). This review provided extensive recommendations for changing the provision of care for women in the NT and was endorsed by the Territory Health Service (THS) Executive in 1995.

Seven major issues underpinned the recommendations:

- the normality of birthing
- the right of women to make choices
- women's participation in and responsibility for the birth experience
- safety of mothers and babies
- continuity of care
- female caregivers accessible to all women
- provision of socially and culturally appropriate care

(NT DHCS, 1992p.5).

The report recommended major changes to the provision of care for Aboriginal women including:

R 4.5 THS develop and formalise a clear policy in relation to birthing outside hospitals including in rural and remote communities;

R 4.6 THS recognise and provide support to remote and rural area women who choose to birth in their community;

R 4.7 Two community birthing pilot programs are established in remote areas and are adequately resourced and evaluated to provide the basis for further expansion of community birthing;

R 5.2 Cross cultural education is provided for all care givers;

R 8.1 The skills and expertise of the traditional birth attendants are recognised and their role as an integral part of the midwifery team is promoted;

R 11.5 The role of the traditional birth attendants in antenatal care is recognised and promoted; and,

R 17.1 Alternative models of care that provide a choice for women from rural and remote areas ... are implemented as soon as possible

(NT DHCS, 1992pp.10-18).

Not one of the above recommendations has been implemented. The report also acknowledged that women from remote areas had not been adequately consulted and recommended this occur:

- R 3.4 Consultations take place with Aboriginal women in the Top End in relation to providing culturally appropriate birth centre care and the issues related to birthing in remote communities; and,
- R 4.4 A forum be established to enable Aboriginal women and health professionals to examine the issues related to birthing in rural and remote communities

(NT DHCS, 1992p.10).

Two consultations with Aboriginal women occurred in the Top End of the NT in 1998 as a result of these recommendations. One was the Women's Business Meeting held in Darwin, which had 134 registrations (Biluru Butji Binnilutlum Medical Service, 1998), and the other was a consultation with 442 people that occurred mostly in remote communities across the Top End (Kildea, 1999). Many of the concerns that had been raised in the 1992 review were still an issue as highlighted in the following quote:

"Women should have a choice to deliver in the community, not turned into victims where they try and hide from the staff and the plane...it is empowering to have proper choices" – East Arnhem Women (Kildea, 1999p.84).

Both consultations recommended that the resources and support be provided to enable women to birth 'on country', suggesting this could lead to improved birthing outcomes for Aboriginal women. The second report concluded by stating the following.

The primary advantages of providing a remote area birthing service would be:

- to provide a safer environment for those women who are already choosing to birth in their remote communities;
- to improve antenatal care, antenatal education and postnatal care, which would lead to improved health for both mothers and babies; and,
- to develop a service delivery model:
 - that has been requested by Aboriginal communities;
 - that has a primary health care focus;
 - in collaboration with community members;
 - that strengthens community capacity to be involved in decisions that effect their health; and,
 - that has been shown internationally to improve outcomes for birthing women

(Kildea, 1999).

2.6.6 The Risk Equation

When focusing on birth in remote areas of Australia there are many factors that must be included in the risk equation. Some of the issues that are important to Aboriginal women have already been identified. Medical risk factors in pregnancy (eg. hypertension, placenta previa) are easier to identify, and are often stated as the reason women must travel to the regional centres. However, it appears that health services either ignore, are unwilling to address, or feel unable to address, the social and emotional risks. Some women are performing their own personal risk assessment and deciding that the risks to their families and themselves associated with having to leave home for birth, are more of a concern than the obstetric risks. These women may not attend for Western antenatal care for fear of being identified as pregnant and being forced to leave town. Some will consent to travel to the regional centre but return to their communities before birth, (unbeknown to the service providers), and arrive at the health centre in strong labour when it is too late to be transferred out. Anecdotally, these women are labelled as ‘non-attenders’ or ‘non-compliant’ and may incur the disapproval of the service provider who feels they are being put in a vulnerable position. In fact, these women have often made a decision that suits their family, anticipating the negative reception they will receive when they present to the health service. This is not an ideal situation particularly for women with risk factors who would benefit from obstetric care.

Maternal Risk

In biomedical terms, maternal risk refers to the probability of experiencing serious morbidity or mortality as a result of pregnancy or childbirth (Family Care International and Safe Motherhood and Inter-Agency Group, 1998). Under this definition social or emotional risks are often not considered. Evidence suggests that approximately 15% of women will have some form of serious complication during pregnancy or childbirth (MacDonald & Starrs, 2002a). Suggested prevention and management for these situations include the presence of a skilled attendant at the birth and a supportive enabling environment for referral if necessary (MacDonald & Starrs, 2002a). Antenatal risk assessment and risk scoring has been used in many settings to identify women who are at risk of a poor outcome or of having an adverse event in pregnancy or childbirth (Enkin et al., 2000). The aim of risk scoring is that once identified, women with specific risk factors can have action plans developed to minimise the likelihood of an adverse event occurring. It has been generally assumed that risk assessments can provide a reasonable division between high and low risk women but they should be performed at regular intervals throughout the pregnancy (Fals-Borda, 2001). Risk scoring is intended to result in timely interventions that are life saving or a reduction in anxiety and interventions that are not warranted (Fals-Borda, 2001; NHMRC, 1996). The current international evidence suggests, however, that the risk approach has poor sensitivity and specificity and can cause costly diversion of the resources away from those who need them (Family Care International and Safe Motherhood and Inter-Agency Group, 1998).

One study performed in the North Eastern Australia trialed a pregnancy risk scoring system and reported on the difference between outcomes for the different scores that were recorded (M. Humphrey, 1995). There was a significant decrease in the perinatal mortality rate for this region over the course of the study (16.8/1,000 in 1991 to 7.8/1,000 in 1993) and the author suggested this is due to the change in care following the introduction of the risk scoring approach. However, women who had no Western antenatal care and those being transferred for tertiary level care, had been grouped with those who had no risk scoring assessment. This would unfairly bias the statistics in favour of the group of women who did have risk scoring and thus brings into question the claims of the author. The journal editors commented that the statistics show perinatal mortality rate for the women who did not have any risk scoring also fell from 10.5/1,000 to

5.3/1,000 from 1991 to 1993 (M. Humphrey, 1995). This research does not provide enough evidence either way for the use of a risk scoring approach. The improved perinatal mortality rate could be related to other factors such as the specialist outreach service, which commenced in the early 1990s to provide obstetric services in the remote areas of this region.

International studies have shown that both psychological and social factors can be important to pregnancy outcomes (Saxell, 2000). Perhaps this risk assessment tool would be more useful if it included questions that measured other risks such as:

- will you have support in labour from someone you know?
- are you able to take your other children with you to the regional centre for birth?
- will you have an interpreter with you during your interactions with the health system?
- where any questions are answered with a 'no' then a women with risk factors who may need additional support has been identified.

A consensus symposium held in British Columbia in 2000 debated risk management approaches for women birthing in rural communities and could not reach a consensus on risk scoring, advocating instead for a risk management approach (British Columbia Reproductive Care Program, 2000). Members of this group suggest a risk management strategy should include guidelines for identifying, assessing and managing risk along with a quality improvement process able to evaluate the strategy's effectiveness (British Columbia Reproductive Care Program, 2000). However, it is never possible to predict when and to whom adverse events may occur and many women with risk factors are often able to have a normal birth without intervention. In risk management terms, it can be argued that a skilled workforce able to manage emergencies and evacuations calmly, without placing undue stress or anxiety on the women or their families, may produce better outcomes. Importantly, it was with suggested in the British Columbia consensus statement that risk management strategies should be formally documented and regularly reviewed (British Columbia Reproductive Care Program, 2000).

Risk to Service Providers

In the remote Australian context there are also risks for service providers and these need to be included in the risk equation. Being under resourced and unable to offer women the choices they deserve can lead to heightened anxiety. Fear of something going wrong, increasing distances from emergency services and perceptions of being exposed to 'blame' are very real factors, as demonstrated in the quote below.

If something goes wrong who will be blamed ... yesterday it took 2 hours for a Priority One plane to get here!! Midwife (Kildea, 1999p.97).

Horizontal violence, together with lack of support and professional back up, are all factors that have been reported as reasons for midwives leaving the profession (NSW Health Department, 2000b). These factors are often exacerbated in the remote setting (ANF et al., 2000a; NSW Health Department, 2000b) where there are increased accounts of violence and workplace conflict (MI Taylord Services, 2000). A survey of remote area nurses showed that 85% had been subjected to violence in the workplace (42% physical violence) and 79% had been involved in workplace conflict (MI Taylord Services, 2000).

There are reports that for doctors, the fear of litigation has a marked influence on their practice, with many performing unnecessary tests and caesarean sections in an attempt to lessen their chances of being sued, and that this factor is influencing professional practice in many countries (Enkin, 1994). One author reported that in 1992 the chance of an obstetrician in America getting sued if in practice for 5-15 years was 75%, a figure that is thought to be higher now (Enkin, 1994). Descriptions of how legal action, which on average takes four to five years, affects their lives include: feelings of fear and anger, insomnia, bitterness and loss of appetite (Enkin, 1994).

In the early 1990s in America, the Advanced Life Saving Course in Obstetrics (ALSO) was developed. This obstetric emergency course aimed at improving maternity care and practice, was introduced as a risk management strategy (American Academy of Family Physicians, 2000). The course includes a component on minimising risk, highlighting what is known as the '5 C's' for minimising risk:

- communication
- compassion

- charting
- confession, and
- competence

(American Academy of Family Physicians, 2000).

The ALSO course, now available in Australia, has excellent generic concepts of risk management, but does not include specific material to the remote Australian setting. It is worth noting that poor communication has been identified in three confidential inquiries as a factor contributing to 24 - 29% of the stillbirths and infant deaths (Rowe et al., 2001).

2.7 The Remote Workforce

As previously described, much of the remote workforce provides services to Indigenous Australians. The Aboriginal and Torres Strait Islander Workforce Strategic Framework addresses actions and specific strategies aimed to produce a competent health workforce servicing the needs of this population (Standing Committee on Aboriginal and Torres Strait Islander Health, 2002). The overarching principles described in this document have been used to guide the strategies reported on in this thesis, namely:

- cultural respect,
- holistic approach to health services,
- supporting community decision making and participation in control of primary health care services, and,
- strengthening the capacity of health services, which includes equipping staff with appropriate cultural knowledge

(Standing Committee on Aboriginal and Torres Strait Islander Health, 2002).

A consistent recommendation in many of the reports on Indigenous health is for more Indigenous people to receive education in order to join the health workforce. In 2003 in Australia, the Indigenous workforce in health consisted of 90 medical practitioners, 912 nurses and 583 AHWs with only 73 Indigenous health service managers (Trewin & Madden, 2003). Data detailing the number of Indigenous midwives in Australia is not available. In fact obtaining accurate data on those that provide health and maternity

services in remote areas is difficult as the various reports use different data collection techniques, classifications and definitions when defining remote areas. An example of the variation in data is shown in these figures for the AHW workforce that show a total of 583 (Trewin & Madden, 2003), 853 (ABS, 2001) or 1,400 (J. Smith, 2004) depending on the data source. Other reports have highlighted the difficulty in identifying midwives within the health workforce (Barclay et al., 2002). Nonetheless, an overview using a synthesis of these data sources is provided below.

The remote workforce in Australia is represented by RANs (50%), AHWs (45%) with doctors and allied health practitioners making up the other five percent (CRANA, 2004). As remoteness increases, the supply of maternity service providers, in particular, medical specialists decreases, with approximately seven times the number of medical specialists per person in capital cities compared to those in remote areas (Trewin & Madden, 2003). Table Two below shows the number of health professionals per 100,000 people, comparing those in capital cities with those in remote settings. The full time equivalent (FTE) figures have been included when available, all other figures are total numbers employed in the profession.

Table 2. Number of health professionals per 100,000 population: capital cities and remote centres

| HEALTH PROFESSIONALS PER 100,000 PERSONS, 1999 | | | |
|---|--------------------------------------|----------------|-----------|
| | Capital cities | Remote centres | Australia |
| Registered & Enrolled nurses | 929* | 886* | 1024* |
| Medical practitioners | 121 | 75 | 110 |
| Medical specialists | 113 | 15 | 90 |
| Pharmacists | 87 | 38 | 79 |
| *FTE | (AIHW, 2003c; Trewin & Madden, 2003) | | |

It can be seen that remote centres have significantly fewer practitioners per person than the capital cities.

2.7.1 Midwifery Workforce

Data on Australian midwives is difficult to find and statistics showing numbers of practising midwives in each state and in small communities are not necessarily clear or current (Barclay et al., 2002; Tracy et al., 2001). What can be interpreted from the statistics is that there are many registered midwives in Australia who are choosing not to

work in midwifery. One study reported 30% of new graduates were choosing not to enter the profession following completion of their midwifery education (NSW Health Department, 2000b; Tracy et al., 2000). A nursing labour workforce study was conducted in Australia in 2001 (AIHW, 2003c). This identified 13,865 midwives working in midwifery, gynaecology or obstetrics with 68.2% working part time (27.9 average weekly hours) and 2.2% (305) working in remote or very remote areas (AIHW, 2003c). An example of the difficulties in workforce estimations can be seen in the NT where the Nursing Board has 780 registered nurses with an authorisation to practice midwifery and 10 direct entry midwives (not nurses) registered (Quirk, C., Nurses Registration Board, NT, Personal Communication, 25.2.05). However, the Nursing Board have no clear estimation of how many of those registered currently live or work in the NT (Quirk, C., Nurses Registration Board, NT, Personal Communication, 25.2.05). One report documented 175 (153 FTE) midwives working in midwifery in the NT (Australian Health Workforce Advisory Committee, 2002), from a survey that had a 60% return rate (Quirk, C., Nurses Registration Board, NT, Personal Communication, 25.2.05). Another report stated 85 midwives were working in remote areas of the NT in 1999 (Australian Health Workforce Advisory Committee, 2002).

The nursing workforce report showed a 16.8% decline in midwives working in the midwifery field from 16,658 in 1995 to 13,865 in 2001 (AIHW, 2003c). A midwifery workforce review was undertaken in 2002 to determine the requirements for the midwifery workforce through to 2012 (Australian Health Workforce Advisory Committee, 2002). Closer examination of the data revealed that only 11,985 (8,754 FTE) midwives were working in the midwifery workforce in 1999 in Australia (Australian Health Workforce Advisory Committee, 2002).

Similar to nursing, the midwifery workforce is ageing, with the average age of practitioners being 40.7 years (Australian Health Workforce Advisory Committee, 2002). The midwifery workforce review estimated the current Australian shortfall of midwives to be 1,847 with between 519 and 1,752 midwives needing to be educated by 2012 (Australian Health Workforce Advisory Committee, 2002). There is also evidence to suggest that shortages in the urban areas are exacerbated in the rural and remote areas, where managers find it more difficult to recruit staff (DHAC, 1999b; NRHA, 2001c). The

workforce situation in many of the remote Health Centres is reported as reaching a 'critical' level with some communities not having a trained resident provider of maternity care (McElligot, S, WHE, Personal Communication, 11.12.04). Mostly these communities rely on RANs and AHWs to provide antenatal care with advice and support from visiting trained maternity service providers every week or fortnight (McElligot, S, WHE, Personal Communication, 11.12.04). A national Australian study cited professional isolation, loss of opportunity to practice midwifery, fragmentation and dilution of the midwifery role and feeling unsafe and unprepared in critical situations, as key concerns of the rural and remote midwifery workforce (Tracy et al., 2001).

2.7.2 Obstetric Workforce

There are also difficulties in analysing data on the obstetric workforce. Most workforce data are inclusive of all obstetricians, gynaecologists and their subspecialties, but many of these do not provide clinical obstetric services (Australian Medical Workforce Advisory Committee, 2004). Additionally, some data relies on results from self reported questionnaires and surveys performed by the medical registration boards and often these do not have a high response rate (Australian Medical Workforce Advisory Committee, 2004). The medical specialty area of Obstetrics and Gynaecology is one of the largest in Australia and its workforce has increased by 10.6% since 1998 to 1,160 providers in 2003 (Australian Medical Workforce Advisory Committee, 2004). Eighty four percent of obstetricians practice in the metropolitan area with only 1.1% practicing in remote areas where the average hours worked are 69.2 hours per week versus 54.8 hours in capital cities (Australian Medical Workforce Advisory Committee, 2004). The average age of this workforce in 2003 was 51.3 years, 24% being women, with 60.5% of trainees also being women (Australian Medical Workforce Advisory Committee, 2004). The Divisions of General Practice have identified a shortage of obstetricians and gynaecologists in 61% of rural areas (Australian Medical Workforce Advisory Committee and Australian Institute of Health and Welfare, 1998).

2.7.3 General Practitioner Workforce

There were 4,047 medical practitioners in rural and remote Australia in November 2003, with a total of 902 classified as 'procedural' practitioners (Australian Rural and Remote Workforce Agencies Group, 2004). Of the procedural practitioners, 638 undertake

procedural obstetrics, with a total of 114 living in remote or very remote areas and six living in the NT (Australian Rural and Remote Workforce Agencies Group, 2004). The rural and remote workforce report showed a 10% decline in practitioners practicing obstetric procedures from 2002 to 2003 (Australian Rural and Remote Workforce Agencies Group, 2004).

2.7.4 Recruitment and Retention

There have been numerous reports documenting the problems associated with both recruiting and retaining health practitioners to rural and remote areas, with many factors being common across the different professions (Australian Medical Workforce Advisory Committee and Australian Institute of Health and Welfare, 1998; Barclay et al., 2002; DHAC, 1999b; Goldman, 2001; Humphreys et al., 2002; Monaghan & Walker, 2001; Ozolins et al., 2004; Stratigos & Nichols, 2002). An overview of some of these workforce reports for the professions of midwifery, obstetrics and general practice will be given in the following pages.

Rural and Remote Midwifery Workforce Issues

The difficulties in recruiting and retaining midwives to remote areas are related to both a national and international shortage of midwives, and have been well described (Australian Health Workforce Advisory Committee, 2002; Barclay et al., 2002; Brodie, 2002; Brodie & Tracy, 2000; Tracy et al., 2000). Difficulties include the isolated nature of providing clinical services in remote areas, with reduced access to additional expertise, education and resources (AIHW, 1998; National Rural Health Policy Forum & NRHA, 1999; NSW Health Department, 2003; C. L. Roberts & Algert, 2000). Recent Australian research, the Australian Midwifery Action Project (AMAP), identified several issues that contribute to decreased job satisfaction and high attrition levels within the profession (Brodie, 2002). These include the medical model of childbirth services where there is under utilisation of the midwifery role, midwives needing to work as nurses, the invisibility of midwifery, diminished access to ongoing education and a lack of autonomy within their practice (Brodie, 2002).

The requirement to transfer women out of the area for the birth and difficulties associated with the provision of culturally appropriate care, often lead to discontentment for both

women and midwives. These factors, along with the declining numbers of births that are occurring in the remote areas, are associated with skill reduction and/or decreasing confidence of midwives (Barclay et al., 2002; Fitzpatrick, 1995). Other issues include concerns about the lack of resources, backup support and emergency referral services available in rural and remote areas (Barclay et al., 2002; Brodie & Tracy, 2000). Midwives interviewed from remote areas in the NT and QLD have stated their work would be more enjoyable and satisfying if babies were born at local health centres (Fitzpatrick, 1995; Kildea, 1999).

Midwives and nurses in remote and rural areas, provide 90% of health care yet only receive 1% of rural health support funding. In contrast, doctors who form only 7% of the workforce receive 49% of the funding (Goldman, 2001) with Commonwealth funded agencies and scholarships¹⁰ to support doctors and medical students and no equivalent schemes for other health professionals. One of the key recommendations from the Sixth National Rural Health Conference (March 2001) was:

as a matter of urgency the Australian Health Ministers' conference agree on a plan for increasing substantially the level of resources to all non-medical health professionals for recruitment, retention, education, training and support (NRHA, 2001bp.6).

Rural and Remote Obstetrician Workforce Issues

There are recognised concerns regarding recruitment and retention of obstetricians in rural and remote areas. Whilst there are many incentive schemes in place to attract them to these areas, they have had limited success (Australian Medical Workforce Advisory Committee, 2004; Australian Medical Workforce Advisory Committee and Australian Institute of Health and Welfare, 1998). Workforce projections are suggesting further declines. Factors consistently mentioned affecting rural procedural services are indemnity issues, difficulties balancing personal and professional life and remuneration (Australian Health Workforce Advisory Committee, 2002; Stratigos & Nichols, 2002).

¹⁰ Examples include: Australian Rural and Remote Workforce Agency Group (ARRWAG) and the John Flynn Scholarship

Rural and Remote General Practitioner Workforce Issues

Another factor affecting the availability of services in rural and remote areas is the declining number of General Practitioners (GP's) who are willing to practice obstetrics. Rising costs associated with medical indemnity insurance are cited as a primary reason with others listed below. A survey response from 220 GP's in Victoria showed 78 had ceased or were planning to cease practicing obstetrics in the next five years (Innes & Strasser, 1997). Reasons cited for this were:

- personal/family reasons (36%)
- rising insurance premiums (16%)
- unexpected emergencies (10%)
- lack of remuneration (8%)
- closure of the local hospital
- difficulty in maintaining skills, and
- stress associated with always being on call

(Innes & Strasser, 1997).

Other factors highlighted by the increasing proportion of female GPs in rural and remote areas include opportunities for their spouse in the community, childcare and difficulty accessing continuing education (Ozolins et al., 2004). Another questionnaire was completed in 2001 by 677 rural and remote GP's (50% response rate). Results suggested that good on call arrangements was the most important factor for retention, followed closely by professional support and variety in practice (Humphreys et al., 2002). Additionally, general practitioners working in remote and very remote areas, (ARIA categories 4 & 5) (n=93), listed on call arrangements and allowing time off, as their highest priorities (Humphreys et al., 2002).

In contrast, there are factors in rural and remote practice that doctors find attractive namely: continuity of care; variety of work; being valued by the community; lifestyle issues and an opportunity to use a range of skills (Humphreys et al., 2002; Ozolins et al., 2004). One study suggested the development of an electronic network for rural female

doctors as a strategy to assist with mentoring and support (Ozolins et al., 2004) of rural and remote doctors.

2.8 Health Services in the Very Remote Areas

Recent research has examined health services in the ARIA category five, 'very remote' regions across Australia. The results show a startling demarcation between the areas that are predominately inhabited by Indigenous populations and those that are predominately non-Indigenous communities. There are 1,030 discrete Indigenous communities in very remote areas, many of which have small populations and no resident health service. Two hundred and seventeen communities in very remote areas of Australia have a health centre with permanent staff (K. Kelly, 2004). Of these, 61% (133) are in communities where greater than 70% of the population are Indigenous and 39% (84) are predominantly non-Indigenous communities (K. Kelly, 2004).

The Indigenous communities are less likely to have inpatient services, on site doctors or private doctors. Additionally the death rate in these communities is 400% higher than the non-Indigenous death rate in very remote areas and 80% higher than the death rate for Indigenous people living in cities (K. Kelly, 2004). The staff turnover can be 2-300% (K. Kelly, 2004). The table below gives an overview of the different resources in these communities.

Table 3. Comparison of health facilities in Indigenous and non-Indigenous very remote areas

| | Indigenous communities | Non-Indigenous communities |
|-----------------------------|----------------------------|----------------------------|
| Number | 133 | 84 |
| Population | 150-3,500 | 100- 4,500 |
| Total population | 81,002 (45%) | 97,473 (55%) |
| Industry | Minimal if any | Usually present eg. mining |
| Hospital | 6 * | 43* |
| Inpatient facilities | 7 | 47 |
| Community health centre | 6 | 43 |
| Clinic | 127 (10 - on-site doctors) | 36 |
| Multipurpose health centre | 1 * | 4* |
| Aboriginal medical service | 1* | 11* |
| On site doctor | 18 | 47 |
| Private doctors | 0 | present |
| Pharmacists | 0 | 26 |
| Ambulance officers | 0 | 31 |
| * all with on-site doctor/s | | (K. Kelly, 2004) |

As can be seen by the above table, there is a stark difference in resourcing between the Indigenous and non-Indigenous communities.

2.8.1 Council of Remote Area Nurses of Australia

The Council of Remote Area Nurses of Australia (CRANA) is the professional organisation representing nurses who work in remote areas of Australia (CRANA, 2004). Approximately 70% of RANs work in Aboriginal and Torres Strait Islander communities with others working in mining communities, pastoral properties, islands and small outback towns (CRANA, 2004). Remote area nurses have an extended scope of practice, often diagnosing, prescribing and treating conditions without the presence of a doctor. Since it was founded in 1983, CRANA has been actively involved in preparing health practitioners for work in this setting. This has been achieved through the development of:

- national competencies
- the national clinical procedure manual
- the remote emergency care course
- the maternity emergency care course
- managing stress in the workplace course

- the Bush Crisis Line¹¹; and
- the remote health practice program with exit points at graduate certificate, graduate diploma and masters level

(CRANA, 2004).

Additionally CRANA has been closely involved in the development of resources to raise cultural awareness. One example is the report that was used as an evaluation framework for Case Study Three: Thinking, Listening, Looking, Understanding and Acting as You Go Along: Steps to Evaluating Indigenous Health Promotion Projects (Tjikalyi & Garrow, 1996). Another is Binan Goonj: Bridging Cultures in Aboriginal Health (Eckermann et al., 1998). In the Bidjara language from South Western Queensland Binan Goonj means ‘they hear but they do not listen’ (Eckermann et al., 1998), a phrase that is particularly pertinent to Indigenous women from remote areas and will be discussed in more detail in Case Study Three.

Another strategy developed by CRANA, to address the lack of midwives in the remote setting, is the Maternity Emergency Care (MEC) course for non-midwives. The course was not intended to encourage nurses or AHWs to provide midwifery care, but rather to provide them with the skills and knowledge necessary to respond to unexpected birth or maternity emergencies. Prior to development of the course, a needs assessment was performed. A questionnaire was completed by 85 respondents who comprised registered nurses (n=83) with 52% (n=44) having midwifery training, and medical officers (n=2) (Dunn & Malone, 2002). Ninety one percent (n=77) stated that the remote generalist health care provider required skills to manage a normal birth in remote areas and 94% (n=80) thought generalist providers needed skills to manage maternity emergencies in remote areas (Dunn & Malone, 2002). Several of the quotes from registered nurses highlight issues of concern in remote areas:

There are fewer and fewer midwives in the bush ... women in remote areas are entitled to appropriate care (RAN)

¹¹ A 24 hour telephone counselling service for remote area health practitioners.

We are expected to be as proficient in midwifery as we are in general nursing but we are not trained for it. Women don't listen when you say you can't deliver them, especially if they have had problem free previous births (RAN)

Non-qualified personnel can easily be involved in emergency and non scheduled deliveries (RAN)

I have 6 occasions I've needed to deliver a child unassisted in the past 13 years in the Torres Strait Islands (RAN)

(Dunn & Malone, 2002).

The MEC course is multidisciplinary with most participants being nurses and Aboriginal Health Workers. It consists of a self directed learning package followed by a two and a half day workshop. The lack of midwives in remote areas has made courses such as MEC an important strategy to improve maternity care. However it is concerning that it is necessary in a country such as Australia to introduce such 'remedial' and stopgap measures to address workforce issues.

2.8.2 Education in Isolation

Service providers who work in remote areas are faced with additional challenges that are not seen in an urban setting. Most midwives, nurses and doctors lack specific education or training for the unique clinical and cultural requirements for remote area work (Kildea, 1999; NHMRC, 1996; NSW Health, 1998a; NT DHCS, 1992; C. L. Roberts & Algert, 2000; Senate Community Affairs References Committee, 1999). Many remote communities have strong cultural systems that generate their own health beliefs that often conflict with Western medical ideologies (Eckermann et al., 1998). Despite these factors, health professionals will move from urban to remote settings, often receiving minimal or no cultural awareness training (Lowell, 2001; Trudgen, 2000). Many non-Indigenous health professionals are unaware of how their own personal and professional cultures guide their thinking and behaviour, and this is known to inhibit clinical and social effectiveness in remote Indigenous services (Eckermann et al., 1998; Lowell, 2001).

Maintenance of professional competence is a key area of concern for health providers in remote areas given the difficulties in accessing current research, guidelines and educational updates (DHAC, 1999b; NRHA, 2001c). Barriers to providing education and training for remote practitioners are many and the expense involved in traveling for

education can be prohibitive. Relief staff are often expensive to fund and difficult to find, resulting in practitioners who are unable to leave the remote area for educational updates.

Upskilling Programs

There are two specific strategies that are targeting the ongoing education of midwives in Australia at present. One is the Commonwealth funded national rural and remote midwifery workforce upskilling program that commenced in 1999. This has been managed individually by each state and territory and most have included short term clinical placements for rural and remote midwives in the tertiary centres. Some states have also provided written educational material for midwives as self-directed learning packages. In the state of Tasmania the Department of Rural Health made a section of the upskilling package accessible online (Monaghan & Walker, 2001). Tasmania has a strong network of rural health teaching sites with Internet access, community online access centres (Monaghan & Walker, 2001) and only two areas (both islands) that are recognised as remote / very remote (DHAC, 1999a). No midwife identified lack of Internet and computer access as a barrier to participation in this program (Monaghan & Walker, 2001). The total funding in the NT was \$360,000 over three years that enabled 219 midwives in rural and remote areas to participate in the program that included both a theory and clinical component (Ford, 2003).

The second national strategy is the introduction of the Advanced Life Support in Obstetrics (ALSO) course. This is an evidence-based educational program targeting the development and maintenance of skills for managing maternity emergencies. The course was introduced into Australia in 2001 and involves studying a workbook and then an onsite multidisciplinary two day workshop. Competence must be shown in both a practical and written exam before passing the course. The course targets midwives, general practitioners and obstetricians and is being run across Australia and New Zealand. Barriers to participation include the costs of attendance (\$900) that can escalate dramatically when adding travel costs from the remote setting.

The development of flexible education and training programs that are culturally and socially appropriate (Lowell, 2001; NRHA, 2001a) and promote multidisciplinary networking of isolated practitioners for professional support and education, have been recommended for strengthening rural and remote services (NSW Health, 1998b).

Advances in information technology could assist in addressing this issue. However, there is little information on the potential uptake of this education mode.

This thesis has explored some of these issues in the four Case Studies, which utilise communication strategies aimed at decreasing the isolation experienced by the remote health practitioner. The next section provides an overview of computer mediated communication, a history of communication in remote Australia and the use of communication technology to provide support to health services in these areas.

SECTION 2. COMPUTER MEDIATED COMMUNICATION

Computer mediated communication has been defined as ‘the process through which humans create, maintain and transform meaning by interacting as users of computerised systems of communication’ (Lindloff & Taylor, 2002p.249). The integration of computers with telecommunication technology (telephone, satellite, cable and digital) has been integral to their use as a communication medium (Lindloff & Taylor, 2002). Computer mediated communication includes both real time and asynchronous computer facilities with examples of those commonly used for education provision including computer networking (LANs and WANs), audiographics conferencing, email, computer-text conferencing, bulletin boards, file transfer, access to databases (including medical image databases), electronic libraries (including full documents, journals and newspapers), electronic interactive multimedia and desktop videoconferencing (PRHCIT, 1996). The two that are explored in this thesis include the electronic library (Case Study One) and the bulletin board that is a type of online community (Case Study Two). The use and utility of this medium has increased greatly over the last 30 years with key factors to uptake including: speed, memory, functionality, transparency, autonomy and interactivity (Lindloff & Taylor, 2002).

The Internet refers to an interconnected system of networks that connect computers around the world (Dictionary.com, 2005). The Internet was largely unknown until 1990, when one of the most significant inventions in modern times occurred, with the birth of the World Wide Web (www) (Norris, 2001). Information technology and the flow of information that is possible through the Internet is rapidly changing the world. It is being referred to as the ‘information revolution’ and is influencing economics on a global scale as well as the day-to-day living of many individuals (P. Evans & Wurster, 2000). Proponents of the Internet suggest that it could provide multiple opportunities for both socioeconomic and democratic development with computer power doubling every 18 months and the price remaining relatively stable (Norris, 2001). The impact of the Internet on people’s lives is suggested to be similar to that of the telephone with signs of the online community doubling every two years (Norris, 2001; Pandey et al., 2003). The flow of information is becoming so important to many companies today that they are using it as an indicator for measuring their performance (P. Evans & Wurster, 2000).

The Okinawa Charter on Global Information Society produced at the Kyushu-Okinawa Summit Meeting in 2000 summed up how important they believe information technology to be in the following statement:

Information and Communications Technology is one of the most potent forces in shaping the twenty-first century. Its revolutionary impact affects the way people live learn and work and the way government interacts with civil society. ... we renew our commitment to the principle of inclusion: everyone, everywhere should be enabled to participate in and no one should be excluded from the benefits of the global information society. The resilience of this society depends on democratic values ... such as the free flow of information and knowledge, (Kyushu-Okinawa Summit Meeting, 2000p.1).

Once the hardware is in place to support it, digital technology with its broad bandwidth, will enable rich information to reach out into the remotest regions of the world, delivering education and health information as well as support for socioeconomic developments (P. Evans & Wurster, 2000; Norris, 2001). However 'hardware' is not all that is needed. Individuals must have the time, motivation, skills and support to be able to use this technology so that it suits their needs (P. Evans & Wurster, 2000; Norris, 2001).

2.9 Health Care and Information Technology

The terms telemedicine, telehealth and e-health are often used and yet not clearly defined in Australia today (John Mitchell and Associates, 1998). The key factors include the delivery of health services at a distance between professionals and/or patients, using telecommunication of some form (audio, video or graphic data) and may be combined with information technology (John Mitchell and Associates, 1998). Progress in these fields is occurring at a rapid rate and the economics of 'health information' is extraordinary. Evans and Wurster (2000) state that one third of the cost of health care in the United States is spent on 'information' making it the largest 'information business' in the country (P. Evans & Wurster, 2000). There would not be many health concerns that do not have discussion lists, forums or chat rooms available; patients can educate themselves, write their own care plan, diagnose a complaint and purchase medication on line (P. Evans & Wurster, 2000). Estimates suggest that 55% of Americans access the Internet for some kind of health related information (Dickerson, 2003; P. Evans & Wurster, 2000).

Advantages of electronic health information include:

- the ability to access many different sources of information at any time of the day
- anonymity allowing people to access information on very personal or embarrassing health care conditions
- the ability to join a virtual community that can provide information and support
- the non-hierarchical nature of the Internet, and
- the relative cost savings that can be achieved

(Pandey et al., 2003).

Evidence suggests that professionals as well as consumers are using the Internet for health information (P. Evans & Wurster, 2000).

2.10 Information Technology and Health Education

As the technology develops, we are seeing vast improvements in the quality of screen resolution, the speed with which photos and graphics can download, and the ability to interact with the information. The provision of educational material, which captures and engages the audience through the Internet, is enticing. Already entrepreneurs, providers of health services, and individuals are providing these resources. Examples include:

- Antenatal education and childbirth classes online: 'birth.com' (Birthnet Pty Ltd, 2001)
- A guide for midwives and doctors titled 'Managing Complications in Pregnancy and Childbirth' (WHO, 2000a)
- Educational modules for obstetrics and gynaecology involving case presentations (Blackwell & Blackwell, 2002), and
- 'Neonatology on the Web' (Duncan, 2000).

On the 'Neonatology on the Web' site the producer, Rob Duncan, describes how the site originated in 1995:

I became increasingly conscious of the World-Wide-Web's potential to support universally-available medical information resources at minimal cost, and became

determined to establish a public web site dedicated to the needs of neonatal-perinatal medicine (Duncan, 2000).

2.11 The Digital Divide

Around the world research is showing that the voices on the Internet are not those of the poor (Norris, 2001). Income and education are said to be the major variables influencing the distribution and access to the Internet worldwide, with race identified as another important factor (Pandey et al., 2003). Research is also showing age as an important predictor of Internet use with the younger generations significantly more likely to use the Internet than older generations (Norris, 2001). Additionally, throughout the 1990's the majority of Internet users were men, with women only starting to access the Internet in some countries in equal numbers since around 2002 (Dickerson, 2003). Research has shown different types of usage between men and women, with women conversing online to connect to others and some users adopting anonymous names to disguise their identity (Dickerson, 2003). Men were more likely to trust the technology seeing endless opportunities and absorbing it into their everyday lives (Dickerson, 2003).

One study involving nurses and the Internet in America showed, though initially overwhelmed by learning the necessary computer skills, they soon discovered the broad scope of information available to them (Dickerson, 2003). In particular the amount of information offering current professional support, but also to facilitate interpersonal communication and connect to colleagues and family through email and listservs¹² (Dickerson, 2003). The study highlighted a lack of trust for the Internet with women reluctant to use credit card purchases online or chat rooms, preferring professional listservs or email (Dickerson, 2003). Results from this study showed health care providers using the Internet to keep current professionally and recommended Internet sites for women offer opportunities for social support and networking (Dickerson, 2003). Internet usage amongst remote health practitioners in Australia is not well documented, however in the past they were seen to pioneer communication technology.

¹² A Listserv is a topic specific service where all messages are sent to all subscribers through email and replies will also go to all members allowing ongoing dialogue to occur.

2.12 The History of Communication in the Outback

Communication has made a vital difference to the provision of health care and to breaking down the isolation for those who live in these regions. In the early 1900's there was very little that could be done if you were to be injured in the outback. The history of the Royal Flying Doctor Service (RFDS) of Australia records tell the story of the Halls Creek Postmaster who, in 1917, performed a bladder operation on a man with a penknife (RFDS, (n.d.)). Unable to contact doctors he was under instruction from his first aid lecturer who was 2000 miles away in Perth, and they communicated by telegraph using Morse code (RFDS, (n.d.); Wilson, 1989). In those days telegraph and telephone links were only available in large towns and the isolation and loneliness experienced by many who lived in the outback would often lead to major depressive illness (RFDS, (n.d.)). The Reverend John Flynn and Lieutenant Clifford Peel, a young Victorian medical student, pioneered the enterprising Aerial Medical Service (RFDS, (n.d.)). Known by various names, the RFDS (Air Ambulance Service) linked transport, with communication and health service provision (RFDS, (n.d.); Wilson, 1989). This occurred at a time when both flying and radio (wireless) were in their infancy (RFDS, (n.d.); Wilson, 1989).

Alfred Hermann Traeger, an electrical engineer, was another key person in these early days (Wilson, 1989). He invented the pedal operated generator, which powered a transmitter and receiver radio. He was known as 'Traeger of the Transceivers', the man who started the social and communication revolution in the outback (Wilson, 1989). The Reverend John Flynn recognised the importance of communication stating that the RFDS would be 75% futile without wireless transmitting stations in every homestead (RFDS, (n.d.)).



Figure 3. Radio expert Alf Traeger and John Flynn testing the wireless set, 1925 (RFDS, (n.d.)).

As radio communication improved it progressed from hand to pedal operated transmission, with Morse code used for communicating. This was first operational from the original flying doctor base in Cloncurry in Western Queensland in 1929 (RFDS, (n.d.)). During the 1930's car batteries were used for power and voice communication was enabled (RFDS, (n.d.)). In addition to assisting with health service provision, the radio contributed to addressing the issue of isolation, which was hitherto an accepted part of living in the outback, and thus the 'bush telegraph' was born (RFDS, (n.d.)p.18).

"He created a social revolution. Human relations were transformed. In a very real way he made Outback Australia." (RFDS, (n.d.)Our History: Communication).



Figure 4. Voice communication, Alf Traeger (RFDS, (n.d.))

Since the 1920s high frequency radio has been the major form of communication and only recently has the telephone started to replace the radio for all but 2% of calls for medical assistance (RFDS, (n.d.)). Education for children via the radio was commenced

with the 'School of the Air' in 1951 (RFDS, (n.d.)). Many who are traveling around Australia today will still equip their cars with a two-way radio, although even in this setting the satellite phone is increasing in popularity.

In the early 1990s some medical calls were still coming in to RFDS over the radio, and the 'Galah Session'¹³ was still regularly occurring. The 'Galah Session' enabled people to keep in touch with others, and for many in the remote setting, this was the only social interaction they would have apart from that with their families. Participants could dial into the radio channel and listen as people who were hundreds of kilometres from each other would chat about anything that was important to them at the time. The radio was often turned on and listened to by health practitioners working in many of the remote health centres (Dunn, R. & White, J., RANs, Personal Communication, 23.6.04). The RFDS still support radio communication today, with high frequency radio still used in some remote places (RFDS, (n.d.)).

2.13 Remote Area Nurses – A History of 'Telehealth'

The average age of Australian nurses is 42.5 and 92% are female (AIHW, 2003c). Many who have worked in remote areas will recall the days of using radio telecommunications for medical assistance and advice. Remote area nurses were often the first to try new innovative techniques and a previous CRANA president (who is completing a doctorate on the use of telehealth in remote areas) believes remote area nurses have traditionally been 'trailblazers' in communication across distances (Ellis, I., Previous CRANA President, Personal Communication, 19.2.04). However computer mediated communication is changing at a rapid rate with much of the expertise concentrated in urban areas. The resources needed to keep up with technology are expensive and hardware quickly becomes obsolete. Keeping abreast of these changes, while providing the necessary hardware, human expertise and resources to the remote areas, is a challenging exercise.

¹³"Named after the noisy, chattering, grey and pink native parrot" (RFDS)

Remote area nurses recognised the potential of information technology that has been identified as a priority for improving rural and remote recruitment and retention (ANF et al., 2002). The sixth recommendation from the project 'Action on Nursing in Rural and Remote Areas, 2002-2003' is:

Recommendation 6

Action to lobby for the provision to nurses in rural and remote areas of regular access to reliable and relevant information technology, including telephones and the Internet, and training and support for its use (ANF et al., 2002p.3).

2.14 Information Technology in Rural and Remote Australia

Although Australia is thought to be at the forefront in information technology development there is a significant 'digital divide' within the country with access to telecommunications and the Internet vastly different between metropolitan, regional and remote areas (Estens et al., 2002; Norris, 2001). However, as will be described below, there is cause for optimism, as the situation is changing rapidly across the country. The Australian Government is aware of the digital divide following the independent Telecommunications Service Inquiry that was established to assess the adequacy of telecommunications services in Australia in March 2000 (Besley et al., 2000). Key issues identified in this report included concerns about basic telephone services, coverage of affordable mobile phone services and reliable access to the Internet in rural and remote Australia (Besley et al., 2000). This report listed 17 recommendations. The government response included \$160 million to implement all of these recommendations and a national competitive grants program of \$52 million over three years was established to fund major projects across the country (DCITA, 2003b).

The Telecommunications Service Inquiry led to the independent Regional Telecommunications Inquiry that examined services in regional, rural and remote Australia and resulted in 39 recommendations (Estens et al., 2002). The government delivered a \$180 million package towards implementing these recommendations, several of which are important to this thesis. One led to the National Broadband Strategy where \$104 million over four years was provided to improve broadband services in regional areas, with an the element of this strategy aimed at using sectors like health and education to accelerate the rollout (DCITA, 2003b). Another recommendation was that the

government consider providing training and support for information technology in rural and remote areas and \$10 million over four years was allocated (DCITA, 2003b). Although there are many organisations providing training and support there are a few, if any, in the remote and very remote regions (DCITA, 2003a). Issues identified include a lack of awareness of the available training, the high costs of travel, and inappropriate content leading to a lack of interest (DCITA, 2003a). Additional concerns included a lack of technical support to these areas, the lack of basic information technology training that is available, and the lack of culturally appropriate training (DCITA, 2003a).

A further investigation into the needs of remote Indigenous communities was conducted: Telecommunications Action Plan for Remote Indigenous Communities (DCITA, 2002). The main recommendations from this investigation were to improve the use of telephone and Internet services, improve the provision of broadband services and increase awareness of telecommunication rights and opportunities (DCITA, 2002). Though cause for optimism with \$8.3million allocated, the reality was that much of this money went towards providing payphones in communities that had no access to any telecommunications services at all (DCITA, 2003b). In fact the Telecommunications Inquiry found a significant link between poor access to communications and broader social disadvantage (DCITA, 2003b). One report cautions that without significant resources being dedicated to education and training the technological revolution, like the industrial revolution, has the potential to lead to an unskilled, underprivileged class driving greater social disadvantage rather than bridging the social divide (PRHCIT, 1996).

2.15 Access in Remote Australia

In 1995 the national 'Project for Rural Health Communications and Information Technology' (PRHCIT) was performed (PRHCIT, 1996). Primarily it explored the information technology and telecommunications needs and applications for health services in rural and remote Australia, including support, education and training needs (PRHCIT, 1996). The report describes a very experienced, professionally isolated, workforce who work long hours and strongly believed that telecommunications could improve the way they worked (PRHCIT, 1996). Many gaps in telecommunication technology in rural and remote areas were highlighted, whilst recognising the potential to

deliver education and training as well as clinical services (PRHCIT, 1996). Key recommendations in this report included the need for further research in this emerging field and the need for a coordinated strategic, whole of government approach (PRHCIT, 1996). Other recommendations include comprehensive promotion and training in the use and application of information technology for health and that, as a matter of urgency, remote health facilities have reliable and adequate telecommunication equipment, software and infrastructure (PRHCIT, 1996).

It can be seen that there have been many national strategies aimed at improving communication in remote areas, with progress occurring at a rapid rate. Exploring the reality and potential of how these strategies could support remote practitioners was relevant to this thesis. Research by the Australian Bureau of Statistics (ABS) showed that 61% of Australian households had a computer in the home in 2002 with 46% having Internet access (ABS, 2003b). The percentages were higher in metropolitan regions and lower amongst Indigenous Australians with a marked decline occurring with increasing remoteness (ABS, 2003b). Other research by the ABS showed Australia had 5.2 million subscribers to the Internet in September 2003, which had increased by three percent in the previous six months (ABS, 2004a). It can be seen that telecommunications services and support are being rolled out across the country. However there are significant differences between the metropolitan, regional and remote areas with enormous challenges not only related to the distances that need to be covered. National Rural Health Alliance (NRHA) has acknowledged the lack of evidence regarding information technology use by rural and remote nurses across Australia calling for further research to explore these issues.

Another national report 'the Telemedicine Industry in Australia: From Fragmentation to Integration' cited extraordinary progress in some areas (teleradiology, telepathology and telepsychiatry) (John Mitchell and Associates, 1998). Other areas (telemedicine) remain at embryonic stage with substantial barriers to further development including immature professional organisations and a lack of research, private investment and healthy competition (John Mitchell and Associates, 1998). Other concerns included medico legal, privacy and security issues with wasted money on projects that have not disseminated their findings (John Mitchell and Associates, 1998). Overall this report called for

government leadership, further public debate and national coordination (John Mitchell and Associates, 1998).

Further examples of the rapid rate of progress around Australia include video conferencing facilities increasing from 30 sites in 1994 to around 300 by 1998 with teleradiology sites doubling to 300 in the same timeframe (John Mitchell and Associates, 1998). The Rural Health Education Network provides national interactive satellite delivery of health education programs to approximately 550 sites, 23 in the NT, with many programs also available online via video streaming to either broad or narrowband facilities (RHEF, 2005). The University of Queensland has a Centre for Online Health that specialises in the evaluation of telehealth services and is currently performing research projects in the areas of paediatrics, dermatology and homecare (University of Queensland, 2003). Conferences, symposiums and journals articles on telehealth are multiplying every year and many of the health departments across the country have telehealth programs either being researched or commencing.

There is little research in Australia looking at the uptake of computer mediated communication by remote health practitioners, in particular nurses and midwives. Most research has been performed in the rural areas (Gibb et al., 2003) and has involved either allied health practitioners, medical practitioners (Nielson, 1998; White et al., 2002) or university students (Glover et al., 2001; Tollefson et al., 2003). A Queensland survey (with a 25% response rate) of rural and remote medical practitioners found a gender difference with men more likely to use computers for education than women, however there is no information on how many survey respondents lived in the remote setting (White et al., 2002).

Barriers to the use of computerisation for education and training in rural and remote areas include a lack of understanding of computers, cost of hardware, support and training, lack of access to training and time constraints (PRHCIT, 1996). However anecdotal and other evidence (P. Evans & Wurster, 2000; Tollefson et al., 2003) suggests the situation is improving rapidly with staff from one of the national communication carriers (Telstra) stating that developments in information technology were occurring so rapidly that is she was unable to report in writing as it would be incorrect in a weeks time (PRHCIT, 1996).

Most of the information regarding computer mediated communication in the remote setting is available from government sponsored reports, four of which were released in 2003 (Besley et al., 2000; DCITA, 2002; 2003a; Estens et al., 2002; John Mitchell and Associates, 1998; Northern Australia Business Services et al., 2003; Peter Farr Consultants Australasia, 2003; PRHCIT, 1996).

2.16 Information Technology in Remote Northern Territory

By 2003, the NT Health Department had 200 satellite communications in approximately 70 remote communities providing Internet access and email (Northern Australia Business Services et al., 2003). However an NT report cited a lack of government support for coordinated management and telecommunication infrastructure at remote community level (Northern Australia Business Services et al., 2003). Other areas of concern included: lack of a whole of government approach; limited sharing of resources between organisations; a dearth of onsite expertise for support and maintenance; and a lack of engagement by local remote residents (Northern Australia Business Services et al., 2003). The NT has released a five year strategic plan (2003-2008) to extend broadband telecommunications to remote communities (Northern Territory Government, 2003). However, the enormous tasks required to achieve some of these goals are better articulated in other reports (Northern Australia Business Services et al., 2003). It is hoped that the research described in this thesis will further inform the knowledge base regarding the potential of computer mediated communication to support remote practitioners.

2.17 Conclusion

This chapter was divided into two sections. The first gave an overview of remote Australia and what is known about the health of people living in these areas (AIHW, 1998). In particular, the poor maternal and infant health of Indigenous Australians has highlighted a concerning situation that needs urgent attention (Slayter et al., 2004; Trewin & Madden, 2003). The past 200 years of colonisation have brought rapid changes to the Indigenous peoples of this land (Broome, 2002) as government policy has swung from dissemination and dispossession to segregation, assimilation and then self determination (Broome, 2002; Johnston, 1991b). A process of reconciliation is gradually occurring at the grassroots level (Reconciliation Australia, 2004), but greater steps are necessary if Australia is to eliminate the disadvantage currently experienced by Indigenous

Australians (Broome, 2002; Jackson & Ward, 1999; Pyett & VicHealth Koori Health Research and Community Development Unit, 2002).

It is clear from the literature that maternity services in remote Australia are not meeting the needs of the people, many Indigenous, who are living in this setting. The current services do not provide a culturally safe environment for birth and some women believe this is the cause of the higher rates of morbidity and mortality currently experienced (Mills & Roberts, 1997; Rawlings, 1998; J. Roberts, 2000). At times this presents an unacceptable risk to women who then choose not to use the current services, avoiding antenatal care and transfer for birth (Biluru Butji Binnilutlum Medical Service, 1998; Fitzpatrick, 1995; Kildea, 1999; J. Roberts, 2000).

There is a plethora of literature and international evidence to support the reintroduction of birthing services in remote areas of Australia. In particular, the Inuit have shown how Indigenous birthing practices, combined with Western practices, can provide a socially and culturally safe model of care to improve outcomes for women from remote areas (M Chamberlain & Barclay, 2000; Morewood-Northrop, 2000; O'Neil & Kaufert, 1990; Tookalak, 1998). Alternative models of maternity care in remote areas of Australia could also lead to increased satisfaction, better outcomes, increased recruitment and retention of health staff and produce cost savings (Fitzpatrick, 1995; Kildea, 1999; NSW Health Department, 2003; Tracy et al., 2000). However it is also clear that remote areas need additional support to that which currently exists in order for this to occur. Practitioners who work in these areas are isolated from educational resources (ANF et al., 2000a; DHAC, 1999b; NRHA, 2001c), cultural knowledge (Eckermann et al., 1998; Lowell, 2001), their peers (MI Taylord Services, 2000) and at times, the communities in which they are working (Trudgen, 2000). In the past, remote practitioners used radio communication to reduce some elements of this isolation (Wilson, 1989). The radio has been replaced by the telephone and more recently remote areas are seeing the rollout of information technology (Besley et al., 2000). The rapidly changing information technology environment provides a medium that could support remote health care practitioners and is investigated further in this thesis.

Literature Review

This thesis will describe four case studies that utilise PAR and computer mediated communication strategies, to target areas identified in the literature, in order to strengthen maternity services in remote areas of Australia. The overarching principles of cultural respect, holistic approach to health services, supporting community decision making, primary health care and strengthening the capacity of health services to equipping staff with appropriate cultural knowledge (Standing Committee on Aboriginal and Torres Strait Islander Health, 2002), have all been used to guide this research.

The following chapter provides an overview of the methodology and methods that were utilised for the individual Case Studies. Particular aspects that are pertinent when performing research in the Indigenous Australian setting have been outlined.

3 CHAPTER 3. METHODOLOGY AND METHODS

3.1 Overview

A methodology, compatible with the research context and approach, is required to answer the research question. This thesis presents four case studies that employed a combination of methods within a participatory action approach (Lindsey et al., 1999; Selener, 1997). The findings are reported within each case study. The overarching goal of reducing isolation and strengthening remote area maternity services in Australia has 'communication' as the theme linking the case studies. Two of the four case studies involved research conducted in partnership with Aboriginal Australians. This chapter, therefore, includes specific considerations relevant to research in Indigenous settings.

3.2 A Case Study Approach to Health Systems Improvement

There is much debate as to whether case study is a methodology, a method, a design or a strategy (Bryar, 1999; C. Meyer, 2001; Stake, 2000). This debate will not be addressed in this thesis as it does not affect the utility of the approach when trying to research complex contexts and problems (Bergen & While, 2000; Bryar, 1999; Gray, 1998; C. Meyer, 2001; Stake, 2000). The case study approach has been useful in practice-orientated professions when examining new processes or behaviours within a contemporary real life context (Gray, 1998; C. Meyer, 2001), which is relevant to each of the case studies presented here. The case study approach allows a holistic understanding to be developed through a range of methods investigating the context and the processes involved in a contemporary phenomena (C. Meyer, 2001; Pegram, 1999). Case study research can be descriptive, exploratory or explanatory (Pegram, 1999) and is usually bounded by time and place (Gray, 1998). It is not unusual to combine case study with action research methods, particularly when exploring change in a particular setting, which is what occurred in this research (Kock et al., 2000).

The use of qualitative approaches in limited settings does not necessarily restrict the theorising or insights produced to that particular setting (Bryar, 1999; Gray, 1998). In fact, some argue that because the research is being conducted in a 'real life' environment, the believability and thus the internal validity are strengthened (Pegram, 1999). Others suggest the lessons derived from this in-depth research technique may be beneficial in

other settings (Bryar, 1999; Gray, 1998). Case studies have been used to study program evaluation, implementation processes and organisational change and are appropriate for exploring and evaluating situations (Bergen & While, 2000; Pegram, 1999). In this thesis, the case study approach was used to study the development and evaluation of communication strategies aimed at reducing the isolation of the remote area maternity service provider.

The contextual factors that facilitate and impede these communication strategies are also explored. In each of the cases the contextual factors and methods vary, but the desired goal is the same: to develop knowledge and resources to strengthen remote area maternity services.

In an effort to increase the generalisability of the results, or the 'external validity', I have used a range of data sources drawing on both qualitative and quantitative methods to inform the interpretation through triangulation (C. Meyer, 2001; Pegram, 1999; Stake, 2000). The range of data commonly collected in case study research ranges from documents, recordings from direct and participant observation, interviews, archival records and physical artifacts (Gray, 1998). In these case studies, data has been derived from the literature, published reports and data sets, minutes of meetings, key informant interviews, focus groups, participant observation, email correspondence, a self reflective journal kept from March 2001 to October 2004, phone conversations, field notes and statistics. The methods are discussed in more detail in the individual cases.

Each case study described both the process of inquiry and the product of the inquiry as a stand alone case, though many of the factors were overlapping (Stake, 2000). Two key approaches to conducting the case studies and gathering the data were the RARE (Trotter et al., 2001) and the PAR approach (Kemmis & McTaggart, 2000).

3.3 Rapid Assessment, Response and Evaluation

The RARE approach was designed as a part of a strategy to target human immunodeficiency virus (HIV) and acquired immune deficiency syndrome (AIDS) in cities in the United States (Trotter et al., 2001). It is based on the rapid assessment or rapid appraisal approach, which has been used in rural developments, particularly in the

developing world, since the mid 1970's (Beebe, 1995). Since then there have been many slightly differing approaches with very similar methodology, including the participatory rural approach and the rapid assessment program (Beebe, 1995). During the last ten years the approach has become more common in the health field, particularly primary health care studies (Beebe, 1995), and the public health field (Trotter et al., 2001).

The RARE approach incorporates both process and outcome measures of effectiveness (Trotter et al., 2001). The approach is pragmatic and efficient as it assumes a complementary positioning of the evaluation alongside existing activities and data collections. Some of the advantages of RARE include its rapidity; focus on contexts and situations; local community involvement; its pragmatic, targeted and 'complementary' nature with other monitoring; the emphasis on triangulation of data; and, process as well as summative evaluation (Trotter et al., 2001). Most importantly the theoretical underpinnings encompass community participation and direction in the research, in designing the strategy and evaluating its effects; including direct involvement of community leaders and community participation in data collection (Trotter et al., 2001). These points are all integral to research with Indigenous Australians and were important for Case Study Three (Birthing Business in the Bush Website) and Four (A Primary Health Care Guide to Planning Maternity Services in Your Community) (AIATSIS, 2000; NHMRC, 1991; Trotter et al., 2001).

Rapid ethnographic assessment used within RARE draws heavily on ethnographic procedures to gather contextual information including cultural, social and behavioural matters that can influence health (Harris et al., 1997). This is particularly pertinent in settings where communities have a holistic view of health, such as Aboriginal communities (Harris et al., 1997). Including Indigenous researchers on the research team is a key feature of this design (Harris et al., 1997). This has occurred in two of the case studies presented in this thesis. Additionally, this design encourages collaboration and community involvement (Harris et al., 1997), which are also recommended in Aboriginal health research (Snow, 1997).

Rapid appraisal was developed in the 1970's around the same time as rapid assessment, and the approaches are not dissimilar (Beebe, 1995). However the rapid appraisal

approach will always use more than one researcher, the team approach is critical and the results are gathered much faster than traditional qualitative research (Beebe, 1995). In Case Study Three and Four, Molly Wardaguga, an Aboriginal Burarra elder from Maningrida, and I worked together as a team and utilised the rapid appraisal approach, combined with a PAR approach, to perform the research. Presentation of data in the form of 'high impact quotes' is commonly used in RARE, allowing the data to speak for itself (Trotter et al., 2001). This technique was utilised in the literature review and will be seen throughout all four case studies.

Key concepts of the rapid appraisal approach are taking a systems approach, triangulation of data and iterative data collection and analysis (Beebe, 1995). The systems approach utilises the insiders understanding of the situation, considers all aspects that may be effecting the functioning of the system but moves on to focus on the most important aspects to that particular context (Beebe, 1995).

Triangulation of data is the second key concept in the rapid appraisal approach and involves consciously choosing different research methods, different team members and different individuals to interview to provide richness and added perspectives to the data (Beebe, 1995). With the PAR teams I was able to have a variety of individuals representing different backgrounds, worldviews and disciplinary perspectives. These are described in more detail below. Usually it is important to have both women and men on the teams (Beebe, 1995) but this was not appropriate as Aboriginal people consider childbirth to be women's business and the men rarely get involved. The research had assistance however, from both Aboriginal and non Aboriginal men throughout the course of the research. This assistance is further described in Case Study Three.

The third key concept of rapid appraisal is iterative data collection and analysis. This can be used to clarify uncertainties and may uncover unexpected details (Beebe, 1995).

3.4 Action Research

There is some debate around the origins of action research, an approach that emerged over time from a broad range of disciplines across many different countries (Brydon-Miller, 2003). In America, it saw its beginnings in the 1930's as a way of improving race

relations between the Navaho Indians and employees of the Soil Conservation Service (Selener, 1997). In the late 1940's, researchers from the University of Chicago and members of the Fox Indian community from Central Iowa were involved in a research project that resulted in social action for the Fox (Ivanitz, 1998). The original methodology for the Fox project changed dramatically as the research progressed, challenging the researchers and the university, and resulting in what is now termed Action Research (Ivanitz, 1998). Kurt Lewin, Paulo Freire and Orlando Fals-Borda have all been involved in using action research to promote social justice, democracy, institutional change and to alleviate depression (Brydon-Miller, 2003).

Action research involves a cyclical process of Plan, Act, Observe and Reflect (Kemmis and McTaggart 2000). This often leads to a 'spiralling off' from one action research cycle to another and this is an important factor in the change process (Hart and Bond 1995). Underlying principles of successful action research is that it is not linear, cannot be predicted and does not follow set stages (Hart and Bond 1995). Three of the key elements of action research include:

- the participatory approach with shared ownership;
- learning through research; and,
- contributing to social change that is created through action, usually democratic action.

(Ivanitz, 1998; J. Meyer, 2000)

These changes occur as the research process progresses through the following steps: collaboration between researcher and practitioners, finding solutions to practical problems, changing practice and developing a strategy and theory (Inger & Schwartz-Barcott, 1993). Unlike the more positivist approaches to research, action research is not value free, but suggests that knowledge is socially constructed and influenced strongly by personal values, social and political systems (Brydon-Miller et al., 2003). Action research is increasingly being recommended in the health care arena where it is being used to study the process of improving health outcomes at many levels.

Action research is suggested as a methodology that could suit research with Indigenous Australians as it:

- is reliant on Aboriginal involvement;
- includes respect for individual peoples knowledge, Indigenous knowledge systems, and peoples ability to understand the issues that are important to their communities; and
- is able to be responsive and flexible as the need arises.

(Brydon-Miller et al., 2003; Ivanitz, 1998).

There are many different branches of action research: action learning, action science, PAR, practice research engagement (PRE), collaborative participatory research and cooperative inquiry (Kemmis & McTaggart, 2000). The particular approach used in this research was PAR and is described further below.

3.5 Participatory Action Research

Participatory action research has been used to bring about social change in many different settings, particularly in the fields of community development, education, agriculture, and within organisations (Selener, 1997). It has been described as a process that, if done correctly, can empower and liberate oppressed peoples (Selener, 1997). The connection between action and reflection has been defined by Freire as praxis (Udas, 1998). Paulo Freire is well recognised for his work on ‘activist PAR’, particularly in the field of education, whereby participatory methods lead to social action through increased individual awareness, confidence and empowerment (Freire, 1970; Henry et al., 2002). Participatory action research has also been influenced by critical theory (Udas, 1998), however in this thesis, it was Jordans (1997) authoritative knowledge, that was used to guide the PAR process.

Differing theoretical frameworks and ideologies can guide the focus of the research and the actions that result, however the basic tenets involve promoting change in the research setting, participation from those who are intended to benefit and applying useful knowledge to solve practical problems (Selener, 1997). Participatory action research is often undertaken by people who are experiencing a problem or want to change their

environment. They then become directly involved in the research process by both participating in it and guiding it (Lindsey et al., 1999). The PAR cycle of Plan, Act and Observe, Reflect and Evaluate has been used in this research to generate knowledge through shared action (Kemmis & McTaggart, 2000).

A common criticism of PAR is the lack of rigour and validity of the results, both internal and external (Melrose, 2001). It has been argued that the more positivist notions of reliability and validity are not appropriate in PAR when the knowledge is sought for improvement in practice rather than the development of theory (Udas, 1998). This has also been said of research in the Indigenous setting (L. Smith, 1999). Strategies used throughout this research to increase rigour involved the mixed method approach (case study, PAR, RARE), using multiple sources of information (diversity of participants), multiple processes for data collection (face to face interviews, focus groups, telephone interviews, emails, field notes, the online community, video taping) and incorporating current literature (Dick, 1999).

Participatory action research is neither objective nor value free and is often used as a tool to progress social justice issues (Brydon-Miller et al., 2003; Fals-Borda, 2001). One of the philosophies influencing PAR is the recognition that minority or oppressed groups may be disadvantaged and often unable to either articulate, or realise their goals (Ivanitz, 1998). Ensuring Indigenous co-researchers were involved in the planning and control of the research was a strategy used in Case Studies Three and Four to assist the Maningrida women to articulate and realise their goals. This strategy increased the validity of the knowledge produced by the research and the likelihood that the results would be useful to the participants involved.

Particular attributes of PAR that are important to research being conducted in the Indigenous setting include:

- shared ownership of the research project and the research results;
- community based analysis of problems;
- respect for the individual and commitment to social change through community action;

- participants as co-researchers rather than objects of research, and,
- proper acknowledgement too those who are involved in the research.

(Dickson & Green, 2001; K. Humphrey, 2000; Ivanitz, 1998; NHMRC, 1991; Snow, 1997)

These attributes are particularly applicable to Case Studies Three and Four and are described in more detail in these chapters.

3.5.1 Participation

Participation in this type of research can take many forms. I have chosen to describe the participation that occurred in each of the case studies using Wadsworth's framework, where she describes four conceptual parties to research (Wadsworth, 1998). These four different conceptual parties are described below and outlined in more depth in the individual case studies.

The PAR teams

Wadsworth refers to this group as the researchers. The team composition varied slightly between the case studies and included AHWs, midwives, nurses, Aboriginal Elders, both young and older Aboriginal women, doctors, support personnel (Women's Health Educators, District Medical Officers) and the Women's Centre Coordinator.

Critical Reference Group (CRG)

Wadsworth describes the CRG as 'The Researched For' and suggests it commonly includes those who own the problem the research is aiming to resolve. This group can be similar to key informants, or a reference group, but are differentiated by the extent of their participation. In each case study several of the key members of the PAR teams were members of CRG, which was a smaller team. This group included remote area practitioners, AHWs and Women's Health Educators. I had personal knowledge of this group as I had been a remote area practitioner and the Women's Health Educator for the Darwin remote region where much of the research was undertaken. I was known to all of the participants prior to the research. Wadsworth elaborates on how researchers can be participants and contributors to the research and how this can be advantageous as they

build relationships with the CRG (Wadsworth, 1998). Additionally, she contests claims by more positivist-orientated researchers, claiming this biases the research. Wadsworth states, and my experience in this research confirms, that direct research involvement often leads to research that has increased relevance, focus, meaning, power and accuracy (Wadsworth, 1998). It has been argued that when participants are involved as co-researchers, as Molly Wardaguga was for Case Studies Three and Four, the opportunities for challenge and dialogue increase the rigour and credibility of the research (Dick, 1999).

The Researched

The 'researched' team included the practitioners who would be the end users of the resources (Wadsworth, 1998). These participants were best positioned to understand the research problem and 'validity test' the results of the research process (Brydon-Miller et al., 2003). This team included the Aboriginal women and remote area practitioners (midwives, nurses, doctors, medical and midwifery students) who were interviewed and those who reviewed and tested, the resources as they were being developed. Due to my previous work in both Maningrida and the Northern Territory I knew many of the participants in this group. I found that telling my own stories first, to those I hadn't met, established my credibility, and often led to improved discussions, (captured in field notes), and further data collection.

The Stakeholders

Wadsworth also describes this group as 'The Researched for'. It includes those who have some responsibility for the problem, or may benefit from a better understanding of it. This group included the Women's Health Educators (those not in the PAR team), staff development and orientation personnel, policy analysts, remote managers and remote support staff. I also had personal experience of this group in my role as Women's Health Educator and I had worked as a policy officer in the Women's Health Strategy Unit in Darwin. Involving this group was intended to highlight the inquiry to those who have a responsibility and the capacity to address the problem. Increasing their participation should have increased the relevance, meaning and effectiveness of the research (Wadsworth, 1998).

Wadsworth argues that the greater the participation by each of the groups above, the more likely the success of the project and the more likely the research will reflect the needs, understandings and contributions of those for whom it is being conducted (Wadsworth, 1998). A second component aimed at increasing the rigour of this approach, was the multidisciplinary nature of the teams with their different worldviews, life experiences and expertise (Bammer, 1997).

3.5.2 PAR in the Remote Setting

During the course of the research it became clear that undertaking PAR in remote, geographically dispersed settings had its own set of challenges. This is not surprising considering the recommendation that PAR be conducted and applied locally (Udas, 1998). Maintaining participation in the research project from people situated in many locations across the NT, while I was based in Sydney, was a constant challenge. I travelled between Maningrida in Arnhem Land and Sydney, visiting both Alice Springs and Darwin several times throughout the research. The longer than expected timeline is not uncommon when performing participatory based research (Israel et al., 1998; Ivanitz, 1998), and was exacerbated in the remote cross cultural setting. It presented challenges to the funding body that supported part of the research. Two extensions for a total of ten months were required with regular reports describing progress facilitating this process.

At times the participation was quite fluid with people moving in and out of the teams as they were able, or as was appropriate for the contextual environment. Initially, I was concerned that this was not 'true PAR' as we didn't have a team of people who remained the same throughout the project. I was reassured by the literature that this was not only appropriate, but reflected the nature of the 'real' as distinct from the 'research' world (Wadsworth, 1998).

Factors that impacted on the participation of research team members were often out of my control. These were the same issues that interfere with the ability to perform primary health care activities in the remote setting. Specific factors included the high turnover and mobility of staff, the overriding acute care priorities in the workplace, and at times, violence in the workplace. Several of the practitioners moved during the research

continued their involvement from their new settings. All these issues are further explored in individual case studies.

3.6 Evaluation

Evaluation is an essential element of the RARE approach and a useful tool for exploring the contextual factors that facilitate and impede the strategies in case study research (Stake, 2000; Trotter et al., 2001). The evaluation components of RARE include both process and outcome approaches. These will be outlined in more depth in the individual case studies. Due to the timeframe of the research, the evaluation has also utilised short-term summative evaluation of outcomes by evaluating each case study against its stated goal and objectives (Billings, 2000). Historically, one of the criticisms of action research is that the evaluation process lacks rigor (Billings, 2000). However both formative and process evaluation can be used, as I have done, to guide the research through each cycle prior to planning further action (Billings, 2000). The evaluation section presented in each case study has included the analysis of the findings. Key challenges or barriers, as well as facilitating factors, impacting upon the success or otherwise of the strategies, have been outlined for each case study and for each stage of the process (Israel et al., 1998).

Additionally, evaluation of the utility of the resources that were produced as a result of the research process, as judged by the PAR teams and in particular the CRG, has been documented (Harris et al., 1997). Other factors included in the evaluation were the sustainability of the strategies that were being developed, and the contextual influences and institutional factors impacting on this outcome (Jan et al., 1999). Additional components to the evaluations of Case Studies One and Two included specific factors that affected the utility of computer mediated communication strategies. These have been outlined further towards the end of this chapter and in each of these two case studies.

The process evaluation for Case Studies Three and Four paid particular attention to guidelines and ethical considerations that are recommended for research in the Indigenous Australian context. The guide to evaluating primary health care and health promotion projects in the remote Indigenous setting is titled 'Thinking, Listening, Looking, Understanding and Acting As You Go Along' (Tjikalyi & Garrow, 1996). This guide

recommends a participatory approach and outlines several of the key factors important to culturally relevant evaluation. These include:

- understanding the different cultural viewpoints
- ensuring the evaluation is benefiting both the community and the participants
- community consultation, Indigenous involvement and control and ensuring the community are aware of the progress of the project
- using Indigenous understandings of health
- linking the research to action

(Tjikalyi & Garrow, 1996).

When following these key points, and the principles of PAR simultaneously, I found they synergised to meet the guidelines and recommendations for research in the Indigenous Australian setting.

3.7 Research in the Australian Indigenous Setting

In addition to the guidelines for ethical conduct on research involving human beings, there are specific considerations that must be acknowledged, respected and adhered to when conducting research and evaluation in the Australian Indigenous setting (NHMRC, 2000; 2002). These principles are based on Indigenous understandings of health and research and reflect the principles of primary health care (Tjikalyi & Garrow, 1996). They include:

- the use of Indigenous knowledge systems and Indigenous understandings of holistic health
- Indigenous involvement and control
- reciprocity
- trust and respect
- recognition
- survival and protection
- issues of power

- community consultation and endorsement
- building community capacity.

(NHMRC, 2002; Tjikalyi & Garrow, 1996)

I have outlined these below and they are discussed in more detail in Case Study Three.

3.7.1 Indigenous Knowledge

Research in the Indigenous setting must be undertaken using methods that incorporate the Indigenous ways of knowing. This is described in the following principle:

Acknowledging and respecting Indigenous knowledge systems and processes is not only a matter of courtesy but also recognition that such knowledge can make a significant contribution to the research process (AIATSIS, 2000p.3).

Mandawuy Yunupingu (Yothu Yindi) and the Koori Centre at the University of Sydney suggest that PAR is an appropriate method for this setting (Hughes et al., 1994; Yunupingu & ABC, 1994). They suggest that the actions and priorities of Kooris are grounded in tens of thousands of years experience (Indigenous Knowledge) and that PAR, which does not require, or indeed acknowledge the possibility of, pure objectivity, is able to incorporate this Indigenous knowledge in its methodology. Indigenous knowledge is discussed more in Chapter Six, 'The Maningrida Community' that describes the research context for Case Studies Three and Four.

3.7.2 Indigenous Involvement and Control

Indigenous involvement and control of the research process are key factors recommended in guidelines on Indigenous research (Ivanitz, 1998; R. Kelly & O'Faircheallaigh, 2001; National Aboriginal and Torres Strait Islander Health Council, 2000; NHMRC, 1991; Pyett & VicHealth Koori Health Research and Community Development Unit, 2002). Similarly, these are also tenants of PAR and the RARE approach, which both recommend Indigenous participation (Kemmis & McTaggart, 2000; Trotter et al., 2001). Case Studies Three and Four both had Indigenous involvement with elements of Indigenous control; however there was not complete Indigenous control as the project was initiated by outsiders. As such, this is one of the limitations of this research which are discussed later.

3.7.3 Reciprocity

Reciprocity needs to be demonstrated, whereby the research returns to the community in ways that are beneficial and valued by the community (NHMRC, 2002). Following this principle in Case Study Three led the research down a wider path than originally intended, as Molly Wardaguga and the PAR team guided our actions ensuring the results were beneficial, both to the community as well as to the practitioners and the researchers. PAR provided the flexibility to achieve these mutual goals.

3.7.4 Trust and Respect

Trust is an essential component for successful Indigenous research and is often developing over many years (K. Humphrey, 2001; L. Smith, 1999). Aboriginal Australians, like many Indigenous peoples, have a long history of research being performed 'on them' that has been exploitative, unethical and immoral (K. Humphrey, 2001; NHMRC, 2002; L. Smith, 1999). In many cases such exploitation has resulted in Aboriginal communities refusing access to non-Indigenous researchers (McTaggart, 1999). The onus is on contemporary researchers therefore to change the perception of research and the conduct of researchers within Indigenous communities. This can only be achieved by careful consideration of the ethical guidelines, ethical conduct, transparency and inclusiveness throughout the research process.

The PAR approach employed in this research utilised the 'reflect and evaluate' component of the PAR cycle and allowed continual examination and questioning of the ethical conduct. Ongoing discussions and negotiations occurred throughout the course of the research to ensure participants had awareness of the progress of the research, that their consent remained current and the data was credible (Pyett, 2002). Most importantly, having Indigenous researchers as an integral part of the research team provided the trust throughout the community as well as the cultural leadership (L. Smith, 1999; Trotter et al., 2001), essential to this research. The data can only be reliable and valid if the culture, language and law of the community, that is the Indigenous methodology for this particular community, have been considered and utilised (L. Smith, 1999). I believe this would be impossible without Indigenous co-researchers and a high level of trust between the non-Indigenous and Indigenous researchers.

A respectful collaborative relationship that promotes dignity and recognition is another characteristic of Indigenous research (NHMRC, 2002). Gaining access and acceptance while performing fieldwork is often dependent on the relationship between the researcher, the research team and the individuals who are the owners of the cultural knowledge (Ivanitz, 1998). Decisions between differing pathways are not always made on the basis of scientific merit, but rather on the relationships of trust, respect and generosity that forms between the individuals involved (Hughes et al., 1994). This occurred as the resources were developed in Case Study Three (Birthing Business Website) and Case Study Four (A Primary Health Care Guide), and this has been carefully documented in Chapters Seven and Eight.

Due to my established relationships within the community, I was commencing the research with a high level of trust, with both community individuals and practitioners. I believe these relationships were evidenced during the initial consultation where members of the community expressed support for the research before it was clear exactly what it was that we would be doing. I believe this relationship was a primary influencing factor affecting the success of each of the case studies. As a result of this trust I felt a heavy responsibility, as I believe my actions and ideas were not questioned or scrutinised as much as they would have been if I had been unknown in the community. However a trusting relationship cannot be taken for granted (Israel et al., 1998) and I needed to work hard to maintain communication with the participants and the relationships of trust that had developed. The inherent subjectivity of me as a researcher is discussed again later in this thesis.

3.7.5 Recognition of Participants

Appropriate recognition of all participants was discussed in early consultations in Maningrida and revisited several times throughout the research. Due to a successful funding submission from RHSET to support the research, the co-researchers and informants could be paid for their contribution of expertise and time. The Maningrida women who were members of the PAR team elected to be personally identified and acknowledged in all of the outputs from this research, including this thesis. They felt it was important that their voices and identity be known and 'heard loudly'. In fact, this became one of the most important strategies of the research. The anonymity of the health

practitioners involved in the case studies has been preserved, although one practitioner elected to have her name documented on the stories that she provided for the Birthing in the Bush Website. Issues of respect, intellectual property and ownership are discussed in more detail in Case Study Three.

3.7.6 Survival and Protection

Survival of the Aboriginal and Torres Strait Islander culture is paramount to this cultural group who oppose assimilation and integration and stand proud of their cultural distinctiveness (NHMRC, 2002). This factor became clear as Case Study Three progressed and Molly Wardaguga formulated and articulated her goals for the research process. These included documenting the childbirth experiences and stories from many of the elders so that the stories would be available for generations to come.

3.7.7 Issues of Power

The issue of power and how it is distributed throughout the research project needs particular attention if the researcher is to break with the tradition of exploitation and abuse (Pyett, 2002). In cross cultural research, issues of power, status and culture can make it very difficult to accurately hear the voices of 'the researched group' (Jones & Allebone, 1999). This is dependent on the conduct of those leading the research (Jones & Allebone, 1999). The strategies I used to minimise these challenges included working in teams with local Indigenous researchers, establishing our objectives together and continually reflecting on these and the research process and outcomes. When research is conducted by non-Indigenous researchers who are in control of the funds, as I was, there will always be a power imbalance. This is a limitation of the research and whilst I took advice on how those funds should be spent, I was, as a non-Indigenous academic, still in control. Nonetheless, collaboration between non-Indigenous academics and disadvantaged, under represented powerless groups, when performed reflexively, responsively and ethically, can assist in ensuring the worldview of the oppressed group is heard, as well as providing opportunities for capacity building and empowerment within the disadvantaged community (Pyett, 2002).

3.7.8 Community Capacity

Another factor said to be important in Indigenous research is the extent to which community capacity has been influenced, at both individual and community levels (Jan et al., 1999). Community capacity has been defined as the ability of all the community to deal with its own health problems (Jan et al., 1999). Non-Indigenous researchers collaborating with Indigenous co-researchers can assist in building the capacity of Indigenous communities to develop their own research skills as they work towards community control of the research process (Pyett, 2002). Case Study Three (Birthing Business in the Bush Website) has outlined factors that have influenced community capacity and the difficulties involved in using this as an indicator of success.

3.7.9 Community Consultation

It has been argued that the community consultation itself, if performed appropriately, can be an exercise in self-determination, producing its own intrinsic value independent of health outcomes (Jan et al., 1999). As a part of the evaluation in Case Study Three I have detailed and examined the process of community consultation. I have outlined processes involved in seeking an accurate representation of community views.

3.7.10 The Role of Co-Researchers and Interpreters

Cross-cultural research sets up significant challenges that can be partially addressed by including local Indigenous researchers in the research design. Acting as ‘cultural consultants’, these individuals facilitate the researcher’s understanding of the context, adding to the ethnographic picture and influencing the data collection process (Jones & Allebone, 1999). In the field there can often be a lack of understanding of what is really occurring, with the finer cultural nuances being misinterpreted or completely overlooked. This is particularly relevant when there are language barriers in addition to cross-cultural factors. Working collaboratively with Indigenous co-researchers enables the combination of insider/outsider perspectives to improve the validity and relevance of the research (Pyett, 2002). In this situation, as seen in Case Studies Three and Four, there was a need to work with Indigenous researchers and interpreters. Skills of interpreters include the ability to translate, interpret and have a working knowledge of the technical terms, which will be used in the discussions (Jones & Allebone, 1999). Interpreters will often have knowledge of the culture, particularly when they are Indigenous to the culture,

understanding and identifying when misconceptions occur (Jones & Allebone, 1999). The researcher must be sensitive to, and use this knowledge.

In any research there is the possibility of the researcher being told what the participants believe they want to hear. Working cross culturally, through interpreters, can further exacerbate this risk. Whether this is more apparent when researchers are known and trusted, or when they are strangers, is impossible to know. Also influencing the research findings will be the fact that, although the interpreters are skilled interpreters, they may not have had any training as 'researchers'. Recommendations when using the RARE methodology include using Indigenous researchers and oversight by professionally trained ethnographers (Trotter et al., 2001). Strategies used in Case Studies Three and Four were the inclusion of Indigenous researchers on the PAR team. When interpreters were needed, one of the PAR team, who was the most appropriate for that language group, would be present. In almost every instance the initial discussions with the interpreters resulted in the interpreters themselves wanting to be a part of the research. They were then interviewed prior to acting as an interpreter for others. This not only incorporated their knowledge and experience into the data, but also gave them a better understanding of what the research involved.

3.8 Narrative Methodology

Narrative methodology whilst not being discussed in great detail in this thesis, deserves some mention, as Case Study Three (Birthing Business in the Bush Website) was produced from narrative in accordance with the tenants of Indigenous methodology (L. Smith, 1999). Smith (1999) describes storytelling as a method used by Indigenous peoples as a way:

'of passing down the beliefs and values of culture in the hope that new generations will treasure them and pass the story down further. The story and the storyteller both serve to connect the past with the future, one generation with the other, the land with the people and the people with the story' (L. Smith, 1999pp.144-145).

A key factor relevant to this research was that I did not change the women's stories, but documented them as they were told to me, after rereading them to the participants to check the accuracy and validity. During the research, I learnt the importance of stories to Aboriginal people and how it is particularly important that you do not change a person's

story, as it is an integral part of their dreaming. This concept is discussed more in Case Study Three where the Birthing in the Bush Website uses stories to teach health practitioners about Aboriginal culture and authoritative knowledge around childbirth.

3.9 Computer Mediated Communication

Computer mediated communication is a thread running through all four case studies with the Internet being the tool used to deliver the resources to the remote based health practitioner. I have already discussed the history of computer mediated communication in the Australian outback in Chapter Two but there are several other issues that are important when evaluating strategies being delivered through computer mediated communication that requires discussion.

3.9.1 Research and Computer Mediated Communication

Increasing use of the Internet has also seen an increase in research around its utilisation (Norris, 2001). Disciplines including communications, market research, computer studies, history and social psychology have all undertaken research using various methodologies, including discourse analysis, literary criticism, textual analysis, surveys, focus groups and more (Norris, 2001). Norris suggests that guidelines for research with CMC are similar to any research (Norris, 2001). Norris states, for example, that the most effective strategy for data collection is to triangulate as many sources of evidence as possible (Norris, 2001). However, one of the major challenges highlighted is that of studying a phenomenon that is undergoing such rapid change (Norris, 2001). This issue is discussed further in the individual case studies and again in the discussion (Chapter Nine). Case Study One used an Internet navigator as a tool to access a resource library and Case Study Two utilised the concept of an 'online community' to establish a communication forum. I will now provide an overview of both navigators and online communities.

3.9.2 The Role of the Navigator

The explosion of information available on the Internet has provided vast choices and a bewildering number of possibilities. This has made navigating through these options to the resources required, extremely difficult (P. Evans & Wurster, 2000). This challenge led to the rise of the 'navigator', which in computer terminology, describes software and websites that assist in guiding people 'through' the immense amount of information

available on the Internet to targeted areas (P. Evans & Wurster, 2000). Examples of navigators include search engines such as Google™ and Yahoo® and databases such as Ebay™. Navigators often have a specialist focus (P. Evans & Wurster, 2000). Some examples of these in health include the Cochrane Collaboration; and electronic retailers such as Capers Bookstore and Birth International who sell childbirth products and resources for parents and practitioners. Navigators have made ‘surfing’ the Internet quicker and easier than it was initially. In fact they have become so important that Evans and Wurster (2000) predicted they would become pivotal players in the marketplace. The recent listing of Google™ on the share market is an example of how successful a navigator can become.

In the business world navigators need to be competitive on ‘reach’, ‘agency affiliation’ and ‘richness’, as these are the factors that will affect the utility of the resource. These factors are equally applicable to the provision of this resource in the remote setting and are described below.

Reach refers to the number of people who are sharing the available information. Many navigators will strive to reach as many people as possible and in so doing will probably become the most popular, and if possible, the most profitable. Google™ Australia currently search 3,307,998,701 pages on the Internet (7.11.03)¹⁴ though how many people are using this search engine is harder to gauge (although Google™ themselves are probably collecting these statistics, they are not publicly available).

Agency affiliation refers to the navigator being able to meet the needs of the target audience.

Richness involves delivering quality information and has several components to it. These include:

- how much the information can be customised to meet individual needs

¹⁴ This had increased to 4,285,199,774 pages by 16.9.04

- bandwidth: effecting the amount and speed of information that can be exchanged
- interactivity: dialogue is usually possible in smaller groups whereas monologue is needed to reach millions
- reliability: how reliable is the information
- security of highly sensitive information, and
- currency: how up to date is the information

(P. Evans & Wurster, 2000).

Where agency affiliation and richness are focused onto a particular field then reach does not have to be broad, but rather, needs to be specific.

Until now there has been a “universal trade off between richness and reach” (P. Evans & Wurster, 2000p.23). ‘Richness’ refers to the user-defined quality of information and ‘reach’ refers to the number of people who receive this information (P. Evans & Wurster, 2000). In the past, it has been necessary to have proximity to communicate rich information and, as richness is increased, the reach tends to decrease (P. Evans & Wurster, 2000). Rich education is available when practitioners attend courses like the Advanced Life Support in Obstetrics (ALSO) course. The ALSO course provides customised, current, evidence-based information. However, ALSO has limited reach as only 48 participants are able to attend each course and the cost of transport and attendance can make the course difficult to access. The richness and reach trade-off is, of course, influenced by cost, as both can often be attained if enough money is spent (P. Evans & Wurster, 2000).

Digital technology now enables very rich information to reach a very large number of people and is gradually reducing the richness/reach trade-off. This effect is creating a ‘new economics of information’ (Evans and Wurster 2002). The ‘Navigator’ theory, described above, has been derived from the work of Evans and Wurster (2000) and used to guide the research on the development and utility of a navigator that enables access to specific (rich) information on maternity care. The research process is described in Case Study One, together with the barriers and facilitators that affect the utility of the navigator as experienced by remote area practitioners.

3.9.3 Online Communities

Defining the term ‘online communities’ is complex due to the cross disciplinary fields that are using the expression and the rapidly changing nature of the technology (Preece, 2001). Broadly, it refers to a collection of people who communicate via computer mediated communication (Preece, 2001).

Though not a substitute for human interaction it is thought that online communities can enable meaningful communication between people and across distances (Preece, 2001). One example of an online community is that of the communication forum or bulletin board (Preece, 2001). This will be discussed more in Case Study Two that describes the development and evaluation of a communication forum, an online community developed for remote maternity service providers.

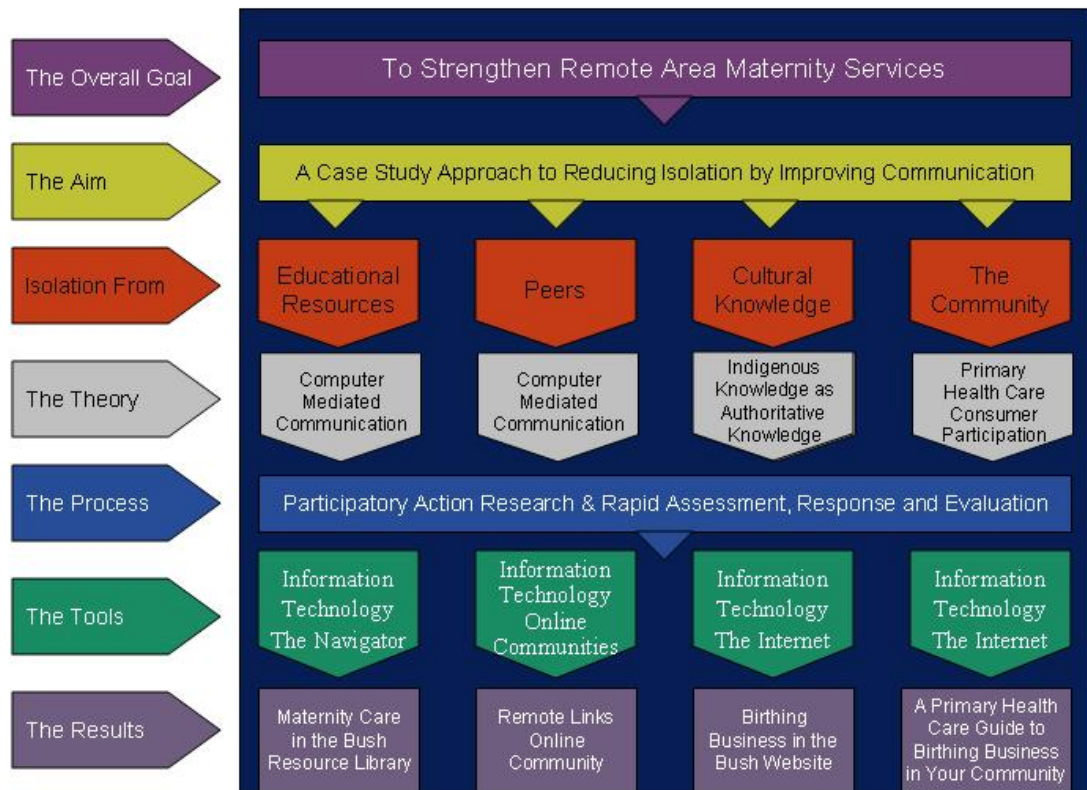
3.10 Conceptual Framework for Thesis

This thesis reports on four Case Studies that used information technology as a tool to deliver resources developed through PAR and the RARE approach, with the aim of reducing the isolation of maternity service providers based in remote areas of Australia. The evaluation included process, impact, contextual and short-term summative evaluation of the barriers, facilitators and utility to practitioners accessing these resources. The data provided a rich source of information on issues pertinent to remote area maternity services and the support of the professionals working in these areas.

Below is a diagrammatic representation of this framework. It depicts the four Case Studies that aimed to reduce different aspects of isolation and their ‘results’, namely the ‘resources’ that were produced from the research. The theoretical underpinnings were slightly different for each case study. Case Study One used the theory of computer mediated communication and navigators to guide the development of the ‘Maternity Care in the Bush Website’. Case Study Two used computer mediated communication, in particular, the theory related to online communities, to guide the development of the ‘Remote Links Online Community’. Case Study Three utilised Indigenous knowledge as authoritative knowledge to inform and develop the ‘Birthing in the Bush Website’. Case Study Four used primary health care, in particular consumer participation in health care

planning, to guide the development of the resource ‘A Primary Health Care Guide to Planning Maternity Services in Your Community’.

Figure 5. Theoretical Framework



This chapter provided an overview of the methodology and methods used throughout the research project. The PAR and RARE approaches informed all case studies and were particularly relevant to Case Studies Three and Four where they were congruent with Indigenous methodologies. The following chapter describes Case Study One, which saw the development of the Maternity Care in the Bush Website. A PAR approach was used to develop this resource library. The barriers and facilitators affecting its use highlight the difficulties in using information technology to support the education of remote based practitioners in Australia.

4 CHAPTER 4. CASE STUDY ONE - THE RESOURCE LIBRARY

4.1 Overview

This chapter describes the PAR process involved in establishing and evaluating an Internet based resource library. The resource library is accessible through a 'navigator' (a tool used to guide people to the library), which is named 'Maternity Care in the Bush'¹⁵. The evaluation of the navigator includes its performance on reach, agency affiliation and richness, as these are the key points said to affect the sustainability and utility of such a resource (P. Evans & Wurster, 2000). An additional component of the evaluation framework documents the facilitators and barriers of using an information technology strategy to reduce the isolation of remote area maternity service providers.

4.2 Background

Providing support and education to remote area practitioners in Australia via information technology is a new and emerging field. At commencement of this case study in 2001 (see Timeline, Appendix One), there was little published research on the efficacy or feasibility of such initiatives in remote Australia. In 2003, three NT Government sponsored reports were released, detailing the challenges to providing remote information technology infrastructure (Northern Australia Business Services et al., 2003; Northern Territory Government, 2003; Peter Farr Consultants Australasia, 2003). Notable in these reports was the NT governments' aim to provide broadband telecommunication infrastructure to all remote communities by 2008 (Northern Australia Business Services et al., 2003).

Given the rollout of telecommunications to remote areas it seemed feasible to investigate the provision of educational support to remote practitioners via this mode. However, research has found the Internet can be overwhelming, with a seemingly endless amount of information available (P. Evans & Wurster, 2000). In Australia, rural and remote area nurses have also stated they find information on the Internet difficult to find (PRHCIT, 1996). These difficulties have led to the development of navigators that assist to guide people to the information they are seeking (P. Evans & Wurster, 2000).

¹⁵ <http://www.crana.org.au> : Hosted Pages : Maternity Care in the Bush

Preliminary discussions with remote practitioners suggested they would find an educational resource library valuable provided it was easy to access and understand. A survey of the Council of Remote Area Nurses of Australia (CRANA) membership in 2000, found 48% of the 102 respondents indicated they needed training in information technology and only 4% of the 97 respondents had received professional training in this area in the previous 12 months (MI Taylord Services, 2000). Not surprisingly, the need for information technology training was greater in the more remote areas (MI Taylord Services, 2000). One respondent commented she was going to leave her current location because of the costs associated with Internet use and difficulties accessing library services for educational purposes (MI Taylord Services, 2000). Seventy four percent of 100 practicing RANs said that the quality of telecommunications affected their ability to access the Internet. Once again this was more significant in remote areas (MI Taylord Services, 2000).

In the same survey, 39% of the 101 respondents reported no work based email account. Reasons stated included management decisions and not having the required telephone lines or computers (MI Taylord Services, 2000). Furthermore, 56% of 100 respondents reported that they could not access the Internet at work for similar reasons (MI Taylord Services, 2000). Overall, 57% had Internet or email access at home with 16% having no Internet or email access at all (MI Taylord Services, 2000).

Being familiar with the remote context, I believed that a navigator, guiding remote area maternity service providers to a resource library specifically targeting their educational needs, could be helpful. Many variables can influence the success of such a strategy and these were to be investigated. They included:

- Telecommunications infrastructure: hardware, speed and reliability, accessibility, cost, support and maintenance
- Contextual factors: time available, management constraints, knowledge of its availability, and

- The human factor: comfort with the technology, education and training, motivation and interest in the resources and technology

(PRHCIT, 1996).

4.3 Research Aim

The aim of this case study was to establish and evaluate an Internet based resource library (known as the 'Resource Library') targeting the needs of remote area maternity service providers.

4.4 Research Question

What information do remote area maternity service providers want to access from an Internet based resource library and, if this is provided, what are the barriers and facilitators that influence its use?

4.5 Research Objectives

The research objectives were:

- To use a participatory process to identify the information that remote area maternity service providers would find relevant in a resource library
- To utilise an action research process to evaluate the resource library as it was being developed
- To evaluate the 'navigator' using an evaluation framework of reach, agency affiliation and richness, and,
- To identify and describe the barriers and facilitators influencing Internet use by remote area maternity service providers in Australia.

4.6 Consultation with CRANA

In 2002 I approached CRANA to see if they were interested in using their website and computer server as the storage unit for the Resource Library. As a national organisation supporting the remote health workforce CRANA seemed an appropriate organisation to perform this function. There were other organisations that would also have been appropriate (NT Health Department, Australian College of Midwives, National Rural

Health Alliance), however CRANA was chosen for several reasons. The organisations aim is to “*promote the development and delivery of safe, high quality health care to remote areas of Australia*” that includes the “*provision of professional and personal support for remote practitioners and improved information flow*” (CRANA, 2004 Aim and Primary Objectives). They have experience in providing education, support and training in remote areas¹⁶, are very aware of the conditions these practitioners work in, are cognisant of the cultural issues that impact on the workplace and have the necessary networks and credibility to be acceptable in this setting. Additionally they had ongoing updating of the website that was aiming to inform and assist remote practitioners and I had strong links and credibility with members of the organisation. Sustainability of the library was also important and CRANA gave the commitment to provide the resources to do this.

Agreeing to support the navigator required the organisation to host the library of resources on the CRANA server and enable access through the CRANA website. The board members were very supportive of this as it fitted well with their strategic plan. As a member of the CRANA Information Technology Committee, I was aware of the strategic direction that the organisation was hoping to take regarding the use of information technology in the remote workplace. Three of the goals of the committee were congruent with my research. They were to:

- investigate and critique the use of information technology hardware and software in the remote workplace
- develop alternate forms of communication that are more efficient (in cost and time) for a national committee and,
- enable the promotion of CRANA and the promulgation of CRANA resources to the remote health workforce and the wider community

(CRANA Information Technology Committee, 2002).

¹⁶ The Remote Emergency Care Course, Maternity Emergency Care Course and Avoiding Stress in the Workplace Course.

4.7 Research Design

A PAR approach was used for this project. The planning was undertaken with the PAR team (described below) and the CRANA Webmaster¹⁷. Action and evaluation were cyclical as the research team assisted with the development of the resource library. The framework guiding the development of the resource library was ‘navigation’ (P. Evans & Wurster, 2000). Reach, richness and agency affiliation were important components of the evaluation as were the barriers and facilitators that influenced access to the Internet (P. Evans & Wurster, 2000). Below is a diagrammatic representation of this case study.

Figure 6. Diagrammatic representation of Case Study One



As the resource was being built it could only be accessed by password. The PAR team members were given the password on recruitment. Initial development and evaluation was expected to last approximately three months. In the final two months of the development phase, the Resource Library was to be extended beyond the PAR group to

¹⁷ The term ‘Webmaster’ refers to a person who is responsible for the design and maintenance of a website. I have used this term to refer to the person who was responsible for maintaining the CRANA website.

anyone who wished to access it, by removing the password protection. This was to provide an opportunity for further feedback and evaluation of the Website. This was the original research intention but as is common with PAR, change occurred frequently as a response to advice or circumstances. These developments are described throughout this chapter. The timeline (Appendix One) for this case study took longer than expected with utilisation and evaluation statistics from the website being collected from November 2002 to November 2003.

4.7.1 Ethics

Ethics approval was granted by the University of Technology, Sydney Ethics Department, the Top End Human Research Ethics Committee in Darwin Northern Territory and the Central Australian Human Research Ethics Committee of the Northern Territory.

4.7.2 Participants to the Research

Recruitment

I anticipated that the PAR team would be composed of a group (5 to 12 participants) of self-selected and targeted midwives, AHWs and doctors who were involved in the delivery of remote area maternity services. Recruitment was predominately achieved via a faxed 'letter of invitation' to all (n=52) remote communities in the NT, sent out at the end of June 2002 (Appendix Two). The letter described the project and asked for expressions of interest. The participants were asked to become involved in the development and evaluation of both the Resource Library (Case Study One) and the Online Community (Case Study Two). Several professional organisations were also approached and asked to place a 'letter of invitation' in their journals, newsletters and e-Forums. These included:

- CRANA
- Remote Workforce Agency (responsible for recruiting and supporting doctors to the Top End remote communities)
- Central Australian Division of Primary Health Care
- Top End Division of General Practitioners.

Once people contacted me they received an email with more detail¹⁸:

The plan is to get a group of about 5-12 people from the NT - I'm hoping to get a mix of professions (Drs, AHW, nurses, midwives and who ever else is interested in maternity care). This group will then be able to give me feedback on what they would find useful on the website. Hopefully they will chat to other people they work with to get more information. At the moment I am planning to include issues that are important to remote area maternity workers like - national guidelines, consensus statements, articles of interest, resources, reports, clinical updates and links etc. ... it will be accessed through the CRANA Website so it will have ongoing support and updating and the link to this is <http://www.crana.org.au>. It would be fantastic to have you involved as I am keen to get broad representation and hope the resource will be appropriate for all remote practitioners. (Email sent to participants, June-August, 2002).

Consent

When individuals expressed interest in being a participant in the research I would send them a consent form (Appendix Three) and an information sheet (Appendix Four) explaining the project in more detail and giving clear instructions on what was required to participate. Collection of the consent forms was problematic as some of the team did not have printers and others chose to send me an email with their consent as seen in the examples below:

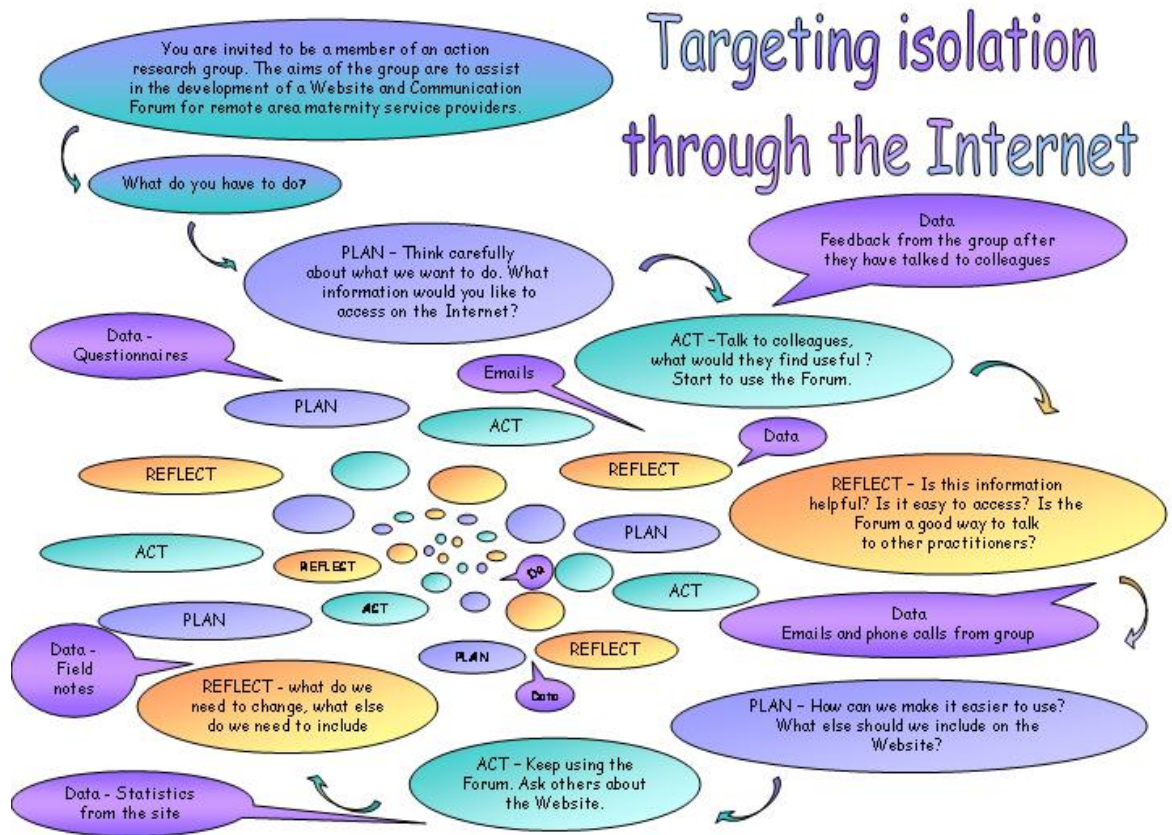
I have read your consent form and the information page thoroughly and am happy to be part of the research group (RANM, 8.02).

I don't have a printer at present, so I can't print out the consent form. I have read and understood the conditions on the form however, and I agree to it (RANM, 9.02).

In addition to the information sheets the figure below was sent to the research participants (and ethics committees) to assist with explaining the project and the methodology.

¹⁸ As is common when using email I decided to use a conversational style rather than a formal style of communication.

Figure 7. The diagram of the PAR project.



Five of the people I invited to participate on the PAR team, were unable to be involved. The reasons for this varied but most were either too busy, or did not have Internet access:

... too busy and unable to come on board, should be getting a satellite in Sept and will be able to get on line then (RANM, 07.02)

... bad time for me –all a bit too crazy!! (RANM, 07.02)

... our turnover at the moment is immense! Don't know why. Just bad timing I think (WHE, 07.02)

However, enough interest was shown from other practitioners to construct the following teams.

4.7.3 Composition of the Team

Table Four below shows the professional groups who participated in the research. I have used Wadsworth's four conceptual parties as a framework for describing participation (Wadsworth, 1998). I categorised people according to where they spent the most time, as

some were included in more than one group at various times throughout the research. This multiple representation is commonly seen in PAR (Wadsworth, 1998).

The PAR team

The PAR team was composed of a group of self-selected and targeted midwives and doctors who were involved in the delivery of remote area maternity services (n=13). This included practitioners who had extensive experience in remote area women's health service provision: remote area midwives (n=5) and doctors (n=1), and remote support staff (n=4), remote area nurse (n=1). Additional members included the Women's Centre Coordinator (n=1) and myself (n=1).

The Critical Reference Group

This group consisted of practitioners who advised and assisted in the project. The critical reference group (CRG) (n=6) were also members of the PAR team.

The Researched

This group were not members of the PAR team. They included remote area practitioners (n=10) for whom the Website was being developed. A number of team members (n=8) did not participate in the research for the full length of the project. These participants had all been in the 'Researched' group, (which reduced the membership from 18 to 10) and the reasons for leaving included: moving interstate (4); being unable to get Internet access (1); leaving the position (1); partner became ill (1); and, expressed interest but never participated (1).

The Stakeholders

This group were not members of the PAR team. They included those who provided support for providers of remote maternity services: women's health educators (n=3), staff development and orientation personnel (n=1), public health nurse (n=1), policy analysts (n=3) and district medical officers (n=2). Additional members of this team were the CRANA director and the CRANA 'Webmaster'.

Table 4. Participants developing and evaluating the Resource Library

| | PAR Team | Critical Reference Group | The Researched | The Stakeholders | Attrition |
|------------------------------|-----------|--------------------------|----------------|------------------|-----------|
| Remote Area Midwife (RAM) | 5 | 2 | 5 | | 4 |
| Support Staff | 4 | 4 | 0 | 5 | 2 |
| Remote Area Nurse (RAN) | 1 | | 1 | | 1 |
| Medical Officer | 1 | | 2 | 2 | 1 |
| Women's Centre Coordinator | 1 | | | | |
| Sue Kildea | 1 | | | | |
| Policy Advisor | | | | 3 | |
| Student (midwife and doctor) | | | 2 | | |
| CRANA Director | | | | 1 | |
| Webmaster | | | | 1 | |
| Total | 13 | 6 | 10 | 11 | 8 |

4.7.4 Data Collection

Once the PAR team was established in August 2002, they were asked to identify what information and materials they and their colleagues would like to access on the Website. Data were taken directly from the Online Community (Case Study Two) that was being established concurrently and from email and phone contact with the PAR team. If I was unsure of the meaning in written feedback I would telephone the participant to clarify my understandings and validate their statements and suggestions. A questionnaire to gain feedback about the site and to evaluate the processes and outcomes was developed and sent to the PAR team (Appendix Five).

Phone interviews were held with each member of the Critical Reference Group to gain a greater understanding of the barriers and facilitators affecting the use of the site. These interviews lasted approximately an hour each. Statistics were collected on the number of 'hits' to the Website and visitors to the Online Community. Seven questionnaires were returned from the PAR team (n=12, discounting the researcher), a further four answered the questions on email and one member discussed the questionnaire by phone. Twenty seven research participants commented via email. Additional data were gathered from: the Webmaster; direct feedback from the Website; and direct feedback (usually on email) from other interested parties who were accessing the site.

Field notes were kept during this time recording formal and informal discussions with interested individuals and stakeholders (in particular CRANA members). Email correspondence was organised and filed, to be drawn on as additional data. A total of 384 emails were received. Emails with multiple 'replies' to and from myself and the sender were filed only once, as were emails that were addressed to more than one person. Of these, 166 were direct correspondence with the research participants. The remaining emails were correspondence from the Webmaster regarding technical issues or from organisations regarding resource promotion and provision of reciprocal links with other webpages. Initially I attempted to categorise them separately for each of the Case Studies however this proved too difficult, as many would be about two or more of the Case Studies. All emails, questionnaires and field notes were imported into a qualitative analysis software program, Atlas TI version 5 for data storage, management and retrieval. Descriptive analyses of the data were performed.

As I was starting to recruit participants I received the following email from a remote area midwife:

I'm after some info - what was the name of that report on birthing in the Top End, Aboriginal women's experiences of birth and birth options? I'm writing an essay for the Remote Health Practice course and would like to try and get it (RANM, 07.02).

My response was to send the report to the midwife concerned, recruit her into 'The Researched Group', (which she was happy to join) and then place the report on the Website in PDF format under the section titled 'Reports of Interest'.

Another similar request that came via the website:

(There is a project officer) from the Women's Health Strategy Unit who was working on ... a screening tool (for domestic violence) in the NT (RANM, 09.02)

Each time my response was to contact these people, explain the project and ask them to contribute information for the Website.

Simultaneously I was involved in facilitating courses that provided educational updates to remote area practitioners (ALSO and the MEC). I used these courses to promote the

Website and discuss issues regarding information technology use in rural and remote communities. The results of these discussions were documented in field notes.

The ongoing evaluation, reflection and then further planning and action did not always occur in the cyclical order described in the literature (Kemmis & McTaggart, 2000), but opportunistically, responsively and rapidly. Most of the changes suggested by the research participants were incorporated into the Website as they were recommended. Ongoing literature searches and Internet browsing was performed as I looked for resources and links that would be appropriate for the site.

4.8 Results

The Resource Library was hosted on the CRANA Website and went 'live' in November 2002¹⁹. The opening page of the site is shown on the next page.

¹⁹ The resource library can be viewed live on www.crana.org.au → maternity care in the bush

Figure 8. Entrance to the Resource Library as it Appears on the CRANA Website

CRANA Council of Remote Area Nurses of Australia Inc.

Hosted Pages > Maternity Care in the Bush

Maternity Care in the Bush

Introduction

This site has been developed by Sue Kildea, Centre for Family Health and Midwifery (CFHM), University of Technology Sydney, with the Council of Remote Area Nurses of Australia (CRANA). The funding for the site has been provided by a grant from the Rural Health, Support, Education and Training Scheme. The ongoing development of this site will be performed by CRANA.

What's new on the site?

An additional part of this Project saw the development of another website that was produced with the women from Maningrida and its outstations. This site has more information on traditional and cultural beliefs around childbirth practices and can be reached by clicking on the link (image) to the right.

Search the site

Search by keyword: [Go >](#)

Choose a section:

- [Clinical - Courses](#)
- [Clinical - Antenatal](#)
- [Clinical - Birth and Postnatal](#)
- [Guidelines](#)
- [Reports of Interest](#)
- [Articles of Interest](#)
- [Resources For Parents](#)
- [On Line Journal Links](#)
- [Websites of Interest](#)
- [Women's Health](#)

(Note: You will need Adobe Acrobat to read some of the pdf files that result from links, if you don't have Adobe Acrobat please click on the link at the bottom right of this page to download it)

Broken Links OR Suggestions??- Please assist us

There are a lot of links to other websites & pdf documents contained within the listings, if you find broken links or have suggestions about new links to add please take a minute to let us know by filling in details below.

Section referring to (optional - see above for section):

The sub-heading is (if broken link):

Email address (optional, though necessary if you need a response):

Any additional information / suggestions you might like to add?:

Disclaimer

The links that appear on the attached pdf documents may relate to third party sites, CRANA and the CFHM are not responsible for and makes no representations concerning, the condition and content of, or products offered at, the third party site. The link does not indicate, expressly or impliedly, that CRANA endorses the site or the products or services offered there. You access the site and use any products or services at your own risk.

[Close Window](#)

1880 visitors since Oct 2002 [TOP OF PAGE](#) Website by [DWD](#)

Copyright ©2002 CRANA [Disclaimer](#)

The research group assisted in planning the information that would be appropriate for their needs, and this was catalogued under separate sections. The refined and modified sections on the Website include:

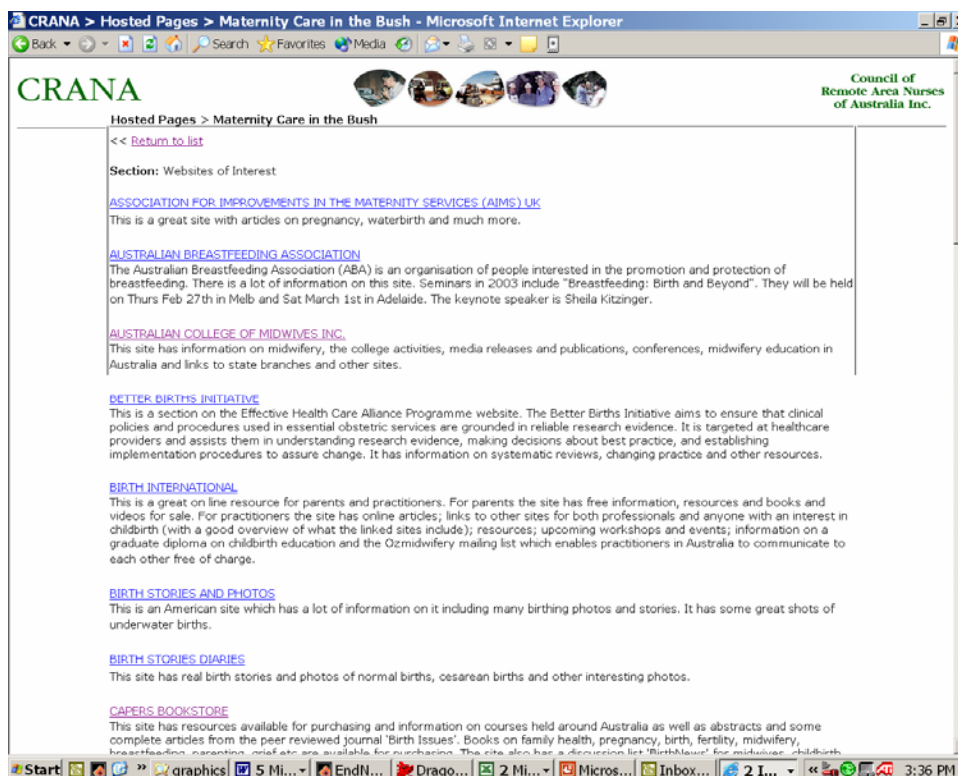
Figure 9. Sections Available on the Resource Library

Choose a section:

- | | |
|--|---|
|  Clinical - Courses |  Articles of Interest |
|  Clinical - Antenatal |  Resources For Parents |
|  Clinical - Birth and Postnatal |  On Line Journal Links |
|  Guidelines |  Websites of Interest |
|  Reports of Interest |  Women's Health |

Each of the above sections contains articles, reports, reference material and links to other Websites. Many links have been made (example below) with descriptions against each link to allow easier searching of the site. Additionally the Resource Library has reciprocal links with most of these sites. The figure below is an example of one of the pages that opens when entering through the 'websites of interest' section.

Figure 10. Example of the Links available on the Resource Library



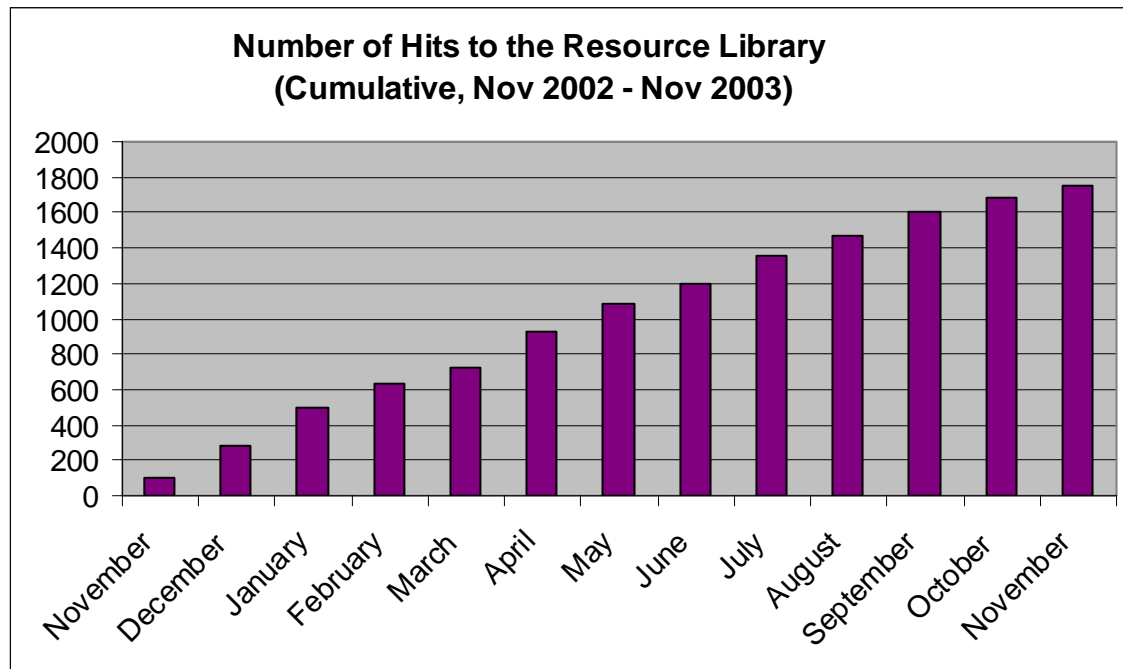
4.9 Evaluation and Discussion

The broad principles used for the evaluation included reach, agency affiliation and richness as these are the factors said to affect the utility of a navigator (Evans and Wurster 2000) and thus the Resource Library. Additional factors that were explored included the barriers and facilitators impacting on the utility of an information technology strategy.

4.9.1 Reach

Reach refers to the number of people who are sharing the information that is available (P. Evans & Wurster, 2000). The figure below shows the reach for the Resource Library, that went 'live' in November 2002. The figure shows the cumulative number of 'hits' that the site received between the 1.11.02 and the 31.11.03. The range was 62-222 hits per month and the mean was 134 hits per month. This graph shows steady access over the 13 month period of the evaluation.

Figure 11. Hits to the Resource Library



These figures show the minimum number of visitors to the site as the counter only registered people accessing the site through the index page. Users who saved other sections or pages to their browsers favorites list would not be counted. At the time of

writing (January 2005) the website statistics showed the number of 'hits' were around 100 per month.

A specific factor important to the reach of a navigator is that when agency affiliation and richness are focused on a specific target audience, then reach does not need to be broad, but targeted (P. Evans & Wurster, 2000). I was targeting maternity service providers involved in the care of women living in remote areas, particularly in the NT. However exact figures for this target group are uncertain with the added complication of registered nurses and AHWs providing maternity care in some areas. National data shows that there are 305 midwives, 622 medical practitioners (not all have obstetric training) and 12 Obstetricians and gynaecologists who provide services to, or live in, remote areas across Australia (AIHW, 1998; 2003b; 2003c). In the NT there are 175 (153 FTE) midwives though the large majority of these work in regional areas (Australian Health Workforce Advisory Committee, 2002). These figures give an estimation of the size of the target group. Defining the target group was important as the promotion and dissemination about the Resource Library needed to attract the attention of this group.

Promotion

Promotion of the Resource Library and Online Community (Case Study Two) occurred throughout 2002-4, alongside promotion and dissemination of Case Studies Three and Four. This was used as a strategy to highlight the issues important to women living in remote areas of Australia (discussed more in Case Study Three). Information was placed in journals and newsletter; fliers were given out at conferences where presentations were also given; publications in journals and stories were placed in the media (Appendix Six). Many organisations listed on the Resource Library placed a reciprocal link to the 'Maternity Care in the Bush' Resource Library on their own Website.

After the Resource Library went live to the public in November 2002, I placed additional information on the CRANA Website. This explained that I was a doctoral candidate and would be using information derived from the Online Community and the Resource Library towards a PhD. This, and the active promotion of the site, led to more people contacting me directly as shown in the emails below:

This looks interesting. Can I speak with you per phone to find out more about what it is and what would be involved for me? (Doctor, Aboriginal Medical Service, Dec, 2002)

Have just visited the above site and it's great. Am looking forward to spending more time with the links. Last year I completed my MPH. I did a qualitative study looking at antenatal and birthing issues of concern for women in a remote community in WA. I am very interested in the project that you mentioned on cultural safety issues. Is it possible to get more info at this stage? (RAN, WA, March 2003).

Additional factors influencing the reach of a navigator include having it listed on other Websites. To increase the opportunity for this to occur I added a 'suggestions' section to the front page of the Website: This resulted in emails like the following:

I am a midwife and would like to add a link to CRANA from our Website: www.birthing.com.au. I would also like to request that a link is made to our Website from your 'Websites of Interest' section (07.04).

These suggestions were followed up directly.

4.9.2 Agency Affiliation

Agency affiliation is defined as meeting the needs of the target audience (P. Evans & Wurster, 2000). Using a PAR approach allowed the research group to directly influence the composition of the Resource Library to increase the opportunities for agency affiliation to be met. The changes that were suggested were incorporated as much as possible as the project progressed. Examples of feedback around agency affiliation included the following emails:

I think the mat care in the bush is a great idea - useful information that would be otherwise difficult to access in remote areas — (RAN, 02.03)

... the information is targeted and very relevant to practice (WHE, 11.02)

Seems like the information on your site would be essential to anyone thinking of working up here (Medical Student, 02.04)

Some of the remote workers have said they would like clinical info - updates on new drugs for preterm labour etc (WHE, 05.03).

There were a number of requests for clinical information as seen in the above examples. In response I placed two clinical sections on the site, one for antenatal care and one for birth and postnatal care. Additionally, I developed a large clinical section on the 'Birthing Business in the Bush Website (Case Study Three) focusing on the issues that are

particularly pertinent in remote Australia (preterm labour and birth, urine infections of and sexually transmitted infections in pregnancy, postpartum haemorrhage).

As part of the PAR cycle of plan, act, reflect and evaluation, the Resource Library was continually improved and updated. In the following table I have documented some of the ‘reflections’ (feedback), from the PAR team and ‘the researched’ group that aimed to strengthen agency affiliation. The ‘act’ component was my response to these suggestions and is documented in the column titled ‘Action’.

Table 5. Reflection and Action Used to Improve Agency Affiliation

| Reflection | Action |
|---|---|
| Need something about the project (WHE) | Explanation added to front page of the site |
| ALSO course – what it is about, how to get into it (RAN) | ALSO brochure scanned and added to site and link added |
| Can you add - counselling for triple test (RAN) | Genetic screening link added |
| Ask for remote area nurses stories (WHE) | RAN stories were placed on the Birthing Business in the Bush site |
| More clinical please immunisation, PND, examining a baby (WHE) | All added either directly or via links |
| More women’s health - Implanon contraception, HPV (WHE) | Women’s Health Section added to site |
| Can you add something about the Domestic Violence project from Darwin (RAN) | Resources about domestic violence were added to the site including articles, and Power Point presentations |
| Fetal monitoring in labour (RANM) | An interactive CTG tutor was placed on the site |
| How to set up antenatal education in a rural community (RANM) | Information on this was placed on the Birthing Business in the Bush site (Case Study Three) with a remote focus and a section was created in the Forum (Case Study Two) |

4.9.3 Richness

Richness involves delivering quality information and includes reliability, security, bandwidth and relevance (P. Evans & Wurster, 2000). Once again the PAR process assisted in ensuring these goals were met, although some were factors were beyond the control of the research: e.g. bandwidth. Most of the comments received indicated that the target audience felt the information provided was appropriate:

I think it is very useful, the wide variety of sites & articles (WHE, 11.02)

Site is good and interesting (RAN, 01.03)

Contemporary, relevant reports and articles, which are often quicker and easier to access than going through journals (RAN, 03.03)

Women's health site is great for checking on management options out bush (RAN, 03.03)

Clinical – antenatal – very good information for quick browsing (RANM, 05.03)

I found some the articles linked on your CRANA site useful to present writing of Maternity Coalitions WA's "Implementing National Maternity Action Plan in WA" Thank you (Email sent to Sue Kildea, 11.03)

I utilise the site prior to facilitating courses, for updated information, and if an inquiry comes from a RAN about a particular subject. I can either send the link information or print it and send by snail mail. The links are good if I need to extend my search. It is on my 'favorites' list (WHE, 08.03).

The site was a valuable resource for practitioners in leadership and education positions. The site enabled access to professional knowledge that could be further distributed to the remote based practitioners. Thus, even if the remote practitioners did not have Internet access they were still able to access the material, through the regional support positions.

In contrast, some thought the site was 'a bit boring' visually.

... I hate the white spaces on the web, the front page is boring and needs to be more interesting, also you need road signs to know where to go. You could get free animations from the web (WHE, 11.02)

First page buttons to broken links – shouldn't have to scroll down ... make buttons more interesting (WHE, 11.02).

Initially lack of visually appealing graphics was intentional to hasten access, as use of high quality graphics affect opening and download speeds. However based on this feedback changes were made to improve the visual appearance of the site.

Other comments relating to richness included:

Very user friendly (RAN, 05.03)

How often would I need to check the Website? Is it constantly being updated? (WHE, 10.02).

Following this last email I talked to the Webmaster to see if we could have some sort of an alert 'what's new on site'. The following diagram shows the result.

Figure 12. Icon Leading to the 'What's New' Section



4.9.4 Internet Access

The following quote highlights one of the key factors regarding this resource:

A very valuable resource, if able to access the Internet (RAN, 11.02).

This access is, of course, a primary consideration and there are several factors that will influence the participants' ability to access the Internet. Having the appropriate hardware is essential, but is not all that is needed to make an information technology strategy a success. Individuals must have the time, motivation, skills and troubleshooting support, to be able to use this technology so that it suits their needs (P. Evans & Wurster, 2000; Norris, 2001). Factors influencing these variables that emerged from the data have been detailed below under the headings: Telecommunications Infrastructure, Contextual Factors, and The Human Factor (PRHCIT, 1996).

4.9.5 Telecommunications Infrastructure

One of the problems encountered by remote practitioners was the inadequacy of computer hardware in many of the remote communities. However, information technology in the remote areas appeared to be quite dynamic with improvements happening throughout the course of the research. Initially one member of the research group did not have access when travelling in remote areas however by November 2003, she emailed me the following comment:

The remote health centres here have just got computers with email but things are not going smoothly (WHE, 11.03).

During other conversations I heard that two remote communities had been paying for the lease on computers for two years and they had not been removed from their boxes. Staff unfamiliar with the technology had shown no interest in setting up the computers. Some Health Centres had computers but no satellite dish and others have had the satellites delivered but not installed:

We've had the satellite dish on the roof for ages but it doesn't seem to work (RANM, 04.03).

Other reasons included buildings that were not strong enough to hold the satellites and trees needing to be cut down. These extra costs had not been budgeted for, and respondents claimed no one was prepared to pay for these unforeseen requirements. This suggested a lack of coordination between the organisations responsible for rolling out the technology and the recipients of the rollout.

Internet Access

Lack of Internet access was one of the common problems participants identified as a barrier to using this resource. This was evidenced by the comments below:

No, we have email accounts, only the Director of Nursing has Internet access (Rural Midwife, 11.02)

(I have) no Internet access at work where I need this information, not a fault of the Website (Rural Midwife, 11.02)

... only med students have access, the midwives aren't allowed unless you are a consultant (Rural Midwife, 07.02)

We have no Internet access or emails yet (RAN, 11.03)

However, once again the situation was changing:

Access at work, yes after a lot of work and many requests to acquire it (WHE, 03.03).

Of the total 166 emails from the research participants only two had very positive responses regarding unlimited Internet access:

I have great access here all day, at home and at the health centre (RAN, 08.03)

I'm in a one-nurse post and I love the Internet, it has transformed my life with only three Balanda's²⁰ in the community and 120 people in total (RAN, WA, 10.02).

Internet access was available in the home for 77% of the PAR team, in the workplace for 53%, with only 31% having both. These figures are slightly better than those reported in the CRANA survey in 2000, where 57% had Internet access at home and 44% reporting they could access the Internet at work (MI Taylord Services, 2000). The availability of Internet access offers some indication of the hardware that was available in these areas. Discussions held with the stakeholders, discussed below under management constraints, highlighted cost as a barrier to providing email and Internet access to staff.

Technical Difficulties

In the initial phase of the project the research team needed to register and obtain passwords to enter the Resource Library and Online Community (Case Study Two). This made the process of logging in more difficult and time consuming. Additionally, occasional corrupted files, cookies²¹ needing to be disabled and old operating systems that had difficulties in viewing the sites, caused problems for the participants and the Webmaster. Although usually repaired fairly easily and quickly, participants who were not particularly familiar with computers, and had a busy work environment, found these factors affected the utility of the resource. This is particularly so in the remote setting but also problematic for people in regional areas as highlighted in the comments below:

... when I last logged in I went straight through without filling in any details... the screen flashes up a fill in form very quickly, which is the survey sheet, but it is too quick to type into. Then it says welcome back xxx. Whoever she is! (WHE).

We discovered that someone with the login name 'xxx' had been on that particular computer before and accessed the CRANA Website. Cookies on an individual's computer will recognise the site and log in as the last person who logged into a particular site. To resolve this problem the participant needed to click on '*If you are not xxx please click here to sign in*' to be able to personalise the survey login screen for herself.

²⁰ A term Balanda is commonly used in the 'Top End' of the Northern Territory when referring to non-Aboriginal people

²¹ A collection of information, usually including a username and the current date and time, stored on the local computer of a person using the World Wide Web. Used chiefly by Websites to identify users who have previously registered or visited the site.

Another problem identified by the Webmaster in the initial stages:

It came to my attention over the last couple of days that login problems to the survey page may have been occurring ... I tested the system 2 days ago and found no fault but on further investigation this morning I found a corrupted file. That file has now been replaced with a backup. I have thoroughly tested and found no more faults. As a result of the file being corrupt not many logins occurred over the last 2 days. I hope there were not many people inconvenienced (Webmaster, June 2002)

Another participant described difficulties with access to the site. The Webmaster and I concluded that her computer was automatically logging into a very old CRANA Website that did not recognise the Maternity Care in the Bush link on the menu. She needed to disable her cookies and then visit the site to get the updated version. One user had a computer that was running Windows 95 operating system and the left hand screen menu was too small to read and could not be adjusted in the normal way you would adjust the screen viewing size. Although usually repaired fairly easily and quickly, when practitioners are busy and not particularly familiar with computers, these inconveniences could affect the utility of the resource. Additionally it would influence the membership and participation of a research group.

Speed

Speed is thought to be an essential component of a usable website influencing perceptions of the site, with 15 seconds recommended as a general guide for download times (Preece, 2001). Some of the participants were using standard phone lines for Internet access and this resulted in download speeds being very slow. During the set up phase, the Webmaster recommended that WebPages were formatted as portable document format (PDF). However this resulted in significantly slower download times and affected the utility of the resource. Following feedback on this barrier, the format was changed to HTML²² in September 2002. This resulted in faster download times. However, many of the

²² A language used to structure text and multimedia documents and to set up hypertext links between documents, used extensively on the World Wide Web.

documents on the library required PDF format that remained a problem for many users, as seen below:

Sometimes the PDF files are very slow to download, but I think this is more the problem of the department computer system. I had to get Acrobat reader installed (WHE, 07.02)

Tends to be a little slow (RAM, 07.02).

Navigation

Further discussions with the research group highlighted the utility of search engines on such sites and we realised that the 'Maternity Care in the Bush Resource Library' was now large enough to benefit from an internal search mechanism. Unfortunately, the Webmaster discovered that search engines capable of searching inside PDF documents were very expensive, so we decided on a cheap alternative that would search the titles and descriptions that I had placed on the site. It was installed within two months. This meant that I needed to return to some of the listings and be more precise with my descriptions, trying to use key words that the target audience would use when searching for information.

4.9.6 Contextual Factors

Time

A barrier that has been highlighted in several reports regarding the use of information technology in remote areas (Peter Farr Consultants Australasia, 2003; PRHCIT, 1996) is the insufficient time to learn about the technology, and to use the technology. This was also a concern of the research participants in this study as it was mentioned by many of them with examples below:

This was compounded by the fact that October was a very chaotic month for my work with me being out bush or interstate so time to roam the Internet was almost zero (WHE, 11.03)

I have accessed it but not had time to look at it properly (RAN, 05. 03)

From my experience few midwives would access this type of resource, partly due to time factors to access the net (WHE, 04.03)

Many practitioners say they have no time to deal with computers (Information Technology Policy Officer, Field Notes, 11.03).

Management Constraints

Other barriers that were reported as affecting access to the Resource Library included the lack of management support. This was also an identified barrier in the CRANA survey conducted in 2000 (MI Taylord Services, 2000). Discussions with a Director of Nursing (DON) at one of the rural hospitals and further discussions with a member of the policy unit in Darwin highlighted some management concerns:

I can't give access to any of my staff... the directive comes from Darwin (Rural DON, Field Notes, 03.03)

There are cost constraints for middle managers and at \$18 per month per staff member with a 50 MB download it can get very expensive (Information Technology Policy Officer, Field Notes, 05.03).

Certainly cost was an issue. Granting all staff Internet access at \$18 a month per person could add significantly to budgets that are often already stretched. When discussing the possibility of sharing a login account between staff members the following barriers were identified:

... sharing log on access ... no good - if someone gets onto pornographic sites you can't track who it was (Information Technology Policy Officer, Field Notes, 05.03)

... they have access for 4 hours after logging on and this can be a problem if you walk away from it – others may get onto it and cause problems (Information Technology Policy Officer, Field Notes, 05.03).

The cost of accessing the Internet due to technical difficulties was also identified as a barrier for use in remote areas:

My phone bill has gone up by \$60 a month because of line dropouts (RAN, 09.02).

One of the advantages of PAR is, that as the research progresses, and the need arises, it is accepted that new people would become involved in the process of change (Wadsworth, 1998). An example of this was when I was speaking to one of the senior policy analysts in Darwin and mentioned that the midwives in the rural hospitals did not have access to the Internet. I was thinking of presenting an 'Issues Paper' for the Department to raise some of the barriers I had found. She suggested that it might be easier for her to address this and she acted on it straight away, with a briefing document to a senior advisor. She felt this was a quicker way of managing the problem. In conventional research this could be seen

as creating a bias or contaminating the results, however in PAR this type of change is acceptable (Wadsworth, 1998).

4.9.7 The Human Factor

However 'hardware' is not all that is needed. Individuals must have the time, motivation, skills and support to be able to use this technology so that it suits their needs and troubleshooting when needed (P. Evans & Wurster, 2000; Norris, 2001). Education and training on information technology was identified in the CRANA survey in 2000 as necessary by 48% of respondents (MI Taylord Services, 2000). Although anecdotal evidence had suggested this situation was changing rapidly, being unfamiliar with the technology and needing computer support, were identified as issues important to the majority of research participants, including stakeholders, throughout the course of this study. I have selected only a couple of quotes to demonstrate these issues below.

Comfort with Technology

Some of the participants had very little experience with computers, affecting their interest and ability to access the site:

I felt a little perplexed by it - no idea what cookies etc are- so I guess I need some coaching, preferably on the phone/in person or what ever (RAN, 11.03)

... also my lack of knowledge of how to access these different sites ... it took time to work my way through it (RANM, 11.03)

Some people are not comfortable with computers (Information Technology Policy Officer, Field Notes, 11.03).

Support, Education and Training

A significant barrier was the lack of computer support in remote areas with not one of the remote participants having on-site support.

The recent viruses have caused problems with Telstra wanting to close some with viruses down, due to the spam problems (Information Technology Policy Officer, Field Notes, 8.03)

We've had no support or training (RANM, 11.03)

People not being able to get rid of the viruses and no budget for flying people out to get them fixed. We tried to send out a CD for fixing the computers but people couldn't access it (Information Technology Policy Officer, Field Notes, 8.03).

These results are not surprising given a 2003 report that identified almost a complete lack of onsite assistance to operate, repair, maintain and service telecommunications across remote communities, including those that had extensive infrastructure already in place from recent Commonwealth Government initiatives (Northern Australia Business Services et al., 2003).

The Power of the Navigator

Decisions about what information is included on the Resource Library are made by whoever controls the navigator. In this case, following directions from the Webmaster, I was given access to these controls and I was the one who placed the information on the site. Ultimately, I was planning to transfer this function to staff in the CRANA office who, together with the Webmaster, and under direction of the Board, would take over the updating and maintenance. This control also includes the right of veto as described in the following scenario. The Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG) released their Clinical Guidelines for Intrapartum Fetal Surveillance in 2003 (RANZCOG, 2003). As an educated professional midwife with access to current research I did not agree with the recommendations, and therefore was not inclined to place these guidelines in the Resource Library. Initially I was concerned about my decision, wondering if it was ethically biased and so discussed it with members of my professional body, the Australian College of Midwives. I discovered they were in the process of writing a letter of objection regarding the guidelines, and strongly recommended I did not place them on the site, as they would not be endorsing them. This example illustrates how a navigator can control the flow of information to the target audience.

The major barriers, identified in this research, to the use of information technology as a tool to deliver educational support to remote practitioners, have been listed above. These barriers were constant themes across all four Case Studies.

4.10 Limitations of the Research

One of the limitations of this research was the inability to measure who was actually accessing the resource library. I had no way of knowing how many of the 134 hits each month were from the target group. The only way to get a precise estimation of this would

have been too ask this question prior to entry. Given the barriers and difficulties experienced by the research participants, evident early in the research, a decision was made not to do this. Another limitation was the lack of clear data quantifying the number of research participants who had the appropriate technology for computer mediated communication in their homes or at the workplace. Although I had asked about Internet access in the questionnaire the questions were not specific enough to provide data on whether the computers were owned and supported by the participants or the employer. Additionally the questionnaire was only completed by the PAR team and this information would have been more helpful had been collected from all the users living in remote areas. It would however, have needed to be collected both at the beginning and the end of the research, as the technology in remote areas was improving rapidly.

4.11 Summary

Maintenance of professional competence is a key area of concern for health providers in remote areas who experience difficulty in accessing current research, guidelines and educational updates (DHAC, 1999b; NRHA, 2001c). Barriers to providing education and training for remote practitioners are many, with the expense involved in travelling for education often prohibitive with limited relief staff available. At the commencement of this research there was little documented evidence about the viability of providing education and training to remote practitioners via information technology. Overall the evaluation of the 'Maternity Care in the Bush Resource Library' was very positive with the research participants suggesting that they did find this resource helpful.

The mean number of hits to the site per month was 134. Practitioners in leadership and education positions identified it as a valuable resource that enabling them to access professional knowledge, which could then be distributed to the remote based practitioners, who experienced difficulties with access themselves. Clearly, logistical issues of access were a major problem for potential users. Initially, I thought this was surprising given the anecdotal evidence that suggested rapid improvements in telecommunications in remote areas, and the amount of money that was being rolled out by the Commonwealth government targeting remote communications (DCITA, 2002). However in 2003, three significant government reports were released from the NT further informing my work and confirming my results around access difficulties (Northern

Australia Business Services et al., 2003; Northern Territory Government, 2003; Peter Farr Consultants Australasia, 2003).

Using PAR proved to be an effective methodological approach to performing the research reported in this case study. The agency affiliation of the resource was greatly strengthened by involving the remote practitioners directly. Feedback from the PAR team described the resource as contemporary, useful, relevant and one suggested it was essential. Though not specifically meant for this purpose, the 'navigator' evaluation framework of reach, agency affiliation and richness, most often used in the business world, was helpful in this setting.

One of the objectives was to identify the facilitators and barriers of accessing resources via the Internet. The facilitators were mostly documented within the navigator evaluation framework. The barriers seemed to be highlighted when evaluating Internet access under the framework of telecommunications infrastructure, contextual factors and the human factor. For Internet access to be successful all three of these areas need resourcing.

Hardware inadequacies, access difficulties, the lack of management support for staff to utilise the resource and not being familiar with computers were all identified barriers. In some Health Centres access and log in decisions were made by the local manager. In other areas both staff and I were told the decisions preventing access were policy decisions of the NT Department of Health and Community Services. Members of the research groups perceived a lack of managerial support for staff to access the Internet. The evaluation highlighted difficulties in determining whose ultimate responsibility it was when technical, or even structural barriers, prevented the hardware from working. This situation seemed to be exacerbated in a climate where the NT government is moving towards Aboriginal control of Health Services. Some Health Centres were in the process of handing over control to the local community, in others the management was being handed back to the NT government whilst some had a complex method of funding involving both Commonwealth and Territory governments (Banscott Health Consulting Pty Ltd, 2003).

Some communities had received Commonwealth or Telstra²³ telecommunication grants to provide satellites, sophisticated hardware and software. However there was little funding for the education and training of staff in the use of equipment, or to assist in the transfer of existing health data onto the new computer systems (Northern Australia Business Services et al., 2003). These points were confirmed by the evaluation data and suggest a lack of a coordinated approach. The additional costs involved in providing support to geographically distant areas should be an added impetus for a whole of government approach, however there is little evidence in the literature (Northern Australia Business Services et al., 2003) or from this research of this occurring.

The evaluation found remote area practitioners need education and training in information technology. This situation has not changed significantly since the survey of CRANA members in 2000, which showed 48% required training in information technology with only 4% receiving professional training in this field in the previous 12 months (MI Taylord Services, 2000). The pivotal question is whose responsibility is it to provide the education and training? Should individuals be responsible themselves, or is it a wider concern for employers or state and commonwealth governments to address? Whatever the answer to this question, there are key points described in this case study that need addressing, before the full effectiveness of computer mediated communication can be realised. In some instances education and training would have to commence at a basic level and 24-hour phone support service would be advantageous.

The aim of this case study was to use a participatory approach to establish and evaluate an Internet based resource library targeting the needs of remote area maternity service providers. This aim has been accomplished and the specific research question regarding the barriers and facilitators that impacted on the development and utility of this strategy have been described. The next chapter describes Case Study Two where a participatory approach was used to develop and evaluate the second communication strategy described in this thesis.

²³ Australia's national telecommunication organisation, partly owned by the Commonwealth government (51%).

5 CHAPTER 5. CASE STUDY TWO: REMOTE LINKS ONLINE COMMUNITY

5.1 Overview

This chapter describes the PAR process involved in establishing and evaluating an Online Community²⁴. The Online Community²⁵ aimed to provide peer support and networking for remote practitioners. The evaluation included the barriers and facilitators as described by the PAR team.

5.2 Background

In the past, remote practitioners used the Royal Flying Doctor Service (RFDS) radio to keep in contact with other remote based practitioners. Many health centers would have the radio on at all times hearing what was occurring in other areas as private channels were not available. There was a scheduled time every day, 'the sched', when all centres would be expected to touch base and highlight any concerns they had (Dunn, R. & White, J., RANs, Personal Communication, 23.6.04). If someone did not join in it would cause alarm in the other areas, as these sessions were generally not ignored (Dunn, R. & White, J., RANs, Personal Communication, 23.6.04). As the telephone replaced the radio, some Area Health Services tried to replicate the 'sched' by providing teleconferences. However these teleconferences were never as supported by RANs, and in my experience, it was not unusual for staff to dial in and say they were too busy, with some health centre staff not dialing in at all.

In a 1996 research project telephone, interviews were conducted with 404 health professionals (Chief Executive Officers and managers, medical practitioners, nurses and allied health professionals) in rural and remote Australia to ascertain their perspectives on how information technology could influence their practice (PRHCIT, 1996). Salient findings included their perception of professional isolation (70%), which was greater in remote regions (85%), and the belief that information technology could reduce this isolation (82%) (PRHCIT, 1996). Feelings of professional isolation were further

²⁴ At times throughout this chapter the Online Community is called the Forum. This was intentional as when the study commenced I believed this was a more recognisable term.

²⁵ <http://www.crana.org.au> : Forum

identified in a CRANA survey of remote practitioners in 2000, which showed 36% of respondents did not have a peer of the same profession in their community with 13% working alone (MI Taylord Services, 2000; Walker - Jefferies et al., 2003). Respondents also suggested CRANA work towards providing more support and networking for RANs (MI Taylord Services, 2000). Increasing the use of technology as a strategy to support education, networking and mentoring is recommended in the national project report 'Action on Nursing in Rural and Remote Areas, 2002-2003', noting the lack of infrastructure as a potential barrier (ANF et al., 2000a).

In much the same way as the radio did in remote Australia, the Internet is providing 'virtual communities' also called 'online communities' for many people across the world (Norris, 2001; Preece, 2001). Computer mediated communication via text based messages in a 'forum'²⁶ offers the potential to network people with similar interests over vast distances (Curran et al., 2003). Usually asynchronous, advantages include being able to leave a message or read other peoples messages 24 hours a day (Curran et al., 2003). Though becoming more popular for special interest groups and sharing health information (P. Evans & Wurster, 2000), there has been little research evaluating the usefulness amongst health professionals or the learning that occurs (Curran et al., 2003). Given that information technology resources were improving in remote areas (Estens et al., 2002), I believed an Online Community could be used for interactive peer support, shared problem solving, increased communication, decreased isolation and information exchange. I hypothesised that being able to discuss local issues and problems that are unique to maternity care in remote areas could minimise the 'learning by trial and error', which so often occurs. These were experiences I had strong memories of myself and which influenced my motivation to undertake the research.

Preliminary discussions with practitioners suggested they would find this kind of resource valuable provided it was easy to access and use. The Online Community could be multidisciplinary, allowing the different experiences, expertise and worldviews of

²⁶ An Internet-based system that enables users to send or read electronic messages, files, and other data that are of general interest and addressed to no particular person; also called online community, bulletin board, discussion board, interactive message board.

Aboriginal health workers, midwives, nurses and doctors to inform and support each other. Theoretically at least, regional support positions (Women's Health Educators, District Medical Officers, Strong Women Coordinators, Specialist Outreach Obstetricians and nutrition workers) would also be able to use the resource to communicate with the remote area practitioners, and each other. They too could share ideas and resources, offer support and discuss local issues with the isolated practitioners.

Developing an online community is a complex task with challenges including user populations that are not easily defined or contactable, and reliance on infrastructure often beyond the control of the developer (Preece, 2001). This type of development has been described as being analogous to a town planning exercise where each development decision impacts on the other and Preece (2001) recommends a needs analysis prior to development. Preece also recommends that it be participatory from the initial stages, with development continuing after the launch through establishment and often as an ongoing role (Preece, 2001). Given the iterative nature of development and testing cycles that are recommended when establishing online communities (Preece, 2001), PAR was an appropriate approach to this research.

5.3 Research Aim

The aim of this case study was to use a PAR approach to develop and evaluate an 'online community' for the provision of peer support for remote area maternity service providers.

5.4 Research Question

What barriers and facilitators, experienced by remote practitioners, impact on the utility of an online community aimed at reducing their isolation from peers?

5.5 Research Objectives

The research objectives were to:

- use a participatory process to develop an online community for remote area practitioners
- utilise the action research process of plan, act and reflect to develop and evaluate the Online Community as it was being developed

- explore the utility of an Online Community to remote practitioners, and its capacity to influence isolation, peer support and shared problem solving, and,
- identify and describe the barriers and facilitators influencing Internet use by remote area practitioners in Australia.

5.6 Consultation

Again I held discussions with CRANA to determine if they would be interested in collaborating to provide an Online Community that could be accessed by remote area practitioners. Once again, other organisations could have performed this function. However, CRANA were chosen for the same reasons as they had been in Case Study One. Additionally, that it seemed sensible to work with only one webmaster when managing the logistical and technical difficulties associated with developing a navigator and online community. The CRANA board were very supportive as, again, it fitted well with their strategic direction that included developing alternate forms of communication that are more efficient in cost and time (CRANA, 2002). Additionally, a CRANA evaluation had documented communication as an area that needed improving throughout the organisation (Walker - Jefferies et al., 2003).

5.7 Research Design

There are four components that are considered important to an online community; these include:

- people (participants), those who are developing the resource along with those who will interact when using the resource
- a shared purpose
- policies, including the rules and regulations of the interactions, and
- computer and telecommunication systems

(Preece, 2001).

It was necessary to address these four components in the research design as all are integral to the development of an online community (Preece, 2001). The people, shared purpose and policies will be discussed in the following section. The computer and telecommunication systems have been described in the evaluation and discussion section,

as the action research cycle utilised the participants feedback to inform the development process (Preece, 2001). The Online Community was streamlined as much as possible, however most issues highlighted in this area were beyond the control of the developers.

5.7.1 Participants to the Research

The major developers of the Online Community were the Webmaster and myself. The Webmaster provided the technical expertise, managed the software, advised on policies and licenses, and maintained the Online Community (Preece, 2001). My responsibilities as the 'human-computer interface specialist' included advocating for community members, liaising between them and the Webmaster when necessary, and monitoring the development process (Preece, 2001). The community members were to consist of anyone who made a posting on any of the Forums. Specifically I was hoping to work with the research participants to develop and evaluate the Online Community. I was hoping the research would increase the use of the Online Community by ensuring the Forums were relevant and meaningful to the target group (Preece, 2001; Wadsworth, 1998).

Recruitment

Expressions of interest were sought simultaneously on the same flier as described in Case Study One (Appendix Two). When I was contacted by an interested respondent I sent out an email explaining the idea for both the Resource Library and the Online Community. The section explaining the Online Community is shown below:

... As a part of the work I am also setting up an Online Community (a Communication Forum / Bulletin Board) for practitioners to communicate to each other (hopefully to decrease their isolation). The research part is to talk to the group via a Private Forum (so only the group have access to it) to find out if there are any problems with access and how useful people find it, etc. and see if it works. It shouldn't take too much time (as I know most people are very busy) and hopefully will be completed in less than 3 months. Then we can stop using the Private Forum and everyone can transfer to the Public Forum. I have set it up on the CRANA Website so it will have ongoing support and updating and the link to this is <http://www.crana.org.au> (Email from myself to Interested Respondents).

Composition of the team

The PAR team was the same team as described in the previous chapter (Chapter Four) and shown in the Table Six below. I was unable to recruit any Aboriginal Health Workers (AHWs) to this or the previous case study.

Table 6. Participants developing and testing the Online Community

| | PAR Team | Critical Reference Group | The Researched | The Stakeholders | Attrition |
|------------------------------|-----------|--------------------------|----------------|------------------|-----------|
| Remote Area Midwife (RAM) | 5 | 2 | 5 | | 4 |
| Support Staff | 4 | 4 | | 5 | 2 |
| Remote Area Nurse (RAN) | 1 | | 1 | | 1 |
| Medical Officer | 1 | | 2 | 2 | 1 |
| Women's Centre Coordinator | 1 | | | | |
| Sue Kildea | 1 | | | | |
| Policy Advisor | | | | 3 | |
| Student (midwife and doctor) | | | 2 | | |
| CRANA Director | | | | 1 | |
| Webmaster | | | | 1 | |
| Total | 13 | 6 | 10 | 11 | 8 |

5.7.2 A Shared Purpose

The research participants had a shared purpose for utilising the Online Community. I had proposed that it be the vehicle for discussion between all research participants during the research project. I commenced a Private Forum entitled 'Maternity Care in the Bush' that required password access. I was hoping this would lead to a familiarity with the Online Community, where participants saw the potential value in communicating with peers via this medium. I also hoped this use would progress to regular use.

5.7.3 Ethics and Policies

Ethics approval was given by the University of Technology Sydney (UTS) Ethics Department, the Top End Human Research Ethics Committee of the Northern Territory and the Central Australian Human Research Ethics Committee. An explanation about the project was placed on the entrance page to the Online Community (see figure below).

Figure 13. Entrance page to Online Community, explaining the project

Remote Links Online Community

Sue Kildea is currently doing her PhD with Professor Lesley Barclay at the Centre for Family Health and Midwifery (CFHM), University of Technology Sydney. The subject is: Strengthening Remote Area Maternity Services in Australia. Sue applied for RHSET funding and is using this in part to develop this Online Community and Resource Library. The Resource Library will be hosted on the CRANA website and will provide education on knowledge and skills specific to remote maternity services, links to new national guidelines, current research, articles of interest and other web sites that are relevant to remote areas practitioners. The Resource Library and Online Community will target a multidisciplinary workforce including midwives, remote area nurses, Aboriginal Health Workers (AHWs) and Local Medical Officers (LMOs).

Aim

Remote area practitioners are isolated from educational updates, current research and evaluations and the support of professional colleagues. The Remote Links Online Community aims to decrease the isolation of the remote health professional, by building partnerships between isolated practitioners, for the purpose of support, exchange of information and networking.

This Online Community has been developed as a joint venture between the CFHM and CRANA. The CFHM successfully applied for funding from the Rural Health Support, Education and Training (RHSET) Program, which aims to contribute towards the recruitment and retention of rural health workers through funding for initiatives that provide them with appropriate support, education or training.

Desired outcomes:

A Resource Library that is relevant to, and accessed by, remote area maternity service providers;

An Online Community that is relevant, easy to use, and accessed by remote area practitioners

Information on barriers and facilitators that influence remote area practitioners use of a Resource Library and an Online Community that targets their specific needs; and;

Issues specific to Internet use in the remote areas in Australia such as: accessibility; convenience; comfort with technology; line drop out; decreased memory capability; and other barriers and enablers will be explored and documented.

Review

An action research group will be formed to assist with gathering the above information. To maintain anonymity of the research group the Private Forum titled 'Maternity Care in the Bush' will be password protected until the group have evaluated the Online Community and made suggestions for the Resource Library.

Evaluation

The Resource Library and Online Community will be evaluated by Sue Kildea as a part of her doctoral studies.

CRANA

CRANA will utilise the Online Community as a resource to further remote area collaboration and communication, on the understanding that information relevant to the desired outcomes listed above, will be used towards Sue Kildea's doctoral work, and ongoing evaluations.

As described in the text box above, under the heading CRANA, the Online Community was to be used by CRANA employees, members and any other individuals who choose to access it.

Consent

The consent form used for participation in Case Study One incorporated consent for Case Study Two (Appendix Three). One of the emails I received from a practitioner, who had agreed to participate in the research, described a typical scenario where I thought the Online Community could be useful:

I have received a copy of the consent form and have had a good read of it. I am more than happy to be a part of the research group as I believe a Website like this will be a valuable resource, not only for education but for sharing experiences and not feeling like you are so alone as you sometimes do. By the way I'm writing this at 04.00am in the clinic on my own with a woman who has abdominal pain while I wait for a first light flight! (RANM, 8.02).

Remote practitioners can be caring for a patient in a stable condition, waiting for weather or light conditions to improve before the plane can land to transfer the patient to the referral centre. If they have access to the Internet this could be a time where the Online Community could be used to communicate with peers.

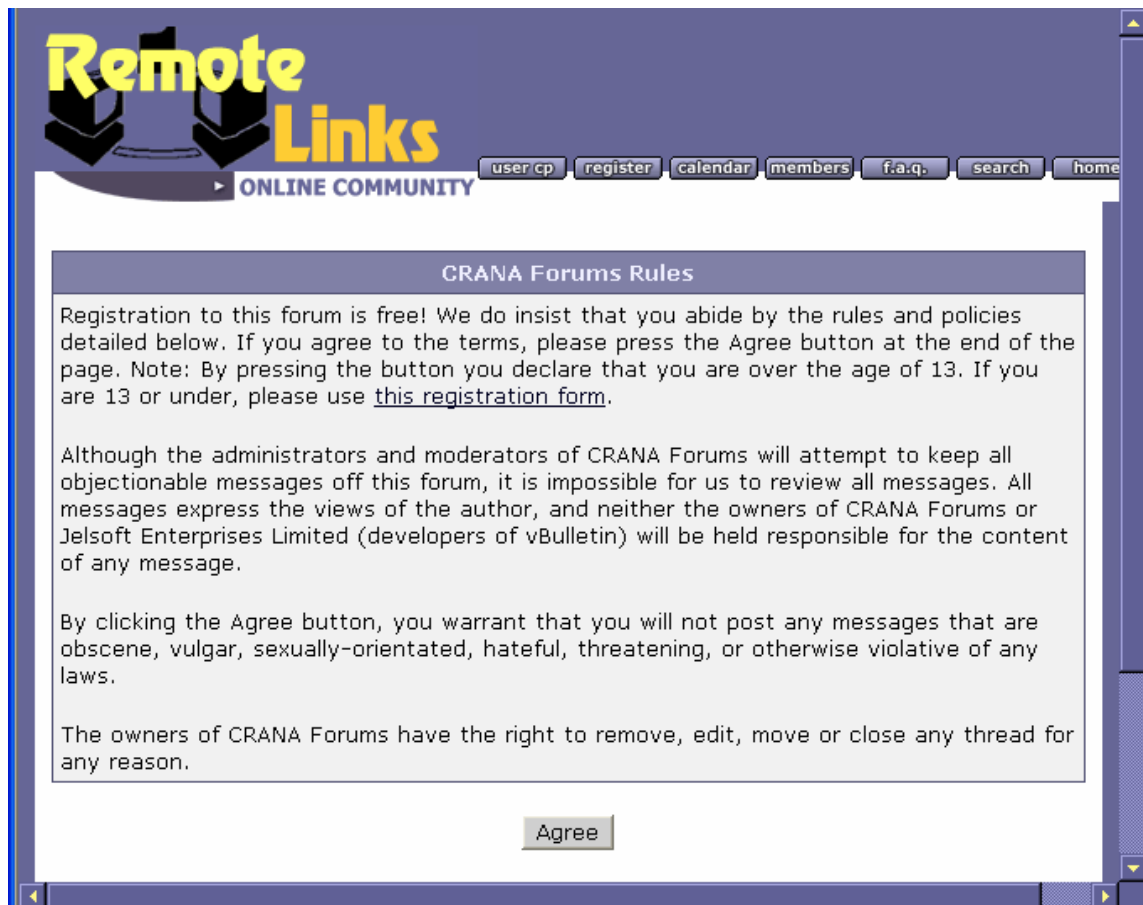
Promotion

Promotion of the project occurred simultaneously with promotion of the Resource Library (Case Study One) and is outlined in Appendix Six.

Rules and Privacy Codes

The rules to the Online Community and the Privacy Code were developed using an iterative process between the Webmaster, the CRANA director and I. The privacy code had to be viewed and accepted prior to entry and is attached as Appendix Seven. The rules can be seen in Figure 14 below.

Figure 14. Online Community Rules



5.7.4 Data Collection

Data were taken directly from the forums, emails, and telephone conversations with the research participants. Field notes collected through the development and evaluation phase were also included. Once the PAR team was established they were asked to communicate with other research participants and myself via the Private Forum 'Maternity Care in the Bush'.

The questionnaire used in Case Study One also contained questions to assist in the evaluation of the Online Community (see Appendix Five). Of the seven questionnaires that were returned from the PAR team (n=12, discounting the researcher) only three had made comments about the Online Community. The majority of comments about the Online Community were received by email (166 emails were received from the research participants but only 22 had comments about the Online Community). A phone interview lasting up to an hour was held with each member of the CRG to gain further insight.

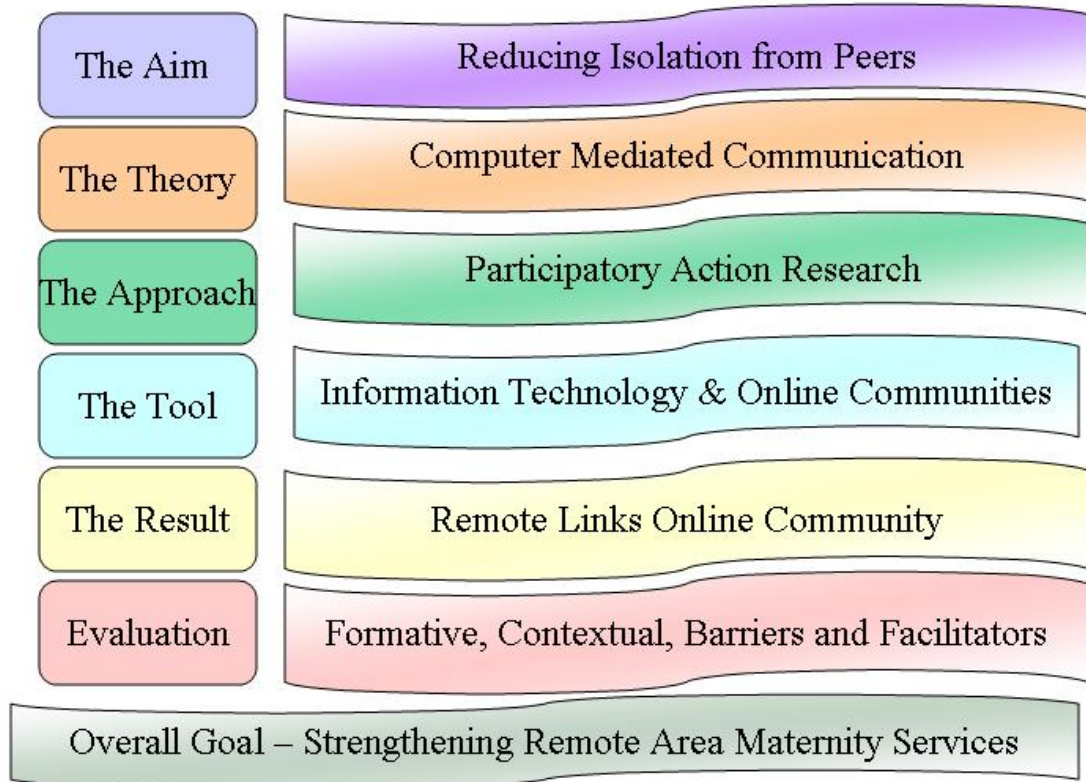
Statistics measuring the use of the Online Community were collected and additional data were gathered from the Webmaster. The data were organised in the same way described in Case Study One.

5.7.5 Evaluation

The planning, development and evaluation of the Online Community were attended in a cyclical fashion using the PAR approach (Kemmis & McTaggart, 2000). Formative evaluation of the Online Community was undertaken as it was being developed aiming to increase the likelihood of producing a resource that the practitioners and stakeholders believed would be useful (Billings, 2000). Changes were made as they were suggested whenever possible.

The key issues explored in the evaluation revolved around peer support, networking, access and usability. As with Case Study One, variables that were expected to influence the success of the strategy, and were incorporated in the evaluation, included telecommunications infrastructure, contextual factors and the human factor (PRHCIT, 1996). The contextual evaluation looked particularly at the institutional factors and remote contextual influences that impacted on the utility of the resource in this setting (Jan et al., 1999). Specifically I was interested in accessibility, convenience, comfort with technology, hardware, line dropouts, management support, time availability, and other barriers or facilitating factors effecting uptake. Below is a diagrammatic representation of this case study.

Figure 15. Diagrammatic representation of Case Study Two



5.8 Results

The Online Community was hosted on the CRANA Website and went live in June 2002. The software was purchased online by the Webmaster, after he had reviewed and discussed with me the differences between several of the many different software packages that were available. He then modified it for our use. As a result there are was little we could to do to change the general layout or the way it operated. The advantage of this was that anyone who was familiar with forums or bulletin boards would know how to use this one. However, I found that no members of the PAR team had ever used an Online Community before.

We divided the Online Community into two sections. One contained the Public Forums with open access and the other contained the Private Forums where access could be

restricted by either the Webmaster or a nominated ‘Moderator’²⁷. The ‘Maternity Care in the Bush’ forum topic was placed in the Private Forums section on the 15.10.02. This forum topic was too be used by the research team as a tool for communicating with the researcher and with each other. Both the Webmaster and I were the moderators of this forum topic, which meant we could give individuals access to join the forum. Being the Moderator also unable access to the statistics section of the software package where I was able to gather data.

Other forum topics were established by CRANA as soon as the Online Community went live. General topics such as ‘Remote Ramble’ also attempted to decrease the isolation of the RANs. Other topics were more specific such as ‘Information Technology Committee’ and the ‘Clinical Procedures Manual Committee’. I created a general topic forum, also titled ‘Maternity Care in the Bush’ on the Public Forum section on the 5.12.03 that was available for anyone to access. The figure below shows the opening page of the Online Community. Initially I had planned that the research would involve only those who participated in the Maternity Care in the Bush Private Forum. However, as this was not well attended, and the concept of an online community was not restricted to maternity care, I decided to extend the area of inquiry to include the online community as a whole. Therefore interest and statistics gathered from the other topics were included in the collection of data. Figure 16 below is how the Public and Private Forums were accessed on the CRANA website.

²⁷ Persons responsible for monitoring the Forums. Moderators usually include the Webmaster and nominated others who have the ability to give access to, and remove postings from, each individual Forum.

Figure 16. Remote Links Online Community

CRANA Forums - powered by vBulletin - Microsoft Internet Explorer

Members: 58, Threads: 41, Posts: 143

Welcome back, **Sue Kildea**
[View New Posts](#)
 The time now is 06:36 AM.
 You last visited: 12th February 2004 10:12 PM.

| Forum | Posts | Threads | Last Post | Moderator |
|---|-------|---------|--|----------------------|
| PUBLIC Forums Public forums are open to anyone Please feel free to browse through the forums but if you want to add a discussion you must register first | | | | |
| Maternity Care Forum | | | | |
| Maternity care in the bush | 14 | 3 | 5th December 2003 04:31 AM by Sue Kildea | Sue Kildea |
| Remote Emergency Maternal Care | | | | |
| Remote MEC Project | 1 | 1 | 9th July 2002 08:07 AM by Geri Malone | Geri Malone |
| General Forums | | | | |
| CRANA Conference This forum has been commenced so that everyone can talk about the upcoming conference in the Blue Mountains on the 21-24 September 03. You can organise to share accommodation and transport if you like. | 3 | 3 | 10th November 2003 08:30 AM by Isabelle | |
| National Clinical Procedures Manual for Remote and Rural Practice (Feedback) This section is a forum for client critique, enhancing the review processes through valued constructive criticism and comment. | 6 | 3 | 24th September 2002 10:27 PM by Helen O | |
| National Clinical Procedures Manual for Remote and Rural Practice (Errata) This section provides for postings of errata with respect to the first edition 2001 of the CPM. YOU CANNOT POST IN THIS FORUM - YOU CAN ONLY READ. | 0 | 0 | Never | |
| Remote Ramble If the topic you would like to discuss is not listed above, start it here! Just click on 'New Thread'. (If the discussion you create becomes popular then we may move it to a more prominent position) | 77 | 20 | 16th February 2004 02:52 AM by Aaron Godfrey | |
| New Topics This section is only for suggesting new topics that could be added to the forum. | 3 | 2 | 16th February 2004 02:26 AM by Aaron Godfrey | |
| Feedback We welcome feedback about our website | 8 | 2 | 23rd August 2003 08:49 PM by Helen O | |
| PRIVATE Forums Before you can gain access a private forum you must: 1. Make sure you are Registered using the REGISTER link at the top of this page 2. Get permission from the MODERATOR of the forum you want to join by clicking on the forum moderators name | | | | |
| Maternity Care in the Bush | 7 | 2 | 15th October 2002 07:12 AM by Sue Kildea | Sue Kildea |
| IT Committee This is a Private forum for members of the IT Committee, however if you would like to join-in, please contact the Moderator. | 20 | 4 | 23rd July 2003 09:58 PM by Chris Wilson | |
| Clinical Procedures Manual Committee This is a private forum for members of the CPM Committee, however if you would like to join-in, please contact the Moderator. | 0 | 0 | Never | Sabina Knight |
| Private Messages | | | | |
| Sue Kildea - You have 0 new message(s) since your last visit. (You have 0 unread messages and 6 total messages in all your folders.) | | | | |

All times are GMT. The time now is 06:20 AM. [Log Out](#) | [Mark All Forums Read](#) | [Forum Leaders](#)

New posts No new posts A closed forum

< [Contact Us](#) - [CRANA Homepage](#) - [Maternity Care in the Bush](#) >

Powered by: vBulletin Version 2.2.6
 Copyright ©2000, 2001, Jelsoft Enterprises Limited.

5.9 Evaluation and Discussion

Communicating via the online community did not occur easily as many of the group, including myself, had difficulties understanding the processes involved in using an Internet based online community. These difficulties included accessing the Internet, technical difficulties logging onto the Online Community once on the Internet, and feeling uncomfortable using this type of technology as a means of communication. The major barriers are discussed below following an overview of the statistics that were gathered from the Online Community.

5.9.1 Remote Links Statistics

Despite the barriers, remote practitioners did access the Online Community and new threads²⁸ were commenced. An example of the topic forum 'Remote Ramble' can be seen in the Figure 17 below with six of the threads that have been commenced in this topic.

Figure 17. Threads under the Forum Topic Remote Ramble

| Thread | Thread Starter | Replies | Views | Rating | Last Post |
|---|-------------------------------|---------|-------|--------|--|
| More midwives wanted in Afghanistan | Sue Kildea | 0 | 8 | | 16th July 2004 12:56 AM by Sue Kildea |
| Emergency Procedures | StudentNurse | 3 | 28 | | 5th June 2004 01:38 AM by StudentNurse |
| Word Association | Aaron Godfrey | 2 | 24 | | 23rd May 2004 10:52 PM by alison |
| test / help | Aaron Godfrey | 2 | 14 | | 25th February 2004 08:55 AM by Helen O |
| Otitis Externa | Helen O | 0 | 11 | | 25th February 2004 08:44 AM by Helen O |
| We need a laugh! (1 2 3) | Helen O | 42 | 89 | | 10th September 2003 10:11 AM by Helen O |

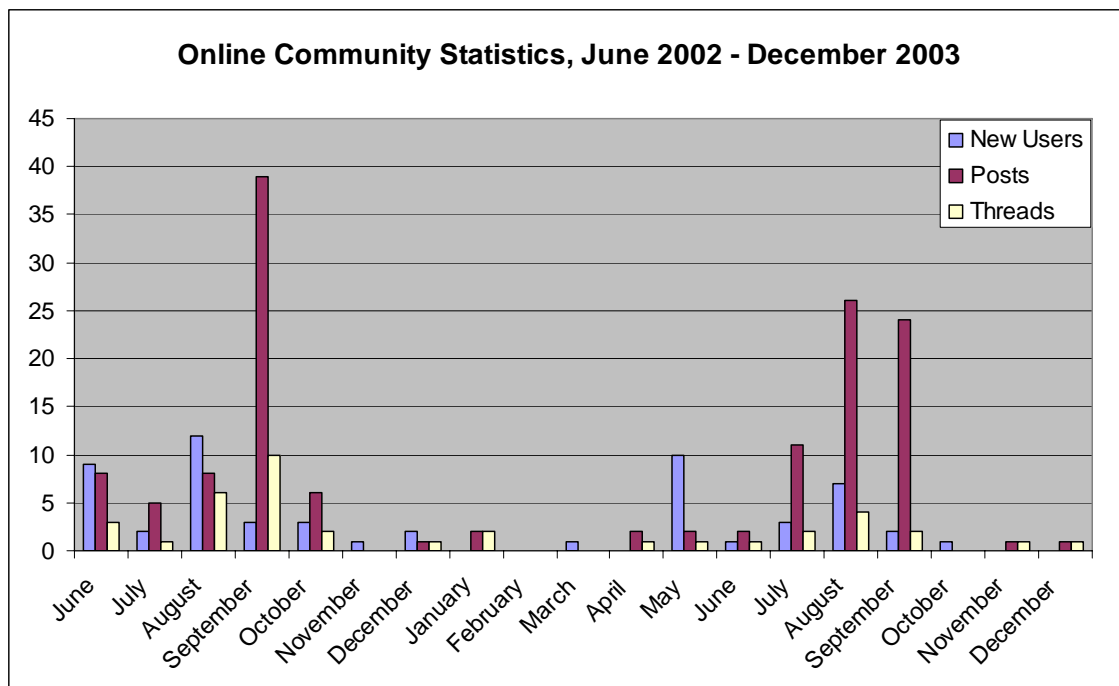
The statistics showed that from June 2002 to December 2003, 38 major threads were created (7 by myself), 57 new users registered on the site, and there were 138 postings²⁹ (see figure below). This general view of the statistics gives a false impression of success

²⁸ A thread refers to a set of postings, composed of an initial topic forum and all responses to that topic.

²⁹ A posting is an electronic message that is posted under a topic forum in response to a thread, eg a post under the Public Maternity Care in the Bush Forum in June 2002 from someone in Broken Hill "NSW Health will be introducing auditory tests within the first 24 hours of birth for neonates before the end of this year. What implications will this have for the remote or rural nurse in the Far West?"

of the Online Community. Closer examination of the statistics showed that 15 threads and 55 postings were commenced by one person who was an enthusiastic user of the Online Community, though not a member of the research team.

Figure 18. Online Community: New Users, Posts and Threads



The figure above illustrates the activity in the initial commencement phase of the Online Community with an increase again during May through to September. In May 2003 a Private Forum was established for CRANA members that resulted in this activity, and is detailed later in this chapter under the heading ‘Communication’.

The Online Community was never successfully used by the PAR team to communicate amongst each other or with myself. This is evidenced by the statistics from the Private Forum, ‘Maternity Care in the Bush’ that was established for the research group and showed five postings. Three were postings I had done and one member of the PAR team added the other two postings. Other members viewed these postings (statistics showed 28 views) and responded to questions by email, but did not add any postings. The reasons for this can be seen in the evaluation data, however first I will show the initial thread (seen below), which was placed by myself to the research group, highlighting some of the issues I hoped would stimulate comment.

Figure 19. Initial posting on the Maternity Care in the Bush Private Topic Forum

| Thread | | new thread | post reply |
|--|---|------------|------------|
| <p>Sue Kildea Administrator</p> <p>Registered: Jun 2002 Location: Sydney Posts: 22</p> | <p> Resource Library and Online Community Review</p> <p>Hi, Thanks so much for being a part of this group and sparing the time to give me feedback on both the Resource Library and the Online Community. I would like to use this Private Forum to communicate with you all but if for some reason anyone wants to send me a private email then that is fine too. If anyone would like to start a new topic or new thread, then that is easily done by clicking new thread and making your own topic heading (this can be done on either the Private Forum, the Public Forum or both). Some of the things I would like comments on are:</p> <p>Online Community Do you think it is a valuable resource for remote practitioners? Do you think it will be used? Do you think it should be password protected? Should it be multidisciplinary or should there be different Forums for different practitioners? Would it be appropriate to look at doing case reviews with an obstetrician via a Private Forum?</p> <p>Resource Library Is it easy to access as a PDF file or would you prefer web pages? Do you find the information on the site helpful and appropriate? How do you find having so many links? What else would you like to see on the site?</p> <p>Internet How easy is it to get access? Can you access it at home, work or both? Does it take too long to access the information? Do you have problems with disconnection? General comments on anything would be great and you can be as brutal as you like.</p> <p>To access the Resource Library go to the CRANA home page and click on Hosted Pages - Maternity care in the Bush. At the bottom of this page you will see a link titled research group enter here (authorised users only). If you click on this it will ask you for a user name which is: Maternity and the password to enter is: bushbabies You can save these so you do not have to enter them each time you enter the computer. This will then open up to a page which explains how to access the Resource Library information.</p> <p>Once again, Thank you all so much for you time and feedback, cheers, Sue</p> | | |
| <p> 13th August 2002 01:34 AM</p> | <p> profile pm search</p> <p> buddy edit quote</p> | | |

5.9.2 Barriers

During the initial stages of the evaluation of the Online Community the research participants identified several barriers that resulted in limited use. By the time these difficulties were overcome the PAR team members seemed no longer interested in communicating via the Private Forum, and were communicating with me by email and telephone. This also resulted in a lack of communication between each other. Although the action research spirals allowed for fairly swift follow-up on suggestions it still took quite a few months to remove passwords and streamline access. Several of the barriers described in Case Study One were equally relevant as barriers to the use of the Online Community, including hardware inadequacies, lack of Internet access and technical difficulties. I have not repeated these in detail; however comments that referred specifically to the Online Community are highlighted under the headings below.

Teething Difficulties

As with most new technology there were implementation challenges in the beginning. In the initial phase of the project, accessing the Online Community was quite time-consuming particularly the first logon for each individual. At the time, CRANA was performing market research and prior to entering the site, individuals received a ‘*welcome to our newest member*’ message and were asked several questions including their profession. Participants then needed to log onto the Online Community where they registered their preferences and choose a password to enter the Online Community in the future. They then registered for the Private Forum that the research group was to use for the duration of this project. This involved sending me their login name and I would change the settings in the Private Forum to give them permission to access the Maternity Care in the Bush Private Forum. I explained this process in email to the research group as shown below:

The Online Community has several different Forums, each with their own headings (on the left). So far we have set up an area for Public Forums and one for Private Forums. The registration to the CRANA site is only done the once. Also to get in to the Online Community you only have to register once. The research group will have to send me their email address and I will then give them access to the Maternity Care in the Bush Private Forum in this way (Email to PAR team, 06.02).

This process was not without complication as highlighted in these emails from the PAR team:

I tried getting into the research groups page using my username but then I don't have a password. What happens from here? HELP!! (RAN, 9.02)

... There is no other username or password requested until you get to the Private Forum where I need to register my username and password, which I don't have. Maybe a glitch in the system I've gone in 4 times... (WHE, 12.02)

Actually at the moment when you hit the Online Community button it takes you to 2 conference URL's. I can only access it via the search mechanism (RAN, 8.03).

Additionally I was also having access difficulties as expressed in the email to the Webmaster below:

... the CRANA Website did not recognise me again, and I have just had to re-register to get in. Also the Online Community page did not accept my password for some reason so I have reset it, is there a cookie for it to remember my password when I register my name?? I did not get an email telling me of the latest post to the Private Forum even though I have requested that this happen (Myself to the Webmaster 07.02)

Most of these issues were addressed quickly. This was possible because the Webmaster was responsive and easy to contact and the team work between the Webmaster and I worked well. This type of support is the sort that is needed in an ongoing capacity for remote practitioners. However, I believe the initial difficulties in accessing the Online Community strongly influenced the PAR team members' use of the Private Forum as a communication tool. Field notes, emails and phone conversations with the research group highlighted the fact that it was 'too difficult' and 'too time-consuming' to pursue. Initially I tried to influence this, as it is an acknowledged role of the developer (Preece, 2001). I would receive emails that I thought would result in great discussions between the group and I would ask the participants to copy the email onto the Private Forum. Several times I would be on the phone to the participants giving them step-by-step directions to get onto the Private Forum. Invariably there would be problems and we would be unable to access the Private Forum at that time. I also found this frustrating and seemed to spend significant time in contact with the Webmaster. I had never used an Online Community before and felt I had a good understanding of the difficulties the research group were

experiencing. The emails below are an example of the many correspondence I had with the Webmaster:

Hi, I have replied to the 2 posts on different Forums but I am wondering if there is any way that the reply can go under their heading and their questions or does this only happen if they create new threads? (Myself to the Webmaster, 06.02)

Hi Sue, They (or you) will have to create new threads. Forums work on the concept that the top message is the thread starter and replies go below in the order of date submitted. The only other way to reply is through a Private Message (pm), by clicking on the "pm" button at the bottom of the persons thread that you want to reply to (Reply to the above email, 06.02).

The technical support offered by the Webmaster is recommended as an integral factor when developing an online community (Preece, 2001). In retrospect, giving the participants direct access to the Webmaster and 24-hour telephone support could have increased the chance of success.

Lack of Confidence and Experience

Another factor that seemed to influence the use of the Online Community was remote area practitioners' lack of experience and confidence when using this type of communication, as illustrated below:

I have never used a Forum before so it is not really in my mind to communicate this way with people (RANM, 11.02)

The forum is something I am only just learning about - it is all the young kids that are using them at the moment (RANM, 11.02)

I'm only just getting used to email, everything else is too confusing at the moment (RANM, 11.02)

Some of the team had very little experience with computers and said the same about other remote area staff. Other problems identified included:

In the current format I think it is too hard. And I am probably more computer friendly than many of the bush nurses I know (RAN, 11. 02)

I forget my registration as we live with too many codes and numbers and I access this area rarely (WHE, 12.02).

Internet Access

The following email illustrates the difficulties experienced by town-based midwives, who wanted to access the Internet:

Sue after speaking with you I made a mad dash about to the five midwives in town who had expressed an interest in the site to tell them all about it and how to access the general sites- only to find out they didn't have internet access! Hope things will be better out bush. This feels good and easy to me now that I'm in. I'll pass on the info to the mob out bush (WHE, 09.02).

Similar experiences were described in the remote regions:

I can't get into the Forum yet as our district does not have Internet access (RANM, 05.03).

Computer Support, Education and Training

As described in the literature review, there is very limited support, education and training for information technology in remote areas (DCITA, 2003a). In fact discussions with the PAR team, and data from the evaluation of both the Online Community and the Resource Library, suggest that significant support is needed, even to assemble computers in some instances. Scattered throughout my field notes from all four case studies are the suggestions for after-hours support and telephone support like the one below:

I also tried to get onto the Forum but I had problems with this so I guess if I were 'outbush' I would need some help, preferably on the phone (Public Health Nurse, 08.03).

One of the most common complaints about the Online Community involved the difficulties experienced when accessing and using it:

I have not managed to get on and become involved in the Forum. I do think it is a good idea, and I actually tried to get on but it seemed such a hassle with all the different buttons you had to push and then you had to register (that I eventually managed) and then when it actually came to have a say I simply chickened out (RANM, 10.02)

... I had a look at your Forum today and to be honest, I ended up completely bamboozled. I am such an IT technophobe, I just freeze up. Is there anyway of just clicking one button and getting in? (RAN, 11.02)

I found it not at all intuitive, still can't access the Private Forums even though I have a username and password. Need easy to read instructions as soon as you enter the Forum to make it user friendly (RANM, 01.03)

I'm really concerned about the lack of use of the Forum. It does seem a little complicated to use, which may put some people off (RANM, 07.03).

The comment above describing the Online Community as '*not at all intuitive*', along with a lack of consistent standards across platforms, has been described as a problem in the literature (PRHCIT, 1996). Although these problems are being addressed with new software (Preece, 2001), it can be seen that they are still a barrier in this environment, and require a high level of skill or reliable computer support for Online Community to be useful.

Confidentiality

Privacy, confidentiality and security are important to many users of online communities with the health, commerce and education fields being particularly sensitive (Preece, 2001). Participants usually want reassurance that their personal information will not be given to others without their permission, therefore policies to ensure privacy are important (Preece, 2001). The Online Community was covered by the privacy policies with several additional precautions taken. Participants were able to log in with a pseudonym and had the option of hiding their email address so no personal information was available to other users. However these options did not seem to offer enough reassurance for some participants. The following quote highlights a participants feeling of vulnerability, not knowing who was going to read their posting and what they might think:

I got nervous, wondering who was going to read it and what would they think. And this was over simple things like neonatal hearing screening or some other non-controversial subject. I just felt really vulnerable I suppose. In private conversation or emails I suppose you know who you are conversing with and you can judge their response and adapt your opinion or thoughts accordingly. Do you know what I mean???
(RANM, 10.02)

This has also been shown to be a problem with research on American nurses who highlighted a lack of trust in the Internet and a preference for using anonymous names (Dickerson, 2003).

5.9.3 Facilitators

Despite the difficulties the research participants experienced accessing and using the Online Community they still had positive comments about it. A comment from the CRANA director outlines some of the benefits he saw in using the Online Community:

I hope that CRANA can accept the challenge and promote the Online Community as a cheap and viable means for progressing democratic issues, let alone reducing isolation and increasing communication!! (07.03).

This email articulates the aims of the Online Community well.

Access to Peer Support

Communication with peers for the provision of peer support and shared problem-solving was one of the key objectives of this resource. The following comments suggested this could be achieved:

Fast access to peers and answers to questions (RAN, 06.02)

Not a lot of maternity care out here, so I am likely to become very rusty. Would like to join your Private Forum please (RANM, 05.03)

I can see how it could be a very valuable means of sharing knowledge & resources (WHE, 11.02).

Several of the postings on the Public Forum Maternity Care in the Bush were posing general questions to peers:

NSW Health will be introducing auditory tests within the first 24 hours of birth for neonates before the end of this year. What implications will this have for the remote or rural nurse in the Far West? (Forum Posting, 26.06.02)

I would like some practical ideas for ante natal education ... ideas for books, videos etc that I can use to loan to mothers. Or any other ideas for that matter. I did my mid years ago ... I do intend to do a midwifery update in the future, but till then I have mothers from here suffering education deficits due to our lack of resources and probably my lack of up to date knowledge (Forum Posting, 26.06.02).

Receiving emails like the ones above gave me some insight into the work involved as a developer of an online community, and the necessity of having someone in the role on an ongoing basis. Many of the Forum postings required follow-up, and although I was able to do this and respond, I was not very successful in encouraging others to answer requests

on the Forums. The following email is from a RAN who was hoping to find information regarding childbirth for himself and his partner:

As a non midwife I am lucky to work in a three nurse clinic with a very good midwife who is also providing antenatal care for me and my partner. We have found it almost impossible to obtain any antenatal education besides what I can glean from my textbooks and journals and what our midwife here can tell us. Obviously we don't want to burden her too much as she works with me and is on call etc. ...I am sure that if we are finding it difficult then other non-health practitioner Mum's and Dad's are finding it harder. As ... says when you work on call 24/7 when do you get the time to run health education sessions? I guess my post is more related to what can health services develop to offer those having a child in a remote location without further burdening the midwives or nurses? (Forum Posting, 30.06.02).

Unfortunately these questions did not receive any spontaneous responses. As the developer I felt it was important to respond and did so in two ways. I had met a midwife in New Zealand who was providing antenatal information online and I sent her an email asking if she would respond. Once again I was hoping to get others involved in the site (Preece, 2001). Her response to the above posting on the Maternity Care in the Bush Public Forum was:

Hi, I met Sue Kildea at the NZ College of Midwives conference last week and got an email from her today. She suggested that I contact you re. your request for antenatal education info. We have a midwifery practice here in Golden Bay, two hours by ambulance from the nearest secondary care hospital - remote by NZ standards!! While we provide antenatal classes and education at antenatal visits we also found a need for women to have access to more information than they could easily get here. So I built a website for them and included a multitude of links to useful sites where they can get information on just about anything they are looking for. The URL is www.goldenbaymidwives.com and perhaps you may find it of some interest. Anyway, take a look and see what you think (Forum Posting, 12.07.02).

Additionally I had found another website delivering antenatal classes online so added the following posting:

I have been doing a lot of searching for the Resource Library and have found a web site that I think would be worth visiting. This site has a lot of free information available, the opportunity to enroll for online childbirth education classes, a classifieds section and a variety of forums: <http://www.birthing.com.au/main.asp> I hope you find it helpful, Cheers, Sue (Forum Posting, 5.08.02).

The following respondent was a CRANA member (not one of the PAR team) who had written to me by email asking if there was some way a Forum could be set up for members to talk about accommodation at the upcoming conference. Although I sent her details on how this could be done, hoping this would encourage her to use the Online Community, she must have forwarded it to CRANA administrative staff as they were the ones who commenced the forum topic titled '22nd CRANA Conference'. She wrote me the following email that made me realise that many remote area practitioners were not familiar with the term Forum:

Many thanks for setting up the accommodation network for the conference. At the State Representatives meetings, and also from talking to others, I have heard that some people feel it is difficult to get access to and use the Forum. It was suggested to change its name to chatline (yeuch!) or networking pages. People think the idea is good, just difficult to get to... (RAN, 07.03).

I had originally planned to call the Online Community 'Remote Links' and this would be the title that would be used on the CRANA homepage to enter the Online Community. However, following discussions with the Webmaster we had called it the 'Forum', believing more people would identify this word and access it. Although this has not yet been changed it may be when CRANA remodel their Website, which is currently occurring (February 2005).

Decreasing Isolation

From discussions held with remote area nurses, many have said they felt their isolation increased when the communication methods changed from radio to telephone (anecdote and field notes). Additionally they went from knowing the other nurses in the surrounding communities (if only by voice), and regularly talking to them, to often not even knowing the name of the nurses in nearby communities (Dunn, R. and White, R. Remote Area Nurse-midwives, Personal Communication, 23.6.04). Reducing the isolation, expressed by remote practitioners, was a key objective and several research participants believed the Online Community achieved this:

I think the Forums are absolutely great. I was waiting for the RFDS plane the other night and it was great to get on and check out what people are saying. Mind you I wasn't game to put up a posting but I

really enjoyed it, and it kept me awake too, which was an added bonus (RANM, 12.02)

I believe these Forums are an important link for remote practitioners; and targeting their needs (RAN, 10.02)

... have started to look at the Internet sites you have established, and I have to say they would have been really useful to me outbush, so I can only guess that if people know about them and can access them, they will be similarly helpful to them (Public Health Nurse, 04.03).

The last quote highlighted two important issues, one is related to access and the other is that practitioners need to know about the existence of the Online Community. The lack of awareness about information technology resources has been noted in other Australian reports (PRHCIT, 1996) and highlighted the importance of the promotion and disseminated the strategy (see Appendix Six).

Ease of Use

Two of the respondents found the Online Community easy to use:

I admit that I haven't used the Forum very much but it is easy to use (RANM, 02.03)

... no problem using the Forum, I found easy to navigate (RAN, 08.02).

5.9.4 Communication

As a member of CRANA I was aware that the organisation was experiencing difficulties with communication. This had been detailed in both an organisation wide evaluation (Walker - Jefferies et al., 2003) and a members survey (MI Taylord Services, 2000). I had been involved with discussions about this with several of the staff and members of CRANA. A second Private Forum with the topic title 'CRANA Communicates' was established in May 2003 to which the CRANA Director and the Webmaster were moderators. This Forum was created for CRANA members only. An email was sent from the CRANA office to members (169 members were accessible by email) to inform them with instructions on how to access the Forum. Although I was not the moderator I had been involved in this initiative and I received several emails following it:

I think this is an excellent idea to help with communication in CRANA (CRANA Board Member, 05.03)

This is a grand idea (RAN, 05.03)

This sounds great... (RAN, 05.03)

... great way to communicate with everyone. I was a bit worn out before, but have just had holidays and the birth of my son last Wednesday 7/5 has given me a new lease of life to get back into the fray (CRANA Board Member, 05.03).

Initially this seemed to be quite successful. Between May and the end of September 2003 there were 23 new members registered and 64 postings. However I was in England when the Private Forum CRANA Communicates was unexpectedly deleted and as I was not a Board member at the time I was not privy to the reasons this occurred. My understanding was that something was written in one of the postings and a Board Member was concerned that legal action could be taken by one of the staff of CRANA, based on the content of the posting. The Board member asked for the Private Forum 'CRANA Communicates' to be removed and it has not been recommenced (January 2005). Once again this raises issues of confidentiality and legal issues that need addressing.

5.10 Limitations

One of the limitations of this case study was the lack of multidisciplinary representation in participation of the Online Community. Although doctors and other support personal were represented in the participant teams, none made any entries to the forum. A particular disappointment was my inability to recruit any AHWs to this case study. Several of the participants suggested that the AHWs they worked with felt less comfortable with computers, and had probably had less training and education in this field, than they did. This highlights an area for further research.

A further limitation was the lack of use of this resource by participants. I was hoping that their involvement in the development of this resource would promote a feeling of ownership, and lead to increased use. In particular I had hoped that the Online Community would facilitate group discussions that could elicit further debate and data than what is possible when participants comment in isolation. Disappointingly, this did not occur, and there was little communication between members of PAR teams directly, with most of the communication occurring through me.

5.11 Summary

The aim of this case study was to use a participatory process to develop and evaluate an online community to provide peer support for remote area practitioners. The Online Community was developed but has not been widely adopted and a number of barriers and facilitators that impacted on both the development and utility of this strategy have been described. Although the results of this case study were not what I had hoped to achieve, it should not be judged solely on whether the Online Community was a success or not (J. Meyer, 2000). Instead it is important to look at what I have learnt from this case study and ensure that the lessons learnt are fed back into the appropriate organisations, national policy and debate around the subject (J. Meyer, 2000). This is particularly important in the telecommunications field where changes are occurring rapidly and have not necessarily been well reported.

Reasons for the failure of the Online Community are probably many with several out of my control as the researcher. However there are a few key factors that probably influenced the outcome and could have been preformed more thoroughly. Preece (2001) recommends a needs analysis prior to development and I did not perform one of these believing that my previous experiences as a remote practitioner, the literature recommending this type of networking of practitioners (ANF et al., 2002; NSW Health, 1998b) and the rapidly improving information technology infrastructure was enough. In retrospect this case study should be seen as a needs analysis, or a pilot study, as it has highlighted several factors that need to be addressed before an online community could be seen as a valuable networking tool.

It is clear that further resources and infrastructure are needed along with enhanced computer training, support and education of health professionals. In fact discussions with the PAR team, other research participants and data from the evaluation of both the Online Community and the Resource Library, suggest that significant support is needed, even to assemble computers in some instances. Twenty-four hour phone support would be helpful. Remote practitioners will often have quieter times in the evenings and at night when they have to be at the Health Centre, and have the time to utilise these resources.

The results of this research would suggest that it could be some time before communicating via an Online Community is routine practice for remote practitioners. However as telecommunications improve in these remote settings, younger practitioners who have grown-up regularly using Online Communities, for example Forums and Chatlines, will make their way out to remote areas. Though I believe we can be optimistic for the future, it would be surprising if RANs became the 'trailblazers' in this form of communication they once were considered to be (Ellis, I., Previous CRANA President, Personal Communication, 19.2.04).

Additional concerns highlighted in the evaluation included privacy, confidentiality and 'feeling vulnerable'. These factors are significant and are worthy of further research as they seem to be barriers to the Online Community offering a viable means of networking with peers. It was interesting that use of a pseudonym did not prevent people from feeling vulnerable when using the Online Community. This situation is in stark contrast to the complete lack of confidentiality that existed in the days of the radio, when everybody knew who was talking and what they were saying. However social interactions are complex by nature and even though many remote practitioners are of a similar gender, age, profession and culture this was not enough to ensure success of the Online Community. This issue would benefit from further research.

Another factor I believe I underestimated was the ongoing role of the developer. Preece (2001) describes this as one of the major reasons for failure, stating that Online Communities will usually need long term help as the community does not usually take care of itself. This factor was not taken into account in the initial budgeting and is beyond the ability of either myself, or the current CRANA staff, to manage. However this was one of the reasons I had initially approached CRANA as a national organisation as I knew they were hoping to develop alternate forms of communication for both the executive and the membership (CRANA, 2002). Recent CRANA funding applications to provide active support to both the Resource Library and the Online Community have been successful and it will be important to ensure the results from this research are incorporated into further planning and development. As the current vice president of CRANA I am in a position to assist this process.

However it must be said, placing the resources with an organisation, which has a national remote focus but remains predominately poorly funded, may not have been the best decision. Other options included national organisations that support both rural and remote practitioners, but many of these are either medically or rural focused and do not meet the specific needs of remote practitioners. However, the multidisciplinary, broader focus may have been beneficial. Another alternative would have been to approach the NT Department of Health and Community Services, however with the rollout of community controlled health organisations across the area this also held risks of access and acceptability to those employed outside the government sector or in other states and territories.

This chapter described the PAR process involved in establishing and evaluating the Remote Links Online Community. The barriers and facilitators to the use of this computer mediated communication tool for the provision of peer support for remote based practitioners have been described. The following chapter describes the Maningrida community, a remote Aboriginal community in Northern Australia, which is the setting for both Case Study Three (Chapter Seven) and Case Study Four (Chapter Eight). The chapter introduces Molly Wardaguga, a retired senior AHW who was a co-researcher for these case studies. Indigenous research methods, cultural preparation of the non-Indigenous health practitioners and consumer participation in health care planning and also discussed.

6 CHAPTER 6. THE MANINGRIDA COMMUNITY

6.1 Overview

This chapter provides an overview of the setting for Case Studies Three (Chapter Seven) and Four (Chapter Eight). These case studies commenced with a single aim, but as is common in PAR, progress led to two different projects (Kemmis & McTaggart, 2000). These PAR process resulted in the simultaneous development of the ‘Birthing in the Bush Website’ and ‘A Primary Health Care Guide to Planning Local Maternity Services’. Both Cases Studies used similar methods however the PAR teams differed slightly between the cases and over time. As the PAR process spiraled into different directions it was decided to describe the outcomes separately. Case Study Three describes the research process that led to the development of the Birthing in the Bush Website concentrating on issues that were specific to the Aboriginal women. Case Study Four describes the development and evaluation of the Primary Health Care Guide to Birthing Business in Your Community and describes more of the practitioners’ involvement in the project. As there was overlap in the research, so too there is overlap in these two chapters. However, I have tried to separate the issues as much as possible.

The research was carried out in a remote Australian Aboriginal community. Molly Wardaguga, a retired Senior Aboriginal Health Worker who lives in Maningrida, was a co-researcher for these case studies. This chapter provides an overview of the Maningrida community; my links to this community; Molly’s story; how Molly and I came to be working together in this setting; the professional and policy context, and, the research theory, ‘Indigenous knowledge as authoritative knowledge’, which guided these case studies. Additionally this chapter describes the consultation that occurred prior to gaining support for the research.

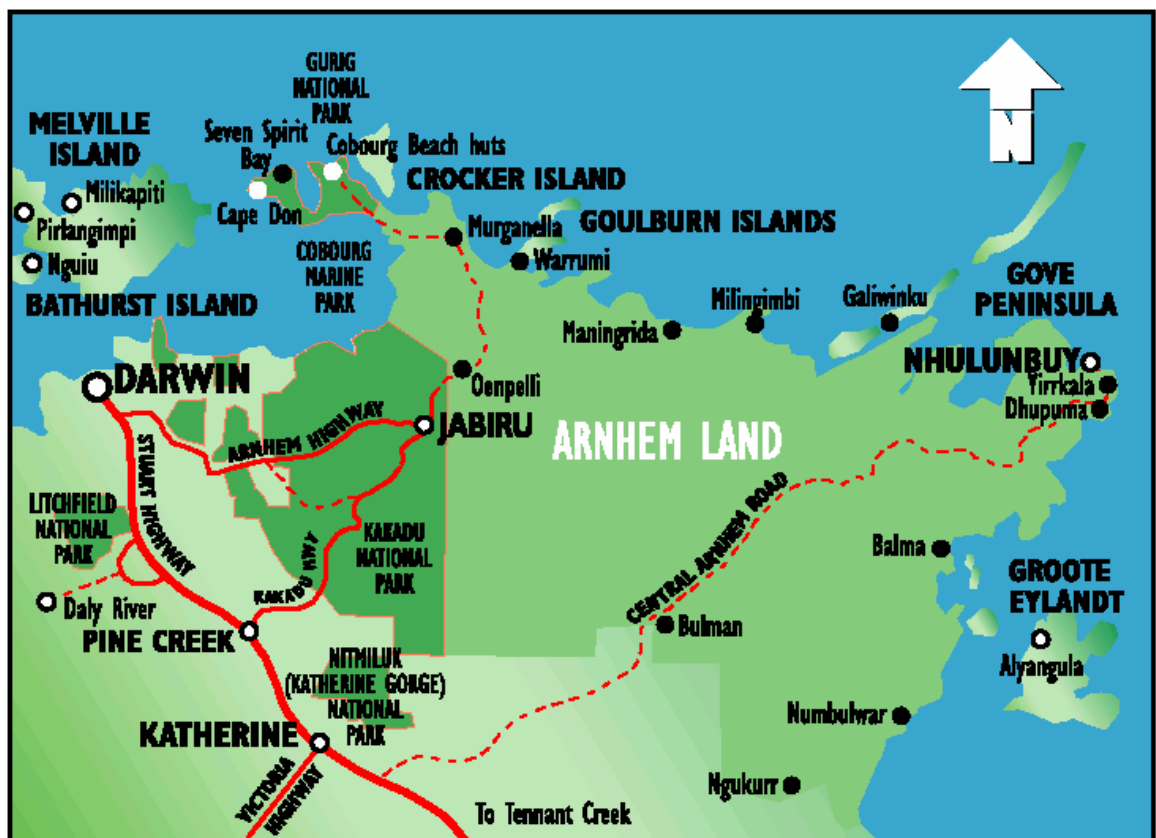
6.2 The Research Setting

6.2.1 The Maningrida Community

The township of Maningrida is situated on the northern coast of Australia near the mouth of the Liverpool River. It is in Arnhem Land, approximately half way between Darwin and Nhulunbuy and can be seen on the map below. Arnhem Land was declared to be inalienable Aboriginal freehold land in the 1930s and the region covers 90,000 square

kilometers (Hall & Bawinanga Aboriginal Corporation, 2002). It is bounded by the Gulf of Carpentaria in the east and the Arafura Sea in the North with Kakadu National Park to the west (Hall & Bawinanga Aboriginal Corporation, 2002). Today Maningrida is a one hour flight from Darwin (300km by air) and approximately five to seven hours drive when the roads are open in the dry season. It is impossible to access by road during the wet season, which usually occurs between December and April each year. The traditional culture and land ownership values of the people in this region remain very strong today (Hall & Bawinanga Aboriginal Corporation, 2002).

Figure 20. Map showing where Maningrida is situated



Maningrida was initially to be established as a Trading Post in 1949 and, unlike many of Aboriginal communities across northern Australia, had no missionary involvement in its establishment or ongoing development. The Trading Post was abandoned until 1957 when it formally became known as a Government Welfare Settlement with the intention of providing trading and medical services to the region (Doolan, 1989). The provision of these services attracted people to the region and today Maningrida is one of the largest remote Aboriginal communities in Australia, consisting of the town centre and

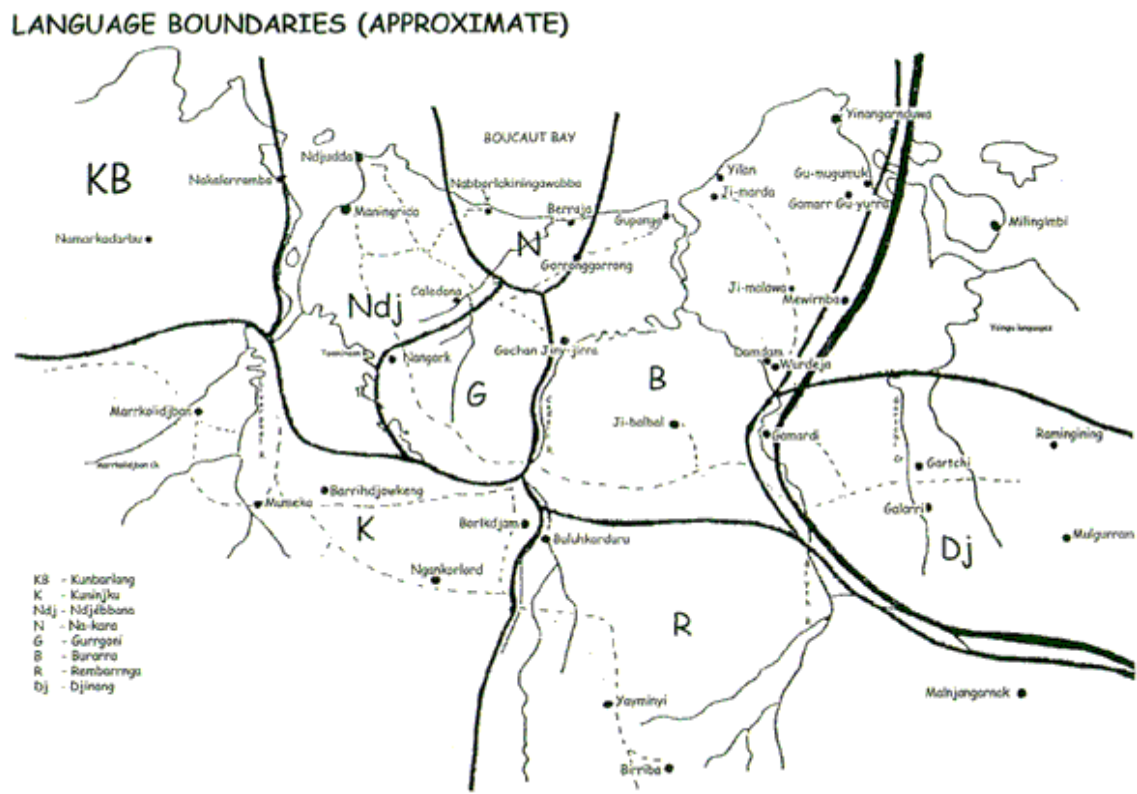
approximately 36 outstations, many of which are occupied year round. The population of the region is approximately 2,200 people. There is a strong outstation movement in Maningrida with up to 800 people living on outstations during the dry season. The Bawinanga Aboriginal Corporation (BAC), which was incorporated in 1979, supports the traditional landowners with the services and resources to assist them to remain on their outstations. During the wet season most of the roads to the outstations will be cut and the only access is by boat; small plane, which cannot land if the airstrips are wet; or helicopter, which can only fly in daylight hours. Bawinanga own several boats, a small plane and a helicopter and provide regular trips to the outstations during the wet season.

Communication systems in Maningrida and on the outstations are improving, though not at the same rate as occurs in urban areas. The high frequency radio network is long gone and the Maningrida township is expecting mobile coverage within 12 months, though this will not extend to the outstations (Munro, I, Managing Director BAC, personal communication 20/9/04). The telecommunications company servicing Maningrida have a helicopter on permanent standby in Jabiru (about one hour's flight away) to service the area and to date there are 28 payphones in Maningrida outstations, and a small number of private services (Munro, I, Managing Director BAC, personal communication 20/9/04). The fault reporting is done by BAC and the service response is reported to be efficient in houses where a resident has a life threatening illness (not an uncommon scenario in the area) (Munro, I, Managing Director BAC, personal communication 20/9/04). Systemic problems remain however. For example the public phone systems are designed to make outgoing calls rather than incoming, and the ringers on the phones are inaudible beyond a few metres (Munro, I, Managing Director BAC, personal communication 20/9/04). However services are said to be improving and there has been a recent increase in the uptake of broadband, which will undoubtedly extend to outstations in time (Munro, I, Managing Director BAC, personal communication 20/9/04). The Health Centre, and most of the staff housing now have Internet access via two way satellite (March 2005), though this technology was not available in 2001 when the research commenced.

Despite being a very small community (population 2200), Maningrida is thought to be one of the most multilingual communities per capita in the world (Carew, n.d.). There are 14 different languages endemic to this region with 51 different languages spoken in the

area (Handelsmann, 1996). Many people speak several of these languages and English is often their third or fourth language. The map below was produced by the Maningrida School and shows eight of the major language boundaries and many of the outstations.

Figure 21. Language Boundary Map for the Maningrida Region



Having so many different languages spoken in one small area makes communication very challenging. Learning one language can be seen as favoring a particular language group and was not recommended when I commenced working in the community. This advice was in spite of beliefs in Eastern Arnhem Land that non Indigenous personnel are more effective in their work when able to speak the local language (Trudgen, 2000).

6.2.2 Personal context

My Story

I first worked in Maningrida in 1995 as a remote area nurse midwife. I had been employed on a two-year contract as a generalist nurse to look after the 'Women's Business Program'. Half way through my contract I become the Nurse Manager of the Health Centre and I stayed in the community for almost three years.

The health centre role was to provide both acute care and primary health care. The primary health care role included the Women's Business Program, Men's Health Program, Children's Growth and Development Program, School Screening, Immunisation Programs (Including the Pneumococcal and Flu Vaccine), Chronic Disease Program, Older Peoples Program and Monthly Bicillin Injections for People with Rheumatic Heart Disease. In addition we had responsibilities for providing visiting primary health care and acute care services to the outstations.

The Women's Business Program was allocated two days a week. However, high rates of premature births (twice the Australian rate), cervical cancer, and sexually transmitted infections gave me a feeling of urgency and I felt 'Women's Business' needed to be available every day of the week. There were around 35-40 women to see antenatally at any one time and although the women's cervical screening register was not current, there appeared to be at least 200 well women's checks that were over due and another 30-50 women who were overdue for contraception counselling and provision.

Maningrida Health Centre seemed to be always busy, never having enough staff to do the work that was needed in a community with many health concerns. This included a tuberculosis incidence rate over 500 times the Australian rate and a prevalence rate for rheumatic heart disease that was one of the highest recorded anywhere in the world: Australia - 0.6/1,000, Soweto 6.9/1,000 and Maningrida 44/1,000 (Burns, 1995). Given the health status of people in the community it seemed astounding that there was no resident doctor to service the town. A team of District Medical Officers (DMO's) situated in Darwin had responsibility for providing services for the remote communities. Two DMO's shared the Maningrida community, flying out from Darwin two days a week for alternate weeks. When there was no doctor on site there was always a doctor available by phone. A team of eight DMO's would take turns to cover the 24-hour call and it was always a relief when I rang and knew the voice at the other end of the phone. At this time 'telehealth' involved discussing a patients condition over the phone and faxing reports. Remote area nurses become very experienced at telehealth taking the responsibility for calling out the medical evacuation plane and crew very seriously.

When I commenced working in Maningrida it was with a new team of nurses, with seven in total, although two had started a little before me. Only two of us had worked in a remote setting before and none of the team had received any more than a two days orientation in Darwin. This orientation was focused around organising salary arrangements, banking and food orders. None of the nurses had received any cultural awareness training despite signing contracts for a two-year period. Much of the 'program' work had ceased the previous year as staffing had been filled by mainly short-term agency nurses, resulting in most of the work being around the diagnosis and treatment of acute illness. Health visits to the outstations had ceased, apart from emergencies, and many of the Aboriginal Health Workers (AHWs) were no longer coming to work, as often occurs when there has been a high turnover of non-Aboriginal staff. Often they would only be one or two health workers at work despite funding to employ eight.

Molly Wardaguga, a retired Senior Aboriginal Health Worker (SAHW) and Margaret Dawumal (SAHW who was initially on extended leave) became my mentors in those early days in Maningrida. During this time I completed further study, my Honours Degree, and Margaret was a co-researcher with me on that research. Both Molly and Margaret became co-researcher's for Case Studies Three and Four of this research. The health workers assisted all of the staff particularly in the early days. Slowly more health workers returned and several registered to commence AHW training. One of these was Mary Mason who has also assisted on Case Studies Three and Four and is now a fully qualified Health Worker.

After leaving Maningrida I was employed by the Women's Health Strategy Unit in the Policy Department of the DHCS to perform a consultation across the Top End of the NT. The report '*And the women said... Report on Birthing Services for Aboriginal Women from Remote Top End Communities*' was a result of this consultation (Kildea, 1999). Molly Wardaguga worked with me on the project in the Maningrida region where we talked to women about how maternity services could be improved. During this time I learned how important it was for Molly, that women were able to stay in Maningrida for birth. It was only natural that Molly and I would work together again on my PhD research. While I had been in Maningrida, one of the Managers in Darwin was a nurse midwife who had spent many years as the manager of the Maningrida Health Centre. She

returned to the community as Manager again when I left the community. Though very different working styles, we had a mutual respect for each other, which facilitated liaison with the Health Centre staff throughout this research.

Following the Birthing Services Consultation I was employed as the Women's Health Educator for the Darwin Remote Region. This role included frequent visits to Maningrida to support the staff around women's health. In this position I could see the midwives overwhelmed by acute presentations of illness and treatment responsibilities and struggling in their attempts to take a primary health care approach to service delivery. In the same role I myself had felt overwhelmed, with responsibilities such as educational sessions at the school beyond my capacity. The realities of practice, the limited resources, and, the knowledge that we are not practicing appropriately, create an inner turmoil and increased levels of stress for many in the remote workforce.

Molly's Story

Molly Wardaguga is a Burarra Aboriginal elder and a retired Senior Aboriginal Health Worker (SAHW) with over 40 years experience. Molly has been a lead participant in Case Studies Three and Four. An overview of Molly's story will assist in understanding Molly's interest in maternal and child health, her experience as a traditional midwife in the Maningrida community and why her leadership and participation as a co-researcher, were pivotal to the research. Molly's story is detailed in the Birthing in the Bush Website and I have included some excerpts here.

Figure 22. Molly and her grandson



When I was seven I went into the Leprosarium³⁰. I used to get lonely in there and after a while I forgot my lingo (Burarra was Molly's language). In the Leprosarium I was speaking Kuninjku, Tiwi Lingo, some Mawu (Millingimbi) and languages from Oenpelli side³¹. We went to school and learnt English and that was it. When we came back from school the old man taught us Kuninjku lingo, he would talk to us in that lingo³².

I came back to Maningrida when I was 16³³ but I didn't know my family, though I did know old lady Mary, who had been in the Leprosarium earlier. I couldn't speak my lingo and my father said that I should teach them English, and they would teach me Burarra. There was a woman (Betty Meehan) living in Maningrida who was teaching the people English. She spoke Burarra and this was how I started to learn my language again. While I was learning my own language I started to work with the Balanda people. It was easy for me because I could understand English. There was no health clinic in Maningrida then, just a little paper bark hut. Visiting Dr Hargrave asked me to help with the leprosy patients and that was really how I started to be a Health Worker.

I had a chosen husband but I didn't like him so I told my father I would choose my own husband. The husband I chose was the right skin husband for me. Then in 1958 I had a baby starting to come up. When it was big I had a sort of pain and I told my husband 'I've got lots of pain' and he went down and told my mother, he said 'Molly's got pains starting'. So then they took me down to a bush near the waters edge. My mother was there; my auntie, old lady Mary; my grandmother, my fathers mother her name was Mary too but I call her 'maka'; and Barbara, that old lady who used to belong to tall Frank, his mother. My father had three wives, but only two

³⁰ A national survey of Indigenous health in 1989 found that 47% of Aboriginal respondents of all ages had been separated from both parents in childhood.

³¹ These are languages from other areas and many are very different to Burarra.

³² Kuninjku is one of the major languages in spoken Maningrida. Molly's grasp of so many different languages made her an invaluable asset in the Health Centre for so many years and as a researcher during this project.

³³ There is some discrepancy in the documentation of Molly's date of birth and the year she returned to Maningrida. I have used the dates that Molly states are correct.

came. I said to them I've got lots of pain you know and they said to me: 'you look, that tree over there, that bending one tree, you go there and you have a little swing up and down, up and down'. No I said to them I couldn't understand the Burarra but Ingrid³⁴ and Mary were interpreting for me so I did.

Then I was sitting on my feet, all the women were sitting beside me, at my back and some in the front. They were saying, put your feet together, open your legs so the baby can listen and feel the fresh air³⁵. They were telling me to open my legs but I was too shamed, I would close them and they would open them again. Then, when the pain was really bad, my grandmother said I had to break the waters to make the baby come out easy. If you push when it is not broken it is sort of no good, everything might come out, your guts and all. They used to tell us that story, you've got to pinch that water bag, like a balloon, if you don't you will push and push and push and you and the baby will die. They said to me, push and I said to her (old lady Mary), what are they saying and she was telling me to hold my bum together really tight and holding the ground really hard to stop the tearing inside. They were pushing on my back and I was crying and crying and next minute the baby went plop. I was lucky, I didn't tear.

I shocked myself, I tell you. I said to them 'this baby is too skinny' he was sort of like a premature baby and you could see a lot of veins showing like red one, blue one, like a little wallaby. I got a shock. He was too early that baby. The next minute my mother said to me the baby bag was coming out. Then my 'maka', she dug that hole and put that ant pit, the red one in. The women were moving and I was worried and said 'hey don't abandon me' but they didn't. They covered me with a really heavy blanket for the smoking³⁶.

³⁴ Ingrid Drysdale – was a non-Aboriginal woman who spent many years in Maningrida when it was being first established. She was involved in teaching English, assisting with a feeding program, and though not a nurse, she assisted in caring for Leprosy patients who were able to stay in the community.

³⁵ Molly was whispering, often looking around to make sure no-one (men) was listening.

³⁶ The smoking ceremony occurs following childbirth and assists in bringing on the breast milk, healing the perineum and making both the mother and baby strong again. It is described in more detail in 'Birthing Business in the Bush'.

I didn't feed my baby (Albert) with my milk, my real mother fed my baby, and auntie did too. He was too small for me; I was too scared to feed that one. After a while when I saw he was looking around, smiling and starting to build up his body, covering the veins up and looking around maybe eight or nine weeks old then I said, I better try to feed him. I had to pinch my nipples to make them small, rolling them like a cigarette, and I had to sit on top of the ant pit to help the milk come. I needed to do this three times. When the milk has stopped if you get on the ant pit you will get the milk to start again³⁷. They said to me 'you are going to feed him all day'. And after that I took that baby to work and Ingrid used to do our babysitting. I used to call that lady grandmother. So I kept working with the leprosy patients kept going all through the years. But now if the girls have problems they use a titty bottle (formula feeding via a bottle) yuk. I tell them in the card games it isn't good for their baby they should be breast feeding, they are not white woman, I talk to the young mothers like that all the time.

Next I had Andrew, he was born in Darwin hospital in 1960. My husband had said 'when I die I want my son to know how to walk to Darwin'. We had walked all the way to Darwin when I was pregnant. Then I had Lucy in 1962 in the medicine room in the old clinic, it was really small that room. Shirley was there and she told me to stop pushing. I was on the small skinny bed. I was too scared, I told them I should have gone down on the floor. Shirley was also worried I would fall off the bed. Always in the clinic the women would get on the bed, Balanda way, but in the bush they would sit on their legs sort of squatting, that is the Aboriginal way to have their babies.

After my own birth, the next baby I saw born was the first baby to be born in the new paper bark clinic. This was a small shelter made of wood and paper bark. It was built down near the beach and had a sandy floor. There was a nurse midwife living in Maningrida, Sister Helen Miller. Sister Helen and I were there and the pregnant woman had her second sister and auntie with her too. I was helping her, watching

³⁷ Molly believes the smoking ceremony (where ant pits are added to the fire) and breastfeeding are two of things that are important for the health of young babies.

her hands to see what she did. I was young then maybe only 16 yrs old or something. So I was watching her, how the baby was coming out, and how the babies head was the wrong way and they used to twist and turn the baby around by massaging and rubbing the tummy, to turn the head straight so he could come straight out. Then she was feeling around the baby's head for the cord, then the baby was born the normal way. She used those two forceps to cut that cord and stop the bleeding and, I couldn't believe how she had done it, and I said to myself, 'one day I'm going to do it like that', and I did!

Then some of the husbands would come and get me when their wife was going to have a baby. In the bush they would sit Aboriginal way with the relatives there to help. But if I was helping them in the clinic they would have a shower and put on a nightie, and have the baby up on the bed, Balanda way. I would wash them with Savlon too. Some would ask to have the mattress on the floor and that was OK. Most still had relatives with them. Most times it was easy but one time I had to cut the cord because it was really tight around that babies neck and I told them to put the forceps on so I could cut and untie the cord. That baby didn't breathe when she was born but I held her upside down and smacked her bottom to make her cry. She now has a baby of her own that girl.

When Margaret³⁸ and I went to Darwin to do our Midwifery training³⁹ we went in for 12 weeks, though Margaret could only stay for 6 weeks and had to return the next year to do the other 6 weeks. We spent the first week in lectures and then we were sent to the antenatal ward, we couldn't believe it. All the women were lined up in beds in a row and they gave us a bowl and razors to go and shave them all, we had never heard of doing that thing before.

(Kildea et al., 2004)

³⁸ Margaret Dawumal is also a retired SAHW who was a member of the research group.

³⁹ Molly learnt about childbirth from both the Aboriginal elders and the Balanda midwives and doctors. When she was with women birthing outside the health centre she described her role and practices as similar to the one the Aboriginal elders would play in childbirth. When she was in the Health Centre she would work as the Balanda staff had taught her.

6.2.3 Professional Context

One of the strategies for strengthening maternity services is to increase the effectiveness of the practitioners who work in these areas. To increase their effectiveness it is necessary they receive education on local cultural issues (ANF et al., 2002; National Aboriginal and Torres Strait Islander Health Council, 2000). Developing an understanding of the history and cultural origins of the population with whom you are working, and identifying the key individuals in the community with whom to communicate and develop working relationships, will often assist practitioners to gain a better understanding of health behaviors and practices for that community (Akukwe & Nowell, 1999; ANF et al., 2000a).

The workforce needs have been recognised by a working group with representatives from the Australian Nurses Federation (ANF), the Australian Association of Rural Nurses (AARN) and CRANA who devised the 'Action on Rural and Remote Nursing Vision Statement'. The vision states: *"there will be a sustainable, skilled and stable nursing workforce in rural and remote areas continuing to provide quality health care"* (ANF et al., 2000b). The first condition required of this vision is pertinent to the development of the Primary Health Care Guide described in Case Study Four:

Nursing resources are oriented toward the priority health needs of their communities within a primary health care framework, while also catering for the needs of community members requiring secondary and tertiary health care (ANF et al., 2000b).

As a remote area nurse midwife who received minimal structured orientation or cultural awareness training prior to working in remote settings across three Australian states, I was interested in developing resources that were not dependant on employer provision, capacity or goodwill. This is where the idea of an Internet based resource originated. The type of resource I believed could be helpful was a 'guide' for the non-Indigenous maternity service providers working in the remote setting. The 'guide' would increase the service providers understanding of cultural issues that are important to Aboriginal women around childbearing. If followed it would reduce the isolation of the service provider from the community in which they are working, by 'guiding' them to meet members of the community who would have this sort of knowledge. Bridgitte Jordan suggests that cross-cultural examination of childbirth practices can provide a better understanding on which

to plan for change (Jordan, 1993). Also described by Jordan is that people will often understand their way of bringing babies into the world as the ‘right way’ of doing so (Jordan, 1993). For these reasons it is important that the service providers understand the beliefs and practices of Indigenous women, as a prerequisite to providing safe and appropriate care.

Previous work with Aboriginal women had taught me how important it was to listen to their voices, and how difficult it was to listen effectively. My goal, prior to approaching the Maningrida community, was to combine practitioner, academic, and Aboriginal women’s voices and knowledge, in a resource that would improve the health practitioner’s capacity to deliver culturally safe maternal and infant health care. I was hoping to use the women’s wisdom and knowledge, to increase their influence within the health care setting (Pryrch & Castillo, 2002). My intention to progress this through the PAR group, resulted in two very different resources. The first resource, ‘The Birthing Business in the Bush Website’ aimed at reducing practitioners’ isolation from cultural knowledge and is described in Case Study Three. It combines the ‘cultural knowledge’ from the women’s voices with ‘professional knowledge’ to be used as a learning and information tool. Development of the second resource, ‘A Primary Health Care Guide to Planning Local Maternity Services’ aimed to reduce the isolation of the health practitioner from the community in which they are working and integrated the principles of consumer participation in health care planning. This is described in Case Study Four in Chapter Eight.

6.2.4 Policy Context

Case studies Three and Four incorporated principles necessary for sustained improvement in Aboriginal and Torres Strait Islander health as identified by the National Aboriginal and Torres Strait Islander Health Strategy (National Aboriginal and Torres Strait Islander Health Council, 2000). These principles include:

- ‘using a holistic approach to health issues’
- training the service providers on ‘cultural security: ensuring that the legitimate cultural rights, views, values and expectations of Aboriginal and Torres Strait Islander peoples are respected’

- ‘building the capacity of health services and communities to respond to health needs and take more responsibility for health outcomes’ and,
- ‘includes equipping staff with appropriate cultural knowledge and clinical expertise’

(National Aboriginal and Torres Strait Islander Health Council, 2000pp. xiii-xvii).

Consumer Participation in Health Care Planning

One of the underlying tenants of primary health care is community participation in health care planning (Tjikalyi & Garrow, 1996; WHO, 1978). A systematic review of involving patients in planning and developing health care describes increased self-esteem and improvement in services as resulting factors (Crawford et al., 2002). Whilst primary health care and community participation are commonly seen in health strategy and policy documents concerning health services in Indigenous communities (National Aboriginal and Torres Strait Islander Health Council, 2000; NSW Health Department, 2003), resources to assist service providers to become knowledgeable, skilled, and therefore able to achieve these goals, are minimal (DHAC, 2000; Lowell, 2001). In fact it has been recognised nationally, that very few resources, education or training on consumer participation in health care planning, exist to assist health providers or consumers in rural and remote areas of Australia (DHAC, 2000).

‘Healthy Horizons’ is a framework to guide the development of health programs and services in rural and remote areas of Australia (National Rural Health Policy Forum & NRHA, 1999). One of the key recommendations from this document is:

To help improve the health status of their communities, health professionals need skills in cultural sensitivity and in public health and primary health care approaches to health issues. Skills to work collaboratively with community members and interest groups are necessary if shared development plans are to be successful (National Rural Health Policy Forum & NRHA, 1999p21).

The resources described in Case Studies Three and Case Study Four aimed to address these recommendations. In particular, one of the goals of the Planning Guide (Case Study Four) was that it orientates and prepares the non-Indigenous health practitioner, towards jointly planning maternity service provision with community members.

Community Development

The PAR project described in the following two chapters demonstrates several of the tenets of community development (Blakely, 1979) and community participation. The research aimed for participation and change in a predetermined direction, which was to develop a resource that would increase the non-Aboriginal practitioners understanding of Aboriginal culture and beliefs around childbirth in this particular community (Case Study Three). Case Study Four endeavored to improve the dialogue between practitioners and the women in the community and to increase joint planning of maternity services (Blakely, 1979). Community development is reported to be a social science methodology and action research an approach that enables research to fit into community development (Blakely, 1979). Action research can assist the process of community development, whereby the community members themselves are involved in the praxis resulting from the research.

The PAR process employed in this research aimed to achieve participation from all the language groups in the community, as it was not known how much the results of the research would apply both across, and between, these groups. To achieve this it was essential to have broad participation on the research team, to know who should be approached, how, and when this should occur. Additionally the PAR team provided guidance on which other family members were important to include. Molly however, seemed to be able to talk across the language groups. Occasionally there were difficulties and these have been described in Chapter Seven (Case Study Three).

6.3 Authoritative Knowledge

There are many different ‘kinds’ of knowledge and ways of ‘knowing’ in this world and it is clear that there can be vast differences between, and also within, different cultural groups (L. Smith, 1999). The following two chapters (Case Studies Three and Four) were influenced by the ‘knowledge’ systems that existed in the Maningrida region. In particular I needed to learn about the Indigenous research methods appropriate for this area. These methods would then be utilised to explore the authoritative knowledge around health and childbirth. I turned to the literature and discovered that ‘authoritative knowledge’ provided an appropriate explanation that reinforced my own personal experiences in the

remote setting. These concepts are further explored in the following two chapters and again in the discussion chapter (Chapter Nine).

Authoritative knowledge and its relationship to childbirth practices was first described by Bridgette Jordan in 'Birthing in Four Cultures' (Jordan, 1993), and further explored in 'Childbirth and Authoritative Knowledge' (Jordan, 1997). The concept of authoritative knowledge can be described as the knowledge that is the most persuasive (Jordan, 1993). That is, the knowledge that influences decision making and actions in a particular area, often guiding policy direction and practice (Jordan, 1993).

Further work in this area has been undertaken by Daviss (1997). She devised her own 'mental survival strategy' as a way of categorizing the differing motivations and practices that guide peoples thoughts and decisions around birth (Daviss, 1997). She identified eight types of logic and related them to Brigitte Jordan's 'Authoritative Knowledge' (Jordan, 1997). In the book '*Childbirth and Authoritative Knowledge*' (Davis-Floyd & Sargent, 1997), Daviss described these types of logic through the story of an Inuit community reclaiming birth (Daviss, 1997). The situation she describes in northern Canada typically reflects the situation in remote Australia, once again highlighting the similarities between these cultural contexts. Below I have used Daviss' 'classifications of logic' framework (Daviss, 1997), to describe a similar story of a birth I was involved in when working as a midwife in a remote community.

A woman from an outstation presented to the health centre at approximately 28-32 weeks of pregnancy. Her blood pressure was high (180/110) and she had protein in her urine (+). In pregnancy these signs are considered dangerous and she was categorized as 'high risk' and advised to go to the regional centre for review by a doctor and for an ultrasound scan of her baby (Clinical Logic). This was discussed through an interpreter as she did not speak English. However she refused to go saying she was frightened and had never been away from this community before (Personal Logic). The last time she had a baby she did not have any complications*

* Satellite communities serviced by the remote centre.

and she feels safer at home surrounded by family (Intuitive Logic). Additionally, she wanted to birth at her outstation, on 'her own land' (Cultural Logic). If her baby was not born there the correct ceremonies will not be performed and the child could have problems establishing their connection to the land (Cultural Logic).

As a midwife I was concerned with the clinical signs and tried to persuade her to go to the regional centre. We had no on-site doctors; very little equipment for emergencies; she could develop eclampsia on the outstation; and lose her baby, or her life (Clinical Logic). Additionally, I could get blamed by the community members (Cultural Logic) or in trouble with my employers (the policy of my employer was that all women should attend the regional centre for birth and the clinical guidelines clearly stated she should have a medical review) if I 'allowed' her to stay, especially if something went wrong (Legal Logic, Political Logic). But it did not seem right. The doctor in the regional centre refused to authorise an escort to accompany her and act as an interpreter, as 'lots of patients speak her language at the hospital'. She was clearly terrified; this would not be good for her or the baby (Intuitive Logic). Why are there not facilities that can offer services in her home town? The evidence suggests she could have better health outcomes if such services were available (Political Logic and Clinical Logic). Reaching a compromise she agreed to go to the regional centre for review only, with an escort, and on the understanding that she could return to await the birth at home. When she did return she stated she would not be going back to the regional centre for the birth, she had been too frightened there (Intuitive Logic). She did agree to come in from her outstation (two hours drive from the Health Centre) for regular check ups and she stayed with relatives in town as she neared her due date. I was told about the birth approximately one hour after the child was born and found her with her baby sitting by the campfire surrounded by aunts and sisters. Everyone was very happy.

This woman was assertive enough, and had enough support from her family, to carry out her own risk assessment. She decided that going into the regional centre was too dangerous. Many other women in remote areas are unable to do this.

6.4 Indigenous Knowledge

Working in Aboriginal communities it is important to understand that the authoritative knowledge guiding the practitioners will often be in conflict with the Indigenous knowledge, that is the authoritative knowledge, for the members of the community (Hughes et al., 1994). In a discussion around Koori health, Hughes et al (1994) compares the very powerful scientific medical knowledge (looking for cause and effect) and the bureaucratic administrative knowledge (rational efficiency) with Indigenous knowledge, that understands health as being dependent on relationships and balance. These authors state that the fundamental task for improving Indigenous health is to restore the natural balance between human beings and nature, as existed prior to colonisation (Hughes et al., 1994). They report that Kooris have a very different idea about themselves and their health to what the scientific or bureaucratic knowledge believes (Hughes et al., 1994). This is evident to anyone who has worked in the field of Indigenous Health and has taken the time to listen to what people say about their health. It will often be explained to the non-Indigenous practitioners by the AHWs. Another personal experience demonstrates this point:

As a remote area nurse I had assessed a man who had abdominal pain of unknown origin. I was unsure of the diagnosis and wanted to fly him out to the regional centre (clinical logic). I did not know why he was sick but I did know he was very ill. The family did not want him flown out (cultural logic) and I could not understand why. After several days with his condition worsening I was very stressed thinking he may not survive and I could be blamed or held responsible for his death (personal logic, intuitive logic and clinical logic). I sat down with the health workers who whispered to me that he had breached 'cultural laws' and this was the cause of his illness. They suggested the only way he would get better was if the family would pay for a witch doctor. By this stage he was unconscious and the family had agreed to let him be flown out, but they also decided to get the witch doctor to see him before he left. I was present at the witch doctors' ceremony where special leaves were burnt and chanting and dancing was performed. A foreign object was sucked out of the man's abdomen and was spat out with about 10 mls of blood. The witch doctor said he would now get better, and though flown to hospital, he was discharged after several hours as his condition improved dramatically.

When the Indigenous Knowledge was shared with me, usually by the AHWs, it was often whispered, almost as a secret. This was not the first time this had happened. In my experience AHWs are often not comfortable talking of such things when they were in the medically dominated setting of the Health Centre. I have found that this information often comes easier in more informal settings, for example sitting under a tree on an outstation, where the power and knowledge are firmly in the hands of the Indigenous people themselves.

6.4.1 Ganma

Gamma is a word used by the Yolngu⁴⁰ people of East Arnhem Land. Gamma has been described as a metaphor; an Indigenous theory; a social theory explaining how their society works; a place where new knowledge is recreated (Hughes, 2000; Marika et al., 1992; 2002; Pyrch & Castillo, 2001; Yunupingu & ABC, 1994). Mandawuy Yunupingu⁴¹ uses the Ganma metaphor to describe the constantly changing state: good health, and its dependence on balance, relationships and harmony (Yunupingu & ABC, 1994). Rather than risk misinterpretation and loss of meaning by paraphrasing, I will repeat the description offered by the Yolngu:

Gamma is taken as describing the situation where a river of water from the sea (in this case Balanda knowledge) and a river of water from the land (Yolngu knowledge) mutually engulf each other on flowing into a common lagoon and become one.

In coming together the streams of water mix across the interface of the two currents and foam is created at the surface so that the process of Ganma is marked by lines of foam along the interface of the two currents. In the terms of the metaphor, then the line of foam that is formed by the interaction of the two currents marks the interface between the current of Yolngu life and the current of Balanda life. Both Yolngu and Balanda can benefit from theorising over the interaction between the two streams of life

(Marika et al., 1992).

⁴⁰ A term referring to the Aboriginal people of East Arnhem Land (Marika et al., 1992)

⁴¹ Yolngu East Arnhem man, school principle and lead singer of rock band, Yothu Yindi

To me, this seemed to be the perfect metaphor for what I was hoping to achieve in my doctoral work. That was, to develop resources that combined the knowledge and wisdom of the Aboriginal women in the Maningrida region, with the literature around ‘Indigenous maternal and infant health in remote areas’, and ‘consumers participating in health care planning’. If utilised appropriately these resources could increase the practitioners’ ability to work appropriately in this culturally diverse setting. This could lead to a greater understanding of the authoritative knowledge that influences decision-making and health outcomes. Additionally, these resources could enable greater participation in the planning of health services, by the women in the community. Thus allowing their authoritative knowledge to guide and strengthen the maternity services available in their communities.

6.5 Gaining Support for the Research

Prior to commencement of the research it was important to consult with the key stakeholders to ascertain their willingness to be involved in the research and their perceptions of what could be achieved.

6.5.1 The Maningrida Community

In August 2001 my research supervisor and I travelled to Maningrida to talk to community residents, governing bodies and health practitioners about the possibility of undertaking a collaborative research project.

6.5.2 Consultation with the Women

In the Maningrida community we first visited the Bawinanga Women’s Centre where we talked to women about our ideas and listened to theirs. There was enthusiastic support for some joint work. Several of the women we spoke to emphasised how important it was that non-Aboriginal service providers had knowledge about their culture and tradition. Several of the women identified this as an area they were interested in and would like to work together on. The Coordinator of the Women’s Centre was, coincidentally, a nurse midwife and was also very interesting in collaborating on a project.

6.5.3 Consultation with Landowners and Community Organisations

An important part of the initial consultations involved discussions with landowners and community organisations. As the project involved women’s business it was appropriate

Figure 23. Helen Williams



Figure 24. Sue, Lesley and Women's Health Advisor talking to Valda Bocmukagarra



that most of the discussions were held with women in the community. Helen Williams (pictured below) is a traditional land owner for the land that Maningrida was established on. At that time, Helen was the only female member on the Malabam Health Board, that included representation from each language group in the area and whose responsibilities include the strategic direction for Health Service⁴². Helen expressed strong support for the project. Whilst in the community we also held discussions with staff working in the major organisations. This included members of the Bawinanga Aboriginal Corporation, The Maningrida Council, The Malabam Health Board and the Maningrida Progress Association, all of whom were supportive of us further developing a research proposal. Valda Bocmukagarra is a trained interpreter who works at the vocational training centre and coordinates interpreter services in the community. We discussed the research with Valda and she too was supportive, with suggestions about other interpreters who would be available to assist us.

6.5.4 Consultation with Molly Wardaguga

We sat with Molly Wardaguga and discussed the possibility of working together. Molly was concerned about the health of the young women and babies and worried that the young girls were not listening to the older women any more. She believed that health practitioners were not as effective as they could be and needed to develop closer links

⁴² The Malabam Health Board do not have control of health funding nor any direct control of the staff at the Health Centre.

with the older women in the community. Molly agreed to be a co-researcher on this project with me.

Figure 25. Talking to Molly about being a researcher with Sue on the project.



6.5.5 Consultation with the Practitioners

We met with the health team during this first visit and although I was not known to several of the health staff⁴³, I knew the manager well and she supported the project throughout its duration. Present at the meeting included the Health Centre Manager, two midwives, one doctor, one AHW and two remote area nurses. I gave an overview of my background and the research I was hoping to perform. Below are a number of comments made by the practitioners, which highlight some of their concerns and confirmed that it wasn't only me that felt under prepared for working in this setting.

In our cross cultural training there was absolutely nothing mentioned about birthing. It wasn't even health orientated (Remote Area Doctor, Field Notes, 8.01)

I've worked for several different communities and have never had cross-cultural training (RANM, Field Notes, 8.01)

The one (orientation) we did in Darwin was all general - nothing health related. Most people that did it were people working for the Public

⁴³ Throughout the course of the research there were three consecutive midwives and two doctors whose responsibilities included Women's Business all supported the research.

Service. And even then it sounded better than the one that one of the doctors did (RAN, Field Notes, 8.01).

Consultations with the practitioners highlighted the importance of learning about, and understanding, Aboriginal history and culture. Following this meeting several of these practitioners agreed to be in the PAR team and some became a part of a critical reference group (CRG) who advised and assisted, guiding the project throughout (Wadsworth, 1998). The PAR Team and the CRG will be discussed in more detail below under the heading Research Design.

6.5.6 Department of Health and Community Services

The DHCS is the largest provider of health services throughout the NT employing many of the practitioners responsible for maternity service provision. As an important stakeholder in the research topic, I believed it was valuable to involve them from the outset. I approached the Women's Health Advisor in the Women's Health Strategy Unit in Darwin, who I knew from my previous employment. Initial discussions established that she was very interested and supportive of the research and she also visited Maningrida during the initial consultations to ask permission for the Women's Health Strategy Unit to participate and support the research.

6.5.7 Results of the Consultation

Everyone we spoke to voiced support for the research. By the time we left we had a general outline of the research objectives, with agreements that the project would be based at the Women's Centre with several members of their staff as participants. We also had support and agreement for the next step, which was to write the grant application. Most importantly for me, Molly Wardaguga had agreed to be a co-researcher on the project. Following the visit the research objectives were documented and circulated back in the community for comment (with the assistance of the Women's Centre Coordinator), prior to submitting the application for funding and working on the documentation necessary for ethical approval.

6.6 Conclusion

This chapter has provided an overview of the Maningrida community, which is the setting for Case Studies Three and Four. I have described my links with members of the Maningrida community, in particular Molly Wardaguga. Molly worked as a co-researcher and I believe it was important to present her story here. I have also described the professional and policy context influencing the research together with the theory that guided the research in the Maningrida community. The next chapter describes Case Study Three, which led to the development of the 'Birthing in the Bush Website'. In particular Chapter Seven explores the factors that are important when performing research in the Australian Indigenous setting.

7 CHAPTER 7. CASE STUDY THREE - BIRTHING BUSINESS IN THE BUSH WEBSITE

7.1 Overview

This chapter describes the PAR process involved in establishing and evaluating a resource aimed at improving access to cultural knowledge specific to birthing. The resource developed was the 'Birthing Business in the Bush Website'⁴⁴. The evaluation utilised the 'Thinking, Listening, Looking, Understanding and Acting as You Go Along' framework (Tjikalyi & Garrow, 1996), discussed in Chapter Three (Methodology and Methods). In particular, this chapter describes the Indigenous research process and evaluation, as advised and guided by the Aboriginal co-researchers and participants.

As a result of the research process, women's stories were recorded and presented on the Website. In accordance with the tenants of Indigenous methodology (L. Smith, 1999), this chapter does not analyse the women's stories, they stand alone as one of the resources developed from the research. Some of the women's quotes, and other information currently recorded on the Website, have been utilised in this chapter as they highlight issues pertaining to the overarching goal of this thesis. Anything that has been taken from the Website has been identified as a quote or has been placed in a text box.

As this case study progressed it evolved into two distinct resources. One resulted in the development of the Birthing in the Bush Website, which recognizes, presents and honours Aboriginal women, their knowledge and experience and is detailed in this chapter. The Website also combines Aboriginal stories, knowledge and culture with an overview of birthing in the NT and clinical information for the practitioner. Primarily it provides a platform for the voices of Aboriginal Australian women from this area and cultural information for practitioners. The second arm of the PAR process led to the development of 'A Primary Health Care Guide to Planning Maternity Services in Your Community' aimed at engaging the health practitioner with community members and is detailed in Chapter Eight as Case Study Four.

⁴⁴ <http://www.maningrida.com/mac/bwc/index.html> : Also included as Appendix 12.

7.2 Research Aim

The aim of this case study was to combine the PAR approach, with Aboriginal research methodology, to develop resources to reduce the cultural isolation of the remote area maternity service providers.

7.3 Research Question

How can computer mediated communication be used to present Aboriginal women's knowledge and experience to remote area maternity service providers and increase their cultural understanding of childbirth?

7.4 Research Objectives

The research objectives were to:

- provide an opportunity to document and circulate the experience of Aboriginal women around birth
- explore what information Aboriginal women felt should be included in a resource to assist practitioners have a greater understanding of the cultural issues important to maternity care
- incorporate Aboriginal research methods into the research process as advised by the Aboriginal participants
- integrate Aboriginal women's knowledge and health beliefs, with the maternity service provider's knowledge and health beliefs, to produce resources that were mutually beneficial to all participants
- incorporate the principles of cultural safety, primary health care and community development in the resource
- carefully document the barriers and facilitating factors that influence the research and evaluation process during this case study

7.5 Ethical Considerations

The following section details the ethical approval. The intellectual property and copyright issues addressed during this research have been documented in the section titled Cultural Sensitivity and Security later in this chapter.

Ethics approval was granted from the University of Technology Sydney (UTS) ethics department, the Top End Human Research Ethics Committee of the NT and the Central Australian Human Research Ethics Committee. All of these institutions have Aboriginal Subcommittees that approved the research. Guidelines for ethical research with Aboriginal communities were followed as closely as possible (AIATSIS, 2000; Ivanitz, 1998; R. Kelly & O'Faircheallaigh, 2001; NHMRC, 1991). Steps in the participatory process I believe were important in gaining successful ethics approval for this project included:

- the researcher was well known in the community
- appropriate consultation occurred prior to funding and ethical applications
- the project had the support of local Aboriginal leaders
- letters of support were obtained from local Aboriginal organisations and individuals: Bawinanga Aboriginal Corporation, The Maningrida Council, The Malabam Health Board, The Bawinanga Women's Centre, Helen Williams, traditional land owner and member of the health board, Maningrida Health Centre, and Molly Wardaguga, retired senior AHW and co-researcher on this project
- there was to be a two way transfer of skills
- Aboriginal people were to be employed on the project: the project budgeted to pay Molly Wardaguga as the co-researcher, the research team, interpreters and women who were interviewed during the course of the project
- reimbursement of expenses for research participants and organisations that assisted with the project were included in the project budget
- discussion about intellectual ownership and joint publications were held at the outset of the project
- the PAR team were the producers of the resources and as such were to be properly acknowledged on all material produced as a result of this project
- the research should benefit the Maningrida community and potentially Aboriginal people outside the community.

Consent forms for the women (Appendix Eight) and the practitioners (Appendix Nine) were developed. Where necessary, Molly explained the research process in language prior to us asking the participants to sign the consent form.

7.6 Research Design

This section presents an overview of the research approach including participant recruitment and the establishment of a PAR team. A timeline detailing the major events and occurrences for this case study can be found in (Appendix One).

7.6.1 The Research Approach

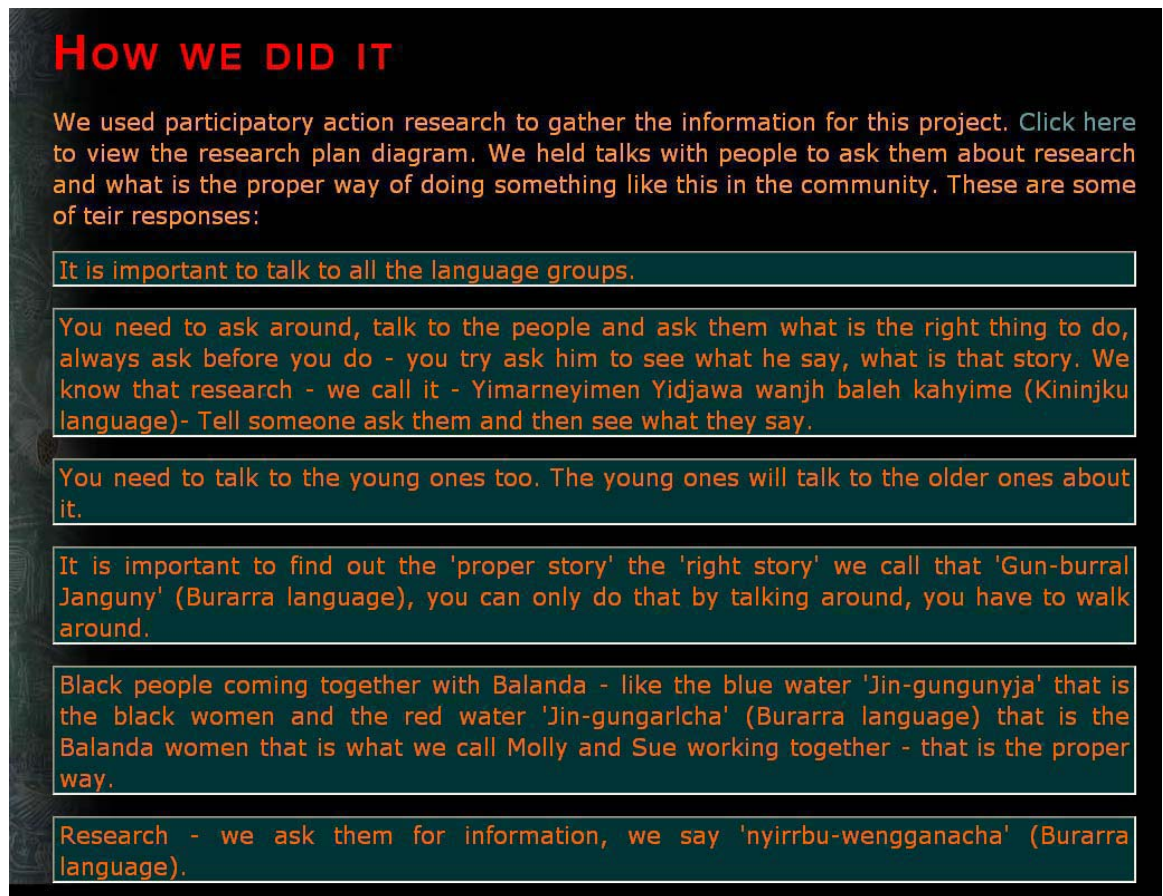
Prior to confirming the elements of the research design it was important to talk to people in the community about research and their understanding of research. Incorporating the knowledge systems and processes for people of the region was necessary to ensure the methodology was appropriate for this community (AIATSIS, 2000). I had several small group discussions with people, organised by Molly and other women from the Women's Centre, to talk about research. It was during these discussions that I talked about the Ganma metaphor that was used by the Yolngu people to the east of Maningrida (described in the previous chapter). I wanted to explore the concept, seeing if it was appropriate for the Maningrida region, and if not to explore what they believed was a suitable research methodology.

I discovered this was not the appropriate way of discussing research with people who lived in the Maningrida region. The reason for this is illustrated below:

*That is not the right way for here, one day we might talk to the elders
and they will tell us what is the best way to talk about it for here
(Research Participant, Field Notes).*

Figure 26 below provide examples of how Aboriginal people in Maningrida told me to describe, and perform, research in this community. It is presented here in the same format as it appears on the Website.

Figure 26. Descriptions of research cited on the Website: Introduction: How We Did It



These descriptions of research fitted very closely with the PAR approach, which is increasingly being recommended for research in the Australian Indigenous context (Ivanitz, 1998; Pyett & VicHealth Koori Health Research and Community Development Unit, 2002). Both Molly and the research team were happy to use the PAR cycle of Plan, Act and Observe, Reflect and Evaluate for this project, it seemed to be what they would have done naturally (Kemmis & McTaggart, 2000). The PAR cycle is illustrated below. It was printed and used to describe the project with the women, and the practitioners. It was also used for ethics submission.

Figure 27. The PAR cycle describing Case Study Three



The following is the diagrammatic representation of this case study.

Figure 28. Diagrammatic representation of Case Study Three



Participants to the Research

Following community endorsement of the research, and ethics approval, I travelled to Maningrida for the first field trip (February 2002) where we talked about the research process described above. During this time Molly and I commenced recruitment of individuals who were interested in participating in the research.

Recruitment

As co-researcher, Molly (illustrated over the page) was vital when it came to recruitment of the PAR team. Her local knowledge and wisdom insured the team had broad representation and included women who were well respected in the community, interested in, and able to participate in, the research. Table 7 below lists the women who were recruited to the PAR team, their language group, their ‘country’ and current or previous positions.

Table 7. Maningrida participants in the PAR team

| Name | Language | Country | Position |
|---------------------|-----------|-----------------------|--------------------------------------|
| Molly Wardaguga | Burarra | Gupunga | Retired senior AHW |
| Margaret Dawumal | Burarra | Wurdeja | Retired senior AHW |
| Mary Mason | Burarra | Gupunga Maningrida | AHW |
| Deborah Wurrkidj | Kuninjku | Mumeka | Women’s Centre worker |
| Elizabeth Gandabuma | Kuninjku | Marrkolidjban | Women’s Centre worker |
| Phyllis Dundudja | Burarra | Jinuwinga | Coordinator ‘Skinny Kids Program’ |
| Dora Daiguma | Ndjébbana | Maningrida | Women’s Centre worker |

One of the goals of the research had been to employ AHWs as an integral part of that research team. As can be seen in the table above, three of the PAR team, two of whom had retired, were AHWs. The Maningrida participants of the PAR team are shown over the page.



Figure 29. Molly Wardaguga.



Figure 31. Deborah Wurrkidj



Figure 30. Margaret Dawumal and her grandchildren.



Figure 32. Phyllis Dundudja and her granddaughter Kerryantha.



Figure 33. Dora Daiguma.



Figure 34. Mary Mason and her daughter Kylie.



Figure 35 Elizabeth Gandabuma.

This group of women participated throughout the two-year period of the research. Most of the research group had little familiarity with women and family structures outside their own language group. Molly and Margaret however, had an extensive grasp of the women we should talk to, and the relationships that existed across the whole community, probably from their years experience as health workers. They were invaluable to the research. Other women would become very involved at times, in particular several interpreters or women who were assisting with different language groups. As their participation was not consistent, nor required, for the full length of the research, they were included in ‘The Researched’ group, as described below.

Composition of the Team

The PAR team

There were 17 members in the PAR team. Membership can be seen in more detail in Table 8 on the following page. The team included Aboriginal women and health workers from the Maningrida community; the Women's Centre Coordinator; and Molly and myself as the key researchers. It also included practitioners for whom the resources were being developed and who had experience in remote area women's health service provision: remote area midwives and doctors, and remote support staff.

The Critical Reference Group

The CRG consisted of seven members who had varying levels of participation depending on which area of the research we were working on at any particular time. The CRG included Molly Wardaguga, and Margaret Dawumal, both retired senior AHWs with approximately 35-40 years experience each. They were the cultural advisors, with inside knowledge of both the community and the Health Centre. They assisted in evaluating and validating the cultural and community information that was documented.

In addition there were five practitioners: two remote area midwives, two women's health educators, and one public health nurse-midwife. All of the members of the PAR team had extensive experience in remote area maternity service provision. Feedback from the CRG was incorporated into the Website and Guide before they were circulated for comment and further development by members of the PAR Team, The Researched Group and The Stakeholders. This process of 'cycling' of materials occurred at each stage of the development.

The Researched

This group numbered 65 and included women from the Maningrida region (n=52) who spoke with us and shared their stories, the remote area practitioners (n=13) who were interviewed and those who looked at, or tested, the Guide and Website as they were being developed.

The Stakeholders

This group included nine individuals who had some involvement in the support and provision of remote maternity services in the NT. Women's Health Educators, staff

development and orientation personnel, the Women’s Health Advisor, District Medical Officers and remote managers were all members of this group.

Two participants were unable to maintain contribution to the research have been documented in the table below under the heading ‘Attrition’. One was from the stakeholders’ group who was unable to get regular Internet access. The other was a member of the researched group who left her position and did not have time to continue participation. Several times positions were vacated; however each time this occurred, the new recruit became a participant. In Table 8 below I have described this as ‘one’ person as there was usually only one involved at any one time. An example of this was the Women’s Centre Coordinator. Four different people filled this position over the course of the research and all participated in the research during their employment. Two of these were also midwives and one was a qualified teacher. This was an indication of the high turnover of non-Indigenous staff, in other areas within the remote community, similar to that of the Health Centre.

Table 8. Participants in developing and evaluating Birthing Business in the Bush Website

| | PAR Team | Critical Reference Group | The Researched | The Stakeholders | Attrition |
|----------------------------------|-----------|--------------------------|----------------|------------------|-----------|
| Aboriginal Women from Maningrida | 4 | | 52 | | |
| Aboriginal Health Worker | 3 | 2 | | | |
| Medical Officer | 1 | | 1 | 2 | |
| Student (midwife and doctor) | | | 2 | | |
| Remote Area Midwife (RAM) | 3 | 2 | 6 | | |
| Remote Area Nurse (RAN) | | | 4 | | |
| Policy Advisor | | | | 2 | |
| Support Staff | 4 | 3 | | 5 | 2 |
| Women’s Centre Coordinator | 1 | | | | |
| Myself | 1 | | | | |
| Total | 17 | 7 | 65 | 9 | 2 |

7.7 Methods

This section presents an overview of the research methods including the data collection process; data analysis; the use of interpreters; sampling; and funding arrangements.

7.7.1 Field Trips

Eight trips were made to Maningrida, between August 2001 and March 2003 (see Timeline Appendix One), with a total of nine weeks being spent in the field. I realised that shorter trips of five to eight days were more appropriate as we worked many long hours when I was present and this was quite tiring for the PAR team.

7.7.2 Planning the Research Questions and Interviews

One of the challenges, commonly found in cross-cultural research, was framing the questions for mutual understanding. I had several discussions with Molly and other members of the research team about the best way to approach the interviews to meet our objectives and overall goal. I planned to follow their advice about the most appropriate way of talking to women in the community. We started with a list of working questions, which we planned to discuss in semi-structured interviews. The questions were guided by the objectives and after we had completed several interviews the questions were ultimately refined to those shown in Appendix Ten.

Initially I tried to frame the interviews around the research questions, worrying when we hadn't covered each question in detail. With experience, I realised that being very flexible with the interview structure and sitting and chatting usually resulted in the best data (though it did involve a lot of transcription). As we progressed I found I no longer used the questions above but instead had a series of dot points that I used as cues and a memory aide, which I ticked as each one was covered. Additionally, I was asking fewer questions as the PAR team were taking over that role and much of the initial explanations were being done in the participants' language. As this started to occur I found it quite difficult; I was concerned that the aims of the project and consent for discussions, recording, photography and documenting needed to be very clear, particularly when discussing the sensitive domain of childbirth practices. However I learnt to trust the PAR team and relinquish control of this process, realising as well, that the research participants would be much more informed having the explanation in their own language rather than in English for my benefit.

7.7.3 Molly Wardaguga's Objectives

Molly and I worked very closely together from the beginning of the project, each bringing different skills to the research. Neither of us were able to perform our work without the other. Molly's main objective, initially not articulated, became clear as we started to talk to the women. However it was still some time before I realised what her main aim of the project was. Perhaps she, like I, was developing and refining her expectations as the research progressed. Molly wanted to record the older women's stories, as she was concerned that the younger girls were not listening to the stories and were not showing an interest till they grew older. She felt that by the time they were interested it was often too late, as the older women had died, taking the stories with them.

... those young girls don't listen anymore but they will want to know the stories when they get older ... but we will all be dead by then ... this way they will be there for them ... written in a book (Molly, Field Notes, 5.03).

One of the key points in Indigenous research is that the research is important to members of the community (Pyett & VicHealth Koori Health Research and Community Development Unit, 2002). This research was very important to Molly in ways I didn't fully understand at first. I was grateful for the flexibility and responsiveness of AR methodology, which allowed us to incorporate changes to the research as we needed (Dick, 1993). During interviews and focus groups Molly would explain her goals first and ask the women to describe their birthing story. These were audio-recorded and later transcribed. Following their stories around birth I would explain the Guide I was hoping to develop and we would ask further questions pertinent to the information the women believed were important for new health practitioners.

7.7.4 Two Way Knowledge

The exchange of knowledge was a two way process as Molly and the PAR team taught me about Indigenous research methods and understandings and I taught them about Western research methods. Generally we would discuss the data collection at the end of the day when team members were able to explain things to me that I had not understood. These discussions were recorded as field notes. Throughout this process we learned a lot about each other's beliefs on childbirth practices. The women would often get me to

pretend I was pregnant and sit in positions where they could illustrate what they would do when caring for childbearing women, as shown in the picture below.

Figure 36. Illustrating care during childbirth



This part of the research was iterative in nature as the research team would describe events to me and I would take notes. Later I would expand in my field notes and further detail the information I had learned when transcribing my notes onto the computer that evening. My understandings of the topic or events would be fed back to the team, or individuals from the team, the following day to ensure the correct understanding had more been reached (Ivanitz, 1998; Trotter et al., 2001). This too was a challenging component of the reflexive process, which did not always happen in a timely manner and at times did not occur at all. Each time I returned to the field I would have a long list of questions generated from the transcriptions and data analysis that needed clarification.

7.7.5 Photos and Videos

When I was in the community I would usually have a digital camera, a single lens reflex (SLR) camera and for several trips, I also took a video camera. All three of these were useful at different times. The community members enjoyed the digital camera as they could see the photo on the screen of the camera as soon as it had been taken. The SLR camera took better quality photos and these were the ones I would print in Sydney and take copies back to the community on my next field trip. This worked well as people were very happy to receive photos. As I distributed them I would talk about the project and

organise times to return to confirm my interpretations of the data. Everyone gave written consent to the photos being used in any of the resources that were being developed. The video camera was also used for data collection. Molly was interviewed on video, which produced three hours of data. After transcribing the stories I edited the tapes onto one video giving a copy to Molly and her family, and another copy to the Health Centre. I also took video footage on some of the hunting trips, observing them later for extra data.

7.7.6 The Data

Data were taken directly from individual interviews, focus groups, field notes, videos, phone calls, and other interactions in the community. All interviews and focus groups were audiotaped. The audio and videotapes were transcribed when I returned to Sydney. A transcriptionist transcribed half of the tapes verbatim (those words spoken in English) and I transcribed the other half. Following each transcription I would listen again to the tapes as I reread each of the transcripts, verified the accuracy and listened to the dialogue to understand the participants meaning (Struthers, 2003). This was particularly important as the tapes contained people speaking in several different languages as well as English. There were some sections I needed to listen to many times to ensure I had documented the correct words. Very infrequently I could not determine the words spoken. At these times I would record a '_____' in the text. Only English spoken words were transcribed unless it was a word in language that had meaning within an English context.

A total of 52 women were interviewed. Twenty three women gave oral histories telling their own birthing stories. Other women participated in the focus group discussions. Interpreters (often more than one) were present at many of the interviews.

Many of the individual interviews developed into a focus group. This was keeping with Indigenous methodology as traditional Aboriginal people seldom undertake activities alone. Consequently there were always several people present, which included myself, at least one member of the PAR team, at least one interpreter and one or two women. Invariably, other women would come and join in and in every instance children would be present. Additionally, some women would call out to nearby relatives so they could all be interviewed together. Often one or two women would tell their birthing story and then all the women would join in for discussions about the 'Guide'.

This photo below was taken when Dora, PAR team member (second on left), took me to interview a family who were a part of her language group. The interview did not progress until all had arrived back from shopping and other activities. This was the second time Dora had attempted to organise this interview and we waited for about an hour for everyone to arrive. Three women told their stories and a focus group followed.

Figure 37. Ndjébbana family, four generations



Most interview sessions lasted 60-90 minutes. When there were long discussions in language I would often turn the tape off. Nineteen of the women did not speak any English and many of the others spoke in a mix of local languages and English. We continued interviewing until we reached what is termed ‘pragmatic redundancy’, where we were confident we had reached saturation in the data (Trotter et al., 2001). As we showed people the stories and the Website, more women requested to be interviewed. Unfortunately, due to time constraints, we could not continue to collect all of the stories that were offered.

The interviews ultimately produced 990 minutes of taped data, 493 pages of transcription, three hours of videotaped stories from Molly, 2 hours of videotaping in the field and many notebooks full of field notes. The consolidated data was then returned for validation (described below under Verifying the Data) before being used in: the Birthing in the Bush Website, the Primary Health Care Guide (Case Study Four), a poster and a book (described in more detail under Results below).

7.7.7 Data Analysis and Presentation

The women's stories were not analysed but placed directly on the website. The data from the focus groups was placed into ATLAS.ti qualitative data software program (Scientific Software Development, 1997-2003) and major themes that emerged from the data were described and categorised. The major themes, key points and high impact quotes (Trotter et al., 2001) were grouped under headings and placed on separate HTML pages of the Website: 'Before Birth', 'Birthing Business', 'After Birth' and 'Culture'. The major themes, for example: 'Smoking Ceremony', 'Traditional Midwives', 'Traditional Healer', 'During Birth', 'Bush Medicine', 'Breech Birth', became sub-section headings on the Website.

Stories from the women and the practitioners were interwoven with information presented as case studies. A series of true and false scenarios, 'quiz' questions, and 'did you know' sections were interwoven with written guidelines, diagrams and statistics. This was done as a way of facilitating learning (P. Ramsden, 1992).

7.7.8 Interpreters

Throughout the research there were many times when I was unsure what was occurring around me, either because I was unable to understand the language or the cultural context. Many of the interviews with participants were performed in a mixture of English and one or more other languages. Due to the wide range of dialects in the Maningrida area, there were few interpreters who had undergone formal interpreter education and qualification. Where possible, the services of qualified interpreters were enlisted. At other times the interpreter role was performed by members of the PAR team, but often other women in the circle would assist in the process.

One key research assistant was Nancy Gununwanga, who is a qualified interpreter and speaks four languages. Prior to working as an interpreter on this research Nancy herself was interviewed. This gave her a better understanding of the goals and objectives of the research. Her photo can be seen on the right.



Figure 38. Nancy Gununwanga

7.7.9 Sampling

The PAR team discussed basic sampling methods for gathering data. We tried to ensure we spoke to representatives of all the language groups to capture the cultural variability within the region (Trotter et al., 2001). Additionally we targeted women known to have in-depth cultural knowledge and experience in childbirth issues. The RARE approach describes this method as a ‘nominated framework’ whereby individuals who are known to be involved in an area of culture nominate experts who are appropriate for discussing a particular cultural domain (Trotter et al., 2001). Experts who have been nominated by various members of the team or community are called consensual experts (Trotter et al., 2001). It was clear from early in the research that both Molly Wardaguga and Margaret Dawumal were consensual experts in the domain of ‘childbirth’.

This sampling method was effortless for the PAR team who easily identified the cultural experts, even though most were only familiar with those in their own language group. This was another example of the importance of broad representation on the PAR team and how the guidance from Molly, as a co-researcher was essential. She seemed to know all the older women in the community and appeared to be well respected across all language groups, probably due to her many years as an AHW. The other person who assisted in nominating consensus experts was the nurse manager who had worked in the community for over 12 years and had a particular interest in women’s health. I liaised closely with her

regarding the progress of the research and she too would identify cultural experts for this domain. An example of this is given below:

... did you get to talk to ... mother to ... and grandmother to most of the Marrkolidjban mob. She is known as a midwife... she has been at so many of the births. ... as the elder for the family she would naturally become very experienced (Health Centre Manager, Field Notes, 8.02).

7.7.10 Funding

Funds to support the project were successfully sought through the Rural Health Support, Education and Training scheme (RHSET). Funding was essential for the project to progress in the way it was being planned. It enabled payment of the researchers, interpreters, and cultural consultants and covered the costs associated with resource development and transport. Funds allowed us to comply with guidelines for research in Aboriginal communities:

Members of the Aboriginal and Torres Strait Islander community being studied will be offered the opportunity to assist in the research and will be paid for their assistance, and the funds to support that assistance are included in the research budget proposal (NHMRC, 1991p.7).

Challenges in Payment of Indigenous Researchers

The research was run through the Bawinanga Women's Centre where staff were 'employed' under the scheme known as the Community Development Employment Program (CDEP). On this program people are paid to work four hours a day that is considered 'full time' CDEP and the remuneration is usually marginally less than the average payment available under the unemployment benefits scheme available in Australia. However advantages of the scheme are numerous including the provision of work where there is otherwise none, a financial boost for development opportunities and it contributes to regaining self esteem and dignity (Broome, 2002). Several of the staff became members of the PAR team, which enabled payment to be administered through CDEP to 'top up' their fortnightly income⁴⁵. An often-occurring challenge to this process was the fact that the participants would request immediate payment, not wanting to wait

⁴⁵ I was able to pay them for working an extra four hours a day at the highest rate, which more than doubled their weekly income.

till the end of the fortnight. Reasons for this were numerous; a research participant said for example:

...my son is going through men's ceremony and I was not allowed to go to work, so I only got paid \$62 last week. I need to buy some food (PAR Team member, 10.02)⁴⁶.

Another challenge associated with this means of payment was that CDEP is not always considered to be 'real money' for 'real employment':

... we need 'real money' to be able to pay people, not CDEP, they do not come to work for CDEP (Health Board member, 10/02).

Payment was more difficult for women who were on pensions. To meet auditing requirements I intended to pay an hourly rate that could be administered through the Women's Centre. Initially the accountant was unhappy with this arrangement as he was concerned about the tax implications for some of the participants. If claiming the pension, individuals can earn up to \$106 a fortnight and \$188 a fortnight if they are married, before they need to declare all income. Several of the key research participants earned more than this amount when we were involved in intensive fieldwork. We reached a compromise by assessing the income over a 12-month period rather than fortnightly, this allowed casual payments without employment contracts or tax requirements⁴⁷.

Equal Participation

Ideally, if we were to follow Indigenous research and community development principles, the control of the funds should have rested with the community (Lindsey et al., 1999; Pyett & VicHealth Koori Health Research and Community Development Unit, 2002). This would enable community members themselves to make decisions on how the money was spent and administered. However this did not fit with university audit requirements and hence could not occur. Controlling the finances made me uncomfortable, as it ensured I had a certain amount of power over how the funds were spent and though I tried to

⁴⁶ One of the difficulties with CDEP occurs when people cannot attend work if they have their payments docked this results in fortnightly income significantly less than they would receive if on unemployment benefits, where they would not have to go to work at all.

discuss this with Molly and the PAR Team when I could, the power differential was impossible to eliminate.

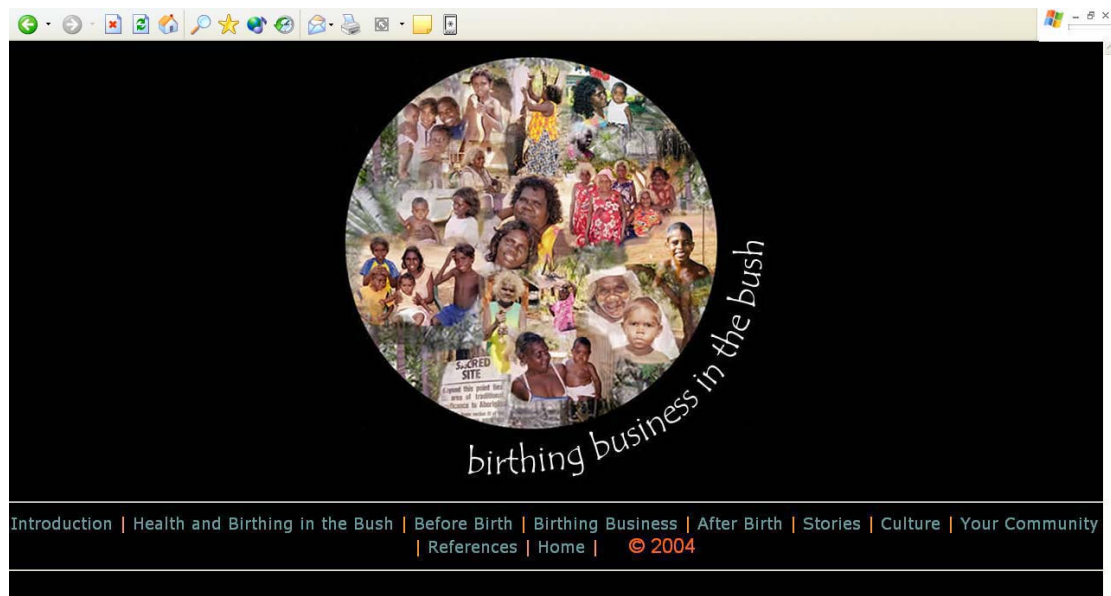
7.8 The Results

In this section I have presented the resources/products that resulted from the PAR process. True to the iterative approach, there were many discussions and negotiations before these resources were ultimately produced. This is outlined in more detail in the evaluation and discussion sections later in this chapter.

7.8.1 The Website

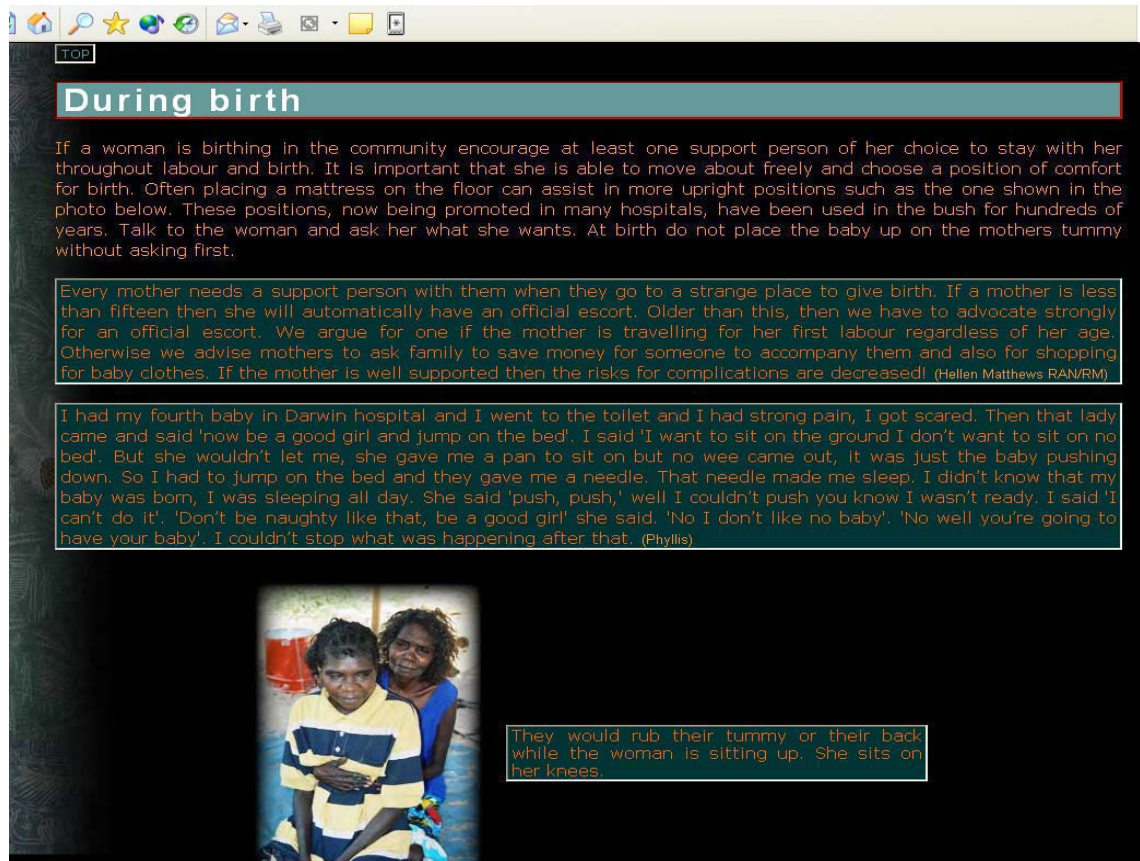
The Website, pictured below, is hosted on the Bawinanga Aboriginal Corporations Website and went 'live' in May 2004.

Figure 39. The home page of the Website



Sections of the website are categorised under the following headings: Introduction; 'Health and Birthing in the Bush'; 'Before Birth', 'Birthing Business', 'After Birth'; 'Stories'; 'Culture'; 'Your Community (the electronic version of the Guide: Case Study Four); and References. Each category is further organised into more subheadings. For example, 'Smoking Ceremony', 'Traditional Midwives', 'Traditional Healer', 'During Birth', 'Bush Medicine', and 'Breech Birth'. The photo below is shows an example of the category 'During Birth'. The boxed areas contained quotes from the women and the practitioners with general text and explanation notes interweaved throughout.

Figure 40. 'During birth' section of the Website



7.8.2 *The Guide*

The Guide is presented in Chapter Eight as Case Study Four.

7.8.3 *The Poster*

As already mentioned, on each field trip I took many photos, always organising getting double copies and taking these back to the community to distribute during the next field trip. On one trip Molly suggested that I should make a poster for the community, 'a big one for all the women to see'. This was the beginning of an additional spiral in the AR process as we responded by talking to women, choosing the photos and gaining permission to use these. The spiral resulted in the production of the poster below.

The poster was an outcome that had been requested by, and was important for, the community participants involved in the research. It was an example of reciprocity, whereby the research returns to the community in ways that are beneficial and valued by the community (NHMRC, 2002).

Figure 41. Poster produced during the project



Everyone who participated in the project was given an A1 size of the poster, which assisted the process of community ownership and reciprocity. The rest were to be sold by the Women's Centre for \$20 each. We decided the Women's Centre would pay for the

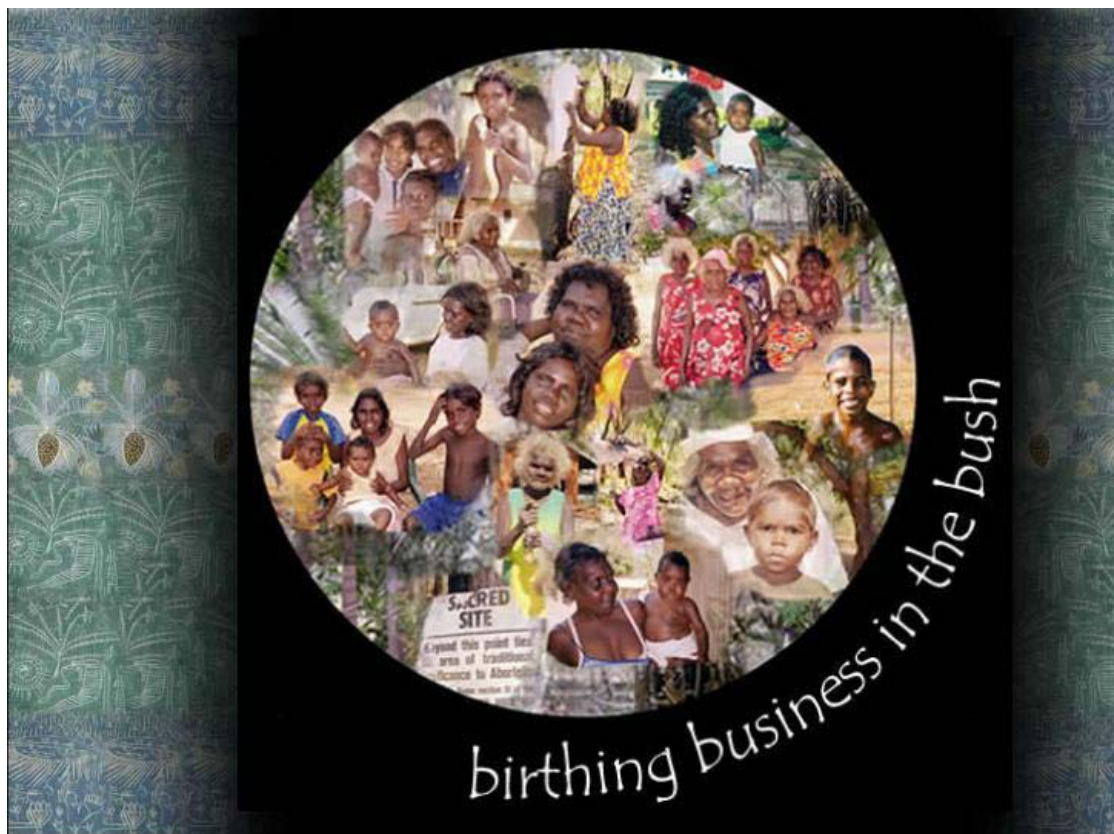
printing, as the funding agreement stated that no profits should result from RHSET funds and we were hoping the poster would make money for the Women's Centre⁴⁸.

7.8.4 The Book

As already mentioned Molly's main goal throughout the research was to record the women's stories in a book. This was done simultaneously to development of the website. During the last field trip I returned to the community with a collection of stories presented in a spiral bound book. We went around the camps showing the women the book to checking the stories with the women and their families. The families gave instructions on which photos to use, the wording throughout the book, and at times the layout and order of the stories. During this process we discussed submitting the book for professional publications. At the time of writing this thesis, the book has been submitted to an Indigenous publishing house. Additionally, Molly and I had discussions with Katie Cooper (one of the bilingual teachers at the school), as Molly suggested that parts of the stories be used to produce a book locally, in several of the languages, to be used for teaching purposes at the school. Unfortunately, the position for a linguist at the school has been vacant for twelve months and local production of the book in languages has not yet been possible.

⁴⁸ The Women's Centre had recovered the costs of the printing by February 2004

Figure 42. Design for book cover using artwork and photos from Maningrida



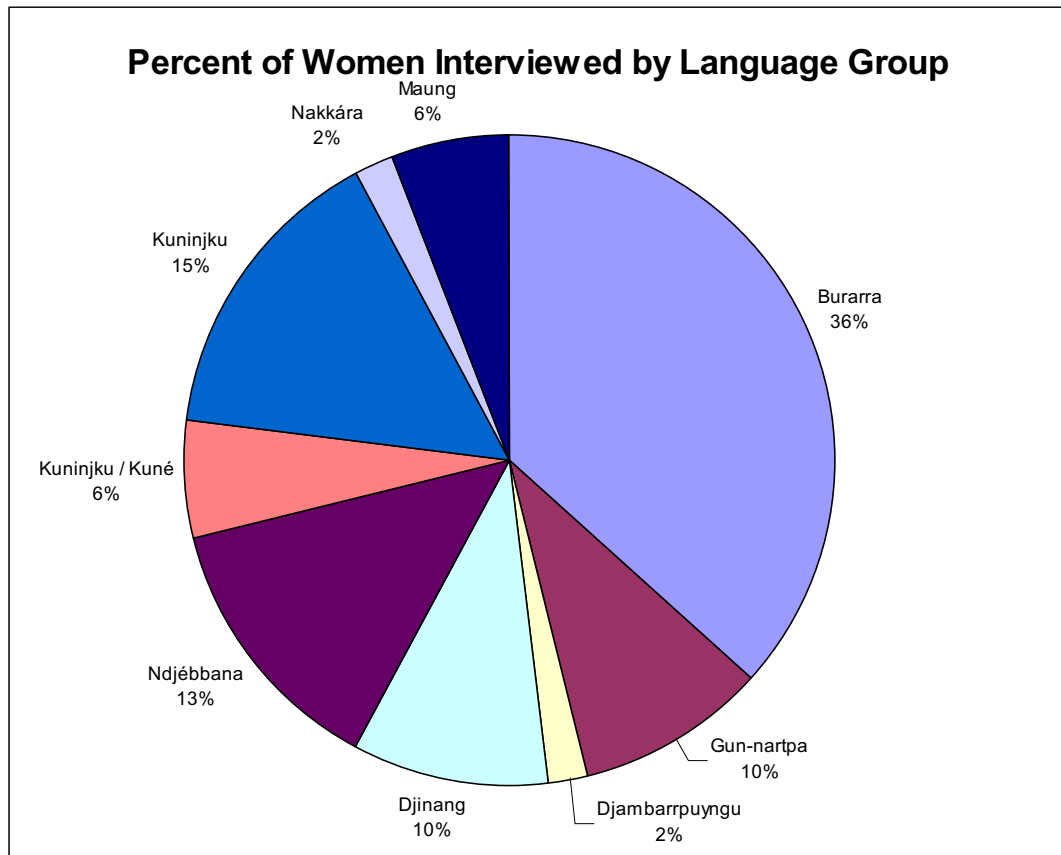
7.9 Process Evaluation

This section describes the language representation of the women who were involved in the research; the techniques that facilitated data collection, the challenges encountered, and techniques used for ‘verifying’ the data. The framework used to guide this part of the research and evaluation, discussed in Chapter Three (Methodology and Methods) included ‘Thinking, Listening, Looking, Understanding and Acting As You Go Along’ (Tjikalyi & Garrow, 1996) and ‘Plan, Act, Reflect and Evaluate’ cycles of PAR (Kemmis & McTaggart, 2000). This resulted in data collection and verification occurring in a cyclical fashion throughout the research and evaluation.

7.9.1 Language Representation

The figure below shows the representation of languages of the women who were interviewed. Many women spoke more than one language, some speaking three or four. Documented below is the languages spoken the most frequently.

Figure 43. Percent of women interviewed by language group.



The major language groups in the area were well represented in our sample: Burarra, Kuninjku and Ndjébbana (Handelsmann, 1996). The Kunibidji people, who speak Ndjébbana are the landowners of Maningrida Township, and although the large majority of people live on Kunibidji land, Ndjébbana is not the major language spoken in the area (Handelsmann, 1996). One of the largest language groups in the area, spoken mostly on the eastern side and in the greatest number of outstations, is the Burarra language (Handelsmann, 1996). Burarra has several dialects including Gun-nartpa (Handelsmann, 1996).

7.9.2 Techniques Facilitating Data Collection

In the Beginning

We used several different strategies to collect the data. In the beginning we would hire the women's centre four wheel drive (if available) and travel around the community looking for women. We would only approach people if advised by Molly or other PAR team members. This would depend on family dynamics and community happenings, much of

which I would not always understand. The notes below were taken during my second field trip, as we were commencing data collection, and highlight some of my early thoughts:

Frustrating day – kept trying to find women to talk to but something kept happening – half the time I couldn't understand exactly what. Molly in good form. Managed to tee up the disability truck for tomorrow. Then up to top camp –Valda (interpreter) in another truck but we lost Valda initially as Molly wanted a drink and that took a while. Stopped at a card circle but they were not interested 'Never try to break up a card circle!!' As if I didn't already know that – I think Molly just wanted to get someone to talk to me and make me happy! Drove around a bit but then decided to give up. Back to the Women's Centre to organise the seatbelts for the wheelchairs – but no-one in the workshop, what a day! (Field Notes, 8.02)

We quickly realised that talking to people, giving a brief overview about the project and organising a time that suited for us to return, seemed to be one of the best ways of organising the data collections. The field notes below were taken on the third field trip when I still felt like a 'very novice researcher':

Some women just aren't interested in talking about women's health... The older women love to talk about things – they are very proud to tell their stories (Field Notes, 10.02)

As we moved around I was pleased to be recognised by many in the community. I had been a midwife to many of the younger women having provided antenatal care and at times birthing assistance to children who were now six, seven and eight years old. I remembered names, older women and family structures. One woman had come to me for her monthly Bicillin injection⁴⁹ nearly the whole time I had worked in Maningrida. I knew to ask questions about family members with specific health issues such as: tuberculosis, rheumatic heart disease, the children who needed extra support, and the older women and men who had since passed away. I found I knew the women in the community so much better than the men and felt the recognition and previous relationship of trust, together with Molly's presence as a co-researcher, facilitated the research process enormously. The importance of trust and relationships is widely documented in

⁴⁹ This was given prophylactically to avoid infections to do rheumatic heart disease.

Indigenous research (Pyett & VicHealth Koori Health Research and Community Development Unit, 2002).

Reciprocity

Developing resources whereby researchers combine data collection with goals that are important to the community (Tjikalyi & Garrow, 1996) is a recommended strategy that I found usually resulted in enjoyable and productive days. An example of this was when I was able to take the Women's Centre staff and the Coordinator to Rocky Point⁵⁰ for hunting and then a picnic⁵¹. Following the hunting we sat together with a cup of tea and held a focus group. Leaving the data collection until after these activities enabled time for us to develop a rapport and build relationships. It was also a time where I learnt more about the culture and community happenings.



Figure 44. Talking to women from the Women's Centre, Rocky Point

Outstation Trips

Allowing for flexibility, last-minute changes to a schedule, and other priorities intervening, are important points to gathering information the 'right way' (Tjikalyi &

⁵⁰ Beach approximately half an hour drive from Maningrida

⁵¹ Hunting is an important cultural activity and difficult for many families to access due to lack of vehicles. I had budgeted for these sort of occasions in the RHSET grant application

Garrow, 1996). Many times things would not go as planned, however sometimes events would unfold better than I had planned or expected. Many of the older women were resident on outstations and these trips, though difficult logistically, were invaluable and enjoyable. The field notes below describe one of the trips we went on when we managed to get a lift with the Aged Care Coordinator who was going out to Jibabal (an outstation) and was happy to go via Ji-bena (another outstation) on her way.

Today we went out to Ji-bena to talk to some older women. It took hours to get organised – with trips to the shop for food and finding someone to mind young Albert – who was watching DVD’s in Molly’s bedroom. Also had to deliver \$50 to Dixie’s husband to buy cigarettes for her son on an outstation. The road was rough and the ladies didn’t want to go out too far as they were tired – so we never got to Jibabal, only Ji-bena. The coordinator didn’t mind. We arrived just in time as the older ladies we had come to see were walking up the road to collect Pandanas. Luckily they were happy to return and we agreed we would drive them back there after sitting down and talking. Spoke to Dixie, Shirley, Mary and Elizabeth who all had great stories –Molly was needed as an interpreter. Then we drove to a ‘good place’ to get Pandanas and a slow trip home – all happy to be recorded and photographed (Field Notes, 8.02).

Figure 45. Shirley, Elizabeth, Dixie, Molly, myself and Mary at Ji-bena



Hunting and Gathering

There is much criticism of research deadlines, funding and agendas that do not incorporate the flexible approaches that are needed in Aboriginal communities (K. Humphrey, 2001; L. Smith, 1999). The funding body, RHSET, were sympathetic to these approaches and approved my requests for two extensions (within the original budget) by 10 months. Having the flexibility to buy food, incorporate hunting trips and extend deadlines, in my experience, can make the difference between successful and unsuccessful research projects. The following field notes highlight this issue:

Mary was keen for us to talk to the old ladies near her camp – we picked them up and took them out bush to collect items for the young men’s ceremony. Collected reeds, paperbark, berries, ochre, – also white clay for painting - the same clay people eat as an appetite suppressant or to stop diarrhoea. Marie showed me a bush medicine tree used for healing vaginal tears after birth. She collected sticks from it and said she would make the medicine overnight. All the branches need to have the bark stripped, then the stems pounded and boiled for hours. The liquid is used on the skin to treat scabies and the stems can be used as a poultice for anywhere, including vaginal tears. Lots of photos and video footage. Then we dropped off Molly and took Mary, Nancy and Marie home and I interviewed them about the old days. Marie had spent a long time in the leprosarium and has very disfigured hands and feet. Nancy does not speak English and Mary interpreted for us. They were keen for me to come back in the morning and show me the bush medicine that they had made. Long hard day and very dirty at the end of it – but great day – this is what we should do as a part of orientation to the community! (Field Notes, 8.02).

7.9.3 Challenges Involved in Data Collection

The saying: ‘ignore the context at your peril’, was very pertinent to me when I was in the community collecting data. When in Maningrida I found I had to be particularly flexible with the plans we were making. Even on a day-to-day basis things could change rapidly and many of the priorities of the community members and Health Centre practitioners had to take precedence over the research. Using the PAR approach ensured other priorities could be seen to first (Ivanitz, 1998). Some of these are discussed below.

Health Concerns

Following the RARE approach of ‘nominated frameworks’ and ‘consensual experts’ (Trotter et al., 2001), I was alerted to identifying key informants. During the third field

trip I learnt about an older lady, Mara Mira, who was considered an expert in childbirth matters. She was not well and members of the PAR team thought she would not be alive for much longer. They called her the ‘famous midwife’ stating she had been with many women in childbirth. During this field trip she had been involved in a funeral ceremony that had lasted the whole time I was in Maningrida so I was unable to speak with her. I was very pleased that she was well enough to talk with us when I returned for the next field trip. We recorded her story and took many photos of her and her family before she passed away.

Interviewing older women meant that their health concerns were always a priority as these next field notes describe:

Went to Bottom camp – to interview the old lady Mara Mira – but she was short wind and needed a (Ventolin) puffer. Up to clinic and then back but she was not really well enough and Molly kept saying she was worried she would have a heart attack and did not want to take her to the Women’s Centre. So off to top camp to talk to Theresa. She too was breathless and needed a trip to the Health Centre. So five hours later we managed to get one interview – but it was a good one!! (Field Notes, 10.02).

Both of these women passed away during the course of the research.

Health concerns were often a priority with Molly too, as she was now around sixty years old, and has previously had both a stroke and a heart attack. I needed to be sensitive to her health requirements, over the research needs, and I learnt to read the signs as she started to get tired:

Molly no good today – I took her to the clinic and they kept her there for a few hours – she needed a nebuliser and some peace and quiet – lots of fighting last night next door and something happening with her mob too – not quite sure what yet – will probably be clearer tomorrow?? (Field Notes, 10.02).

Hunger

The availability of food often impacted on the data collection process. This was particularly evident on weekends and public holidays when shop-opening hours were restricted. Many houses in the community do not have fridges and if the family has no transport it is difficult to go hunting, as many of the hunting areas are a few hours drive

from Maningrida. When women were hungry and did not have enough money for food, I found that buying food and sitting down and eating together and having a cup of tea first would often lead to the best data collection. I learnt to start later in the day and end the days later, as it was often cooler in the early evening and this was when the community used to come alive. This was also when I would be invited to observe ceremonies.

Language Groups and Avoidance Relationships

These field notes, taken early in the project highlight an important aspect of the project that I did not initially envisage.

Tues. Meeting at Women's Centre – took ages to get organised - bought morning tea. Hard to get everyone together - it kept nearly happening - but then never did – I wonder if it is because of the different language groups. Dora – keen to be involved and to act as an interpreter for the Kunibidji women at bottom camp (Field Notes, 8.02)

Increasingly I realised that events would occur a great deal more smoothly when I did not try to bring women from too many of the language groups together, but worked with them separately. Though more time consuming, this was another example when it was important to take advice from the PAR team and follow local methods. This wasn't always the case but over the life of the project it did seem to be so. This highlighted the importance of having representatives from different language groups as core members of the PAR team, illustrated again in the quote below:

It's not right for Molly to interpret for you with the Kuninjku speakers, better we do it (Field Notes, 08.02, Kuninjku speaker).

I had hoped that the PAR team would regularly come together to discuss the research, however reflection led me to a different understanding and more suitable work practices. Increasingly I realised data collection and reflection would occur more easily when I did not try to bring too many women from different language groups together. As I learnt more from the community women, and literature I was reading, I realised I had been putting my own social constructs and expectations onto the team, when I needed to take

Figure 46. Members of the PAR team and Lesley



Figure 47. Molly sitting in the wheelchair in the back the car



advice and guidance from the women instead.

Recording

Though most interviews were recorded, there was one incidence when I was unable to use the tape recorder and needed to take notes instead:

We had explained the project and thought everyone understood till I tested the tape recorder – I played it back and one old lady heard the voices and straight away there was a response to turn it off. She yelled and screamed – seemed to have a big argument with another women and ended up walking off, I think she was spooked by it (all dialogue was in the Kuninjku language that I was unable to understand). The women all said to ignore her and just keep going. So I asked Molly if it was OK to tape the group and she said better not. Women wandered around a bit but most stayed – I think I missed a lot of this talk as it was in language and never translated back to me. (Field Notes, 8.02).

Transport

Transport proved to be one of the most important factors in the data collection process. Though I quite liked walking around the community there were several obstacles. Maningrida township covers a large area and it takes over an hour to walk from one end to the other. The climactic region is wet/dry tropics and the mean daytime temperature is 33°C (Hall & Bawinanga Aboriginal Corporation, 2002). In the wet season the relative humidity can be over 80% by nine o'clock in the morning and there can be torrential downpours (Hall & Bawinanga Aboriginal Corporation, 2002). In addition to the distances and the weather Molly sometimes needed a wheelchair, which was often impossible to push on the dirt tracks that crisscrossed the town. There were also many 'cheeky dogs', which meant that you had to walk with a stick to fend off any dog that looked like it might want to attack. Though a community bus is sometimes seen, it is infrequent and has no timetable and could not be relied upon.

The project had funding to hire the Women's Centre four wheel drive when it was available but it was often needed for the Meals on Wheels Program and other functions. On occasions other organisations in the community would assist with transport but other times we were on foot and the following field notes describe my feelings:

Wish I had a car!!! It makes a huge difference being known in the community and having transport – with out this the research would be almost impossible (Field Notes, 10.02).

Other Priorities

Another factor mentioned many times in the conversations as causing problems in the community and effecting maternal and child health, was the amount of marijuana (gunga) people were smoking:

Lots of women talk about gunga being a problem and causing fights in the community – seems to get mentioned all the time. They say the babies aren't being fed when the parents are smoking gunga ... always the grandmothers are having to look after the kids (Field Notes, 10.02).

This was certainly a topic that was important to the community and yet there was little I could do about it apart from discussing the situation with the local 'drug and alcohol' team, which consisted of two part time Aboriginal workers and a drug and alcohol nurse from Darwin who visited four times a year.

Women's Centre Priorities

The Women's Centre was not always available for use. One visit I had planned to hold a group session at the Women's Centre but there had been arguments the previous day and there was a lot of tension amongst some family groups. When I arrived with a carload of women many of them were frightened and decided we should have the get together the next day. Unfortunately I never managed to get that particular group of people together again.

Funerals and Ceremonies

With approximately fifty people dying every year in Maningrida, and funerals that can often last a week or longer, they are an important part of community life. An individual's responsibility at a funeral is often dependent on their relationship to the deceased, and is a particularly important part of Aboriginal culture. All plans had to be flexible in case of deaths, funerals or ceremonies as these always took priority. This was at times an important consideration for the research team members as well as other women we had organised to meet:

Still lots of ceremonies on, this week there has been one funeral, one 'young-mans' ceremony and another ceremony down at bottom camp. The road has been closed⁵² down at bottom camp and there were rumors about the road being closed up near Yilan outstation for ceremony (Field Notes, 4.03).

Similarly, the health centre staff would also often have other priorities that effected their involvement in the research. Short staffing, being on call and emergencies were a few of the issues that required flexibility from the project.

7.9.4 Verifying the Data

I used several different strategies for presenting the data back to the women for verification and confirmation of permission for use. Examples are described and illustrated below. As the project progressed I was writing the stories on computer and showing the computer to women in the community, trying to explain the Internet at the same time. We had chosen the Internet as the vehicle for telling the stories as it had the potential to reach many people all over the world (P. Evans & Wurster, 2000), and did not depend on funding for printing and publication.

Individual Feedback

Twenty-three women had told stories about their own birthing experience. These stories were tape recorded, transcribed and during subsequent field trips they were read back, often through an interpreter, to the women to ensure they were a true account (Struthers, 2003). Changes were made as they were suggested and the process was followed until they were satisfied with the final product. Final permission for inclusion of the story and use of a photo was then sought. This was usually done in small groups in the camps, often in the evenings where, without the glare of the sun, the laptop screen was easy for all to see, even though it was more difficult using the keyboard, due to lack of light.

⁵² Roads can be closed for ceremonies, sometimes at short notice, and heavy fines can be given to anyone who disregards this. It was important to be aware of this when driving around the area and collecting data.

Figure 48. Taking the computer and poster around at night



These individual stories and photos have been documented under one section of the Website titled 'Story Telling – Sharing Wisdom'. The picture below shows the beginning of this section.

Figure 49. Opening page of Story Telling - Sharing Wisdom



The 'Right Story'

On one occasion when I was checking the stories by taking the laptop around to the camps, an older son of one of the women called me over and said he wanted to hear his mothers' story. The women and his mother consented, even though the stories were 'Women's Business'. Perhaps this was because he was her son. When I read '*...she had five babies in total, all born out bush*' he said no, that was wrong, and that three had been born in the outstation and the other two had been born in Maningrida (though in the camp and not in the Health Centre). I said I would change it to make it clearer as 'out bush' had probably been my words, but he was adamant that it should not be changed as he said that was the dreaming story for the person who had told me the story in the first place, and that you should never change someone else's dreaming story. This was one of many incidents that highlighted the importance of checking the stories carefully. It also showed that even though we were trying to be meticulous in recording and documenting, there were still misunderstandings across the languages and between the cultures.

The Women's Centre

One strategy I had used for checking the stories was to have a morning get together at the Women's Centre. We borrowed a data projector from the school to show women what the Website was starting to look like. We organised a cooked lunch for after the session. The provision of food seemed a particularly successful way of sharing the information, giving feedback to the group and generating further discussion. Molly had assisted, talking in language and explaining to the women what stage of the project we were up to. These field notes described the session:

Good session at the Women's Centre, 28 women came to look at the progress of the Website all seemed to understand the concept of the Internet – Molly was interpreting (Field Notes, 3.03).

Verification was achieved with minimal changes being necessary.

Figure 50. Checking the stories with groups of women at the Women's Centre.



During another visit I was hoping to have a similar session. I had made arrangements with the Women's Centre staff and they had organised for the 'Ranger Girls'⁵³ to bring in some bush tucker. The day before I was discussing the logistics of it with Molly when she turned to me and said:

... that's your way – Balanda way – we want the stories our way, you better put them in a book (Molly, Field Notes, 5.03).

Molly was happy for the stories to go on the Internet as she wanted women all over the world to know their stories. It now became clear that she also wanted the stories in a book. She stated that she wanted to take a book around the community to show to women, she did not want to use the data projector again and she did not want to do it at the Women's Centre. Reflecting on this led to me to several conclusions. Molly had identified that the Website was a Balanda tool, and given the access and familiarity to the Internet in the community, she was right. The older women would probably rarely see the stories on the Internet. I also found that once we did have the stories in book format, the

⁵³ A team of women who were working with the Ranger Station. They often went hunting and collected bush tucker for the 'Old Peoples Program'.

response from the women and their families was better than it had been when we took the computer around.

Changing Her Mind

Only one woman decided she did not want her stories documented at all. I was taking the computer back to her to show her the story and check that she was happy with it. But before she heard it she said that she had changed her mind and did not want it recorded. I do not know why this was, although she had told me quite a lot about the 'first period story' and perhaps she felt it was too sensitive to write down. We did not record her story anywhere, and it was removed from my files.

Representation across the Region

Birthing practices across the world vary markedly amongst different groups of people (Jordan, 1993). Variation has also been described in Australian literature that documents Aboriginal birthing practices (Callaghan, 2001) and this was certainly the case in this small multilingual area. There were a variety of practices and beliefs, of what occurred in the past, and what women still want, and do, today. One example of this was the presence of men at the birth. Jordan (1993) describes access to births often being limited to female relatives and this is a common understanding of Indigenous Australians. This was the case for most of the women we interviewed however there were several, including older women who had birthed traditionally who talked of their husbands being present. Mara Mira, her daughter in law, Margot, and Barbara all described births where their husbands were present. Barbara's story is described below:

My husband was with me for all of my babies. Some husbands will stay together with their wife and some will want to sit by themselves or go hunting. Some will see the birth with their own eyes (Barbara's Story) (Kildea et al., 2004p. Storytelling - Sharing Wisdom).

The differences across and at times within the language groups, reinforced the importance of health practitioners asking individual women what they want in relation to their birth. The comments below are taken from the Birthing in the Bush Website and highlight strong beliefs regarding individual choice in childbirth practices, the presence of relatives at the birth and birthing in Maningrida. These comments were examples of beliefs that were consistently expressed across the area:

It is up to the woman where she has her baby, but if it is in the Health Centre it is important to have her grandmother, mother or auntie with her (Wendy, Mary)

When it is their first they should have it here, they need their auntie with them (Tinica)

They should stop and have the baby here with the health workers if they want that (Ruby and Esther)

(Kildea et al., 2004p. Health and Birthing in the Bush: Place of Birth - Choice)

Rarely were women prepared to talk on behalf of others, and all said that individual women needed greater choices in childbirth. To highlight this point the following was placed on the Birthing in the Bush Website.

Even in this one relatively small area the rituals and beliefs around pregnancy, childbirth and the postnatal period varied amongst the different language groups and at times even varied within the language groups. This illustrates the importance of talking to individual families about what they want throughout this significant time of their life (Kildea et al., 2004p. Before Birth).

The data clearly showed that many women would prefer to birth in Maningrida than be transferred to the regional centre. This is an interesting point as when I talked to the practitioners around the country (when delivering courses on maternity emergencies) I was often told that Aboriginal women were happy to birth in regional centres these days as they 'liked the shopping'.

Validation by the Team

One or more members of the PAR team, particularly Molly and Margaret, checked each of the sections on the Website before it went 'live'. In March 2004, towards the end of the project, I set up the data projector and computer in the flat where I was staying. Molly and Margaret carefully read all of the stories and many of the sections of the Website to check that I had not made any mistakes, nor documented anything that should not be written down. This was another way of checking the data and ensuring that I was not infringing any cultural taboos by documenting 'women's business' information that should not be read by others.

Additionally, I discovered Margaret has an extraordinary memory. Her knowledge of how many children women had birthed, when, and to whom; was incredible. She was invaluable when we started to check the stories. The field notes below highlight the difficulties of being accurate in a Western sense with research data. This was particularly evident whenever I asked women how many children they had. It seemed to be a difficult question that often took a lot of discussion back and forth in language before I would get an answer that the women were happy to have documented. This raises questions about style and accuracy of medical histories.

Margaret and Molly were with me when we went back to check Theresa's story with her. I had written that she had seven children and she nodded at that, but then Margaret stopped her and said no you didn't you had nine children. Then there was a discussion in language for about 15 minutes. In the end they said to change it to nine. (Field Notes, 8.02).

Figure 51. Molly and Margaret checking the poster



7.9.5 Cultural Sensitivity and Security

Cultural Security

The research began with the acknowledgment that the community members are the custodians of cultural knowledge and it was their choice as to how much of this knowledge was discussed and then incorporated into the resources (AIATSIS, 2000). There was some information that was shared with me under the understanding that it should not be recorded or repeated outside the community. I was honored to be privy to such information and these requests were treated with respect and agreements maintained. The PAR team was involved in designing and performing the research and ensuring the

knowledge systems, cultural protocols, Aboriginal Law, research process and issues surrounding childbirth were acknowledged, incorporated and appropriate for this particular community (AIATSIS, 2000).

Women's Business

Cross-cultural research in such a sensitive area as childbirth beliefs, practices and understandings, requires meticulous care and transparency. As the project progressed we decided, as a group, to place the resources on the Internet. This would make them widely available without high, ongoing costs. Placing culturally sensitive knowledge in such a public domain was the basis of many discussions over the life of the project, with the research participants, stakeholders and with others. The steps we took to ensure our decisions were appropriate decisions for this community are now outlined.

Molly Wardaguga's Advice

Molly strongly believed that all the information we had documented should be placed on the Internet:

This is Women's Business, not secret ceremony business its okay to put it there (Molly, 7.03).

The PAR Team

I was also guided by the Indigenous members of the PAR team who stated many times they wanted to place this material on the Internet. Regarding my suggestions that men may access it they replied:

Aboriginal men will not look at it (Molly, Phyllis and Dora, 7.03).

They suggested it could be clearly marked with a warning 'Women's Only Section'.

Introducing the Internet

It was important that all women who had told us their stories realised their contributions to our work would be located on the Internet and what this entailed. For many women this involved explanations about the Internet, as they had no previous experience with this technology. The following photograph was taken when we were using a data projector to explain the concept of the Internet, show the development of the website, and gain consent to continue with the research and place the stories on the Internet.

Figure 52. Showing the Website and Internet to women in the Women's Centre



All the participants were very pleased to know that women all over the world would be able to read their stories and the above-mentioned quote regarding Aboriginal men was reiterated many times throughout the research. Women did not seem concerned that non Aboriginal men around the world may access the site (if they ignored the 'Women's Only' warning that we used). In fact some women stated they believed 'it would help them to understand our ways' and I believe there was very good understanding about both the Website and the Internet from the participants.

Aboriginal Men

Two other events confirmed our approach. I met an Aboriginal man on a plane when I was returning from a visit to Maningrida. I had worked with him in the Health Department six years previously and decided to talk to him about my concerns. He stated that although he had not been brought up as a traditional Aboriginal man he would never look at something that was 'Women's Business'. He felt it was unlikely that any Aboriginal man would ever look at the site, and if they did find it they would respect the 'Women's Only' warning. One of the traditional Aboriginal men from Maningrida, who had been involved in developing the Maningrida Arts and Crafts Website, stated:

It's about preserving culture, you've built up a relationship of trust working with the women in the community ... it's good for different cultures around the world to read these stories ... our own ladies get their voices heard (Aboriginal Man, Field Notes, 17.12.04).

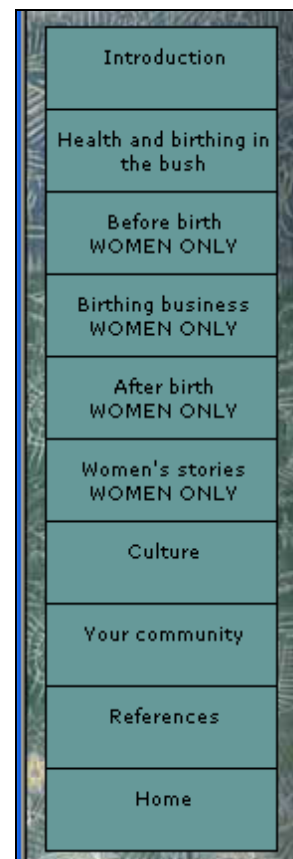
We also discussed men looking at the site:

... it's more of a thing about Aboriginal people ... it's a good way of educating Balanda people on women's issues (Aboriginal Man, Field Notes, 17.12.04).

The Website

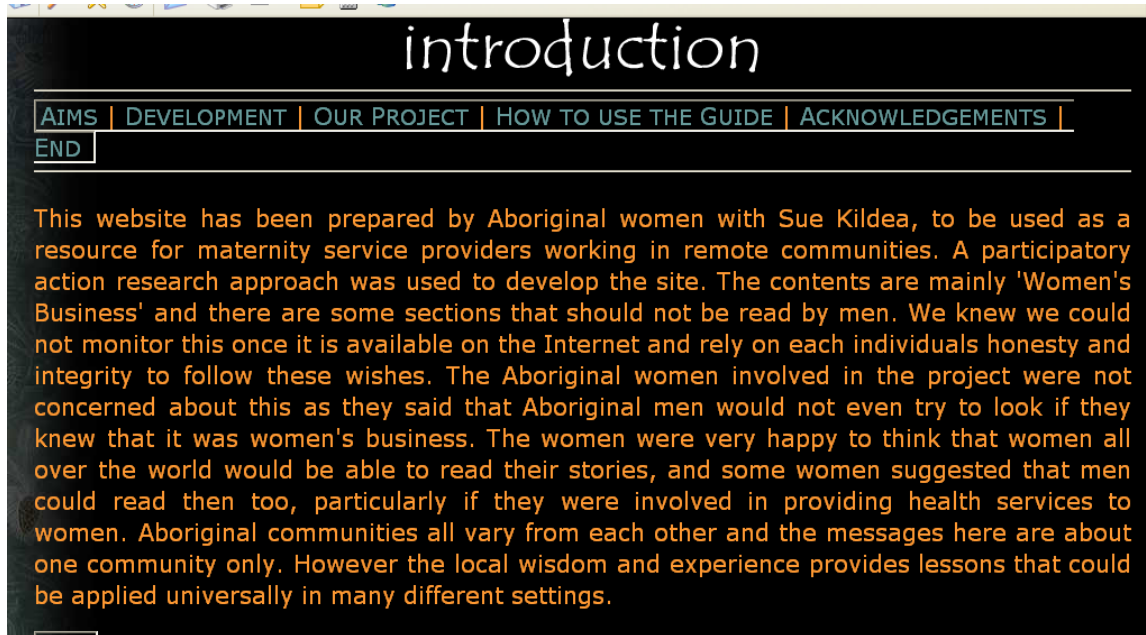
A 'Women Only' alert was placed on the index under the appropriate sections chosen by members of the CRG (right) and we explained the situation in the 'Introduction' section on the Website (below).

Figure 53. Index highlighting 'Women's Only' sections



| |
|---------------------------------|
| Introduction |
| Health and birthing in the bush |
| Before birth WOMEN ONLY |
| Birthing business WOMEN ONLY |
| After birth WOMEN ONLY |
| Women's stories WOMEN ONLY |
| Culture |
| Your community |
| References |
| Home |

Figure 54. Introduction to the Website



Intellectual Property and Ownership

During initial consultations we had discussed and agreed that appropriate acknowledgement of research participants would occur on any of the research outputs. We had planned to place the Website on the CRANA Website with the other two strategies that had been developed for remote area practitioners (Case Studies One and Two). As the resource developed into a Website encompassing the stories and cultural knowledge of women from the region, it was evident that it would be more appropriate under the control of the Maningrida community. We discussed this with the Bawinanga Aboriginal Corporation's (BAC) Managing Director who suggested it be hosted on their Website: Maningrida Arts and Culture site. This ensured that the community would have access to it at any time, be able to change or add to it, or remove it if they wanted to. Aboriginal ownership and control of research results, is one of the major guidelines for research with Aboriginal communities as described in the Australian Institute of Aboriginal and Torres Strait Islander Studies Guidelines for Ethical Research:

Continuing ownership of the cultural and intellectual property rights in the materials on which the research is based should be recognised and acknowledged in the design of a research project (AIATSIS, 2000p.9).

We noted this on the Website itself:

Figure 55. Aboriginal Ownership noted on Website: Introduction – Acknowledgements

The website has been located on the Maningrida Arts and Culture website so that the community have control over the site and are able to add, update or remove sections as they wish, or if they need to for cultural reasons.

However this highlighted a further challenge around the copyright for the Website. The funding body had stated they maintained the right to hold copyright on all resources developed during the project. We wrote explaining the cultural sensitivities and requesting the copyright for the Website remain with BAC. This was granted demonstrating increasing awareness and respect for Indigenous culture and ownership from RHSET. Another challenge was that BAC did not have broadband at the time and whenever the phone lines to the community were ‘down’ the Website could not be accessed. However they were planning to upgrade phone lines in the future and we felt it was more important to have the Website based in the community than on a more reliable server outside the community.

When Women Pass Away

Some women who shared their stories passed away during the course of the project. Although we knew this would probably occur, it was still difficult. In many Aboriginal communities it is not appropriate to show photos of people after they have passed away and I was unsure how this would affect the resources that were being developed, as they included many photos. Molly had assured me that this would probably be all right and that we should ask women when they were being interviewed if they were happy to have the photos used after they were gone. All women had given consent for the photos but as discussions were often held in language I was not sure how many agreed to have the photos used after they passed away. This was something I asked women to talk to their families and close relatives about so that it would be clear and agreed by the family. Although each woman consented for continued use of their photo beyond their passing, consent was still individually obtained from the family of the deceased.

There were many discussions around what to do if a women who was on the poster passed away while it was being produced, and over the course of production we were up

to the sixth draft (each draft removing women who had passed away) before it was printed. This confirmed to me, in a very personal way, Molly's concern about the elders who were dying before their knowledge had been documented. In between printing and delivery of the posters to the community a woman did pass away and we sought advice from Molly and Margaret as CRG, and PAR team members, for advice. They suggested using a black texta pen to cover the face of the women in the posters that would be sold for display in the community. They said outside the community it did not matter and to leave them. The team talked about the poster being hung in places in Darwin where people from Maningrida may visit; for example the hospital. They decided that it would be appropriate to leave the photos uncovered as Maningrida people did not see these posters all the time, and the women's photos would be there *'for the memory'*. However we did find that the relatives of the woman who had passed away wanted the poster with the photo intact, *'for memory'*. Many times I was asked for copies of photos or enlarged versions of photos of women who had passed away. Whenever I could I ensured the families received these photos.

When women had passed away we held discussion with the family members to ensure they were happy for, and gave permission for, the relatives 'voices', stories and photos to be shared on the Website, the poster and in the book. The photo below was taken during one of these discussions and it was this day that Molly said she thought it was important that men could read the stories too, *'so they have the memory of their relatives'*.

Figure 56. Talking to the family



On the Website, when women have passed away, we have covered their photos with a box so that the photo will not cause distress. Only by clicking the mouse cursor over the top of these boxes will people be able to view the photos of these women. Families were asked if they would prefer to leave it just with the box but all of the families we spoke to felt it was important to be able see the photo if they chose to.

Figure 57. Box covering photos of women who had passed away



This was another reason it was important to locate the Website in the community so they have control over the site and are able to add, update or remove sections or photos as required. We produced a template of the above box so it could be used by them when needed.

7.9.6 Disseminating the Research

Maningrida Newsletter

An important part of the evaluation includes informing community members about the progress of the research (Tjikalyi & Garrow, 1996). The Maningrida School produces a

community newsletter, which is available several times a year, depending on staffing at the school. It is read by a large number of people in the community. Several times a year, I would document the progress of the research including many of the recent photos and send it back to the Women's Centre for the PAR team to check and make any necessary changes. We would then submit it to the paper so the community residents all had an opportunity to review the progress of the project. Over the course of the research we had four articles published in the community newspaper. Details are in the table below.

Table 9. Articles in the Manayingkarirra Djurrang, Maningrida community newspaper

| Edition | Title of Story |
|----------------------|--|
| September 2002 | 'Women's Centre Business' |
| June 2003 | 'Women's Business' |
| September 2003 | 'Birth Rights -Sharing Stories' |
| Submitted March 2004 | 'Molly Tells Medical Conference - It's Time to Listen' |

Involving the Schoolgirls

During an opportunistic conversation with the high school teacher we discovered the students (girls only as the classes were unisex) were starting to learn about the Internet. Molly and I described the project we were doing and how we were planning to use the Internet has a vehicle for telling the women's stories. We were invited to a session at the school to show the class the Website. They started to navigate around it themselves and loved reading about their families and seeing photos of community people. Anything they didn't understand Molly would explain to them and I found myself talking about health in pregnancy too. The session was such a success that the teacher asked Molly to participate in regular sessions with the schoolgirls. These sessions continue, two years later, and are much enjoyed by both Molly and the students. Additionally the teacher planned an assignment where the girls would interview their own family members, take photos and document their stories. Having the Website controlled at a local level meant that the schoolgirls or any other members of the community could add stories to the site whenever they choose to. Though not a planned outcome of the AR process, this was certainly a

result of it, and allowed Molly to further meet her goals of enabling the young girls to listen to the women's stories.

Figure 58. Showing the high school girls the Website



Telling the Story Further Afield

Another important part of the project was telling the story to a wider audience. Molly had been involved in several consultations around birthing services in the NT and she believed that no one was listening to the voices of Aboriginal women. I too had similar frustrations and we decided one strategy for strengthening remote area maternity services (my goal) and strengthening the women's voices (Molly's goal) was to get publicity for the work. This became an integral part of the AR, a spiral in itself, and involved publications, conference presentations, media releases, articles for newsletters and radio interviews (Appendix Six).

What's the Point – You Mob Just Don't Listen!

One of the most powerful occasions when we publicised the work was when Molly and I were invited to be keynote speakers at the Perinatal Society for Australia and New Zealand 8th Annual Conference: *'Integrating Science and Perinatal Practice: Controversies and Dilemmas'* (Sydney, 15-18th March 2004). We had been asked about the above conference more than a year in advance and Molly and I had discussed the

logistics of her coming down to Sydney⁵⁴. We discussed this during each of my visits and mostly she was keen to come and quite excited about it. However on one occasion she responded by saying ‘what’s the point – you mob just don’t listen!’ This was a turning point for me, as I couldn’t stop thinking about her analysis and how right she was.

Molly did agree to come to the conference ultimately and we titled the keynote address, where we talked about Aboriginal women’s desire to birth in the bush: ‘What’s the Point – You Mob Just Don’t Listen!’ This led to a three page article in the NT News and we received much positive feedback. In an Indigenous Forum shortly after the conference the Director of the National Perinatal Statistics Unit announced that listening to Molly’s story made her rethink the way statistics were collected and reported, highlighting the importance of the context in which the statistics were set, something she said she had never given much thought to previously (Sullivan, L., Director, National Perinatal Statistics Unit, Personal Communication, 19.3.04).

The logistics of bringing Molly to the conference had been difficult. Costings included airfares for her and an escort, food, accommodation and spending money. Fully refundable airfares⁵⁵ were \$1000 each way per person and this was beyond the RHSET budget, so we risked buying the cheaper tickets. In the months before the conference I was having weekly conversations with Molly as we organised the event. In the final month these conversations occurred every two to three days and then I flew up so that I could travel down with her. Although logistically difficult, it was a great success and well worth the planning that had been involved. Perhaps the most rewarding aspect occurred when Molly disembarked at Darwin airport and a stranger approached her asking for her autograph as she had seen her in the paper that morning. This was hugely significant for Molly and she retold the story with pride many times, to myself and others, in the following months.

⁵⁴ Sydney is over 3000 kms from Maningrida and Molly had not travelled such distances for many years. She would need an escort to assist in her care and also for company. She was still rehabilitating from a stroke and needed a wheelchair most of the time.

⁵⁵ This was preferred as if there had been a death in the community Molly would have had to cancel with little notice.

Feedback from the Website

The website had gone live in May 2004 and promotion of the site occurred in several journals and newsletters (Appendix Six). The website had a hyperlink to the email address of the Women's Centre for anyone wanting to provide feedback. This led to several responses, some of which were an important part of the evaluation as shown in the emails below. Others were requests for posters, or to reproduce some of the Website in journals, newsletters and one was a request for the women to place some of their stories in a book! The following emails suggested our aim of providing cultural information to assist in educating maternity practitioners was being successful:

Hello all, Thank you for this beautifully and respectfully made web resource on birthing business in the bush. It heartens me no end to see the dedication, care and generosity of spirit that has gone in to it. The pictures, graphics and words make so much sense of the need to make birthing relevant to those who it belongs to. So thank you again for making and sharing this beautiful work. I have sent the address on to all my midwifery students in Western Australia. I would very much like a copy of your poster. (Email to Women's Centre, 11.8.04).

Hello, Firstly congratulations on an absolutely amazing web site. I am a 2nd year student midwife and this is the most valuable information I have ever read regarding Aboriginal women. I live in Darwin and cannot say how much I adore this web site. I do ask if there is any hope of it becoming a hard copy/book. I think it would be a resource all midwives need, especially us student midwives. Thank you for your work, please keep it up and keep us all informed. I have passed on this site to all my uni class mates, and hope to see this resource in places like Darwin Hospital. What wonderful role models! Regards, Student Midwife (Email to Women's Centre, 13.8.04).

The email below was the only negative email we received, however I think it was possibly the only one we received from an Indigenous women, and as such, was important:

I am a Waka Waka woman from Queensland. I was horrified that the very, very sacred information of Child Birth in Aboriginal Society was available on site. What mechanisms have you put in place around ensuring that men do not access the site that is sacred. I have been taught by my Elders that it is not business for men and here it is for the world to see. Can I please speak to someone regarding this contentious issue as I am very concerned and I know that my Elders will also be shocked. We need to talk about how this will affect other Aboriginal Women in Australia. My contact details are ... (Email to Women's Centre 17.8.04).

I was quite concerned and upset by this email and talked to Molly and my supervisor about it. Their responses were very reassuring reminding me of the care we had taken to ensure that we had done what the women wanted. It was difficult for me to know if all women involved in the project had a true understanding of the Internet. Many of the conversations had been in local language and it must be difficult to fully comprehend the potential reach of the Internet when you have never used the technology before. However, I believed we had taken measures to ensure that everyone understood the stories would be in a public forum, where we were unable to restrict access apart from highlighting this request on the website itself. Initially Molly was quite concerned and wanted to talk to other members of the community. Following this she decided to take the responsibility of responding and stated: 'no one will take the stories away from us, you tell her this is our way, we trust the men on our side'. I sent a hardcopy of all of the emails to Molly and asked her advice on a suitable response. She asked me to respond and said if this is not enough I should give the 'Waka Waka' woman her phone number to talk directly to her. I sent the following email to her as a response to the above email:

Hi, My name is Sue Kildea and I have been a (non-Aboriginal) researcher on this project with co-researcher Molly Wardaguga, who is a Senior Aboriginal Health Worker and member of the Malabam Health Board, Maningrida, Arnhem Land. I, like you, initially had concerns about the placement of 'Women's Business Stories' on such a public domain. I have a 10 year history of working with women in the Maningrida community and am confident that the stories being shared on this Website are there at the expressed wishes of the women in the community. The project has included extensive community discussion and consultation about these stories and what is the best way to share them. Additionally the project has had clear direction from two senior women in the community who have been co-researchers and the cultural consultants on the project; a PAR team representing the major language groups for the area; and ethical approval from the Top End Human Research Ethics Committee and its Aboriginal committee. Additionally the project has approval and involvement from the Bawinanga Aboriginal Corporation, The Maningrida Council, The Malabam Health Board, The Bawinanga Women's Centre, the Traditional Land Owners and the Maningrida Health Centre.

When we first commenced the project the Website was not the aim of the project however, as is common with PAR, this is what evolved from the research as something the community wanted to do: 'preserve and share our cultural knowledge and stories'. Maningrida women were confident that Aboriginal men would not look at the Website if they thought it was 'women's business', however they were not that concerned about non-Aboriginal men and many of them were happy for

the Aboriginal men in their families to share these stories. They said that there was nothing in these stories that is 'sacred Women's Business'. I have discussed your concerns with Molly who has asked me to deliver this message to you:

My name is Molly Wardaguga; I am a Burarra woman from Gupunga, Blyth River in Arnhem Land. This is our story and our way. We are trusting men on our side and this is the right way for our side. We don't know about your side. We are very happy for this story to be there, no-one will take this story away from us. The story is there so everyone can learn from us. We want the young girls to learn this story, we want the Balanda (non-Aboriginal) to learn this story, we want the doctors and nurses to learn this story and we want people in India, Tonga, Papua New Guinea and all around the world to learn this story.

I hope this helps to reassure you that this project was directed and determined by Aboriginal people. If you need further clarification from Molly or myself please let us know (Email to Waka Waka Woman 20.8.04).

Even though Molly was clear about how she felt I still had concerns about being a non-Aboriginal researcher and open to criticisms. I spoke to an old friend of mine who is an Indigenous researcher, also doing her PhD, exploring Aboriginal methodologies, who knew a little about my PhD. I asked for her guidance, sending the emails to her and asking if she would view the Website and advise me. This was her response:

I have gone through the Website and believe it is very clear and respectful of its readers and the women in Maningrida; you have achieved a great deal congratulations to all of you. I think it speaks volumes in relation to how women in this country want their issues acknowledged, and it is very clearly following women's law and social and emotional well-being, in regards to self-determination and sovereignty of their business. I am thrilled to read it and see such a beautiful and sensitive approach (Email from Indigenous colleague, 19.8.04).

Additionally she rang and spoke to Molly to congratulate her on the Website and for what she had done for her community. She asked her Indigenous colleagues if they would be prepared to comment as well. This was the next email I received:

I have also had this support for your project confirmed by my Indigenous colleagues, who recommend also the women's law and respect for this law has been shown by both of you, and the query you received is by some one who does not really know her law (Email from Indigenous colleague, 20.8.04).

We did not receive any further emails from the 'Waka Waka' woman.

Other confirmation of the benefit of the Website was evident in a phone call I had with Molly. She told me a story of a conversation she had with a nurse who had recently started working at the Health Centre:

A new nurse from Melbourne has just started and she came up to me and told me how much she loved our stories and what a difference it made being able to read those stories before she came to work in Maningrida (Field notes, phone conversation with Molly, 08.04).

One of the objectives of this case study was to carefully document the barriers and facilitating factors that influence the research and evaluation process (Israel et al., 1998; Ivanitz, 1998; Stake, 2000). Clearly it can be argued, that adherence to ethical guidelines for research in the Indigenous Australian setting is more important than the research outcomes themselves. Thus I placed particular emphasis on the process evaluation that required continual reflection and negotiation to ensure mutual understandings are reached in this cross cultural context. I will now discuss several of the points that were important during this case study including a personal reflection of my journey.

Personal Reflection

Throughout the research I was always aware of my position as a non-Indigenous researcher, researching issues important to Indigenous Australians. Like many other Indigenous populations, Indigenous Australians have a history of research that has been performed 'on them' often for the benefit of others (L. Smith, 1999). This knowledge led to a continual questioning of my aims, as I too, was hoping to gain a PhD as a result of the research I was involved in. The temptation to work more with the practitioners where I felt 'safe' in a familiar environment was countered by the desire to work with the women towards goals they themselves had set. In particular, I was hoping to develop resources that would make a difference to the cultural preparation of the practitioners. Working side by side with Molly Wardaguga as a co-researcher enabled me to continually reflect on the research goals and my own motivation, ensuring the research would benefit the participants and the community.

I learnt many important lessons during the four years of this research. Being in the community as a researcher was completely different experience to working as a practitioner at the Health Centre. I felt privileged to be able to spend the time sitting and

listening to stories and talking about health and other community issues. I know I would be a much more effective health practitioner working in the Health Centre now than I was before. As a clinician I was too rushed to sit and talk to families, always worrying about the 'professional' work that needed to be done and never feeling I had the time to sit and learn. Throughout the research, it was sharing activities like hunting, collecting material for ceremonies, weaving and artwork; that enabled a better understanding of living in the community. Although I had spent several years in the community, and had weekend trips with families, hunting and visiting their land, I had not spent so much time just sitting and talking to the community members.

During the research project I was often like other community members, walking around hoping someone I knew would stop and offer me a lift. It gave me an understanding of the importance of transport in this community, particularly in the heat that is associated with the 'build up' to the wet season. I also came to a greater understanding of the difficulties involved in accessing a nutritional diet. As a health practitioner I would order food from Darwin and always had a full pantry. As a researcher, I depended on the local store that closed each evening at five, did not open at all on Sunday and quickly sold-out of fresh fruit and vegetables.

7.9.7 The Research Approach

The most important decision made, I believe, was to use PAR as the research approach. This approach is being increasingly recommended when working with Indigenous communities, as it is able to incorporate Indigenous knowledge into its methodology (Hughes et al., 1994; Yunupingu & ABC, 1994). When discussing PAR with Aboriginal people in the Maningrida community it seemed to fit very well with the approach they suggested would be most appropriate. Members of the community were familiar with the term research and stressed the importance of consulting with all the language groups, the younger generation and the elders. They also pointed out the importance of always working side by side. Ensuring a wide representation of language speakers were included on the PAR team enabled access to the different groups in the community and resulted in a diversity of data. It also enabled greater community participation and joint ownership of the research process, products and results. This is particularly important in such a multilingual area (Carew, n.d.).

Indigenous Involvement

This study was also guided by the RARE approach, which, like PAR, recommends Indigenous participation (Kemmis & McTaggart, 2000; Trotter et al., 2001). This participation was crucial to the success of this project. Having an Aboriginal co-researcher and Aboriginal members in the PAR team who guided the research from the very beginning, ensured the research met the aims of the community participants. The Aboriginal participants taught me how to perform research appropriately for this particular community and enabled collection of data I could never have accessed myself. Their insider knowledge of the cultural experts for the domain of childbirth meant the data was rich and appropriate for the aims and objectives of this case study (Trotter et al., 2001). Additionally, Molly Wardaguga, Margaret Dawumal and Elizabeth Gandabuma, all PAR Team members, appeared to be consensual experts and were obviously well respected in the community when discussing this cultural domain (Trotter et al., 2001).

Another important aspect was having funding to employ the Aboriginal researchers and participants (NACCHO, 2004; NHMRC, 2000; Pyett & VicHealth Koori Health Research and Community Development Unit, 2002). Too often Aboriginal people are asked to be involved in research without proper reimbursement of their skills and their time. Having the flexibility, within the funding, to cover all costs, including food for picnics, or for the PAR team when they hadn't eaten, was also important. Without these it would have been impossible to accomplish as much as we did. One of the challenges often encountered was a request for immediate reimbursement, possibly reflecting the instant gratification historically associated with a hunter-gatherer culture. It is also reflective of the socioeconomic disadvantage of this community.

Reciprocity

Examples of reciprocity, whereby the research returns to the community in ways that are beneficial and valued by the community (NHMRC, 2002), included distributing copies of photos that were taken during the research, ensuring everyone had a copy of the poster and that profits from poster sales went to the Women's Centre. There were additional requests for photo enlargements from families where the research participants had passed away and these were always fulfilled. Sharing resources for data collection (eg. transport),

with goals that are important to the community (eg. hunting and gathering materials for artwork), is a recommended strategy (Tjikalyi & Garrow, 1996), and led to the collection of rich, high quality data.

Trust, Respect and Issues of Power

The literature suggests that trust, respect and acceptance are key factors that will influence the success of field work in Indigenous communities (Ivanitz, 1998). Without these, access to informants and collection of data would have been extremely difficult (Ivanitz, 1998). Having worked in the community for several years previously meant I knew many members of the community and I found the women seemed to trust me, and what I was doing. At times this led to personal concerns and questions such as: was I abusing their trust? Did they definitely understand the stories would be on the Internet where we cannot actually prevent men from reading them? Am I doing what the community wants or am I steering the whole process to receive a PhD? All these were valid concerns, however having Molly and the PAR team ensured that decisions were always discussed and made jointly. Placing the Website on the BAC server in the community, though slower to access and not as reliable, enabled local community ownership and control. This also highlighted the difficulties remote communities experience with information technology, which has been discussed in the previous two case studies, therefore not discussed again here.

Survival and Protection

The research was not without criticism (as was demonstrated in the email from the Waka Waka woman), nor was it without precedent in Australia. Women from North Western Australia (Stewart & Women of Warmun, 1999), and Cape York in Queensland (Apunipima Council, 2001) have documented Aboriginal women's stories of birthing practices. However this was the first time the stories had been placed on the Internet where the 'reach' is potentially much greater (P. Evans & Wurster, 2000). This means that control of who looks at the information is impossible, though it can be argued that any control is also lost once stories are documented in a book.

Although the women were very enthusiastic to have the stories on the Internet, and adamant that they should stay there when criticised, the Internet was not a sufficient vehicle for Molly or other women in the community to access the stories. This is not

surprising given that many of the outstations only have one public phone in the community and the opportunities for community members to view the stories on the Internet are so few at present (Munro, I, Managing Director BAC, personal communication 20/9/04). Therefore it was understandable that Molly insisted on having the stories placed into a book, which could be shared around the camp fires and read by any community member, as directed by the women. Molly's suggestion about translating the stories into several of the languages, and producing them through the school, would also increase the local reach. Given the technical difficulties the Commonwealth government is having in rolling out information technology services and support to remote areas (DCITA, 2002), it could be some time before the Internet is a viable means of communication for community members in Maningrida and its outstations.

Recognition

A mutual understanding at the outset of the research was that any resources developed would acknowledge those involved, an important recommendation in Indigenous research (Ivanitz, 1998). This has occurred throughout the course of the research, in newsletters, journal articles, conference presentations, the Website, the poster and the book. Acknowledgement and recognition are of course important, but more so is the issue of copyright and control of the developed resources. This needed negotiation with the funding body, the Commonwealth Government. Standard practice for any resources developed using this type of grant money meant the government retained the copyright. This is in contrast to recommendations regarding ethical research with Indigenous Australians and I felt it was important that the Women's Centre retained the copyright for the Website. Negotiations with the Commonwealth Government meant we did accomplish this.

Community and Individual Capacity

Participatory action research is a political process in itself whereby the research involves changes that affect others (McTaggart, 1989). If measuring change at an individual level one of the risks is that participants can experience increased frustration and powerlessness in their inability to change environmental and institutional factors operating around them (Jan et al., 1999). The most pertinent example of this was the way the research process affected Molly Wardaguga and her continual inability to effect change at the Health

Centre, despite being a member of the Health Board. This led to the most stress on my part. I worried at raising expectations that could not be met. However Molly's wisdom, and experience with Balanda culture, institutions and systems, continually grounded both of us throughout the research. In fact my expectations for change were probably greater than hers. This was another reason the research process needed to result in outcomes valued by the community, and why it was imperative to print the stories in a book.

Measuring perceptible changes in community capacity was an extraordinarily difficult thing to accomplish in this case study. Through consciousness raising PAR can have community level outcomes external to the research (Selener, 1997). An example of this was how Molly commenced regular visits the school meeting with schoolgirls in educational sessions that are still being offered. One of the key points important in PAR is being responsive to opportunities that arise as a result of the research process, whereby reflection and 'critical intelligence' inform action leading to praxis (McTaggart, 1989). An example of this occurred when Molly and I received the invitation to deliver a keynote address at the Australian and New Zealand Perinatal Society's conference in Sydney. The research data and literature all confirmed that Aboriginal women's voices were not being recognised at policy or practice leadership levels within Australia. This provided an opportunity to achieve an integral part of the action research process, which was the dissemination strategy, to increase the 'reach' of these voices. This conference was an excellent opportunity to achieve this aim as 724 participants attended it from Australia and New Zealand.

Community Consultation

We aimed to provide broad and accurate representation of community views and having different languages groups represented on the PAR team assisted this process of community consultation. The Website illustrates the wide variety of childbirth practices and beliefs in this multilingual area. Another important factor that resulted from the consultation was that women believed there should be individual choice regarding place of birth, and for many of them that place was identified as Maningrida. This is consistent with other research in the area (Biluru Butji Binnilutlum Medical Service, 1998; Fitzpatrick, 1995; Kildea, 1999; Rawlings, 2002). This belief however, contrasts with many of the practitioners' voices I heard throughout the research stating the view that:

'women are happy to go to town to have their babies these days (Field Notes, 05.03)'. Interestingly one of the keynote speakers for the International Confederation of Midwives (ICM) conference in Brisbane in 2005 is an Inuit midwife, yet I have not noticed the name of any Australian Aboriginal midwives as a keynote speaker. As a profession, I believe, midwives in Australia do not place enough value on our own Indigenous people and knowledge. This is of course, reflective of Australia as a nation. However there is cause for optimism. The strategies used to promote and disseminate this research have led to greater curiosity, knowledge and understanding of the situation as evidenced by the requests Molly and I have received to attend conferences and be interviewed for radio and print (Appendix Six). Additionally, Molly has been invited to talk at the above-mentioned ICM conference and has been given a double timeslot.

7.10 Limitations

There are particular limitations specific to research that is conducted by non-Indigenous researchers in the Indigenous setting and these were pertinent to Case Studies Three and Four in particular. There is the possibility of a power imbalance occurring, especially if the non-Indigenous researcher is in control of the funds as was the situation for this research. Additionally there can be a lack of understanding of what is really occurring, with the finer cultural nuances being misinterpreted or completely overlooked. The RARE methodology suggests oversight from professionally trained ethnographers as a way of minimising these occurrences (Trotter et al., 2001). Instead I elected to include Indigenous participants as co-researchers for Case Studies Three and Four that strengthens the validity of the results. However, I am not a trained ethnographer and was always an outsider in the community working within a vastly different cultural framework to that I was exploring.

A further limitation was the degree of community control of this research process. The PAR team certainly controlled who I spoke to, however I was responsible for recording and collating the data. The validation process, through reflection, aimed to ensure the data was accurate. The reflection process with the participants was used throughout the research to increase their control. However this was not an example of a community controlled process. It has been argued that when the Aboriginal community do not have control of the research funding, it is difficult to link the research to true community

development (K. Humphrey, 2001). However it is also acknowledged that though community control is the ideal, community groups do not often have the experience or the resources to perform the research on their own (Pyett, 2002). In fact combining the skills of community members with university-based researchers can lead to culturally appropriate rigorous research resulting in relevant, creative, problem-solving and more effective social change (Pyett, 2002). It was these aims I was striving to achieve.

7.11 Summary

The aim of this case study was to combine the participatory action research approach, with Aboriginal research methodology, to develop resources to reduce the cultural isolation of the remote area maternity service providers. An additional aim was to provide the opportunity for the Aboriginal women to tell their stories, so that their voices are heard and their knowledge and beliefs around childbirth can begin to enter the debate around the provision of birthing services in Australia today. I believe the aims and objectives of the case study have been achieved. This chapter has described the research approach used to develop the resources with particular emphasis on the guidance and participation from the Aboriginal women. It has also described the evaluation process in detail, focusing on issues that are important in Indigenous research.

The participation of the practitioners, and the summative evaluation of the Birthing in the Bush Website, is described in the next chapter. Case Study Four also describes in more detail the development of the resource: 'A Primary Health Care Guide to Planning Maternity Services in Your Community'. This guide can be used by practitioners to engage women in the community and encourage their input into health care planning.

8 CHAPTER 8. CASE STUDY FOUR - A PRIMARY HEALTH CARE GUIDE

8.1 Overview

This chapter describes the development and evaluation of the Primary Health Care Guide to Birthing Business in Your Community⁵⁶ (the Guide). Simultaneously I will describe the practitioners' participation in, and evaluation of, both the Guide and the Birthing Business in the Bush Website as they evolved together. The Guide provides a step by step booklet for the new health practitioner to complete. It supports and assists the practitioner become oriented to the community, the people who live in the community and their specific cultural and health concerns, with a particular emphasis on maternity care. The evaluation process included formative, contextual and short-term summative evaluation of the Guide. The research aim and objectives specific to this case are described. Many of the research processes were the same as those described in the previous case study. A paper based version of the Guide is included as Appendix 13.

8.2 Research Aim

The aim of this case study was to use a PAR approach to develop a resource to assist remote area maternity service providers engage local women in developing a primary health care plan for maternity services in their local communities.

8.3 Research Question

How can Aboriginal women's knowledge and experience be integrated into a guide that is used by remote area maternity service providers to orientate them to the community and jointly plan local maternity services?

8.4 Research Objectives

The research objectives were to:

- develop a 'guide' to assist maternity service providers take a primary health care approach to planning maternity care

⁵⁶ <http://www.maningrida.com/mac/bwc/index.html> : Your Community

- explore what community women and remote practitioners felt was important information to be included in a ‘guide’
- integrate traditional Aboriginal health beliefs and activities with clinical issues specific to remote maternity care in the ‘guide’
- incorporate the principles of ‘consumer participation in health care planning’ including the appropriate channels of communication, consultation and collaboration within the community
- incorporate the principles of cultural safety, primary health care and community development in the ‘guide’
- carefully document the process

8.5 Ethical Approval

Ethics approval was granted from the University of Technology Sydney (UTS) ethics department, the Top End Human Research Ethics Committee of the Northern Territory and the Central Australian Human Research Ethics Committee. The ethical issues detailed in Case Study Three were also pertinent in this case study.

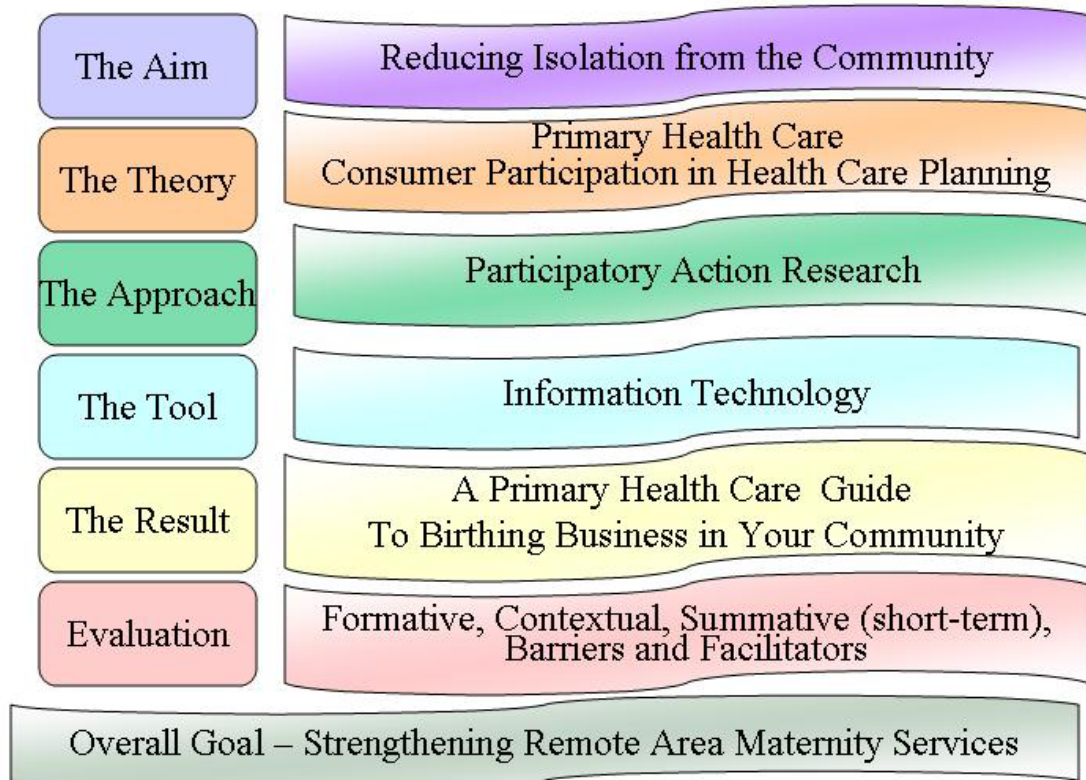
8.6 Research Design

This section presents an overview of the research approach including participant recruitment and the establishment of a PAR team. A timeline detailing the major events and occurrences for this case study can be found in (Appendix One).

8.6.1 The Research Approach

Participatory action research was used to develop and evaluate the Guide. The evaluation has been described in three different sections: formative, contextual and short-term summative (Billings, 2000). The following is the diagrammatic representation of this case study.

Figure 59. Diagrammatic representation of Case Study Four



8.6.2 *Participants to the Research*

Recruitment

I had planned that the PAR team would be composed of between five and 12 participants of self-selected, and targeted, midwives, AHWs, doctors and women’s health educators (WHEs) who were involved in the delivery of remote area maternity services. I was hoping to have strong involvement from the health practitioners in Maningrida, as it was here that I wanted to develop and evaluate the Guide prior to use in other settings. Additionally, I faxed a flier explaining the project and inviting participation to other remote Health Centres in the NT. The flier can be seen in Appendix 11. I also notified the participants of Case Study One and Case Study Two. In particular, I was hoping the stakeholders of the first two case studies would assist in the evaluation of both the Website and the Guide. I was also hoping to target a small number of midwives who had recently commenced working at a new community. The WHEs directed me to midwives and to remote area nurses, who were recruited into ‘The Researched’ group, see Table below.

Composition of the Team

The team differed slightly from the team involved in Case Study Three, mostly because of people's availability and the timeline.

The PAR team

There were 12 members in the PAR team. They included Aboriginal Health Workers from the Maningrida community (Molly Wardaguga and Margaret Dawumal) and practitioners from across the NT, all of whom had experience in remote area maternity service provision. These consisted of remote area midwives (n=2) and doctors (n=2), and remote support staff (n=4). Additional members of the team included Women's Centre Coordinator and myself.

The Critical Reference Group (CRG)

The CRG consisted of seven members. The CRG included Molly Wardaguga and Margaret Dawumal. Once again their role was that of cultural advisors, with 'insider' knowledge of both the community and the Health Centre (Trotter et al., 2001). In addition there were five practitioners: two RANMs, two WHEs, and one public health nurse-midwife. All participants were also members of the PAR team and had extensive experience in remote area maternity service provision.

The Researched

This group numbered 58 in total. Women from the Maningrida region (n=52) and remote area practitioners (n=6). The remote practitioners were the ones most likely to use the guide making their input important in ensuring the resources had meaning and relevance to the remote workplace (Wadsworth, 1998). However the Indigenous input was equally important in ensuring the Guide contained culturally appropriate learning and processes for community engagement.

The Stakeholders

This group included individuals who had some involvement in the support and provision of remote maternity services in the NT (n=9). Women's Health Educators, staff development and orientation personnel, the Women's Health Advisor and District Medical Officers were all members of this group. This group had many years experience

in remote health service delivery. Their comments and input were practical, realistic and encouraging, and they provided much input into the development of both the Website and the Guide. This group was also important to include as they would be influential in determining if Guide would become incorporated into standard practice.

Two participants were unable to continue contribution to the research and have been documented in the table below under the heading ‘attrition’. As described in Case Study Three, one was from the stakeholders group and was unable to get Internet access and was away for extended time during the evaluation of the Guide. The other was a member of the researched group who left her position and did not have time to continue participation.

Table 10. Participants developing and testing the Primary Health Care Guide

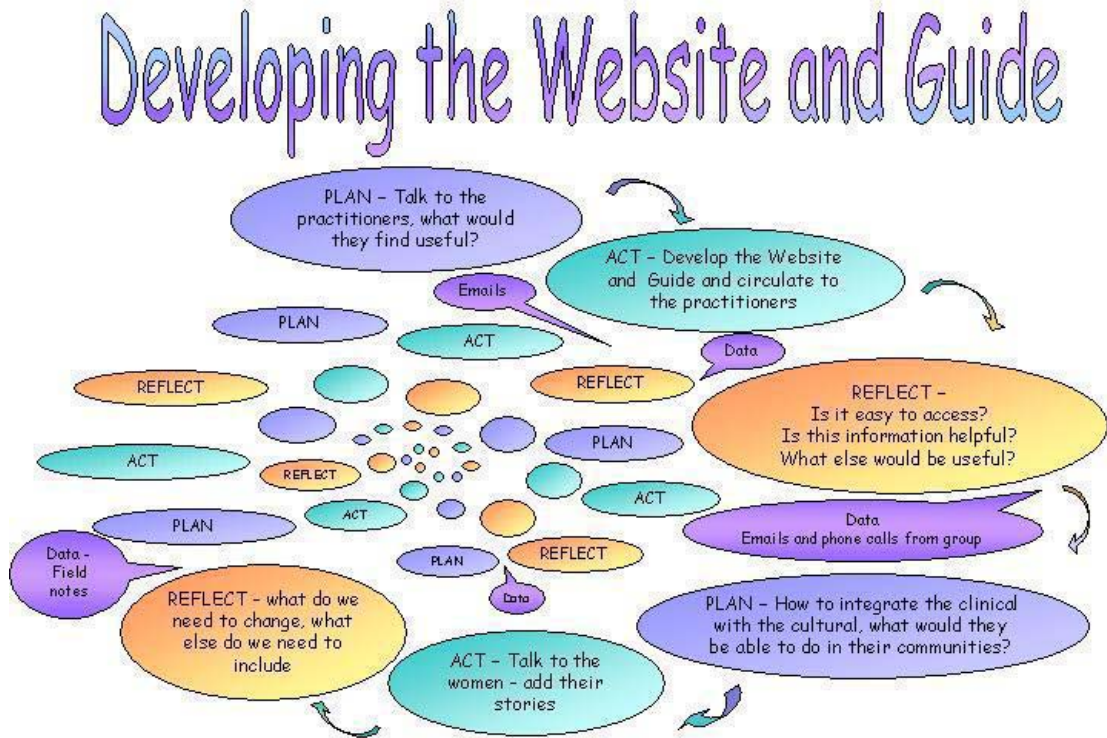
| | PAR Team | Critical Reference Group | The Researched | The Stakeholders | Attrition |
|------------------------------|-----------|--------------------------|----------------|------------------|-----------|
| Maningrida Women | | | 52 | | |
| Aboriginal Health Worker | 2 | 2 | | | |
| Medical Officer | 2 | | | 2 | |
| Student (midwife and doctor) | | | 2 | | |
| Remote Area Midwife (RAM) | 2 | 2 | 2 | | |
| Remote Area Nurse (RAN) | | | 2 | | |
| Policy Advisor | | | | 2 | |
| Support Staff | 4 | 3 | | 5 | 2 |
| Women’s Centre Coordinator | 1 | | | | |
| Myself | 1 | | | | |
| Total | 12 | 7 | 58 | 9 | 2 |

8.7 Methods

8.7.1 Collecting and Validating the Data

The collection of data and development of resources was done in a cyclical fashion with evaluation and validation of the data occurring throughout the process. The Guide was presented to the participants using either paper-based versions or with password access on the Internet. The Website was only available to be viewed on my laptop computer or with password access via the Internet. The draft materials would be delivered to participants either in person, via the post or via email. The participants’ feedback was received either by email, phone interview or they would write on the paper-based versions that were posted back, often with comments throughout. The changes would be incorporated before sending the reworked version out again. This is illustrated in the figure below.

Figure 60. Using PAR to develop the 'Website' and Guide



Data Collection in Maningrida

During each field trip I made to Maningrida I would hold at least one meeting with the practitioners. These meetings had different formats depending on the stage of the research. The meeting held during the first field trip involved consultation and engagement of the practitioners and has been described in the Chapter Six (the Maningrida Community). During the second field trip I held a focus group with the health practitioners. This focus group involved a semi-structured group interview, which was audiotaped and transcribed verbatim. The focus group included many of the PAR team: the Health Centre manager, the midwife who was running the 'Women's Business' program, two other midwives, two remote area nurses and a doctor with obstetrics and gynaecology experience. Some of their comments are detailed below:

I can still remember things that happened when I was new in a community you sort of flounder a lot, luckily we had a lot of health workers, but still I'm sure we made these huge faux pas all the time, but you just don't know. You slowly start to have that picture when you first go to the community but if there was something written down some sort of general guide it would help. It was so frightening to know that I've done the wrong thing and said the wrong thing, no one tells you. You just go around putting your foot in your mouth all the time until

eventually one day you go... ah ah and it clicks... I should be doing something else (RANM, Field Notes, 2.02)

If you don't have that knowledge about what they may have done in the past (around childbirth) and maybe that's what they want to do now you can't make that suggestion to them and they might be too scared to speak up. So it's having that knowledge that those things did go on one time and maybe some of them might still do those practices if the encouragement's there (RANM, Field Notes, 2.02).

As the Website and Guide were beginning to take form I would present these with the data projector and my laptop computer. The most current paper based version of the Guide would be circulated at the same time. We would discuss the ideas, content and layout of the Guide. The practitioners' feedback was incorporated into the evaluation, usually leading to further action on both the Website and the Guide. I would also hold separate sessions with members of the PAR and CRG team. Many would be held after work hours, usually in the practitioner's home and mostly on a one-to-one basis. Most would last between one and three hours, with one session lasting five hours. The practitioners gave their time and feedback generously.

As the resources were towards completion, these sessions were lasting longer as the team members would carefully read through and comment on both the Guide and the Website. Draft versions of the Guide would be left with the practitioners for them to make changes and add too when they had time. These were usually posted back to me. The midwife working on the Women's Business program was asked to implement the Guide as though she was new to the community. Primarily this was to test the utility and ease of use.

During each field trip I would offer to give educational presentations to the staff. At the time I was an instructor for two separate maternity emergency courses and involved in writing the Maternity Emergency Guidelines for Registered Nurses (Kildea et al., 2003). Being able to share this knowledge by delivering educational sessions at the Health Centre was part of the reciprocity inherent in PAR (Tjikalyi & Garrow, 1996).

Data Collection from the CRG, the PAR team and The Researched

Each member of the CRG read the Guide at least once, usually commenting on the paper copy and posting it back to me. It would then be circulated, (for further development), to members of the PAR Teams, The Researched Group and The Stakeholders. Most

members evaluated the Guide several times. They assisted in evaluating and checking each section of the Guide to ensure it was appropriate and feasible.

Some participants to the research were not based in Maningrida, but in various other locations around the NT. The Website was loaded onto a temporary site that could be accessed by anyone provided with the address. The Guide was accessible on the Website or a PDF copy was emailed to participants, to be printed in the workplace for closer examination. Any participants not able to access the guide in this way would receive a printed version in the post. Feedback was received by email, in the post, by phone and in person. As suggestions were made they were incorporated into the resources, along with information from the literature (discussed below). The PAR Team, the Researched Group and the Stakeholders were all involved in this process. Often the participants would circulate the resources in the workplace, gathering wider feedback and combining it, prior to returning it to me. This was occurring simultaneously to the cyclical evaluation that was occurring with the practitioners and Aboriginal women in Maningrida. The cycles overlapped and fed into each other.

Often the data collection from the practitioners, the women, and from Molly and Margaret would occur separately. However this was not always the case, as Molly participated in two of the sessions at the Health Centre with the practitioners. Additionally, when we were showing the resources to the women at the Women's Centre, some of the practitioners also attended. I tried to bring the different groups of participants together as I believed it would provide an opportunity for them to learn from each other, rather than using myself or the resources as a conduit. However, due to personal, family or Health Centre priorities this was often difficult to arrange.

Data Collection from the Stakeholders

The Stakeholders were an important group to keep involved and informed throughout the course of the research. Following several field trips I spent time (usually three to five days) in Darwin informing the Stakeholders about the progress of the research and collecting further data (see timeline Appendix One). I held meetings and information sessions, on a one-to-one basis or in small focus groups. The nine stakeholders were all

involved in the evaluation cycles. The information sessions often included other key decision makers:

- policy analysts
- managers for remote services
- support personnel including: WHEs, District Medical Officers, Orientation Personnel, Co-Coordinator Strong Women, Strong Babies, Strong Culture Program, Community Child Health Coordinator, the community paediatrician, nutritionists and others in the Department of Health and Aged Care.

These sessions would differ each time depending on people's availability. Additionally, I tried to be inclusive of staff living in other towns. I had email or phone contact with staff in Alice Springs, Katherine, Tenant Creek and Nhulunbuy that are the regional referral centres across the NT. Additionally, I would meet some face-to-face, when I was facilitating courses in these areas, or at conferences.

Often the Stakeholders would inform others in the workplace about the research and bring them along to the meetings. As many of these invited guests did not have ongoing involvement I have not identified them as participants of the teams. All were aware that I was collecting data for my PhD and consented to the taking of field notes. Often these were informal sessions, as I knew many of the people who attended. I used the same strategies that I used in Maningrida when updating the health practitioners. That is: presentation of the research progress using data projector and paper based resources, followed by informal, semi-structured discussions and recording of field notes.

Data Collection from the Cultural Advisors

In August 2003 I had a draft version of the Guide that I took to Maningrida where I had arranged to employ both Molly and Margaret for four days on a full-time basis to check both the Website and the Guide. Unfortunately, during this time Margaret needed to attend ceremonies in the outstations, and was absent from Maningrida for approximately three months. Molly however, was able to evaluate these resources and we spent considerable time in the car driving from house to house checking facts and stories with other women in the community. When I returned in March 2004 I had incorporated all of Molly's suggestions along with the feedback received from other women in the

community and members of the PAR team. Margaret had returned to Maningrida, and together with Molly, we were able to verify and check the content and presentation of the data together. The three of us utilised the visitors' accommodation during this time, kindly lent to us for use. Here I set up the data projector with my laptop and Molly and Margaret moved slowly through the Website, a paper based version of the Guide and the book that was discussed in Case Study Three. Any corrections they suggested were entered into the computer at the time.

Data Collection from the Literature

Incorporating specific information from the literature was important to this research and is an integral component of the RARE approach (Trotter et al., 2001). An objective of Case Study Four was to develop an approach to planning maternity care using appropriate channels of communication, consultation and collaboration within the community. Therefore it was important to utilise the principles that guide consumer participation in health care planning (DHAC, 2000), and those outlined in the National Aboriginal Health Strategy (National Aboriginal and Torres Strait Islander Health Council, 2000) as discussed in the Literature Review. However, as noted in the review of the NT Department of Health and Community Services (Banscott Health Consulting Pty Ltd, 2003), consumer participation is a challenging area for the Department. It will become more important as the NT rollout the Primary Health Care Access Program and move towards community control of health services. There are few resources or structures in place anywhere in remote Australia, to support consumer participation in health care planning (Banscott Health Consulting Pty Ltd, 2003; DHAC, 2000).

Additional literature important to incorporate in the Guide was that related to maternity care in the NT. This included statistics from audits on pregnancy care in the NT with an emphasis on areas highlighted in these reports (C. Evans, 2001; Hunt, 2002; 2004). Particular areas of concern included anaemia, smoking in pregnancy, urinary tract infections, sexually transmitted infections, preterm labour, low birth weight and post partum haemorrhage.

8.8 Results

The data was collected from sources and in the manner that has been described above. Following the iterative approach recommended in the AR cycle, data and feedback were acted on before further cycles of development and evaluation occurred. This process, together with the research described in Case Study Three, resulted in the development of both the Guide and the Website.

8.8.1 The Guide

A paper-based version of the Guide can be found in Appendix 12. In the appendix it has been condensed to two pages on each page. The artwork used for the background of the cover was produced from artists working at the Women's Centre: Belinda Guringa, Kate Muwulga and Lena Guriniya. These artists were financially acknowledged for use of their artwork and consent was also obtained.

The introduction to the Guide with an overview of the suggested use in the community is shown below:

This guide has been developed as a tool to assist you to become more familiar with the maternal health issues that are important to the community within which you are working. The time it takes to work through this guide is totally dependent on you and how it suits your working environment. It may take several months to progress through this guide or you may find that it can be done in a shorter time frame. Under each heading there is a suggested section that can be done early after your arrival in the community and a second section that can be done after you have been in the community for a while. The section titled 'Clinical Audit' shows you some of the statistics important to women's health in remote areas. Once again it is up to you if you decide to fill out every section. There are no 'right' answers and some of the questions may not be appropriate to the area you working in.

The guide has been developed with women in Maningrida, a remote community in Arnhem Land, Northern Territory (NT), and many of the health concerns are taken from NT statistics (though the issues are very similar across remote Australia). Many of the answers will need to be discussed with health workers and local community women and it will be as you talk with them that you will learn more about the issues

that are important to them and their community. The Guide has been developed as a companion to the Birthing in the Bush Website and looking through this Website (see address below) will let you see how the issues in the community you are working in differ, or are similar to, the Maningrida area

(Kildea & PAR Team, 2004p.2).

8.8.2 Content of the Guide

The content was developed from the data collected from the research participants and the literature. The Guide provides a step-by-step approach to be filled out by the practitioner in the community. As the practitioner works their way through the Guide they will become orientated to the community, becoming familiar with community demographics, health staff and resources within the community (eg. The Women's Centre, Strong Women Workers, Community Workers, and the Health Board). They will progress through to cultural learning from the women and the elders (eg. cultural beliefs and practices around childbirth), then progressing to a clinical audit, and finally a joint planning section.

8.9 Evaluation and Discussion

The Guide was produced as a draft document, both on the Website and in a paper-based version, in October 2003. It was then tested in three remote communities, including Maningrida, and this process is described under short-term summative evaluation below. Evaluation and changes to the Guide were completed by May 2004 at which time the Guide was presented to NT Department of Health and Community Services policy and orientation personnel for consideration of use. At the time of writing this thesis, orientation personnel had recommended that the Guide be included as a component of their 'Pathways Program'⁵⁷. Funding is being sought for longer-term evaluation of the Guide as it is rolled out across the NT.

⁵⁷ The Pathways Program is an orientation and education program that has been developed by DHCS staff to provide ongoing support and education to health practitioners working in remote communities.

The formative evaluation of the Guide was undertaken as it was being developed, aiming to increase the likelihood of producing a resource that the practitioners and stakeholders believed would be useful (Billings, 2000). The contextual evaluation looked at the institutional factors and remote contextual influences that impacted on the utility of the resource in this setting (Jan et al., 1999). Specifically I was interested in accessibility, convenience, comfort with technology, line dropouts, management support and other barriers or facilitating factors effecting uptake. The PAR, CRG, Researched group and Stakeholders were all involved in the evaluation process. Some reviewed the paper based version and others reviewed the Guide via the Internet.

Lastly, the Guide was exposed to short-term summative evaluation whereby the outcomes were measured against the stated aim and objectives (Billings, 2000). This was performed by all 12 members of the PAR team except the Women's Centre Coordinator and four members of the Researched group. In addition to being evaluated in Maningrida, it was evaluated by a RAN in a remote Central Australian community and a RANM in a Top End Community. I have described these evaluations separately.

8.9.1 Formative Evaluation

As a result of personal experience, and preliminary consultations with Molly, other women in the Maningrida area and the practitioners, we had formulated a list detailing some of the information we thought might be appropriate in such a guide:

- guidelines for engaging community members around maternal health issues
- language to be used when discussing maternal and child health issues
- which elders you should talk to if you are concerned about the health of a pregnant woman
- how to identify the women in the community who are experienced in childbirth knowledge and practices
- when and how it is appropriate to approach these individuals, and,
- assisting and organising escorts for pregnant women going to the urban centre to have their baby.

In the table below I have given some examples of the feedback suggestions, or ‘reflections’, made by the participants, and the subsequent ‘action’ that was taken, during the formative evaluation of the Guide. Different presentations for the information included: ‘question and answer’ sections, a ‘quiz’, ‘did you know’ sections, case scenarios and a clinical audit.

Table 11. Reflection and action used to develop and improve the Guide

| REFLECTION | ACTION |
|---|--|
| Would be good to be buddied up with someone to help you do it, if not a health worker then someone else in the community Perhaps you need to spell it out upfront (RANM). | Added: p.2: Have you asked the health workers if they want to be involved in women’s business? If there is a health worker who is interested in women’s business make sure you do the following activities together. |
| Need some information on skin groups (Orientation Personnel). | Skin / Kinship System section added to the Website under ‘Culture’. |
| Information on urinary tract infections and sexually transmitted infections please (RANM). | ‘Did You Know Section’ added to the Website using NT statistics. Section included in the Guide with encouragement to perform local audit, p17. |
| Need to include something about the men, some of the young girls want them with them these days (RANM). | Added: p.11: What is the husbands/partners’ role in birth? Ask five to 10 antenatal women about this. Though traditionally fathers did not attend the birth some couples today are deciding they should be present for the birth. |
| Perhaps remind them that some people will not want to talk about some of these issues (RANM). | Added: pp.13-14 eg. When you are asking these questions it is important to remember that some people will not be able to talk about some of these things. Listen and look carefully at their body language as that might not want to be rude to you, but you may be putting them in an awkward position. |
| Move the clinical audit later as if they stop there they will miss out on the cultural standards, which are so important (Orientation Personnel). | Clinical audit information placed in separate section and moved towards the end pp.15-20. |
| Need something on non-Aboriginal women who want to have babies in the community (Dr). | Added: p.12. Discuss with other health staff in the community how they feel about non-Aboriginal women who want to stay in the community for birth’ with an explanation about respecting women’s choice. |
| Need to make them aware of what has happened in the past ... so many young ones coming with bright ideas but they just aren’t appropriate (RANM). | A case example: ‘Antenatal Education-Example’ was added to the Website explaining the basic tenets of community development. |
| Can you include preterm labour and postpartum haemorrhage, it so hard for us to keep up-to-date out here (RANM). | Sections including current information on the causes and management of preterm labour and postpartum haemorrhage were added to the Website and both were included in the audit section of the Guide pp15-20. |
| They must realise it is the woman’s choice if her baby is to go in for an | Section added: Birthing Business: Stillbirth on the Website incorporating information from both the |

| | |
|--|--|
| autopsy, the family need to talk about it, they might want that little baby to be buried in a special place with the Grandmother (RANM). | women's stories and the practitioners. In the Guide p.9, a section was added suggesting the practitioners talk to the AHWs and women about specific cultural considerations. |
|--|--|

Incorporating the Literature

There are several issues important to remote maternity care in the NT. These included anaemia in pregnancy; smoking in pregnancy; urinary tract infections (UTI) and sexually transmitted infections (STI) in pregnancy; preterm birth; low birth weight infants; and, postpartum haemorrhage (C. Evans, 2001; Hunt, 2002). These clinical issues were covered in either the Website or the Guide (usually both) and explained in the Website Section 'Before Birth' as shown below:

Interwoven amongst the stories are clinical scenarios and events that remote area nurses identified as being areas of concern, and as such would be valuable in this resource. The stories, and examples given in these sections, have been described by practitioners who have been working in remote settings across Australia. Most of the statistics are from the Northern Territory and have been used to illustrate problems that are common in many remote areas. No identifying names have been used, all are pseudonyms (apart from the Aboriginal women who preferred to have their names recorded here and Hellen Matthews RANM who was also happy to have her name recorded). The information was current up until when it was written in early 2004 (Kildea et al., 2004).

The following are several examples of information that was taken from the literature and used in the Guide and the Website.

| THE LITERATURE | ACTION |
|--|---|
| In 2001 an audit of 18 remote health centres in the NT showed 27% of antenatal women were anaemic in pregnancy | Clinical audit section added to the Guide pp.16-17, and information section added to the Website: Before Birth: Anaemia in Pregnancy |
| Studies have shown that rates of smoking in remote communities are very high when compared to the rest of Australia. | Sections added to the Website: Before Birth: Smoking in Pregnancy |
| Preterm labour has a higher incidence in the NT when compared to the rest of Australia | Sections added to Both the Guide p. 19 (see figure below) and the Website: Birthing Business: Babies Coming Early |

The figure below is an example of how information from the literature was presented in the Guide.

Figure 61. Example of Clinical Audit Section in the Guide

How many babies from this community were born preterm (< 37 weeks) in the last calendar year? Use your community's statistics to fill in the charts below. (1999 Statistics have been used as they were the most complete for the information recorded in the following two charts).

| Percent of Preterm Births in 1999 | | |
|---|------------|----------------|
| | Indigenous | Non-Indigenous |
| Australia | 13% | 6.5% |
| Northern Territory | 15% | 9% |
| Your community 1999 | | |
| Average per year in your community since 1999 | | |
| | | |
| | | |

8.9.2 Contextual Evaluation

The points below are the major themes that emerged during the data collection and evaluation process. Some points were relevant to Case Study Three and several were pertinent to all of the resources developed during the course of this research.

Finding the time

A major concern, which was highlighted during the data collection, and again relevant throughout the evaluation, was finding the time to be able to work through the Guide. It was not unusual for me to be asked to ring back to discuss the evaluation in another month or two:

Would be great but we are so busy, apparently remote health has had a budget blowout and we aren't getting any more relievers till the next financial year... five months away! (RANM)

I'm really interested but we are too busy to even look at the Internet or the Guide at the clinic... (RANM)

It's madness here, relievers and orientating all the time – no time to look at the Guide but you know it would help if you did ... always taking the long way round (RANM).

I've started to look at the Maningrida Website, but ran out of time to sit and enjoy! And I'm sure that I would enjoy! (RANM).

The last two quotes describe the frustrations expressed by many participants in the research project, and reactivates strong memories I have from my own work in remote health. Often you feel like you're going around in circles, knowing there are better ways of doing things but being unable to break the cycle of short staffing leading to acute care responsibilities taking priority over primary health care activities.

Internet Access

One of the major factors affecting the utility of the resource was the limited access people had to the Internet⁵⁸:

I would love to have a look at it, but guess what - I have not got Internet access - surprise, surprise (Strong Women, Strong Babies, Strong Culture, Program Coordinator, 11.03)

We've had the satellite dish on the roof for a year now and only just had it connected (RANM, 12.03).

Computer Support

Other concerns involved the lack of computer support when things go wrong⁵⁹:

Need a 24-hour support desk – maybe CRANA could do this? (RAN, 10.03)

When things go wrong with computers you end up spending too much down time on the phone trying to sort it out, talking and watching a blank screen ... not enough contingency plans (RANM, 10.03).

Management Support

The necessity of management support to ensure time is made to use these sorts of resources was repeated by the PAR team and members of the researched team many times, for example:

It would be great to have support from management to step outside the square and be given the time to do this kind of thing (RANM, 10.03)

⁵⁸ Not covered in detail here as the comments were very similar to those found and described in Case Studies One and Two .

⁵⁹ As above.

We've had three managers in one year – it makes it so hard to do things like this (RANM, 10.03)

The problem is if we don't have time we have to make time, as making time will save time in the end – but we need management support to do it (RANM, 12.03).

This comment highlights the fact that, to be able to use resources such as these, staff must have management support. For this to occur, managers must value the resources and reorientate workplace practices to allow participation. Several participants stated they believed that the only way it would be used was if it became a part of the Health Centres' business plan and they felt this should occur.

This could be offered as an orientation package to all department staff and with outsourcing could be offered to other organisations for their staff. In fact it should be a part of the business plan (Support Personnel, 11.03).

During the data collection it became clear that many in the Maningrida community felt it was important for the maternity service providers to understand their culture and beliefs around pregnancy and childbirth. The suggestion below was discussed many times:

We should have a camp all together once a year where the young girls and the older women get together with the Health Centre staff to talk about women's business and teach both ways. Take one of the strong nurses from the clinic and go and explain to them in the bush somewhere, like in a bush shed or near a creek or where there is good territory. (Wendy, Ruby, Esther, Dora and Rosie) (Kildea et al., 2004In: Before Birth, Knowledge of culture and tradition)

The Maningrida women believed that one of the fundamental things for improving health in the community is to incorporate an integrated learning process whereby the non-Aboriginal health workers, the AHWs and the older women, ('the grey-haired ones'), all learn from each other. Many of the women felt that all new Health Centre staff coming to work in the community would benefit from going on a camp with the women to learn about Aboriginal ways and receive an orientation to the community. Molly and I presented this idea to the manager and staff at the Health Centre several times over the course of the research. Although there was acknowledgement that it was a good idea it was perceived as being too difficult to accomplish:

The big issue is the lack of time and the lack of staff ... you can just do so much but you just do not have time to be able to do it all (RANM, 08.02)

This demonstrates the importance of high-level support from management and policy makers for initiatives such as this.

Other Priorities – Violence

One of the recurring themes across the length of the research, impacting on participants' ability to participate in the research, was the violence against remote area staff:

It's crazy here at the moment, too many relieving staff and too much violence – we are closing the clinic for a community meeting to talk about the violence against nurses (RANM, 08.02)

I know she was interested but she has left – she was assaulted and just couldn't stay any longer (RANM, 05.03)

They don't have a midwife there at the moment; she had a pretty rough time with violence and just left (RANM, 10.03)

I know the last two nurses left in a pretty bad state but they are restricting club hours at the moment so things are getting better, I might get around to it soon (RANM, 11.03).

It is not surprising that violence was mentioned by several of the practitioners when the CRANA survey found that 85% of respondents had experienced some form of violence against them (MI Taylord Services, 2000). Working in this environment, with a high load of clinical services, makes it very difficult to be able to access educational resources or participate in primary health care activities such as 'A Primary Health Care Guide to Birthing Business in Your Community'.

Interested Participants

Although there were many barriers to participation, as outlined above, I found the practitioners were very interested in the resources that were being developed and because of this, they tried to find the time to review the resources and respond to me. Often the response was accompanied by an apology for taking so long, however I was very grateful, as I knew how busy they were working in the remote communities:

This is great, well worthwhile and will be very valuable if they do it. They may not see the significance at first but it will help them greatly once it's done (WHE, 11.03)

Loved the site in general and in particular the stories and comments from various women throughout and in the 'Women's stories' section, think the guide would be invaluable (Medical Student, 02.04).

Visual Impact

During the evaluation of the Resource Library (Case Study One), several participants identified that the Webpage was 'boring', highlighting the importance of resources being visually stimulating. These comments were incorporated into the development of Birthing in the Bush Website and the Guide and the following comment is an example of the responses we received:

Impressed with the beautiful colours, serene and easy on the eye (WHE, 03.04).

8.9.3 Summative Evaluation

As mentioned previously, this phase of the evaluation was performed by a smaller number of participants. Feedback was received from the CRG, all 12 members of the PAR team, except the Women's Centre Coordinator, and four members of the Researched group. In addition it was evaluated in Maningrida, a remote Central Australian community and a remote Top End Community.

Utility

Most of the participants to this phase suggested both the Website and Guide should be used as part of an orientation to the community for midwives, nurses and doctors. In conversations, and as highlighted in the initial consultations in Maningrida, many stated they themselves had not received any orientation prior to working in the remote setting.

The following comments highlight these views:

It would be great for work induction and orientation of staff, when you are ready we would be happy to trial it for you (Orientation Team Leader, 03.03)

This should be essential for orientation of all remote staff (medical and nursing). I think it makes staff really think about the community and the people they are to work and interact with. It actually forces/encourages them to be inclusive, which so many are not. Especially of AHWs. The

direction to contact specific people is good. Even for a skilled RAN taking up a new post - it would enable them to establish communications with key personal hence enabling them to get to know the area (WHE, 10.03)

Think the Guide is a fabulous idea and that in its current format it would be extremely useful for anyone heading out to a community to work. In particular the level of detail and coverage of issues in suggested questions seems really thorough, and would be very encouraging for someone coming in without any experience in a community (Remote Doctor, 11.03).

The above comments confirm that the Guide could assist practitioners become more relevant and responsive to local community needs; one of the objectives of the research. However there were also comments that it would no longer be needed after a year in the community, and that it may not be appropriate for short term staff:

Would have been great a year ago when I first started here but not much use now (RAN, 01.04)

Need to be motivated and interested for a self-learning package it may not suit those coming for a short time (RAN).

The Guide may be more useful as an orientation tool than a joint planning tool, however in either capacity it would benefit from being included in ongoing business planning review. However, I would argue that there would be benefits in performing the clinical audit on a yearly basis, revisiting the planning section each year and perhaps other sections that need updating, for example: current members of the Health Board (p.4 of the Guide).

Cultural preparation

The cultural learning and engagement was mentioned as being the most important part of the Guide by many of the participants. I have included some examples of the feedback here:

The cultural questions are excellent and particularly important. From my experience the dominant focus on health care is medical. There is minimal if any focus on cultural aspects particularly foods, ritual etc. Some of the older women are very concerned about this however unless the health service and workers choose to focus on this it will be lost. As the people need support to continue to encourage cultural knowledge and understanding in the young women (WHE, 11.03)

The Website provides far more insight into the issues that are real for people (eg. the otherwise mysterious smoking ceremony) than any description or summary of people's views could (Medical Student, 02.04).

The above quotes also suggest the Guide was meeting the objective regarding the provision of examples of cultural and ceremonial practices.

Clinical relevance

The following comments were all from members of the PAR team, received either by email, or written on paper based versions of the Guide, and posted to me. These examples highlighted the clinical relevance of the Guide:

The clinical questions before pregnancy are also good, particularly the point of Health Education and School Screening. I had not thought before of incorporating Hb testing in school screening, we don't currently do this. I think the barriers to this being used are the RANs/RAMs become very preoccupied with general nursing issues. The statistical information is also important...I think this is suitable both for nurses and midwives also important document for medical staff, but once again depends on their interest. I would value this document if I were starting in a community. It is also of value to me right now in prompting me to consider some new aspects to cover in orientation of new female staff (WHE, 02.04)

The above comment is an illustration of the thoughtful and detailed responses I received from the PAR team and stakeholders, demonstrating their considerable experience in remote area maternity service provision, and their willingness to assist with this research.

8.10 Limitations

The main limitation of this research was the inability to perform a longer term evaluation of the resource. Given the timeframe involved in the development phase this was not possible. This is a particularly important research topic as few studies have documented the long-term effects of involving consumers in health care planning (Crawford et al., 2002), which is a strong recommendation for improving Indigenous health outcomes in Australia (Berkman & Kawachi, 2000; Devitt et al., 2001).

8.11 Summary

Despite an increasing realisation of the importance of consumer participation in health care planning, particularly in the field of Indigenous health (DHAC, 2000; National

Aboriginal and Torres Strait Islander Health Council, 2000; Tjikalyi & Garrow, 1996), there is a dearth of literature on how this can be achieved in remote Indigenous communities. I was unable to find any resources to assist practitioners towards this goal. A participatory process was used, whereby practitioners, community women, stakeholders and I worked together to develop a Guide to increase Indigenous women's participation in their maternity service. The principles of cultural safety, primary health care and community development were incorporated into the development of the guide.

Early consultations with these participants were described in the Chapter Six (the Maningrida Community). Specifically, the women we spoke to in the community felt the practitioners needed to learn more about Aboriginal culture and tradition. This issue has been identified in other research performed in the remote setting, where community members identified feeling frustrated with service providers who lacked cultural knowledge (Lowell, 2001). Lowell (2001) concluded that strategies to increase community engagement would lead to improved health outcomes. This was the intention of the Guide, which ideally would be used together with the Birthing in the Bush Website. Cultural information and traditional beliefs have been incorporated into both these resources.

Initial consultations with Molly had identified her belief that the practitioners would be more effective if they developed closer links with the older women in the community. This suggestion was incorporated into the development of the Guide with directions for the practitioners to talk to older women before answering some of the questions proposed in the Guide. Consultations with the practitioners also highlighted the importance of learning about, and understanding, Aboriginal history and culture. Many had not received cultural awareness training, and some that had, felt it had not met their needs. None of the participants had learnt any cultural beliefs specific to maternity care in their cultural awareness training.

The development and formative evaluation of the Guide was undertaken using the plan, act, reflect cycle (Billings, 2000) as a strategy to produce a resource that the practitioners and stakeholders believed would be useful. The use of a participatory process increases the probability that the Guide will have relevance, focus and meaning for the target group

and its intended purpose (Wadsworth, 1998). This was confirmed in this case study. The participants identified a range of both cultural information and clinical information they felt would be useful. This information was gathered from discussions with the women, other practitioners and the literature. It was then incorporated into the resources and further evaluated. The cyclical evaluation, though time-consuming, was very successful. The short-term summative evaluation has shown that practitioners found both the Birthing in the Bush Website and the Guide to be important resources with participants highlighting the 'cultural learning' as being the most valuable aspect.

Despite a positive evaluation of the utility of the Guide there are several barriers to the use of this resource in the way it was intended. It was to be accessed online with the Birthing in the Bush Website. The difficulties practitioners have accessing the Internet have not been described again in detail but are just as pertinent to this case study as the other three Case Studies. However as mentioned above, the Workforce Planning Unit of the NT Health Department have requested permission to use the Guide as a paper-based orientation tool, which will overcome this barrier. The other major barrier is allocation of time to participate in primary health care activities. Comments that mention the management support required to '*step outside the square*' highlight the belief that a Guide of this sort is not 'business as usual', even though it is in line with NT policy (Banscott Health Consulting Pty Ltd, 2003) and national policies on consumer participation in health care planning (DHAC, 2000) and the National Aboriginal Health Strategy (National Aboriginal and Torres Strait Islander Health Council, 2000). If used as a part of orientation, practitioners will need to have the time allocated to complete it, and managers will need to understand the value of it. Placing the Guide within the business planning framework of the Health Centres, or incorporating it into performance review could assist this to occur. However it would be important to undertake a longer term evaluation of the guide to determine if it achieved its aims. Importantly there is a lack of literature describing the effect of consumer participation on services, quality of care, satisfaction and health of patients (Crawford et al., 2002), which a longer term evaluation could contribute to.

The aim of this case study was to develop a Guide to assist maternity service providers take a primary health care approach to planning maternity care, using principles of

consumer participation in health care planning. This aim was achieved with the development of 'A Primary Health Care Guide to Birthing Business in Your Community'. If utilised, the Guide could assist the health service providers to work collaboratively with community members in the development of a culturally appropriate model of maternity care for their local community. Together with the Birthing in the Bush Website, the Guide should assist to better prepare the non-Indigenous health practitioner for working in this very different cultural environment. The major barriers to the use of these resources appears to be the difficulties remote practitioners experience prioritising primary health care activities, accessing the Internet, and having the time available to do both of these activities. Management support for such activities, education and training on computer use, and attention to computer hardware are all key factors that will influence the utility of these resources.

The next chapter is the discussion chapter that reflects on the results from all four Case Studies and describes how they related to the overall goals of the research. The discussion includes a critique of the research methodology and recommendations for policy makers, practitioners and potential further research in this field. Additionally, the discussion outlines recommendations for the provision of maternity services in remote areas of Australia.

9 CHAPTER 9. DISCUSSION

9.1 Overview

In this chapter I will present the overall results of the research under the headings of ‘Primary Health Care’, ‘Indigenous Knowledge as Authoritative Knowledge’, and ‘Computer Mediated Communication’. I will then provide a discussion about the research approach used. This will demonstrate how much of the learning and knowledge generated was gained through the processes that were employed in the research, namely the engagement of community individuals and practitioners, with researchers (Ivanitz, 1998; 1998). The limitations relating to performing PAR in the remote setting are presented here. The limitations of each of the case studies have already been presented.

9.2 Primary Health Care

To achieve the goals of community involvement and control, which can lead to health improvement, health professionals need skills in primary health care approaches, cultural sensitivity and working collaboratively with community members (Eckermann et al., 1998; National Rural Health Policy Forum & NRHA, 1999). The literature review in Chapter Two, confirmed by the research in Case Studies Three and Four, highlighted the lack of resources for health practitioners in two of these key areas. There is a lack of cultural awareness training and few resources available to enhance consumer participation in health care planning in the remote setting. I will discuss these two areas in more depth below.

9.2.1 Cultural Awareness

Inadequate understanding of the Aboriginal world view, cultural beliefs and practices is thought to be a central feature of the inability of service providers to provide effective health care (Eckermann et al., 1998; National Aboriginal and Torres Strait Islander Health Council, 2000; Trudgen, 2000). Case Study Three described a process whereby Aboriginal women joined with the researcher and practitioners to develop a resource that described childbirth beliefs and practices. The women identified the information that was gathered and documented as being important for health practitioners to understand and access. The feedback from the website and the responses from the practitioners who reviewed this site were very positive. However a primary health care approach to

planning and providing maternity services means more than simply accessing the stories and learning about the culture of Indigenous women. Part of the powerlessness of oppressed and minority groups is that their voices go unanswered and their belief systems are not recognised (Pyett, 2002; Pynch & Castillo, 2001). In line with primary health care principles, the National Aboriginal and Torres Strait Islander Health Strategy insists that Aboriginal peoples' voices are not only heard, but acknowledged, and incorporated into the planning and provision of services (National Aboriginal and Torres Strait Islander Health Council, 2000; WHO, 1978). These principles led to the development of the Guide that was presented in Case Study Four and is discussed below.

9.2.2 Consumer Participation in Health Care Planning

There is strong evidence to support the value of consumer participation in health care planning (Crawford et al., 2002) and an identified lack of resources to guide this process in the remote Australian setting (DHAC, 2000). These factors result in the lack of culturally sensitive and socially responsive models of care, and negatively affect the relationship between community members and health care providers (Lowell, 2001; Trudgen, 2000). Results from this research show that both practitioners and community individuals believed this situation was evident in Maningrida. Case Study Four described the development of a resource to enhance consumer participation in health care planning. It was planned as a strategy to increase the likelihood of the women's voices being heard and acted on.

The Guide was designed to assist in the orientation of practitioners to the community in which they work. The short-term evaluation showed that the practitioners found 'cultural learning' the most valuable aspect of this directed process. The Guide is to be incorporated into the orientation program that was recently revised (end 2004) by the Department of Health and Community Services in the NT. The Guide directs practitioners to engage with the women in the community, in particular those who are interested in, and influential on, matters of pregnancy and childbirth. Additionally the Guide enables the participation of women themselves, in the planning of their maternity services. The Aboriginal women and the professionals who participated in the evaluation, believe this was achieved. I believe longer term evaluation would show that the communication and negotiation necessary to complete the Guide would increase the cultural learning by

practitioners, giving them a greater understanding of the different views and expectations of maternity care. On communities that support the Strong Women Program, the Guide could provide a framework that enables the Strong Women Workers to have greater input into the planning of maternity services, something that is not occurring well in most communities at present. Longer-term evaluation is necessary to see if the aim of greater community engagement and influence on health care planning can be achieved.

Joint planning documents, such as the Guide, cannot affect change in and of themselves. There must be high-level support for this type of consumer participation to occur, with resources in place to implement recommendations. In fact, using this document without further implementation of the joint decisions that are made, will likely lead to increased mistrust in the health care system (L. Smith, 1999). Given the history of Aboriginal affairs in this country, it would be foolish to suggest that policies will change, based on the participation of consumers alone.

The evidence to support consumer participation in health care planning is strong (Crawford et al., 2002), with increasing evidence that a lack of control over one's life and ineffective self-management are important determinants of health in disadvantaged populations (Pincus et al., 1998). Incorporating resources such as the Guide into health centre business planning, performance review and annual reporting, or an orientation schedule are strategies that would embed this resource into routine health care provision. This highlights the importance of including senior stakeholders as research participants, as they are able to influence the implementation and acceptance of these strategies.

9.3 Indigenous Knowledge as Authoritative Knowledge

Authoritative knowledge is described by Jordan (1993) as the knowledge that counts, the knowledge on which decisions are made and actions taken. Jordan (1997), discusses the domain of childbirth and how many different knowledge systems exist around this particular domain. Some knowledge systems carry more weight than others, either because they are seen to be more appropriate or they are believed and enforced by those who are more powerful, or for both of these reasons (Jordan, 1997). Often, as one knowledge system becomes more powerful, the others are devalued, sometimes to the point where they are no longer heard at all (Jordan, 1997). This is what has occurred for

Aboriginal women in Australia, who have been birthing on their land for 60-120,000 years (Broome, 2002). Their collective knowledge and wisdom have been passed from generation to generation, through the elders in the communities and the stories that are told. However, the knowledge and wisdom of the elders, traditionally always present in the birthing environment, and still important to Aboriginal women, have not been incorporated into current maternity service provision. This is despite specific requests that have been carefully documented in numerous government sponsored reports (Biluru Butji Binnilutlum Medical Service, 1998; B. Carter et al., 1987; Fitzpatrick, 1993; Kildea, 1999; Senate Community Affairs References Committee, 1999). One consistent finding across all of these reports, confirmed by the fieldwork conducted during this research, is that some Aboriginal women still want to birth in their own communities, believing it would improve health outcomes.

In Australia today, key decision-makers claiming the authoritative knowledge in the domain of childbirth, for example, obstetricians and health bureaucrats, believe it is 'safer' for women from remote areas to give birth in regional settings. So pervasive is this generalised view that it is difficult to find it codified or laid down in policy documents, even though this stance drives the resourcing of remote health centres and results in the removal of women to regional settings for birth. This belief is defined within each individual's own cultural framework, where the authoritative knowledge in many cases regards a hospital as the safest place for birth. This is despite evidence to the contrary (Bastian et al., 1998; Campbell & Macfarlane, 1994; Olsen, 1997; Olsen & Jewell, 1998; Wiegers et al., 1996). The reality of authoritative knowledge is that it is not necessarily correct, nor evidence-based, rather it is persuasive and more powerful (Jordan, 1997). Even so, for some women, the knowledge of their elders is more authoritative, as evidenced in some cases, by their resistance to Western antenatal care and their choice to birth in their communities.

It is clear, that for Indigenous women, current policies and health status have resulted in morbidity and mortality rates that do not equal those of other Australian women. Neither do they equal those of Indigenous women from equivalent countries. It could be argued therefore, that long-term strategies to improve Aboriginal health must include the knowledge and wisdom of the Aboriginal peoples. Their voices must be recognised as

contributing to the authoritative knowledge on which childbirth services are planned and enacted. Efforts to improve the health of Aboriginal Australians must encompass their holistic definition of health, which includes the social, emotional, spiritual and cultural well-being of an individual (National Aboriginal and Torres Strait Islander Health Council, 2000). Additional factors that must be incorporated include Aboriginal peoples obligations to the land, their culture and their people, and avoidance of situations that can cause shame (Maher, 1999; Morgan et al., 1997). This is Aboriginal authoritative knowledge that is currently ignored in maternity care systems in Australia.

To Aboriginal Australians, birthing is 'women's business', and when not performed in a culturally safe manner, this can present grave risks to both the woman and the newborn baby (B. Carter et al., 1987; Fitzpatrick, 1993; Kildea, 1999; Mills & Roberts, 1997; Rawlings, 1998; J. Roberts, 2000). When a person's cultural norms, values and attitudes are not recognised, they may experience 'cultural danger' (Dowd & Eckermann, 1992). In fact, some claim this cultural danger is the reason for the higher rates of mortality and morbidity in Indigenous Australians today (B. Carter et al., 1987; Mills & Roberts, 1997; Rawlings, 1998).

Aboriginal women have identified the elements they consider important during birthing. These were clearly documented in the literature review, confirmed in Case Study Three, and represented on the Birthing in the Bush Website. They include: the importance of choice regarding place of birth; support in labour from family members; birthing on their land; the absence of men in the birthing environment and appropriate care of the placenta. Yet many of these elements are not considered in the 'risk equation' that policymakers and professionals use when deciding how to provide birthing services. These women's voices are not yet incorporated into the authoritative knowledge around birthing services.

Authoritative knowledge is socially constructed (Jordan, 1997) and while Aboriginal women's voices are being ignored and suppressed, they are unable to participate in the formation of authoritative knowledge in the domain of childbirth practices. Part of this construction is defining risk and safety in childbirth. This has clearly been debated in the Canadian North (Baskett, 1978; Jasen, 1997; Kaufert & O'Neil, 1993; O'Neil & Kaufert, 1995), and has also been articulated in some Australian reports (Biluru Butji Binnilutlum

Medical Service, 1998; B. Carter et al., 1987; Fitzpatrick, 1995; Kildea, 1999; 2003; King et al., 1998; NT DHCS, 1992; Senate Community Affairs References Committee, 1999). However, there has not been sufficient open dialogue in Australia around risk construction and its importance in the birthing environment, particularly for Aboriginal and Torres Strait Islander women. Imposing ideas and services that are guided by the current Western medically dominated authoritative knowledge has not seen the improvement in mortality and morbidity that was expected. It is time to listen to Aboriginal women and respect their ability to define risk, and make decisions based on their own specific needs.

International evidence suggests that approximately 15% of women will have a serious complication during pregnancy or birth (MacDonald & Starrs, 2002b). Due to difficulties of predicting who these women will be, the Family Care International and Safe Motherhood Inter-Agency Group have suggested key elements for preventing and managing these complications. These include: developing a relationship with the woman and her family in the antenatal period (continuity of care), discussing relevant experience or knowledge, enabling cultural norms and expectations, open communication and the acknowledgement of differing views and expectations (MacDonald & Starrs, 2002a).

The above points provide a framework for moving towards a safer birthing environment in remote Australia. The strategies developed in the case studies are the first steps towards this occurring. Enabling cultural norms and expectations is difficult without knowledge of the history and traditions that inform those norms (Dowd & Eckermann, 1992). The *Birthing in the Bush* Website was developed with Aboriginal women to inform practitioners of the cultural norms, views and expectations of the women from the Maningrida region in Arnhem Land. The women in this area do not presume to speak on behalf of others. They stressed individual choice and involvement in decision-making as important concepts. Using the Guide in remote communities would assist practitioners to learn the cultural views important to each particular community. Both the Guide and the Website included clinical information pertinent to the remote Australian maternity care context, as a means of providing the latest evidence around maternity care. The provision of this online resource library with current guidelines, research and reports also provides

the remote based practitioner with some of the resources necessary to provide safe, contemporary, evidence-based practice.

Internationally there are different opinions as to whether Indigenous peoples should make alliances with non-Indigenous people to further their goals (L. Smith, 1999). I would argue that these alliances are essential to progress towards the provision of birthing services in remote Australia. This thesis highlights that the voices of Indigenous Australians have not been strong enough to this point, to affect such a radical change on their own. Multiple national reports and consultations have called for progress towards the provision of birthing services in remote areas and yet a few changes have been implemented (Biluru Butji Binnilutlum Medical Service, 1998; B. Carter et al., 1987; Fitzpatrick, 1995; Kildea, 1999; King et al., 1998; NT DHCS, 1992; Senate Community Affairs References Committee, 1999). In Australia today it is often non-Indigenous persons who influence policy or who can affect reform and assist Indigenous voices to be heard. This was evident when I was working side-by-side with Molly Wardaguga. Together we were able to give a louder voice to the Maningrida women.

Progress is being made towards the introduction of community-based, woman centered midwifery continuity of care services around the country. These are being developed as a result of midwives working together with consumers. However, few of these models address Aboriginal women's concerns and none address the needs of remote Indigenous women. Internationally, midwives are defending traditional Indigenous birthing knowledge and systems, as they themselves are becoming more political, articulate, organised and educated (Davis-Floyd & Davis, 1996). This alliance of midwives and Aboriginal women should occur in Australia as a matter of urgency.

Using the Inuit experience as a guide and an example of a successful model where Indigenous voices have influenced authoritative knowledge (M. Chamberlain, 1997; M Chamberlain & Barclay, 2000; Morewood-Northrop, 2000; Rawlings, 2000; Tookalak, 1998), Australians could work together towards a service that better suits women and their families. The strategies that are being used by the Inuit could be useful in the remote Indigenous Australian context. As suggested by Smith (1999), it is important for Indigenous peoples to start sharing information about what 'works' in their setting, so

others can see if it works for them. Smith (1999) also suggested developing strategic alliances and sharing international protocols, which could be applied to birthing services in the remote setting. Building alliances between Aboriginal and Inuit people could assist remote Australian communities to move towards the goal of birthing on the lands. This could be achieved through international networking and communication to share ideas, protocols, resources and strategies to affect change. Computer mediated communication could support this process.

The literature from the Canadian North gives some indication of how the policy of routine evacuation for childbirth was turned around. It is clear that some of the key factors included: self-determination and land rights; local activism and political pressure; regaining control of health funding; open dialogue around the construction of risk; alliances with academics and other non-Indigenous people, and positive media reports (M. Chamberlain, 1997; Daviss, 1997; Kaufert & O'Neil, 1993; MacDonald & Starrs, 2002a; Morewood-Northrop, 2000; O'Neil & Kaufert, 1990; 1995). Equally important, I would suggest, is the training of Inuit midwives, on site in their remote communities, and the involvement of men whose role incorporates the provision of nutritious food in pregnancy (O'Neil & Kaufert, 1995).

Without comprehensive changes to maternity services in the rural and remote setting, there will probably not be significant changes to Indigenous Australian birthing outcomes. Experience shows that these changes need to incorporate the wisdom of the elders and the voices of the women, before a difference is seen. The following factors contribute to Western hospitals themselves being unacceptably 'risky' places for birth: the lack of culturally safe models of care; limited interpreter services; minimal social support in labour, one to one care in labour and models that support continuity of care; and a lack of accordance to cultural beliefs and practices.

9.4 Computer Mediated Communication

The 'information revolution' is influencing economics and the day-to-day living of many individuals on a global scale (P. Evans & Wurster, 2000). Income, education and race are major variables influencing the distribution and access to this technology worldwide (Pandey et al., 2003). Australia has the added 'digital divide' between urban and remote

settings (Estens et al., 2002; Norris, 2001). There is much money being spent in this area, and it therefore seemed reasonable to assess the feasibility of using information technology to reduce the isolation of remote maternity service providers. The research has identified potential barriers to the use of information technology by remote practitioners, which will also affect the utility of the resources that were developed.

One of the major challenges to researching computer mediated communication is the rapid change that is occurring in the field (Norris, 2001). This was particularly evident over the lifetime of the research as participants who initially had limited or no access to the Internet were purchasing their own computers and going 'online' at home in the remote setting, albeit not without difficulties. Additionally, during the course of this thesis, the NT has seen the rollout of satellite communications to remote health centres with a strategic plan aiming to provide broadband services to many remote centres by 2008 (Northern Territory Government, 2003).

This thesis highlights an ad hoc approach to the provision of computer mediated communication infrastructure in remote health centres. The participants were relying on communication media that were at times little understood, unreliable and difficult to access. Some health centres had the equipment but as staff had not received the necessary education and training, they were unable to benefit from this form of communication. Other areas had both the equipment and staff with technological know how, but were unable to utilise these resources as they had limited access or were not provided with 'log in' addresses. There were reports at each end of the spectrum: those who had unlimited access to the Internet any time of the day in both the home and the health centre, and those who had neither the equipment, technological know how, nor the desire to access the Internet. Recent documents from the NT suggest the government is aware of this situation and striving to address it (Northern Australia Business Services et al., 2003; Northern Territory Government, 2003).

Results from this research clearly showed the potential of web-based resources in reducing the isolation of the remote practitioner. Nonetheless, difficulties in '*finding the time*' for self education and primary health care activities were often a barrier. These results are not surprising given the health statistics and resourcing available in remote

Australia. This is of particular concern for the people in Indigenous communities in the very remote setting. They are less likely to have inpatient services, on site doctors, community health centres or allied health personal, when compared to non-Indigenous communities of the same size and remoteness (K. Kelly, 2004). Additionally the death rate in these communities is 50% higher than that of the average Australians (AIHW, 2003d). This gives some indication of the health needs of these communities, where the staff turnover can be up to 300% (K. Kelly, 2004). These statistics are stark reminders of the context for this research in which the service providers themselves identified that making time for primary health care activities will ultimately reduce their acute care workload. They also recognised that they cannot do this without policy guidance, further resourcing and management support. Once again, it can be said that the management support needs to be at a senior level.

The utilisation of the resources that have been developed through this doctorate is dependent upon the remote practitioners being able, and wanting, to access them. The remote and rural health workforce is comprised of RANs (50%) and AHWs (45%) (CRANA, 2004), with the RANs predominately white, female, on middle incomes and many with postgraduate qualifications (AIHW, 2003c; MI Taylord Services, 2000). International research has shown increasing numbers of women accessing the Internet, though still not in equal numbers to men (Norris, 2001). This is an important factor when performing research with a predominately female workforce. The average age of Australian midwives and nurses is over 40 years (Australian Health Workforce Advisory Committee, 2002), making generational differences in accessing the Internet another important factor to consider (Norris, 2001). One further factor is the inequity in the provision of rural health support and education funding. Rural and remote workforce doctors received 49% of the rural health support funding and make up 7% of the workforce, whereas midwives and nurses provide 90% of the health care yet receive 1% of funding (Goldman, 2001). Clearly more funding is needed to support the nursing and midwifery workforce with some of the funding being required in education, training and support for the use of information technology.

Technology is advancing at a rapid rate and it is possible that the health sector has not fully realised the potential of how it can support staff who are isolated from current

educational updates, guidelines, research and their peers. Alternatively, there may be many within the health sector who do understand this potential, but perhaps do not have the resources or the positions of influence to make a difference. Additional to education and training, the remote health centres require greater resourcing to enable staff to perform this sort of activity. There needs to be clear strategic direction at policy level whereby all stakeholders work together to achieve mutually derived goals.

There is cause for optimism, as evidenced by the 2003 release of a five year strategic planning document for the NT (Northern Territory Government, 2003), which aims to provide broadband access to remote communities in response to extensive reviews of telecommunication services in remote areas (Northern Australia Business Services et al., 2003; Peter Farr Consultants Australasia, 2003). However, the reports have not clearly articulated how the education, training and support needs of these communities will be met.

An organisation such as CRANA, whose core business is to support remote area practitioners, could become a leader in the field of remote area communication for health care providers. The organisation already has a reputation for delivering targeted education and training to remote health practitioners, and could pursue this goal if it had the resources. Evans and Wurster (2000) discuss a 'deconstructed world' where definitions of leadership are evolving and changing. They state that leaders are still responsible for creating a culture within an organisation and that culture cannot be displaced by, and may even thrive in, the technological era (P. Evans & Wurster, 2000). Leaders, together with the membership, are responsible for creating an organisations' strategic plan and in these times of rapid change, it is often those with vision, unafraid of taking a chance, who will lead successful organisations (P. Evans & Wurster, 2000). This highlights the importance of working closely with the organisation's Director and Board Members. This approach could have been strengthened during this research, as, although the dissemination and promotion strategy specifically targeted CRANA members, reports to the CRANA Board may have had more success in engaging their influence.

Strategy, leadership, and communication are crucial elements in this world where 'bricks and mortar' are no longer an essential part of organisations (P. Evans & Wurster, 2000). It

is in this culture that CRANA has the opportunity to thrive, as the organisation has never depended on 'bricks and mortar', but evolved as a grass roots organisation using radio, telephone and informal networks. Funding has recently been obtained by CRANA to provide active support to maintaining and increasing the size and scope of the Resource Library and to manage the Online Community. The funds will only cover part-time employment of one person and will not begin to address the overall education and training requirements of remote practitioners. The latter task cannot be accomplished in isolation and perhaps the organisation needs to adopt a more vocal advocacy role, demanding better information technology infrastructure for RANs in the workplace. A comprehensive, coordinated approach to this issue would be required.

There are several other factors that should be considered when looking at the provision of information technology infrastructure, support and education to remote Australia. Australians living in remote areas suffer significant economic and social disadvantage, with poorer health outcomes than their urban counterparts (AIHW, 1998; 2003d). Given the already established link between poor access to communications and broader social disadvantage (DCITA, 2003b), this is an area that needs high-level coordination and appropriate resourcing. Resources are needed to bridge the social and digital divide. Information technology alone will not provide the answer to the social divide between Indigenous and non-Indigenous Australians. A comprehensive approach, incorporating the social determinants of health and the provision of health services must be taken.

9.5 The Research Approach

Historically, one of the major criticisms of action research has been the concentration on action, to the detriment of research (Kock et al., 2000), and I found this to be one of the most challenging components of the research process. The action cycles were very time consuming as I concentrated on gathering data and developing resources. I continually needed to stop, critically reflect with participants, and document thoughts and findings. Through the reflection process, knowledge was produced that was then used to inform the development of the resources aimed at improving practice (McTaggart, 1989). It was the knowledge developed by the PAR teams in particular, that led to the production of the resources: the Resource Library, the Birthing Business in the Bush Website, the Primary Health Care Guide, and to a lesser extent, the Online Community. Recognising, valuing

and sharing each participant's knowledge, I aimed to enrich rather than displace the individual voices from the diverse group of participants (Pyrch & Castillo, 2001). Embedding the evaluation framework in each of the cases from the beginning, is a natural component of PAR, and was assisted by the reflection implicit in this approach (McTaggart, 1999). Ongoing evaluation and reflection were particularly important in the Maningrida community, and provided a framework for examining the ethical processes and my own subjectivity (L. Smith, 1999; Tjikalyi & Garrow, 1996).

Dissemination of the knowledge, another important element to the research component, has been an ongoing strategy throughout the life of the project. An important factor in the dissemination of research knowledge is that it is meaningful to the participants and delivered in a form that can be understood (Udas, 1998). Though refereed journal articles are important for professional development, the research participants in this study did not often access them. However, the Resource Library has made journals and reports more accessible to some. Thus I needed to use a dissemination strategy that would be accessed by local Maningrida residents, remote practitioners, other stakeholders and participants. A wide range of strategies were used to achieve this aim including:

- Information sessions held at the Women's Centre
- Taking the 'book' and laptop computer with the Website on it around the camps
- Stories and articles for: the local Maningrida newspaper; the CRANA newsletter (The Outback Flyer); an NT Health publication (The Chronicle); Midwifery newsletters (state and national); Maternity Coalition newsletters; the Aboriginal Health Worker Journal; and, the Australian Nurses Journal
- Conference presentations included: CRANA Conferences; Midwifery Conferences (international, national and state); the National Rural Health Alliance Conference; an Indigenous Symposium; the Australian Rural Nurses Conference; and, the Perinatal Society of Australia and New Zealand Conference
- Newspaper and radio interviews

The dissemination strategy was a key factor in the success of Case Study Three. Specifically, it was used to increase the reach of the Aboriginal women's voices to inform others about their cultural beliefs and practices, as well as their desire to 'birth on their

land'. Using the Internet as a vehicle for dissemination enabled Maningrida women's voices potentially to reach some of the remotest areas in the world (P. Evans & Wurster, 2000).

The other factor important to dissemination, was that many of the participants did not speak English as their first language, thus the material needed to be meaningful to them (Udas, 1998). This was one of the reasons for such an extensive use of photos and 'plain English' in the resources that were developed for the Maningrida community and the stories for the Maningrida newspaper. An additional part of the strategy included discussions with the school to arrange translation of the women's stories into two other languages; however, the staff position at the Literacy Centre, like so many in the remote setting, remains unfilled (February 2005). The report for the funding body was distributed to many of the research participants and stakeholders. An additional version of the report was collated and distributed to Maningrida organisations and residents using photos, diagrams and many of Molly Wardaguga words.

9.5.1 The Indigenous Co-researchers

Working alongside Aboriginal women as co-researchers and full participants in the research, rather than as 'outsider' participants or consultants (Henry et al., 2002), were critical elements in Case Studies Three and Four. When participants are involved as co-researchers they are in a better position to guide the research (Henry et al., 2002). It enables them to challenge and thus strengthen data interpretations, or to challenge the researcher (Dick, 1999). The leadership from Molly Wardaguga, Margaret Duwamul, and other Indigenous members of the PAR team, ensured the Indigenous voices were both heard and respected and that the praxis was relevant to their needs (Henry et al., 2002). Molly and Margaret both retired SAHWs, had the added advantage of having 'inside' knowledge of both the community and the health centre. They had spent many years orientating health practitioners to the Aboriginal world view that impacts on the health of the population in a myriad of ways, often not easily understood by the practitioners. Additionally they understood the demands of the health centre, the acute workload and how the practitioners struggled to apply a primary health care approach in this setting.

Also integral to the success of these Cases Studies was the involvement of community members throughout the research process. This occurred from the early consultation stage, prior to funding applications and ethics submissions, and continued through to the dissemination of results. The linguistic diversity present in Maningrida meant it was particularly important to have women from the different language groups represented in the PAR team. The subsequent data collected reflected the diversity in the cultural beliefs and actions in this small multilingual community.

Molly Wardaguga is a very strong community leader who, with members of the PAR team, made many decisions about the path that the research process should take. I will never know the finer nuances of how this played out within the community, or even within the PAR team. What was clear was the respect that she had from a wide variety of community members, across all language groups. This did not diminish the role of other PAR team members whose involvement was essential to ensure it was not only the goals of one particular stakeholder that were being realised (Wadsworth, 1998). Working side-by-side with Molly and other Aboriginal women meant the research process had to be valuable for them as well as myself. This needed continual discussion, reflection and evaluation to ensure it was occurring.

As an 'insider' researching in her own community, Molly was continually talking to others about the process. Many times I would ask questions that she would answer only after talking to others within the community. Often this would involve women who were outside Molly's family networks, together with members of the PAR team. At times it was weeks before my questions were answered. Smith (1999) describes this constant need for reflexivity as essential, especially when one has to live with the consequences of one's actions in the community on a day-to-day basis.

As described by Smith (1999), I quickly learnt that listening to stories, rather than structured interviews, was an appropriate way of gathering data. I needed to continually revise my approach to be responsive and learn more from my co-researchers. This process increased the co-researchers' influence over the research and resulted in the storyteller, rather than the researcher, controlling the process. This is consistent with the tenants of Indigenous research, and something I understood more as the research progressed. It was

very important not to analyse the women's stories but to document them as told. The researcher has the power to distort, embellish, misconstrue and make assumptions (L. Smith, 1999), and I did not want to risk any of this occurring. Guidance from, and continual checking by, the PAR team assisted the process of reorganisation as sections were placed together under subject domains. This reflection ensured the process was 'rigorous' in a Western research sense, true to the PAR method, whilst acknowledging Aboriginal knowledge of the Maningrida region as the underlying framework for this part of the work.

9.5.2 The Role of the Researcher

There were times when I questioned my participation as a non-Indigenous researcher performing research in an Aboriginal community within a culture I would never truly understand (L. Smith, 1999). This was particularly so when we received negative feedback about the stories on the website from another Aboriginal Australian woman. In spite of this, several factors reassured me, and confirmed the suitability of PAR in this particular community. One was Molly Wardaguga's strong belief and encouragement that we were doing the right thing, and another was the belief that, if we did not do it together, then it may never occur at all. One of the underlying philosophies influencing PAR is the recognition that minority, or oppressed groups, may be disadvantaged and often unable to either articulate, or realise their goals (Ivanitz, 1998). Working side by side with Molly enabled us to articulate and work towards reaching her goals. This was seen to be appropriate by the community as evidenced by the following quotes:

Black people coming together with Balanda ... that is what we call Molly and Sue working together - that is the proper way (Kildea et al., 2004, Birthing in the Bush Website: Introduction: How we did it)

Working side by side can assist health professionals to close the gaps between the perspectives of community members, policy development, research and practice (Israel et al., 1998; Pyett, 2002), which was why it was important to have all these groups represented as participants in the research (Wadsworth, 1998).

When reporting on PAR, it is important that the researcher makes their values and beliefs explicit throughout (J. Meyer, 2000). The method used to facilitate this process was to keep a self-reflective journal and document excerpts from field notes in the presentation

Discussion

of the case studies (J. Meyer, 2000). One of the factors I believe made a significant difference to the participation and responses from the participants was being known and trusted by many of them prior to the research (Wadsworth, 1998). Previous work experience and relationships of trust placed me in a fortunate situation as the researcher within these case studies (Wadsworth, 1998). I was known to, and accepted by, the PAR team, many of 'the researched' and 'the stakeholders'. When trying to recruit those I hadn't met before, I would seek to establish my credibility by giving a brief overview of my working history. I believe this led to greater participation and entitled me to share 'insider' knowledge throughout the research process.

The extent of participation by individuals in the research teams varied across the case studies and if measured on a continuum was greatest in Case Study Three (Birthing Business in the Bush Website) decreasing through to Case Study One (The Resource Library), then Case Study Four (The Primary Health Care Guide), and finally Case Study Two (The Online Community), which was the most challenging of all. In Case Study Three, where participation was the greatest, my role was more of a facilitator, working towards the goals of the PAR team, in particular Molly Wardaguga's goals. However in Case Study Two, where there was least participation, I was driving the process, always struggling to achieve greater interest and more participation in the online community. Wadsworth (1998) comments that greater distances between the various research participants, and between the participants and the process of inquiry, can result in difficulties performing PAR. Certainly the distance was a factor in the research. In Case Study Three, the majority of participants were in Maningrida and the research was often conducted when I was on-site. Case Study Two however, relied on participation across the NT, with contact by phone or email, rather than face-to-face. The difficulties with information technology in the remote setting may have influenced the success of this case study. Another factor that may have been important was the increased interest from the participants in the cultural resources when compared to the online community. Though the aims of this case study were not realised during this research, the knowledge and learning derived from the research process will contribute to the growing body of knowledge around Online Communities.

It is, of course, important to determine if the research has resulted in positive outcomes for the participants (Ivanitz, 1998). This is difficult to answer, as there were so many participants across the four cases. Feedback from the remote practitioners and stakeholders suggested that the resources will be useful if they can be accessed, and if the practitioners have time to use them. Molly Wardaguga's original goals were realised with the production of the book, which has been submitted to an Indigenous publishing house for publication. I was concerned that involvement in the research could lead to an increased level of frustration for Molly as she is unable to make suggested changes occur, even in her community (Wallerstein, 1992). She did, however, have an accurate appraisal of her ability to affect change, expressed one day when she was tired and discouraged and said to me, 'What's the point – you mob just don't listen!' I was hoping to show her that we could listen, throughout this research.

Participatory research inevitably changes the researcher, sometimes in very profound ways (Brydon-Miller et al., 2003; Getenby & Humphries, 2000). This was certainly the case for me, and I believe also for Molly Wardaguga. Case Study Three was the most important 'case' for my personal development as a researcher. This experience included specific learning on how to perform research in this particular cross-cultural setting. Most importantly for me was the acceptance I received from the community, evident by their willingness to share cultural knowledge and expertise. Though I have always been interested in this area, I now have a much stronger commitment to honouring the lived experience and knowledge of the women from this community. Additionally, I am committed to assisting wherever possible, in progressing the goal of returning birthing to remote communities. There will be ways in which the research will have changed Molly Wardaguga too, and many of these I will never know. However, witnessing her speak so proudly, to an audience of over 700 people at a Sydney conference, was a very significant event for both of us (Wardaguga & Kildea, 2004).

9.6 Limitations of the Research

Most of the limitations of this research have been addressed in the individual Case Studies. The major limitation related to the difficulties conducting PAR across vast geographical areas, whilst relying on computer mediated communication. Some people who initially expressed interest were unable to participate, as they did not have sufficient

technological equipment. Insufficient hardware, training, education and support in this area decreased the accessibility of all four resources that were to be accessed through the Internet.

Ironically, one of the key challenges requiring constant perseverance throughout this project was communication. Simultaneously working on the four case studies, I relied on intermittent field trips and phone calls to touch base with some of the participants, and maintained email contact with others. Unfortunately, I did not keep a record of the many phone calls and emails to participants (deleting large volumes of these as I went along). However, a total of 527 sent emails and a further 384 received emails were filed, with multiple replies recorded only once. The fact that there were some participants I have never met face-to-face is testimony to the capabilities of computer mediated communication to engage people and retain participation in the remote setting.

Another limitation was the involvement of the stakeholders who were not involved in the day-to-day running of the research. I needed to work hard to encourage and maintain their participation and ensure they were kept informed of the progress. In the early stages of the research I underestimated the importance of this group. My communication with them was erratic and opportunistic as I concentrated on maintaining involvement with the PAR team and 'the researched' groups who were dispersed across the NT. The effort to sustain communication with both these teams across the four cases, whilst simultaneously developing the resources took most of my time and energy. As the resources were being developed I realised that it was members of the stakeholders who would have greatest influence over the uptake of the resources in the remote setting. Decisions made by this group would influence the support from the managers and subsequent support to the practitioners, particularly if the resources were to be used for orientation or business planning. It was therefore essential to involve them in the process, incorporate their feedback and promote a feeling of ownership of the resources.

A limitation of the literature review is the lack of reporting on the use of computer mediated communication to support practitioners in the international remote context. However the focus of the research was in the NT, with its specific resource base and policy environment, and as such, this can be justified.

9.7 Conclusion

Service providers who work in remote areas face challenges not present in urban settings. They are isolated from expertise, technical resources and professional support, which in turn affects the recruitment and retention of clinical staff and practitioner satisfaction (ANF et al., 2000a; Barclay et al., 2002; C. L. Roberts & Algert, 2000). The service providers clients have the worst health and living conditions in Australia with high unemployment and low education levels (ABS, 2001). Many NT remote communities have strong cultural systems generating their own health beliefs that conflict with Western medical understandings (Devitt et al., 2001; D. Smith et al., 2001; Trudgen, 2000). It is assumed, despite these factors, that these health professionals will be able to move from urban to remote settings and be effective. Many practitioners are unaware of how their own personal and professional cultures guide their thinking and behaviour and this inhibits their clinical and social effectiveness in remote Aboriginal services (Dowd & Eckermann, 1992; Eckermann et al., 1998; Lowell, 2001; D. Smith et al., 2001; Trudgen, 2000).

This chapter has discussed the research approach and some of the knowledge gained from its use in the remote context. The overarching frameworks of primary health care, Indigenous knowledge as authoritative knowledge and computer mediated communication contributed to the research and the resource development. Those who evaluated the resources believe that they could assist the remote practitioner in this challenging working environment to strengthen their capacity to improve the safety and quality of remote area maternity services in Australia. Recommendations to achieve this goal follow the conclusion to the thesis, which is presented in the next chapter.

10 CHAPTER 10. CONCLUSION

This research has confirmed that the provision of maternity services across remote Australia is a complex endeavour. Australia's statistics for Aboriginal and Torres Strait Islander women and babies depict a situation that is not improving and needs urgent attention. The poor state of health within this population of people deteriorates with remoteness, and at times reflects poor quality care. Remote maternity service practitioners

Conclusion

face many challenges when working in this milieu. In particular, many practitioners are isolated from current evidence-based literature and guidelines, as well as from their peers. A significant number are poorly prepared for the cultural context and few have received the training or resources to assist in the process of community engagement and participation in health care planning. This thesis has argued that strengthening the capacity of these practitioners is an appropriate investment to improving the safety and quality of remote maternity services and may help to address problems of recruitment and retention of these workers.

Theoretically, computer mediated communication could be an appropriate tool to deliver resources and reduce various forms of isolation. Investigating this issue was one aim of this research. A second aim was to identify and make visible the concerns of Aboriginal women who live in remote areas, who are not currently satisfied with maternity services. Utilising a research process to test these aims also allowed examination of the contextual factors and tested the effectiveness of the strategies employed.

This research has confirmed that the educational preparation of some remote health practitioners, and the organisational systems in which they work, make it difficult to provide care which is socially or culturally appropriate (Dowd & Eckermann, 1992; Eckermann et al., 1998; Lowell, 2001; J. Smith, 2004; Trudgen, 2000). To improve the quality of care they provide, service providers need access to current guidelines, evidence and research as well as training in primary health care and local cultural beliefs. Rarely are these workers taught how to work in partnership with Aboriginal leaders or programs (Kildea, 1999; Lowell, 2001; J. Smith, 2004; Trudgen, 2000).

In response to this, resources developed through participatory processes during this study are a step towards the provision of culturally appropriate, flexible, education, training and networking for isolated practitioners. The Resource Library (Chapter Four) provided those with access to the Internet, a targeted resource available 24 hours a day. Using the principles of 'navigation' and locating these resources in the one area on the Internet, decreased the time needed to find the required material, which is vitally important in this resource poor environment. The Birthing in the Bush Website (Chapter Seven) and the Guide (Chapter Eight) provided opportunities for cultural learning and community

Conclusion

engagement. Research from the Online Community (Chapter Five) has identified certain factors that are necessary for this type of networking to be a valuable means of supporting practitioners.

The digital divide that exists in other areas of the world (Norris, 2001) has also been shown to be evident in Australia. Unless the infrastructure, education, support and training are seriously addressed, it is unlikely that the current generations of remote Aboriginal and Torres Strait Islander adults, and remote practitioners, will benefit from Internet technology. Even so, the opportunities presented by the Internet can be relevant even to those who have limited access and experience with it. This was demonstrated by the Maningrida women's appreciation of their stories being accessible to women all over the world (Chapter Seven).

The research shows that both maternity services and computer mediated communication would benefit from a comprehensive strategic approach. This requires collaboration between all stakeholders, including Commonwealth and State Governments, and Aboriginal community controlled organisations.

Consultations with those who are most affected by the health service, have not been shown to be effective means of influencing service provision. Such consultations must be followed by positive action. It is long overdue for Aboriginal and Torres Strait Islander people themselves to become involved in the decision-making processes that formulate maternity service policy. It is time to incorporate Indigenous knowledge into the authoritative knowledge defining service provision, in an attempt to improve maternal and infant health outcomes.

As midwifery and maternity services respond to a rapidly changing policy and practice environment in Australia, it will be interesting to see how rural and remote areas are affected. If they follow current trends in Australia, and services continue to scale down, then women will need to travel greater distances to access care during pregnancy and childbirth, a normal life event for many. However, there are also opportunities for innovative leadership to develop models of care that are evidence-based and have been

Conclusion

recommended in many government documents. These services are showing success internationally and starting to be seen in some urban areas in Australia (Chapter Two).

The stark difference between Indigenous health statistics in Australia and those in Canada, America and New Zealand must be addressed. There is strong evidence, confirmed in this thesis, to suggest that returning birthing services to the remote communities who are requesting it, will result in a positive impact on maternal and perinatal health outcomes. This would need to be done in a comprehensive manner. Aboriginal communities must control the process, with the provision of training and employment for Aboriginal peoples an integral part of the strategy. It is arguable that healthy women actually risk damage from the services that are provided currently. It is not only the inequity, but a lack of cultural respect, that is seen throughout the health care system in Australia at this time

Offering comprehensive maternity care in selected remote settings could drive the necessary changes in the organisation of care and improve maternal satisfaction and maternal and perinatal outcomes. Such models could also attract midwives back to the workforce and draw innovative practitioners and students to work in the remote setting. The evidence suggests these models would be cost effective (Chapter Two). Such initiatives need to be planned and implemented with the women themselves and supported by those in positions of power and authority. They can only be achieved with appropriate support, resources and the ongoing education of the service providers. This thesis demonstrates the effectiveness of some of the resources that will facilitate these processes through computer mediated communication. However, further resourcing is required. In particular, information technology education and training of the remote workforce. This training must occur simultaneously to the rollout of the telecommunication infrastructure. The energy and enthusiasm of the service providers depict a workforce that is keen and willing to improve, despite the challenging working environment.

This thesis has illuminated the plight of Indigenous women and their care providers and has drawn together a range of initiatives that could go some way towards bridging the

Conclusion

health divide in Australia. The participants in this research gave generously of their time and expertise. All were willing to work together to improve current services.

The Aboriginal women who contributed to this research played a major role in teaching me, patiently and candidly, their cultural norms and expectations. Working side by side we were able to develop resources to improve the safety and quality of maternity care for this group of Australians.

The following page presents recommendations that have resulted from this thesis.

10.1 Recommendations

Invest in the training and support of Indigenous researchers in Australia.

The improvement of maternity service provision in remote Australia must include the training of more Indigenous researchers who are able to perform their own research, in their communities. Most importantly, there must be acknowledgment of the alternative knowledge systems that are operating in many communities and the incorporation of these into the research design, informed by advice and leadership from community individuals themselves. It must not be presumed that Indigenous Australians are a homogenous group in terms of cultural needs, nor that one methodology is all that is needed. Cultural diversity of the Aboriginal and Torres Strait Islander peoples across the country must be recognised and acknowledged (NSW Health, 2004).

Review the resourcing of remote, and particularly very remote, communities at a national level.

The current inequity that exists in the predominantly Aboriginal and Torres Strait Islander communities is cause for national shame and must be rectified. Further publication of this data and lobbying of the Federal government from organisations such as CRANA, the ACMI, the National Aboriginal Community Controlled Health Organisation (NACCHO), The Perinatal Indigenous Network, Maternity Coalition, National Rural Health Alliance, The Australian Medical Association and the Divisions of General Practitioners could assist in the delivery of adequate resources to address this inequity.

Provide all pregnant, remote dwelling women, with care from a skilled maternity service provider.

It is clear from the workforce data presented in this thesis that women in remote areas have poor access to trained maternity service providers. The World Health Organisation recommends the midwife as the most appropriate person to fulfill this role (WHO, 1996). Strategies to provide midwifery care to women living in remote areas must be developed and resourced at a national level. States and Territories within Australia also need to prioritise the provision of a midwifery workforce that can be effective in remote cross cultural locations.

Promote and support remote area staff to undertake self-education and primary health care activities.

Results of this research suggest that remote health centres remain poorly staffed and resourced, overwhelmed with the acute care load, and often having to manage violence in the workplace. In this setting, primary health care activities will probably continue to take second place to acute care responsibilities and staff safety. As a consequence, in some settings primary health care activities may not be performed at all. Despite these barriers, practitioners and women both recognise the need to move towards a primary health care approach. They will however continue to struggle to achieve this aim unless there are systemic changes and high-level support. Appropriate support for service providers who work in these isolated areas is an integral part of providing culturally appropriate, birthing services.

Continuing research on information technology in Indigenous communities.

Computer mediated communication has the potential to offer access to cultural knowledge and learning as well as contemporary clinical guidelines, reports and research. Additionally, it could offer peer support through further development of online communities. Research could be performed with AHWs, who represent 45% of the remote workforce, to explore their comfort and familiarity with information technology. Research in this area could also include an analysis of the resources and skills needed to enable computer mediated communication in the very remote areas of Australia. It would be useful to determine if the demarcation in health service provision, reported between communities predominately servicing Indigenous Australians and those servicing non-Indigenous Australians (K. Kelly, 2004), is further disadvantaged by the digital divide.

Utilise the political influence of CRANA on state and territory governments to highlight the educational needs of remote area maternity service providers.

As an organisation that speaks on behalf of remote area nurses and midwives, CRANA should effectively lobby Commonwealth and State Governments to have their members' educational and information technology needs recognised and addressed.

Utilise and evaluate ‘A Primary Health Care Guide to Planning Maternity Services in Your Community’ as an orientation tool across the NT.

Short-term summative evaluation of this resource provided evidence of its value as an orientation tool. This could be implemented with yearly audits being incorporated into Health Centre business planning. This resource could be rolled out across the NT, being particularly valuable as a tool to strengthen the links between practitioners and the Strong Women Workers in communities that already have this program established. An evaluation framework to assess the impact of the tool in this environment would be advantageous.

Develop strategic alliances between individuals and organisations to progress the goal of the provision of birthing services in remote Australian communities.

To further the goal of providing birthing services in remote communities, strategic alliances between organisations and individuals who share this goal must be built. This would include individuals such as Molly Wardaguga and I, together with organisations such as CRANA, the ACMI, the National Aboriginal Community Controlled Health Organisation (NACCHO), Indigenous organisations, Maternity Coalition, National Rural Health Alliance, Divisions of General Practice and the Australian College of Rural and Remote Medicine. A national workshop or conference would progress these goals and promote collaboration and networking between peak bodies. As consumer demand drives changes in the models of maternity care that are available in Australia, it is important that Aboriginal and Torres Strait Islander women benefit from these changes. Australian midwives could take a leading role in responding to these challenges.

Developing alliances with international communities who have established birthing services in remote areas, such as the Inuit in northern Canada, could provide advice and leadership. Evidence from these communities suggests that the benefits within the communities have been broad reaching, including increased dignity and self-esteem, increased involvement of men in the program and decreased levels of violence and sexual abuse (Rawlings, 2002; Tookalak, 1998). The provision of similar services that might offer such benefits to Australian women should be explored.

REFERENCES

- AbouZahr, C., & Wardlaw, T. (2001). Maternal mortality at the end of a decade: signs of progress? *Bulletin of the World Health Organisation*, 79(6), 561-573.
- ABS. (2001). *The Health and Welfare of Australia's Aboriginal and Torres Strait Islander Peoples* (No. 4704.0). Canberra: Australian Bureau of Statistics.
- ABS. (2003a). *Australian Social Trends, 2003*. Canberra: Australian Bureau of Statistics.
- ABS. (2003b). *Household Use of Information Technology, Australia*. Canberra: Australian Bureau of Statistics.
- ABS. (2003c, 19/12/03). *Population by Age and Sex, Australian States and Territories*. Retrieved 07 June, 2004, from <http://www.abs.gov.au/Ausstats/abs@.nsf/lookupresponses/e82f5eaef6989ef6ca256d820002e73e?opendocument>
- ABS. (2004a, 9.7.04). *Innovation and Technology Statistics Update - Bulletin No. 10, June 2004*. Retrieved 9 September, 2004, from <http://www.abs.gov.au/websitedbs/D3110129.NSF/f128006d2d1e7c10ca2566fd0081ba4b/e9b1dd7088e25cbaca256eca0003a054!OpenDocument#2%20INFORMATION%20AND%20COMMUNICATION%20T>
- ABS. (2004b, 26.5.04). *Year Book Australia, 2003, Aboriginal and Torres Strait Islander population*. Retrieved 24 September, 2004, from <http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/2F6A3D06D66A12A5CA256CAE00053F9C>
- Access Economics. (2004). *Indigenous Health Workforce Needs*. Canberra: Australian Medical Association.
- AIATSIS. (2000). *Guidelines for Ethical Research in Indigenous Studies*. Canberra: The Australian Institute of Aboriginal and Torres Strait Islander Studies.
- AIHW. (1998). *Health in Rural and Remote Australia*. Canberra: Australian Institute of Health and Welfare.
- AIHW. (2003a). *Australia's Mothers and Babies, 2000*. Canberra: AIHW National Perinatal Statistics Unit Perinatal Series No. 12.
- AIHW. (2003b). *Medical labour force 2001*. Canberra: Australian Institute of Health and Welfare.
- AIHW. (2003c). *Nursing Labour Force 2002*. Canberra: Australian Institute of Health and Welfare.
- AIHW. (2003d). *Rural, regional and remote health: a study on mortality (summary of findings)*. Canberra: Australian Institute of Health and Welfare, (Rural Health Series Number Three).
- AIHW. (2004a). *Health expenditure Australia 2002-03*. Canberra: Australian Institute of Health and Welfare.
- AIHW. (2004b). *Rural, regional and remote health: a guide to remoteness classifications*. Canberra: Australian Institute of Health and Welfare.
- Akukwe, C., & Nowell, A. (1999). Essential strategies for achieving durable population-based maternal and child health services. *The Journal of the Royal Society for the Promotion of Health*, 119(1), 42-49.
- AMA. (2003). *Public Report Card 2003 Aboriginal and Torres Strait Islander Health Time for Action*. Canberra: Australian Medical Association.
- American Academy of Family Physicians. (2000). *Advanced Life Support in Obstetrics, Course Syllabus, 4th Edition*. Kansas.

References

- ANF, AARN, & CRANA. (2000a). *Action on Nursing in Rural and Remote Areas, Issues Paper*. Canberra: NRHA.
- ANF, AARN, & CRANA. (2000b). *Action on nursing in rural and remote areas, Vision and required conditions*. Canberra: NRHA.
- ANF, AARN, & CRANA. (2002). *Action on nursing in rural and remote areas, 2002-2003, Recommendations and Action Plan*. Canberra: NRHA.
- Apunipima Council. (2001). *Saving the Knowledge: Memories of Traditional Birthing in Cape York*. Cairns: Apunipima Council, Cape York Health.
- Australian Health Workforce Advisory Committee. (2002). *The Midwifery Workforce in Australia 2002 - 2012, AHWAC Report 2002.2*. Sydney.
- Australian Medical Workforce Advisory Committee. (2004). *The Specialist Obstetrics and Gynaecology Workforces in Australia, An Update: 2003 to 2013*. Sydney: AMWAC Report 2004.2.
- Australian Medical Workforce Advisory Committee and Australian Institute of Health and Welfare. (1998). *Medical Workforce Supply and Demand in Australia: A Discussion Paper*. Sydney: AIHW.
- Australian Rural and Remote Workforce Agencies Group. (2004). *Minimum Data Set Report as at 30th November 2003*. Canberra: ARRWAG.
- Bammer, G. (1997). Multidisciplinary policy research - an Australian experience. *Prometheus*, 15(1), 27-39.
- Banscott Health Consulting Pty Ltd. (2003). *Report of the Review of the Northern Territory Department of Health and Community Services*. Darwin.
- Barclay, L., Brodie, P., Tracy, S., & Leap, N. (2002). *Australian Midwifery Action Project Final Report*. Sydney: Centre for Family Health and Midwifery, University of Technology Sydney.
- Barlow, A. (2001). Evaluation of educational aspects of the New Zealand College of Midwives standard review process. *New Zealand College of Midwives Journal*, 24, 14-17.
- Baskett, T. (1978). Obstetric care in the central Canadian Arctic. *British Medical Journal*, 2(7 October), 1001-1004.
- Bastian, H., Keirse, M., & Lancaster, P. (1998). Perinatal death associated with planned home birth in Australia: population based study. *BMJ*, 317(7155), 384-388.
- Beebe, J. (1995). Basic concepts and techniques of rapid appraisal. *Human Organization*, 54(1), 42-51.
- Benoit, C., Carroll, D., & Millar, A. (2002). But is it good for non-urban women's health? Regionalizing maternity care services in British Columbia. *The Canadian Review of Sociology and Anthropology*, 39(4), 373-395.
- Bergen, A., & While, A. (2000). A Case for Case Studies: Exploring the use for Case Study Design in Community Nursing Research. *Journal of Advanced Nursing*, 31(4), 926-934.
- Berkman, L., & Kawachi, I. (Eds.). (2000). *Social Epidemiology*. New York: Oxford University Press.
- Besley, T., Bennett, J., & Braithwaite, R. (2000). *Connecting Australia: Report of the Telecommunications Service Inquiry*. Canberra: Commonwealth Department of Communications, Information Technology and the Arts.
- Bewley, S., & Cockburn, J. (2002). The unfacts of 'request' caesarean section. *British Journal of Obstetrics and Gynaecology*, 109(6), 597-605.
- Billings, J. (2000). Community Development: A Critical Review of Approaches to Evaluation. *Journal of Advanced Nursing*, 31(2), 472-480.

References

- Biluru Butji Binnilutlum Medical Service. (1998). *Women's Business Meeting, Darwin, Nov 2-3, Report and Recommendations*. Darwin: Danila Dilba.
- Birthnet Pty Ltd. (2001). *Birth.com*. Retrieved 17 March, 2002, from <http://www.birth.com.au>
- Blackwell, S., & Blackwell, R. (2002). Development of a web-based module for obstetrics and gynaecology case presentations. *Obstetrics and Gynecology*, 99(4 Supplement), 27S.
- Blakely, E. (1979). *Community Development Research: Concepts, Issues and Strategies*. New York: Human Sciences Press.
- British Columbia Reproductive Care Program. (2000). *Consensus Symposium Summary*. British Columbia: British Columbia Reproductive Care Program.
- Brocklehurst, P. (2003, 22 February 2002). *Antibiotics for gonorrhoea in pregnancy (Cochrane Review)*. In: *The Cochrane Database of Systematic Reviews 2002, Issue 2*. Retrieved 19.7.03, 2003, from <http://www.update-software.com/clibng/cliblogon.htm>
- Brodie, P. (2002). Addressing the barriers to midwifery - Australian midwives speak out. *Australian Journal of Midwifery*, 15(3), 5-14.
- Brodie, P., & Tracy, S. (2000). *Rural and remote midwifery: What are the issues?* Paper presented at the Proceedings from the 'Childbirth in Isolation Conference' 2-4.11.00, Kalgoorlie, Western Australia.
- Broome, R. (2002). *Aboriginal Australians, Black Responses to White Dominance, 1788-2001* (Third Edition ed.). Sydney: Allen & Unwin.
- Bryar, R. (1999). An Examination of Case Study Research. *Nurse Researcher*, 7(2), 61-78.
- Brydon-Miller, M., Greenwood, D., & Maguire, P. (2003). Why action research? *Action Research*, 1(1), 9-29.
- Burns, C. (1995). *Feasibility Study and Service Plan of Health Services at Maningrida*. Darwin: Menzies School of Health Research.
- Callaghan, H. (2001). Traditional Aboriginal Birthing Practices in Australia: Past and Present. *Birth Issues*, 10(3/4), 92-99.
- Campbell, R., & Macfarlane, A. (1994). *Where to be born? The debate and the evidence* (2nd ed.). Oxford, UK: National Perinatal Epidemiology Unit.
- Carew, M. (n.d.). *Maningrida Arts and Culture*. Retrieved 5 February, 2004, from http://www.maningrida.com/mac/ab_us.php
- Carter, B., Hussen, E., Abbott, L., Liddle, M., Wighton, M., McCormack, M., et al. (1987). Borning: Pmere Laltyeke Anwerne Ampe Mpwaretyeke, Congress Alukura by the Grandmothers Law. *Australian Aboriginal Studies*, 1, 2-33.
- Carter, E., Lumley, J., Wilson, G., & Bell, S. (2004). 'Alukura... for my daughters and their daughters and their daughters'. A review of Congress Alukura. *Australian and New Zealand Journal of Public Health*, 28(3), 229-234.
- Chamberlain, M. (1997, 16-18/4/1997). *Power in action: Empowerment of Indigenous communities. A midwifery run birthing centre in the Canadian Arctic*. Paper presented at the The Truth, Virtue and Beauty of Midwifery, Melbourne.
- Chamberlain, M., & Barclay, K. (2000). Psychosocial costs of transferring women from their community for birth. *Midwifery*, 16(2), 116-122.
- Commonwealth of Australia. (2002, 17.10.2002). *Geoscience Australia Spatial Information for the Nation*. Retrieved 15 November, 2002, from <http://www.ga.gov.au/>

References

- Congress Alukura and Nganampa Health Council Inc. (1999). *Women's Business Manual 3rd ed.* Alice Springs.
- Couchie, C., & Nabigon, H. (1997). A path towards reclaiming Nishnawbe birth culture: Can the midwifery exemption clause for Aboriginal midwives make a difference? In F. Shroff (Ed.), *The New Midwifery: Reflections on Renaissance and Regulation*. Toronto, Canada: Women's Press.
- CRANA. (2002). *CRANA Business Plan*. Alice Springs: CRANA.
- CRANA. (2004, 16.2.04). *About CRANA*. Retrieved 22 February, 2004, from <http://www.crana.org.au/aboutus.html>
- CRANA Information Technology Committee. (2002). *Terms of Reference: Council of Remote Area Nurses of Australia*.
- Crawford, J., Rutter, D., Manley, C., Weaver, T., Bhui, K., Fulop, N., et al. (2002). Systematic review of involving patients in the planning and development of health care. *British Medical Journal*, 325(1263), 1-5.
- Curran, V., Kirby, F., Parsons, E., & Lockyer, J. (2003). Discourse analysis of computer mediated conferencing in World Wide Web-based continuing medical education. *Journal of Continuing Education in the Health Professions*, 23(4), 229-238.
- d'Espaignet, E., Kennedy, K., B, P., & M, M. (1998). *From infancy to adulthood - health status in the Northern Territory 1998*. Darwin: Territory Health Services.
- Davis-Floyd, R., & Davis, E. (1996). Intuition as authoritative knowledge in midwifery and homebirth. *Medical Anthropology Quarterly*, 10(2), 237-269.
- Davis-Floyd, R., & Sargent, C. (Eds.). (1997). *Childbirth and Authoritative Knowledge*. Los Angeles, USA: University of California Press.
- Daviss, B. (1997). Heeding warnings from the canary, the whale and the Inuit. In Davis-Floyd R & Sargent C (Eds.), *Childbirth and Authoritive Knowledge, Cross Cultural Perspectives*. Berkely: University of California Press.
- Day, P., Sullivan, E. A., & Lancaster, P. (1999). *Indigenous mothers and their babies Australia 1994-1996* (No. Perinatal statistics series No. 8). Sydney: Australian Institute of Health and Welfare National Perinatal Statistics Unit.
- DCITA. (2002). *Telecommunications Action Plan for Remote Indigenous Communities*. Canberra: Department of Communications Information Technology and the Arts.
- DCITA. (2003a). *Information Technology Training and Information Technology Support: Discussion Paper*. Canberra: Department of Communications Information Technology and the Arts.
- DCITA. (2003b, 21.8.03). *Telecommunications Service Inquiry: Frequently Asked Questions*. Retrieved 18 February, 2004, from www.dcita.gov.au/article/0,,0_1-2_3-4_102278,00.html
- Department of Health Expert Maternity Group. (1993). *Changing Childbirth*. London: Department of Health HMSO.
- d'Espaignet, E., Woods, M., & Measey, M. (1997). *NT Midwives Collection: Mothers and Babies, 1995*. Darwin: Australian Government Printing Service.
- Devitt, J., Hall, G., & Tsey, K. (2001). *An Introduction to the Social Determinants of Health in Relation to the Northern Territory Indigenous Population*. Darwin: Cooperative Research Centre for Aboriginal and Tropical Health.
- DHAC. (1999a). *Measuring Remoteness: Accessibility/Remoteness Index of Australia (ARIA)* (No. Occasional Papers: New Series No. 6). Adelaide: Department of Health and Aged Care & University of Adelaide.
- DHAC. (1999b). *Rethinking Nursing, National Nursing Workforce Forum* (No. ISBN 0642415803). Canberra: Commonwealth Department of Health and Aged Care.

References

- DHAC. (2000). *Education and training for consumer participation in health care, Final Report of Project*. Canberra: Prepared by Global Learning Services Pty Ltd for the Consumer Focus Collaboration.
- DHAC. (2001). *Measuring Remoteness: Accessibility/Remoteness Index of Australia (ARIA)* (No. Occasional Papers: New Series No. 14). Adelaide: Department of Health and Aged Care.
- DHAC. (2002, 13.3.02). *Homepage, Maps*. Retrieved 9 June, 2004, from <http://www.nt.gov.au/health/maps.shtml>
- Dick, B. (1993). *You want to do an action research thesis?* Retrieved 18 February, 2002, from <http://www.scu.edu.au/schools/gcm/ar/art/arthesis.html>
- Dick, B. (1999). *Sources of rigour in action research: addressing the issues of trustworthiness and credibility*. Paper presented at the Issues of Rigour in Qualitative Research, Melbourne, 6-10 July.
- Dickerson, S. (2003). Gender differences in stories of everyday Internet use. *Health Care for Women International*, 24, 434-451.
- Dickson, G., & Green, K. (2001). Participatory action research: lessons learned with Aboriginal grandmothers. *Health Care for Women International*, 22, 471-482.
- Dictionary.com. (2005). *Dictionary.com*. Retrieved 21 January, 2005, from <http://dictionary.reference.com/>
- Dixon, J., & Welch, N. (2000). Researching the rural-metropolitan health differential using the 'social determinants of health'. *Australian Journal of Rural Health*, 8(5), 254-260.
- Doolan, J. (1989). *The Founding of Maningrida, Occasional Paper No 7*. Darwin: Northern Territory Library Service.
- Dowd, T., & Eckermann, A. (1992). Cultural Danger or Cultural Safety: Remote Area Health Services. *The Australian Nurses Journal*, 21(6), 11-12.
- Duff, M., & Marmont, E. (2002). *Tihei Mauri Ora: breath of life*. Paper presented at the Midwives and Women Together for the Family of the World, Vienna.
- Duncan, R. (2000, 23.6.2002). *Neonatology on the Web*. Retrieved 11 September, 2002, from <http://www.neonatology.org/index.html>
- Dunn, R., & Malone, G. (2002). *Maternity Emergency Course Needs Assessment: Remote Workforce Questionnaire Results*. Alice Springs: Council of Remote Area Nurses Australia.
- Eckermann, A. (1995). *Introduction to Traditional Aboriginal Societies*. Armidale: University of New England Press.
- Eckermann, A., Dowd, T., Martin, M., Nixon, L., Gray, R., & Chong, E. (1998). *Binan Goonj: Bridging Cultures in Aboriginal Health*. Armidale: University of New England Press.
- Enkin, M. (1994). Risk in pregnancy: the reality, the perception and the concept. *Birth*, 21(3).
- Enkin, M., Keirse, M., Neilson, J., Crowther, C., Duley, L., Hodnett, E., et al. (2000). *A Guide to Effective Care in Pregnancy and Childbirth* (3rd ed.). New York: Oxford University Press.
- Estens, D., Braithwaite, R., & Bennett, J. (2002). *Connected Regional Australia: The Report of the Regional Telecommunications Inquiry*. Canberra: Commonwealth Department of Communications, Information Technology and the Arts.
- Evans, C. (2001). *Antenatal Care in Remote Areas of the Northern Territory, A review of service delivery*. Darwin: Women's Health Strategy Unit, Northern Territory Department of Health and Community Services.

References

- Evans, P., & Wurster, T. (2000). *Blown to Bits, How the New Economics of Information Transforms Strategy*. Boston: Harvard Business School Press.
- Fals-Borda, O. (2001). Participatory (Action) Research in Social Theory: Origins and Challenges. In P. Reason & H. Bradbury (Eds.), *Handbook of Action Research, Participatory Inquiry and Practice* (pp. 27-37). London: Sage.
- Family Care International and Safe Motherhood and Inter-Agency Group. (1998). *Every pregnancy faces risks*. New York: Family Care International.
- Farrell, T., Homer, C. S., Davis, G. K., & Brown, M. (2002). *Women's perceptions of a team approach to risk associated pregnancy*. Paper presented at the 26th Triennial Congress of the International Confederation of Midwives, Vienna, Austria.
- Fisher, J., Astbury, J., & Smith, A. (1997). Adverse psychological impact of operative obstetric interventions: a prospective longitudinal study. *Australian and New Zealand Journal of Psychology*, 31, 728-738.
- Fitzpatrick, J. (1993). *Birthing Choices in Far North Queensland*. Brisbane: Department of Health, Housing and Community Service.
- Fitzpatrick, J. (1995). Obstetric health services in Far North Queensland: is choice an option? *Australia Journal of Public Health*, 19(6), 580-588.
- Ford, C. (2003). Midwifery Upskilling Program a Major Success. *Nursing review*, July, 31.
- Freire, P. (1970). *Pedagogy of the Oppressed*. London: Penguin.
- Gennaro, S. (1990). Concerns of mothers and fathers towards their infants during neonatal intensive care visits. *Children's Health Care*, 18(4), 247-251.
- Getenby, B., & Humphries, M. (2000). Feminist participatory action research: methodological and ethical issues. *Women's Studies International Forum*, 23(1), 89-105.
- Gibb, H., Livesey, L., & Zyla, W. (2003). At 3am who the hell do you call? Case Management issues in sole practice as a rural community mental health nurse. *Australasian Psychiatry*, 11, S127-130.
- Glover, P., James, H., & Byrne, J. (2001). Midwifery in the land down under: rural education issues. *British Journal of Midwifery*, 9(7), 428-433.
- Goldman, J. (2001). Rural and remote nursing: in chaos or coping? *Nursing.Aust*, 2(3), 1-2.
- Gray, M. (1998). Introducing Single Case Study Research Design: An Overview. *Nurse Researcher*, 5(4), 15-24.
- Gray, M., Hunter, B., & Taylor, J. (2002). *Health Expenditure, Income and Health Status among Indigenous and Other Australians* (Vol. Research Monograph No. 21). Canberra: Centre for Aboriginal Economic Policy Research, The Australian National University.
- Haertsch, M. (2000). *Aboriginal Maternal Health in the Far West Area Health Service, A Discussion Paper for the Mardi Paaki Regional Council, Draft*: Flinders University, Adelaide.
- Hall, R., & Bawinanga Aboriginal Corporation. (2002, 12.11.03). *Use of Forests in the Blyth and Liverpool Rivers Catchments, Arnhem Land, NT*. Retrieved 27 January, 2004, from <http://www.affa.gov.au/content/publications.cfm?ObjectID=6CF1AE5A-079E-460D-89D8249BD2486305>
- Handelsmann, R. (1996). *Needs Survey of Community Languages, Central Arnhem Land, NT*. Maningrida: Maningrida Arts and Culture.

References

- Harris, K., Jerome, N., & Fawcett, S. (1997). Commentary - Rapid assessment procedures: a review and a critique. *Human Organization*, 56(3), 375-378.
- Health Funding Authority. (2000). *Maternity services: A reference document*. Hamilton: Health Funding Authority.
- Henry, J., Dunbar, T., Arnott, A., Scrimgeour, M., Matthews, S., Murakami-Gold, L., et al. (2002). *Indigenous Research Reform Agenda: Rethinking Research Methodologies*. Darwin: CRC for Aboriginal and Tropical Health.
- Holleley, A., & Preston, S. (1984). *Bush births in the Northern Territory*. Paper presented at the The Birth Revolution, Highlights from the Fifth Australian Homebirth Conference, Springwood, Blue Mountains, NSW.
- Homer, C. S., Brodie, P., & Leap, N. (2001). *Establishing Models of Continuity of Midwifery Care in Australia. A Resource for Midwives and Managers*. Sydney: Centre for Family Health and Midwifery, University of Technology Sydney.
- Homer, C. S., Farrell, T., Davis, G. K., & Brown, M. (2002). Women's worry in the antenatal period. *British Journal of Midwifery*, 10(5).
- Homer, C. S., Matha, D. V., Jordan, L. G., Wills, J., & Davis, G. K. (2001). Community-based continuity of midwifery care versus standard hospital care: a cost analysis. *Australian Health Review*, 24(1), 85-93.
- Homer, C. S. E. (2000). What do women feel about community-based antenatal care? *Australian and New Zealand Journal of Public Health*, 24(6), 590-595.
- Homer, C. S. E., Davis, G. K., Brodie, P., Sheehan, A., Barclay, L. M., Wills, J., et al. (2001). Collaboration in maternity care: a randomised controlled trial comparing community-based continuity of care with standard hospital care. *British Journal of Obstetrics and Gynaecology*, 108, 16-22.
- Houd, S., Qinuajuak, J., & Epoo, B. (2003, September 10-14). *The outcome of perinatal care in Inukjuak, Nunavik, Canada 1998-2002*. Paper presented at the 12th International Congress on Circumpolar Health, Nuuk, Greenland.
- HREOC. (1997). *Bringing Them Home - The Report*. Retrieved 22 November, 2004, from <http://www.austlii.edu.au/au/special/rsjproject/rsjlibrary/hreoc/stolen/stolen08.htm>
- Hughes, I. (2000, 2.11.04). *Ganma: Indigenous knowledge for reconciliation and community action*. Retrieved 20 December, 2004, from www.fhs.usyd.edu.au/arow/arer/014.htm
- Hughes, I., Goolagong, P., Kharavpour, F., & Russell, C. (1994). *Koori Action Research in Community Health, Paper presented at the Second Healing Our Spirit Conference, 14 November 1994, Sydney*. Retrieved 15/3/02, 2002
- Humphrey, K. (2000). *Indigenous Health and 'Western Research'*. Melbourne: VicHealth Koori Health Research and Community Development Unit.
- Humphrey, K. (2001). Dirty questions: Indigenous health and 'Western research'. *Australian and New Zealand Journal of Public Health*, 25(3).
- Humphrey, M. (1995). The beneficial use of risk scoring in a remote and high risk pregnant population. *Australian and New Zealand Journal of Obstetrics and Gynaecology*, 35(2), 139-143.
- Humphreys, J., Jones, M., Jones, J., & Mara, P. (2002). Workforce retention in rural and remote Australia: determining the factors that influence length of practice. *Medical Journal of Australia*, 176, 472-476.

References

- Hunt, J. (2002). *How can routine antenatal care protocols and practice in the Northern Territory be improved? A discussion paper July 2002*. Melbourne: Centre for the Study of Mothers' and Children's Health, La Trobe University.
- Hunt, J. (2003). *Trying to make a difference: improving pregnancy outcomes, care and services for Australian Indigenous women*. Unpublished Doctor of Philosophy, La Trobe University, La Trobe.
- Hunt, J. (2004). *Pregnancy care and problems for women giving birth at Royal Darwin Hospital*. Melbourne: Centre for the Study of Mothers' and Children's Health.
- Inger, M., & Schwartz-Barcott, D. (1993). Action research: what is it? How has it been used and how can it be used in nursing? *Journal of Advanced Nursing*, 18, 298-304.
- Innes, K., & Strasser, R. (1997). Why are general practitioners ceasing obstetrics. *Medical Journal of Australia*, 166, 276-277.
- Israel, B., Schultz, A., Parker, E., & Becker, A. (1998). Review of community-based research: assessing partnership approaches to improve public health. *Annual Review of Public Health*, 19, 173-202.
- Ivanitz, M. (1998). *Culture, Ethics and Participatory Methodology in Cross-Cultural Research* (No. Research Paper No.7 July 1998): Centre for Australian Public Sector Management, Griffith University.
- Jackson, L., & Ward, L. (1999). Aboriginal Health: Why is reconciliation necessary? *Medical Journal of Australia*, 170, 437-440.
- Jan, S., Rowbottom, J., & Houston, S. (1999, September 27-29). *A blueprint for an evaluation strategy for Indigenous health programs in Western Australia*. Paper presented at the Public Health Association of Australia, Darwin.
- Jasen, P. (1997). Race, Culture, and the Colonisation of Childbirth in Northern Canada. *Social History of Medicine*, 10(3), 383-400.
- Jeffs, L. (2001). Teaching cultural safety the culturally safe way. *Nursing Praxis*, 17(3), 41-50.
- Johanson, R., Newburn, M., & MacFarlane, A. (2002). Has the medicalisation of childbirth gone too far? *British Medical Journal*, 324(7342), 892-895.
- John Mitchell and Associates. (1998, 25-26 November). *The uneven diffusion of telemedicine services in Australia*. Paper presented at the TeleMed 98, The Sixth International Conference on Telemedicine and Telecare, London.
- Johnston, E. (1991a, 29.4.98). *Royal Commission into Aboriginal Deaths in Custody*. Retrieved 15 June, 2004, from <http://www.austlii.edu.au/>
- Johnston, E. (1991b, 29 April 1998). *Royal Commission into Aboriginal Deaths in Custody, National Report Volume Five*. Retrieved 16 June, 2004, from <http://www.austlii.edu.au/>
- Jones, L., & Allebone, B. (1999). Researching 'hard to reach' groups: the crucial role of the research associate. *International Journal of Inclusive Education*, 3(4), 353-362.
- Jordan, B. (1993). *Birth in Four Cultures, A Crosscultural Investigation of Childbirth in Yucatan, Holland, Sweden, and the United States*. Illinois: Revised and expanded by Robbie Davis-Floyd, Waveland Press, Inc.
- Jordan, B. (1997). Authoritative knowledge and its construction. In Davis-Floyd R & Sargent C (Eds.), *Childbirth and Authoritative Knowledge, Cross Cultural Perspectives*. Berkely: University of California Press.
- Kaufert, P., & O'Neil, J. (1990). Cooptation and control: The reconstruction of Inuit birth. *Medical Anthropology Quarterly*, 4, 427-442.

References

- Kaufert, P., & O'Neil, J. (1993). Analysis of a dialogue on risks in childbirth: clinicians, epidemiologists, and Inuit women. In S. Lindenbaum & M. Lock (Eds.), *Knowledge, Power and Practice, The Anthropology of Medicine and Everyday Life* (pp. 32-54). California: Berkeley.
- Kelly, K. (2004). Report on Health Resource Allocation in ARIA Classified Very Remote Communities. *Outback Flyer*, 61(December), 14-17.
- Kelly, R., & O'Faircheallaigh, C. (2001). *Indigenous Participation in Managing University Research*. Griffith: Centre for Public Centre Mangement, Griffith University.
- Kemmis, S., & McTaggart, R. (2000). Participatory Action Research. In Denzin N & Lincoln Y (Eds.), *Handbook of Qualitative Research* (2nd ed.). London: Sage.
- Kenny, P., Brodie, P., Eckermann, S., & Hall, J. (1994). *Westmead Hospital Team Midwifery Project Evaluation: Final Report*. Sydney: Westmead Hospital.
- Kildea, S. (1999). *And the women said... Report on birthing services for Aboriginal women from remote Top End communities*. Darwin: Territory Health Service.
- Kildea, S. (2003, 1.3.03). *Risk and childbirth in rural and remote Australia*. Paper presented at the 7th NRHA Conference, The Art and Science of Healthy Community -sharing country know how, Hobart.
- Kildea, S., Homer, C., Leap, N., Grieve, A., Mollart, L., Kruske, S., et al. (Eds.). (2003). *Maternity Emergency Guidelines for Registered Nurses*. Sydney: NSW Midwives Association Inc.
- Kildea, S., & PAR Team. (2004). *A Primary Health Care Guide to Birthing Business in Your Community*. Sydney: Centre for Family Health and Midwifery, University of Technology Sydney.
- Kildea, S., Wardaguga, M., Dawumal, M., & Maningrida Women. (2004, 7.6.04). *Birthing Business in the Bush Website*. Retrieved 16 September, 2004, from <http://www.maningrida.com/mac/bwc/index.html>
- King, J., Tanna, S., Murphy, F., Colditz, P., Martin, M., & Wall, M. (1998). *Maternal Health Services in Aboriginal Communities*. Brisbane: Queensland Health Department.
- Kleinert, S., Neale, M., & Bancroft, M. (Eds.). (2000). *The Oxford Companion to Aboriginal Art and Culture*. Melbourne: Oxford University Press.
- Kock, N., McQueen, R., & Scott, J. (2000). Can Action Research Be Made More Rigorous in a Positivist Sense? The Contribution of an Iterative Approach. *Action Research E-Reports*, 9.
- Kramer, M. (1998). Socioeconomic determinants of intrauterine growth retardation. *European Journal of Clinical Nutrition*, 52(S1), S29-S33.
- Kyushu-Okinawa Summit Meeting. (2000). *Okinawa Charter on Global Information Society, Official Documents*. Retrieved 1 March, 2004, from <http://www.dotforce.org/reports/it1.html>
- Laws, P., & Sullivan, E. A. (2004). *Australia's Mothers and Babies 2002* (No. AIHW Cat. no. PER 28). Sydney: AIHW National Perinatal Statistics Unit (Perinatal Statistics Series No.28).
- Leeman, L., & Leeman, R. (2002). Do all hospitals need cesarean delivery capability?: An outcomes study of maternity care in a rural hospital without on-site cesarean capability. *The Journal of Family Practice*, 51(2), 129-134.
- Lessard, P., & Kinloch, D. (1987). Northern obstetrics: a five-year review of delivery among Inuit women. *Canadian Medical Association Journal*, 137(11), 1017-1021.

References

- Lindloff, T., & Taylor, B. (2002). *Qualitative Communication Research Methods* (2nd ed.). Thousand Oaks: Sage.
- Lindsey, E., Sheilds, L., & Stajduhar, K. (1999). Creating effective partnerships: relating community development to participatory action research. *Journal of Advanced Nursing*, 29(5), 1238-1245.
- Loudon, I. (2000). Maternal mortality in the past and its relevance to developing countries today. *American Journal of Clinical Nutrition*, 72(Suppl), 241S-246S.
- Lowell, A. (2001). *Communication and Cultural Knowledge in Aboriginal Health Care, A review of two subprograms of the Cooperative Research Centre for Aboriginal and Tropical Health's Indigenous Health and Education Research Program*. Darwin: Cooperative Research Centre for Aboriginal and Tropical Health.
- Lumley, J. (1988). The Safety of Small Maternity Hospitals in Victoria 1982-84. *Community Health Studies*, 11(4), 386-393.
- MacDonald, M., & Starrs, A. (2002a). *Skilled Care during Childbirth*. New York: Family Care International.
- MacDonald, M., & Starrs, A. (2002b). *Skilled Care During Childbirth, Information Booklet*. New York: Family Care International.
- Mackerras, D. (1998). *Evaluation of the Strong Women, Strong Babies, Strong Culture Program*. Darwin: Menzies School of Health Research.
- Mackerras, D. (2001). Birthweight changes in the pilot phase of the Strong Women Strong Babies Strong Culture Program in the Northern Territory. *Australian and New Zealand Journal of Public Health*, 25(1), 34-40.
- Maher, P. (1999). A review of 'traditional' Aboriginal health beliefs. *Australian Journal of Rural Health*, 7, 229-236.
- Marika, R., Ngurruwutthun, D., & White, L. (1992). Always together, yaka gana: Participatory research as part of the development of a Yolngu education. *Convergence*, 25(1), 23-29.
- Maternity Coalition, Association for Improvements in Maternity Services Australia, Australian Society of Independent Midwives, Community Midwifery Program WA, & Community Midwifery Western Australia Inc. (2002). *National Maternity Action Plan for the Introduction of Community Midwifery Services in Urban and Regional Australia*: Maternity Coalition,.
- Matheson, D., & Borman, B. (2001). *The Patterns of Use of Facilities and Obstetric Outcomes for Women Living in Rural Areas - Draft Report*.
- Mayers, N. (2002). Aboriginal Health in Australia: Some Historical Observations and Contemporary Issues. *New Doctor, Winter(77)*, 3-5.
- McTaggart, R. (1989). *Principles for participatory action research*. Paper presented at the The Third World Encounter on Participatory Research, 3-9 September, Managua, Nicaragua.
- McTaggart, R. (1999). Reflection on the purposes of research, action, and scholarship: a case of cross-cultural participatory action research. *Systemic Practice and Action Research*, 12(5), 493-511.
- Melrose, M. (2001). Maximising the rigour of action research: Why would you want to? How could you? *Field Methods*, 13(2), 160-180.
- Members of the World Association of Perinatal Medicine. (2001, 23-27 September 2001). *Declaration of Barcelona on the Rights of Mother and Newborn*. Paper presented at the 5th World Congress of Perinatal Medicine, Barcelona.
- Meyer, C. (2001). A Case in Case Study Methodology. *Field Methods*, 13(4), 329-352.

References

- Meyer, J. (2000). Using Qualitative Methods in Health Related Action Research. *British Medical Journal*, 320(15 January), 178-181.
- MI Taylord Services. (2000). *CRANA Member Survey 2000*. Alice Springs: CRANA.
- Mills, K., & Roberts, J. (1997). *Remote Area Birthing Discussion Paper*. Darwin: Territory Health Services.
- Mobbs, R. (1991). In sickness and health: the sociocultural context of Aboriginal well-being, illness and healing. In R. J & T. P (Eds.), *The Health of Aboriginal Australia*. Sydney: Harcourt Brace.
- Monaghan, J., & Walker, J. (2001). *Delivery in the Bush: maintaining a skilled midwifery workforce in rural and remote Tasmania*. Paper presented at the Good Health - Good Country, 6th National Rural Health Conference, Canberra.
- Morewood-Northrop, M. (2000). Community birthing project: Northwest Territories. In L. Page & P. Percival (Eds.), *The New Midwifery*. Edinburgh: Churchill Livingstone.
- Morgan, D., Slade, M., & Morgan, C. (1997). Aboriginal philosophy and its impact on health care outcomes. *Australian and New Zealand Journal of Public Health*, 21(6), 597-601.
- NACCHO. (2004, 10.6.04). *National Aboriginal Community Controlled Health Organisation*. Retrieved 14 November, 2004, from <http://www.naccho.org.au/>
- National Aboriginal and Torres Strait Islander Health Council. (2000). *National Aboriginal and Torres Strait Islander Health Strategy, Consultation Draft*. Canberra: NATSIHC.
- National Rural Health Policy Forum, & NRHA. (1999). *Healthy Horizons 1999-2003: A Framework for Improving the Health of Rural, Regional and Remote Australians*. Retrieved 1 October, 2001, from <http://www.ruralhealth.org.au/hh.htm#top>
- New Zealand Health Information Service. (2004). *Report on Maternity, Maternal and Newborn Information, 2002*. Wellington: Ministry of Health.
- NHMRC. (1991). *Guidelines on Ethical Matters in Aboriginal and Torres Strait Islander Health Research*. Canberra: National Health and Medical Research Council.
- NHMRC. (1996). *Options for Effective Care in Pregnancy*. Canberra.
- NHMRC. (2000). *Report of the 1999 Workshops on the National Statement on Ethical Conduct in Research Involving Humans*. Canberra: NHMRC.
- NHMRC. (2002). *Draft Values and Ethics in Aboriginal and Torres Strait Islander Health Research, Consultation Paper for revision of the National Health and Medical Research Council's Guidelines on Ethical Matters in Aboriginal and Torres Strait Islander Health Research 1991*. Canberra.
- Nielson, A. (1998). *A Study into Levels of, and Attitudes Towards Information Technology in General Practice, Research Consultancy Report Prepared for General Practice Branch*. Canberra: Department of Health and Family Services.
- Nixon, A., Byrne, J., & Church, A. (2003). *The Community Midwives Project*. Adelaide: Northern Metropolitan Community Health Service,.
- Norris, P. (2001). *Digital Divide?: Civic Engagement, Information Poverty, and the Internet Worldwide*. Cambridge: Cambridge University Press.
- Northern Australia Business Services, Ganter Consulting Services, & Focus Pty Ltd. (2003). *Remote Community Information and Communications Technology Solutions*. Darwin: DCIS, Northern Territory Government.
- Northern Territory Department of Health. (1980). *Annual Report 1979/1980*. Darwin.

References

- Northern Territory Government. (2003). *Remote Areas Telecommunications Strategy, 2003-2008, Building a Connected Territory*. Darwin: Northern Territory Government.
- NRHA. (2001a). *2001 Election Charter*: National Rural Health Alliance.
- NRHA. (2001b, 4-7 April). *Key Recommendations from the 6th National Rural Health Conference*. Paper presented at the Good Health - Good Country, Canberra.
- NRHA. (2001c). *NRHA Submission to Senate Community Affairs References Committee, Inquiry into Nursing*. Canberra: National Rural Health Alliance Inc.
- NSW Health. (1998a). *Evaluation of the NSW Alternative Birthing Services Program Second Phase - Aboriginal Strategies*. Sydney: Health Services Policy Branch.
- NSW Health. (1998b). *Rural and Remote Nursing Summit Report* (No. 980034). Sydney: Nursing Branch.
- NSW Health. (2004). *Communicating Positively, A Guide to Appropriate Aboriginal Terminology*. Sydney: NSW Health.
- NSW Health Department. (2000a). *The NSW Framework for Maternity Services* (No. 000044). Sydney: NSW Health Department.
- NSW Health Department. (2000b). *Report on the New Graduate Midwives Survey*. Sydney: NSW Health, Nursing Branch.
- NSW Health Department. (2001). *NSW Mothers and Babies 1999* (State Health Publication No. 010005). Sydney: Public Health Division.
- NSW Health Department. (2003). *The NSW Aboriginal Perinatal Health Report* (No. 000107). Sydney: NSW Health Department.
- NT DHCS. (1992). *Review of Birthing Services in the Northern Territory of Australia*. Darwin: Department of Health and Community Service, AGPS.
- NT DHCS. (2005). Choices, A Homebirth Update, Newsletter (Vol. 3).
- Nursing Council of New Zealand. (1996). *Guidelines for Cultural Safety in Nursing and Midwifery Education*. Wellington.
- OATSIH. (2003, 10.7.03). *Primary Health Care Access Program*. Retrieved 16 June, 2004, from <http://www.health.gov.au/oatsih/pubs/phcap.htm>
- Olsen, O. (1997). Meta-analysis of the safety of homebirth. *Birth*, 24(1), 4-13.
- Olsen, O., & Jewell, M. (1998, 20.4.98). *Home versus hospital birth, The Cochrane Database of Systematic Reviews*. Retrieved 6 June, 2001, from <http://www.mrw.interscience.wiley.com/cochrane/clsysrev/articles/CD000352/frame.html>
- O'Neil, J., & Kaufert, P. (1990). The politics of obstetric care: The Inuit experience. In W. Penn Handwerker (Ed.), *Births and Power: Social Change and the Politics of Reproduction*. Colorado: Westview Press.
- O'Neil, J., & Kaufert, P. (1995). Sex determination and the Inuit struggle for birthing rights in Northern Canada. In F. Ginsburg & R. Rapp (Eds.), *Conceiving the New World Order, The Global Politics of Reproduction*. Berkeley: University of California Press.
- Ozolins, I., Greenwood, G., & Beilby, J. (2004). Keeping women doctors in the country. *Rural and Remote Health* 4 (online), 268.
- Pandey, S., Hart, J., & Tiwary, S. (2003). Women's health and the Internet: understanding emerging trends and implications. *Social Science and Medicine*, 57, 179-191.
- Pegram, A. (1999). What is Case Study Research? *Nurse Researcher*, 7(2), 5-16.
- Peter Farr Consultants Australasia. (2003). *Connecting Our Communities, Sustainable Networking Strategies for Australian Remote Indigenous Communities*. Canberra: DCITA.

References

- Pincus, T., Esther, R., De Walt, D., & Callaghan, L. (1998). Social Conditions and Self-management Are More Powerful Determinants of Health and Access to Care. *Annals of Internal Medicine*, 129(Five), 406 - 411.
- Preece, J. (2001). *Online Communities: Designing Usability, Supporting Sociability*. Chichester: John Wiley and Sons.
- PRHCIT. (1996). *Telehealth in Rural and Remote Australia, Report of the Project for Rural Health Communications and Information Technologies*: Monash University: Australian Rural Health Research Institute.
- Prych, T., & Castillo, M. (2002). The Sights and Sounds of Indigenous Knowledge. In P. Reason & H. Bradbury (Eds.), *Handbook of Action Research*. Thousand Oaks: Sage.
- Pyett, P. (2002). Working together to reduce health inequalities: reflections on a collaborative participatory approach to health research. *Australian and New Zealand Journal of Public Health*, 26(4), 332-336.
- Pyett, P., & VicHealth Koori Health Research and Community Development Unit. (2002). Towards reconciliation in Indigenous health research: The responsibilities of the non-Indigenous researcher. *Contemporary Nurse*, 14(1), 56-65.
- Pyrch, T., & Castillo, M. (2001). The Sights and Sounds of Indigenous Knowledge. In P. Reason & H. Bradbury (Eds.), *Handbook of Action Research, Participatory Inquiry and Practice*. London: Sage.
- Ramsden, I. (1992). Teaching cultural safety. *New Zealand Nursing Journal*, 85(5), 21-23.
- Ramsden, P. (1992). *Learning to teach in higher education*. London: Routledge Falmer.
- Rawlings, L. (1998). Traditional Aboriginal Birthing Issues. *Birth Gazette*, 14(1), 6-13.
- Rawlings, L. (2000). *Birthing in Povungnituk*. Paper presented at the Childbirth in Isolation - Rural Conference in Midwifery, Kalgoorlie, Western Australia.
- Rawlings, L. (Writer) (2002). Birth Rites. In J. Gheradi (Producer). Perth: Jag Films.
- Reconciliation Australia. (2004). *Reconciliation Australia*. Retrieved 4 October, 2004, from <http://www.reconciliation.org.au/index.html>
- RFDS. ((n.d.)). *Website*. Retrieved November 2003, from <http://www.rfds.org.au/default.htm>
- RHEF. (2005, 2005). *Rural Health Education Foundation*. Retrieved 12 January, 2005, from <http://www.rhef.com.au/index.html>
- Ring, I., & Firman, D. (1998). Reducing Indigenous mortality in Australia: lessons from other countries. *Medical Journal of Australia*, 169, 528-533.
- Roberts, C. L., & Algert, C. S. (2000). The urban and rural divide for women giving birth in NSW 1990-1997. *Australian and New Zealand Journal of Public Health*, 24(3), 291-296.
- Roberts, J. (2000). *Where two worlds collide - maternal health services for Indigenous women in remote communities*. Paper presented at the Public Health Association of Australia National Conference 2000, Canberra.
- Roberts, J. (2001). *The Northern Territory Remote Area Birthing Project*. Paper presented at the 4th National Women's Health Conference, Adelaide.
- Robinson, E. (1990). Maternal health and obstetrical services: measuring health status and the quality of care in remote areas. *Circumpolar Health* 90, 596-600.
- Rosenblatt, R., Reinken, J., & Shoemack, P. (1985). Is obstetrics safe in small hospitals, evidence from New Zealand's regionalised perinatal system. *The Lancet*, August 24.

References

- Rowe, R., Garcia J, Macfarlane, A., & Davidson, L. (2001). Does poor communication contribute to stillbirths and infant deaths? A review. *Journal of Public Health Medicine*, 23(1), 23-24(22).
- Rowley, M., Hensley, M., Brinsmead, M., & Wlodarczyk, J. (1995). Continuity of care by a midwife team verses routine care during pregnancy and birth: a randomised trial. *Medical Journal of Australia*, 163, 193-289.
- Royal Australian and New Zealand College of Obstetricians and Gynaecologists. (2003). *Clinical Guidelines, Intrapartum Fetal Surveillance*. Melbourne: Royal Australian and New Zealand College of Obstetricians and Gynaecologists.
- Saggers, S., & Gray, D. (1991). Policy and practice in Aboriginal health. In J. Reid & P. Trompf (Eds.), *The Health of Aboriginal Australia*. Sydney: Harcourt Brace.
- Saxell, L. (2000). Risk: theoretical or actual. In L. Page & P. Percival (Eds.), *The New Midwifery Science and Sensitivity in Practice*. London: Churchill Livingstone.
- Scientific Software Development. (1997-2003). ATLAS.ti The Knowledge Workbench (Version WIN 4.2 (Build 058)). Berlin.
- Selener, D. (1997). *Participatory Action Research and Social Change*. Ithaca, New York: Cornell Participatory Action Research Network.
- Senate Community Affairs References Committee. (1999). *Rocking the Cradle, A Report into Childbirth Procedures*. Canberra: Commonwealth of Australia.
- Slyter, E., Sullivan, E., & King, J. (2004). *Maternal Deaths in Australia 1997-1999*. Sydney: AIHW National Perinatal Statistics Unit.
- Smaill, F. (2003, 28.12.00). *Antibiotics for asymptomatic bacteriuria in pregnancy*, *The Cochrane Database of Systematic Reviews*. Retrieved 4 March, 2004, from <http://www.update-software.com/clibng/cliblogon.htm>
- Smith, D., Mununggurr, L., Bamundurruwuy, D., & Edmond, K. (2001). *How children grow: A report for health service providers in the NT*. Darwin: Cooperative Research Centre for Aboriginal and Tropical Health and Territory Health Services.
- Smith, J. (2004). *Australia's Rural and Remote Health, A Social Justice Perspective*. Melbourne: Tertiary press.
- Smith, L. (1999). *Decolonizing Methodologies, Research and Indigenous Peoples* (5th Impression 2002 ed.). Dunedin: University of the Otago Press and Zed Books.
- Smylie, J. (2001). *A guide for health care professionals working with Aboriginal peoples - Policy statement of the Society of Obstetricians and Gynaecologists of Canada*. Toronto: Reprinted from the journal SOGC Volume 22, 23 2000-01.
- Snow, D. (1997). *Some issues in the ethics of Aboriginal Research: Aboriginal relationships to research projects*. Paper presented at the NSW University Human Research Ethics Co-ordinators Workshop, University of Wollongong.
- Soublière, M. (2001). *The Nunavut Handbook, 3rd edition, Online Version*. Retrieved 15 November, 2002, from <http://www.arctictravel.com/index.html>
- Stake, R. (2000). Case Studies. In Denzin N & Lincoln Y (Eds.), *Handbook of Qualitative Research* (2nd ed.). London: Sage.
- Standing Committee on Aboriginal and Torres Strait Islander Health. (2002). *Aboriginal and Torres Strait Islander Health Workforce National Strategic Framework*. Canberra: Australian Health Ministers' Advisory Council.
- Statistics Canada. (2002, 20.1.03). *2001 Census Analysis Series - a Profile of the Canadian Population: When We Live*. Retrieved 8 July, 2004, from http://geodepot.statcan.ca/Diss/Highlights/Index_e.cfm

References

- Stewart, M., & Women of Warmun. (1999). *Ngalangangpum Jarrakpu Purrurn: Mother and Child: The Women of Warmun as Told to Margaret Stewart*. Broome: Magabala.
- Stonier, J. (1990). The Innulitsivik Maternity. In J. O'Neil & P. Gilbert (Eds.), *Childbirth in the Canadian North: Epidemiological, Clinical and Cultural Perspectives*. Manitoba: Northern Health Research Unit.
- Stratigos, S., & Nichols, A. (2002). *Procedural rural medicine: strategies towards solutions*. ACT: Australian College of Rural and Remote Medicine.
- Struthers, R. (2003). The artistry and ability of traditional women healers. *Health Care for Women International*, 24, 340-354.
- The Aboriginal and Torres Strait Islander Research Agenda Working Group of the NHMRC. (2002). *The NHMRC Road Map: A Strategic Framework for Improving Aboriginal and Torres Strait Islander Health Through Research*. Canberra: NHMRC.
- Thorogood, C., Thiele, B., & Hyde, K. (2003). *Community Midwifery Program Western Australia, Evaluation November 1997 - December 2001*. Perth: Community Midwifery WA Inc.
- Tjikalyi, C., & Garrow, A. (1996). *Thinking, Listening, Looking, Understanding and Acting as You Go Along, Steps to Evaluating Indigenous Health Promotion Projects*. Alice Springs: Council of Remote Area Nurses of Australia.
- Tollefson, J., Usher, K., Croker, F., & Morrissey, J. (2003). Creating and delivering an external Bachelor of Nursing Sciences course. *Innovations in Education and Teaching International*, 40(1), 51-60.
- Tookalak, N. (1998). Birthing in Puvirnituk in remote Arctic Canada. *Birthplace Magazine, Summer 2000-01 edition*.
- Torzillo, P., & Kerr, C. (1991). Contemporary issues in Aboriginal public health. In J. Reid & P. Trompf (Eds.), *The Health of Aboriginal Australia*. Sydney: Harcourt Brace.
- Tracy, S., Barclay, L., & Brodie, P. (2000). Contemporary issues in the workforce and education of Australian midwives. *Australian Health Review*, 23(4).
- Tracy, S., Brodie, P., & Barclay, L. (2001). The Australian midwifery action project. *Obstetrics and Gynecology*, 3(2), 119-121.
- Tracy, S., Sullivan, E., Dahlen, H., Black, D., Wang, Y., & Tracy, M. (2005). Does size matter? The safety of giving birth in smaller maternity hospitals. *Journal of American Medical Association, (In Press)*.
- Trewin, D., & Madden, R. (2003). *The Health and Welfare of Australia's Aboriginal and Torres Strait Islander Peoples*. Canberra: ABS.
- Trotter, R., Needle, R., Goosby, E., Bates, C., & Singer, M. (2001). A Methodological Model for Rapid Assessment, Response, and Evaluation: The RARE Program in Public Health. *Field Methods, Sage Publications*, 13(2), 137-159.
- Trudgen, R. (2000). *Why Warriors Lie Down and Die*. Darwin: Aboriginal Resource and Development Services, Inc.
- Udas, K. (1998). Participatory action research as critical pedagogy. *Systemic Practice and Action Research*, 11(6), 599-628.
- University of Queensland. (2003, 6.9.04). *Centre for Online Health*. Retrieved 12 December, 2004, from <http://www.uq.edu.au/coh/>
- Wadsworth, Y. (1998, 5.4.2002). *What is Participatory Action Research?* Retrieved 2002, 2002, from <http://www.scu.edu.au/schools/gem/ar/ari/p-ywadsworth98.html>

References

- Walker - Jefferies, M., Blue, I., Misan, G., Aylward, P., Blue, J., Arndt, S., et al. (2003). *An Organisation Wide Evaluation of the Council of Remote Area Nurses of Australia Inc. (CRANA)*. Adelaide: Spencer Gulf Rural Health School.
- Wallerstein, N. (1992). Powerlessness, empowerment, and health: implications for health promotion programs. *American Journal of Health Promotion*, 6(3), 197-205.
- Walsh, D., & Newburn, M. (2002). Towards a social model of childbirth: part two. *British Journal of Midwifery*, 10(9), 540-544.
- Wardaguga, M., & Kildea, S. (2004, 15-18th March). *Keynote Address 'You Mob Just Don't Listen'*. Paper presented at the Perinatal Society for Australia and New Zealand 8th Annual Conference, 'Integrating Science and Perinatal Practice: Controversies and Dilemmas', Sydney.
- Watson, J., Hobson, K., Johnson, R., & Kemp, K. (2002a). The maternity experiences of Indigenous women admitted to an acute care setting. *Australian Journal of Rural Health*, 10, 154-160.
- Watson, J., Hobson, K., Johnson, R., & Kemp, K. (2002b). Opinions of health care professionals regarding the maternity experiences of Indigenous women in an acute care setting. *Australian Journal of Rural Health*, 10(161-7).
- White, C., Sheedy, V., & Lawrence, N. (2002). Patterns of computer usage among medical practitioners in rural and remote Queensland. *Australian Journal of Rural Health*, 10, 137-146.
- WHO. (1978). *Primary Health Care*. Paper presented at the International Conference on Primary Health Care Alma Ata, USSR, 6-12 September.
- WHO. (1996). *Care in Normal Birth: A Practical Guide*. Geneva: Department of Reproductive Health and Research, World Health Organisation.
- WHO. (2000a, 19.8.02). *Managing Complications in Pregnancy and Childbirth A Guide for Midwives and Doctors*. Retrieved 23 June, 2003, from http://www.reproline.jhu.edu/english/2mnh/2mcpc/manual_toc.htm
- WHO. (2000b). *The World Health Report: Health Systems Improving Performance*. Geneva: World Health Organisation.
- WHO, UNICEF, & UNFPA. (1997). *Guidelines for Monitoring the Availability and Use of Obstetric Services*. New York: UNICEF.
- Wieggers, T., Keirse, M., & van der Zee, J. (1996). Outcome of planned home and hospital births in low risk pregnancies: prospective study in midwifery practice in the Netherlands. *BMJ*, 313(7068), 1309-1313.
- Wilkinson, R., & Marmot, M. (Eds.). (1998). *The Solid Facts, Social Determinants of Health*. Geneva: World Health Organisation.
- Wilson, G. (1989). *The Flying Doctor Story*. Melbourne: Magazine Art.
- Wollard, L., & Hays, R. (1993). Rural Obstetrics in NSW. *Australian and New Zealand Journal of Obstetrics and Gynaecology*, 33(3), 240-242.
- Yunupingu, M., & ABC. (1994). Finding the balance. In *Voices from the land* (pp. 1-11). Sydney: ABC Books.

Appendices

APPENDIX 1. TIMELINE

| Timeline | | | | |
|-------------|---|-------------------------|--|--------------|
| Date | Case study 1 | Case study 2 | Case study 3 | Case study 4 |
| | Resource Library | Communication Forum | Birthing in the Bush Website | The Guide |
| 2001 | | | | |
| March | Commenced Candidature | | | |
| April | | | | |
| May | | | | |
| June | | | | |
| July | | | | |
| August | Meetings with Stakeholders in Darwin | | | |
| August | | | Field trip 1 to Maningrida 1 week | |
| September | | | | |
| October | RHSET application submitted | | | |
| November | | | | |
| December | | | | |
| 2002 | | | | |
| January | | | | |
| February | | | Field trip 2 to Maningrida 1 week | |
| March | Ethics submission to UTS and Menzies (NT) | | | |
| April | ICM conference in Vienna | | | |
| April | Ethics approval UTS | | | |
| May | | | Ethics approval UTS | |
| June | RHSET funding commenced | | | |
| June | Ethics approval Menzies | | | |
| June | EOI faxed | | | |
| June | | Forum built and 'live' | | |
| July | Ethics submission Central Australia | | | |
| August | Research group established | | Field trip 3 to Maningrida 2 weeks | |
| August | | | Research group established | |
| September | Ethics approval Central Australia | | | |
| September | | Website being built | Maningrida newsletter article | |
| October | | | Field trip 4 to Maningrida 1 week | |
| October | Meetings with Stakeholders in Darwin | | | |
| October | CRANA conference Adelaide | | | |
| October | Website went 'live' | Private Forum commenced | Stories and information being collated | |
| November | | | | |
| December | | | | |

Appendices

| Date | Case study 1 | Case study 2 | Case study 3 | Case study 4 |
|-------------|---|------------------------------|---|---|
| | Resource Library | Communication Forum | Birthing in the Bush Website | The Guide |
| 2003 | | | | |
| January | | | | |
| February | NACE conference Sydney | | | |
| February | | | Field trip 5 to Maningrida 10 days | |
| March | National Rural Health Alliance conference Tasmania | | | |
| April | | | Field trip 6 to Maningrida 1 week | |
| May | RHSET extension | | | |
| June | Article in UTS News & Koori Mail | | | |
| June | Flier in CRANA newsletter | | Maningrida newsletter article | |
| June | | | | |
| July | | | | |
| August | | | Field trip 7 to Maningrida 1 week final checking of stories | |
| August | Meetings with Stakeholders in Darwin | | | |
| August | ACMI conference Darwin | | | |
| September | Article in Midwifery Matters | | | |
| September | | | Maningrida newsletter article | |
| October | | | Women's Business Poster - Birth International and Capers | |
| October | Ceased collecting statistics | | Website and draft of Guide being tested by PAR team | |
| November | | Ceased collecting statistics | | |
| December | | | | |
| 2004 | | | | |
| January | | | | |
| February | | | Outback Flyer article Storytelling | |
| March | | | Field trip 8 to Maningrida 4 days | |
| March | | | N. T. News article | NT. The Chronicle article Vol 7 Issue 6 |
| March | Perinatal Society of Australia and New Zealand Conference Sydney | | | |
| March | Candidature extension granted | | | |
| March | Reset final report submitted to Commonwealth and distributed as per distribution plan | | | |
| April | RHSET funding ceased | | | |
| May | | | Website went 'live' | Guide available on website |
| May | Article in UTS News In Brief | | | |
| May | | | Outback Flyer article It's Time to Listen | |
| June | | | | |
| July | | | | Guide to be used for orientation in Top End |
| August | ANJ article Birthing in the Bush (120,000 subscriptions) | | NRHA E Forum (2,074 subscriptions) | |
| September | Meetings with Stakeholders in Darwin | | | |
| September | Extract from Website in Birth Matters, Vol 8.3 Sept 2004 | | | |
| October | | | Reconciliation Award | |
| October | | | Articles: Message Stick, Indigenous Post, Sth Syd Herald | |

APPENDIX 2. EXPRESSION OF INTEREST

Wanted

A multidisciplinary group of individuals who provide maternity care

You must be

Willing to be a part of an action research group

Aims of the group

To guide and evaluate, as part of a group, the development of a website and communication forum for remote area maternity service providers

Who is coordinating the task?

Sue Kildea - A remote area nurse/ midwife and Women's Health Educator who has taken time from employment to study full time for a PhD on 'Strengthening Remote Area Maternity Services'

What will it involve?

You will need to be able to access the Internet

You will be asked to talk to colleagues and make suggestions about what resources, guidelines, articles and links you would like available to you on the web

You will be part of a group of remote area practitioners who pilot using a bulletin board to talk to other practitioners on the net (not a chat room) about issues in remote maternal and infant health care.

Commencing July, 2002 and completing Nov, 2002
Please email sue.kildea@uts.edu.au for more details or visit
www.crana.org.au/forum.html

APPENDIX 3. CONSENT FORM: WEBSITE AND FORUM



Lesley Barclay Ph 02 9514 2977
lesley.barclay@uts.edu.au
 Sue Kildea Ph [redacted]
sue.kildea@uts.edu.au
 Centre for Family Health and Midwifery
 PO Box 123, Broadway, NSW, 2007.

I _____ agree to participate in the research project ‘**An action research project to develop and evaluate the ‘Remote Links Web Site Forum’**’. This is being conducted by Sue Kildea, Centre for Family Health and Midwifery, University of Technology Sydney, for the purpose of her doctoral degree.

I understand that the purpose of this study is to identify the barriers and enablers that influence remote area maternity service providers use of a web site and communication forum. I understand that my participation in this research will involve talking to colleagues about what might be useful on the web site and using the forum for communication between colleagues and Sue Kildea.

I am aware that I can contact Sue Kildea ([redacted]) or her supervisor Lesley Barclay (02 9514 2977) if I have any concerns about the research. I also understand that I am free to withdraw my participation from this research project at any time I wish and do not need to give a reason for this.

I agree that Sue Kildea has answered all my questions fully and clearly and has given me a copy of this form. I agree that the research data gathered from this project may be published in a form that does not identify me in any way.

 Signed by _____/_____/_____

 Witnessed by _____/_____/_____

NOTE:

This study has been approved by:

1. The University of Technology, Sydney Human Research Ethics Committee. If you have any complaints or reservations about any aspect of your participation in this research which you cannot resolve with the researcher, you may contact the Ethics Committee through the Research Ethics Officer, Ms Susanna Davis (ph: 02 - 9514 1279, Susanna.Davis@uts.edu.au). Any complaint you make will be treated in confidence and investigated fully and you will be informed of the outcome.
2. The Top End Human Research Ethics Committee. If you have any complaints or reservations about any aspect of your participation in this research which you cannot resolve with the researcher, you may contact the Ethics Committee through the Secretary, Ms Gabrielle Falls (ph: 08 – 89228624). Any complaint you make will be treated in confidence and investigated fully and you will be informed of the outcome.
3. The Central Australian Human Research Ethics Committee. If you have any complaints or reservations about any aspect of your participation in this research which you cannot resolve with the researcher, you may contact the Ethics Committee through the Secretary, Ms Edith Morris (ph: 08 – 89517777 – via Rehabilitation Ward). Any complaint you make will be treated in confidence and investigated fully and you will be informed of the outcome.

APPENDIX 4. INFORMATION PAGE: WEBSITE AND FORUM

Remote area practitioners are isolated from educational updates, current research and evaluations and the support of professional colleagues. The Centre for Family Health and Midwifery (CFHM) successfully applied for funding from the Rural Health Support, Education and Training (RHSET) Program to develop the Remote Links Forum and Website 'Maternity Care in the Bush'. The website will be a hosted page on the CRANA website and will provide education on knowledge and skills specific to remote maternity services, links to new national guidelines, current research, articles of interest and other web sites that are relevant to remote areas practitioners. The Remote Links Forum aims to decrease the isolation of the remote health professional. It is designed to build partnerships between isolated practitioners, for the purpose of support, exchange of information and networking (case review in the future). The web site and bulletin board will target a multidisciplinary workforce including midwives, remote area nurses, Aboriginal Health Workers (AHW's) and Local Medical Officers (LMO's) and has been developed as a joint venture between the Centre for Family Health and Midwifery (CFHM) and the Council of Remote Area Nurses of Australia (CRANA).

I am currently doing my PhD with Professor Lesley Barclay at the CFHM, University of Technology Sydney. The subject is: How can we Strengthening Remote Area Maternity Services in Australia. I will be building and evaluating the website and forum as a part of my doctoral studies. The desired outcomes are:

1. A web site that is relevant to, and accessed by, remote area maternity service providers;
2. A Forum that is relevant, easy to use, and accessed by remote area maternity service providers;
3. Information on barriers and facilitators that influence remote area practitioners use of a web site and forum that target their specific needs; and,
4. Issues specific to Internet use in the remote areas in Australia such as: accessibility; convenience; comfort with technology; line drop out; decreased memory capability; and other barriers and enablers will be explored and documented.

An action research group will be formed to assist with gathering the above information. The Forum titled 'Maternity Care in the Bush' will be password protected until the group have evaluated the Forum and made suggestions for the website. Then it will be opened up for general use – though may still require password access if the research group advise it. CRANA have decided to start using the Forum for other groups straight away and will be commencing Public Forums. A public forum titled maternity care in the bush has already been commenced though there has been no advertising for this. The action research group would be required to communicate to each other and Sue Kildea via the Private Forum. Internet access is necessary to be one of the action research team. The group will be asked to make suggestions on things they would like to access via the website. They will also be asked to discuss this in their workplaces. The group will also be asked to comment on the above four points. They will be able to access the forum at a time that suits them. It is anticipated that the research will take three months to complete but it may be sooner than that.

Ethics approval has been granted from the University of Technology Sydney and the Top End Human Research Ethics Committee of the NT and the Central Australian Human Ethics Committee. Instructions over the page.

Appendices

If you would like to be a member of the group and assist with this research this is what you must do:

1. Read the consent form and information page.
2. Sign the consent form and ask someone to witness it.
3. Fax the consent form to 02 9514 1682, or post it to Sue Kildea, Centre for Family Health and Midwifery, PO Box 123, Broadway, NSW, 2007. Or send Sue Kildea an email stating that you have a copy of the consent form and have read it and the information page thoroughly and are happy to be a part of the research group.
4. Then go to the CRANA website <http://www.crana.org.au/default.html>
5. The first time you visit this site you will need to fill out a quick survey, you will only need to do this once.
6. On the left hand side of the CRANA site there is a heading titled Forum, click here and a page will open describing the 'Remote Links Project'.
7. Click on the blue 'Enter Forum Here' link at the top of the page. This will take you to a new page which reminds you to register for the forum and gives you the opportunity to read the privacy statement if you wish.
8. You will only need to register with the forum once.
9. Once you have registered you will need to send me an email to tell me your user name.
10. I will then ensure you have access to the Private Forum titled Maternity Care in the Bush.
11. The instructions and password to access the Website are on the first posting on this private forum.
12. This posting also has questions I would like you to think about, ask your colleagues about and respond to if possible.
13. Thank you for your participation in this group and feel free to give me as much feedback as you can. I have not given you any extra information about the forum as I am hoping it is easy to access and understand and your feedback on this would be appreciated.
14. The first time you access the forum it will take a little while to get onto the site, fill in the CRANA survey and register. After this you can save the forum address in your favourites and it will be much quicker to get there.
15. Thanks you for your time and patience – I hope you find the website and forum useful.
16. We hope to have information specific to 'Aboriginal Midwifery, Pregnancy and Birthing' added to the site in the future – another project is preparing this information at present.

APPENDIX 5. QUESTIONNAIRE: REVIEWING THE FORUM AND WEBSITE

1. Profession
2. Do you work in a remote or rural setting?
3. Do you have access to the Internet at work, if so are there any barriers or difficulties encountered when using it?
4. Do you have access to the Internet at home, if so are there any barriers or difficulties encountered when using it?
5. Have you accessed the Maternity Care in the Bush Website? Yes No
(if no please go to Question 10)
6. If yes, what would you describe as most useful about this website?
7. What would you describe as least useful about this website?
8. Did you have any problems navigating the website, if so please describe?
9. Do you have any suggestions as to how it could be improved?
10. If you have not accessed the site could you tell me what has made it difficult to do this?

Appendices

11. Have you accessed the Forum? Yes No
(if no please go to Question 16)
12. If yes, what would you describe as most useful?
13. What would you describe as least useful?
14. Did you have any problems navigating the forum?
15. Do you have any suggestions as to how it could be improved?
16. If you have not accessed the Forum could you tell me what has made it difficult to do this?
17. Do you have any further comments

Thank you for completing this questionnaire.

APPENDIX 6. PROMOTING THE RESOURCES AND DISSEMINATION STRATEGY

NEWSLETTERS, WEBSITES AND E-FORUMS

| | |
|---|--|
| CRANA | National Rural Health Alliance |
| ACMI | Office of Rural Health |
| NSW Midwives Association | Maternity Coalition |
| The Australian Nurses Federation | Capers Bookstore |
| The NSW Nurses Association | Birth International |
| The Top End Division of General Practitioners | Australian Breastfeeding Association |
| National Institute of Clinical Studies | Australian Divisions of General Practice |
| Office of Aboriginal and Torres Strait Islander Health | National Association of Childbirth Educators |
| Rural Health Education Foundation | New Zealand Midwives Association |
| The Advisory Committee members for the Centre for Family Health Midwifery | Healthinfonet, Indigenous Clearinghouse |
| NSW Lactation College | |

CONFERENCE PRESENTATIONS

- ❑ Keynote Address 'You Mob Just Don't Listen' Sue Kildea and Molly Wardaguga, Perinatal Society for Australia and New Zealand 8th Annual Conference, *'Integrating Science and Perinatal Practice: Controversies and Dilemmas'* Sydney, 15-18 March 2004
- ❑ 'Stories from Maningrida' Sue Kildea and Molly Wardaguga, Perinatal Society for Australia and New Zealand 8th Annual Conference, *'Integrating Science and Perinatal Practice: Controversies and Dilemmas'* Sydney, 15-18 March 2004
- ❑ Invited Panel Speaker, Indigenous Issues Symposium 'Stories from Maningrida' Sue Kildea and Molly Wardaguga, Perinatal Society for Australia and New Zealand 8th Annual Conference, *'Integrating Science and Perinatal Practice: Controversies and Dilemmas'* Sydney, 19 March 2004
- ❑ Birthing in the Bush. Invited Panel Speaker for the Rural Procedural Medicine Symposium at the 7th National Rural Health Conference – *The Art and Science of Healthy Community – Sharing country know-how*, Hobart, 1-4 March 2003
- ❑ What do Midwives Do in the Bush? Presented at the 22nd National Council of Remote Area Nurses of Australia (CRANA) Conference – *Remote Isolated Community Experience*, Perth, 24-27 September 2004
- ❑ Tackling Isolation with Web-Based Strategies. Presented at the 22nd National Council of Remote Area Nurses of Australia (CRANA) Conference – *Remote Isolated Community Experience*, Perth, 24-27 September 2004
- ❑ Birthing in the Bush – The Great Debate! Presented at the *Australian College of Midwives Incorporated Biennial Conference - Frontiers of Midwifery*, Darwin, 2-5 September 2003
- ❑ Risk and childbirth in rural and remote Australia. Presented at the 7th National Rural Health Conference – *The Art and Science of Healthy Community – Sharing country know-how*, Hobart, 1-4 March 2003

Appendices

- ❑ Myths and Realities: Challenging the Risk Equation for Birthing in the Bush. Presented at The National Association of Childbirth Educators Conference – *Families: Myths, Dreams and Realities*, Sydney, 21-23 February 2003
- ❑ Indigenous remote maternity services in Canada and Australia. Presented at the Council of Remote Area Nurses of Australia (CRANA) Conference – *From Outpost to Outback, The International Remote Area Nurse*, Adelaide, 27-30 October 2002
- ❑ Is there a place for midwives who are not nurses in remote area health services? Presented at the Council of Remote Area Nurses of Australia (CRANA) Conference – *From Outpost to Outback, The International Remote Area Nurse*, Adelaide, 27-30 October 2002
- ❑ Birthing in Outback Australia. Presented at the 26th Triennial Congress, International Confederation of Midwives Conference – *Midwives and Women Together for the Family of the World*, Vienna, 14-18 April 2002
- ❑ Is there a place for midwives who are not nurses in remote area health services? Nicky Leap and Sue Kildea, Presented at the Association for Australian Rural Nurses Inc. 10th National Conference – *Rethinking nursing roles in rural communities*, Sydney, 15-17 February 2002
- ❑ Birthing in the Bush, Maternity Services in Remote Areas of Australia. Presented at the 19th National Annual Conference of the Council of Remote Area Nurses of Australia (CRANA) – *From Generalist to Specialist, The Australian Remote Area Nurse*, Cairns, 28-31 August 2001

PUBLICATIONS

- ❑ Wardaguga, M. and S. Kildea, *Molly Tells Medical Conference: It's Time to Listen*. Aboriginal & Islander Health Worker Journal, 2004. 28(6).
- ❑ Kildea, S., Editor, 'Birthing in the Bush', Australian Nursing Journal, August 2004, Vol 12:2.
- ❑ Kildea, S., Wardaguga, M., Dawumal, M., Maningrida Women, 2004, 'Mothers and Babies' Health in the Bush, Extract from: Birthing Business in the Bush Website', Birth Matters, Vol 8.3, September, pp 25.
- ❑ Kildea, S., Wadaguga, M., 2004, Molly Tells Medical Conference: 'It's Time to Listen!' *Outback Flyer*, No. 59.
- ❑ Kildea, S., 2004, Storytelling -A Guide to Birthing Business in the Bush *Outback Flyer*, No. 58.
- ❑ Kildea, S, Risk and childbirth in rural and remote Australia 2003, Refereed conference paper, *National Rural Health Conference*, 1-4 March 2003
- ❑ Kildea, S, 2002, 'Lennies Story', *Midwifery Matters*, 20:3, September
- ❑ Birthing in Outback Australia. *Conference Proceedings*, 26th Triennial Congress, International Confederation of Midwives Conference – *Midwives and Women Together for the Family of the World*. Vienna, April 14-18th, 2002.
- ❑ Birthing in the Bush, *Conference Proceedings*, 19th National Annual Conference of the Council of Remote Area Nurses of Australia (CRANA) – *From Generalist to Specialist, The Australian Remote Area Nurse*, Cairns, 28-31.8.01.

RADIO INTERVIEWS

- ❑ Kildea, ABC Radio Country Hour, Workforce Shortage in the Bush, 14.2.05

Appendices

- ❑ Kildea, S, ABC Radio, Perth, Childbirth in Remote Areas, September 2001
- ❑ Kildea, S, ABC Radio, Tasmania, Risk and Childbirth in Rural Areas, 4 March 2003

MEDIA

- ❑ 'NT Birthing Call', Saturday News Extra, P.3, Northern Territory News, 20.3.04
- ❑ Kildea, S. and M. Wardaguga, September-October, Women's Centre Business. Manayingkarirra Djurrang, Maningrida Community Newspaper. Maningrida: 27
- ❑ Kildea, S. and M. Wardaguga, Birth Rites. Manayingkarirra Djurrang, Maningrida Community Newspaper. Maningrida: 21-20
- ❑ Kildea, S. and M. Wardaguga, Women's Business. Manayingkarirra Djurrang, Maningrida Community Newspaper. Maningrida: 16-17
- ❑ Maningrida Newsletter (September 2002, May 2003, October 2003)
- ❑ 'Birthing in the Bush', UTS News, 12-15.6.03.
- ❑ 'Bush Birthing – Women's Lore is Documented' Koori Mail, 4.6.03.
- ❑ UTS News article 'Birthing in the Bush' reproduced in Midwifery Matters, Vol 21, No 3, September, 2003.
- ❑ 'UTS Recognition for breakthrough Indigenous projects', Message Stick: Aboriginal and Torres Strait Islander Online: <http://www.abc.net.au/message/news/stories/s1220844.htm>, NSW, 15.10.04.
- ❑ National Indigenous Times, p.14. 'Indigenous projects get the tick at UTS Human Rights Awards', 27.10.04
- ❑ 'Recognition for breakthrough Indigenous projects', South Sydney Herald, p.3, November 2004.

APPENDIX 7. PRIVACY CODE

CRANA is committed to providing you with the highest levels of client service. This includes protecting your privacy. From 21 December 2001, we are bound by new sections of the Commonwealth Privacy Act 1988, which sets out a number of principles concerning the protection of your personal information.

This statement, called "Protecting Your Privacy", sets out important information about privacy protections which we extend to your personal information. It relates to personal information that you provide to us (eg when you logon to our site or when completing our membership or other forms)

Quick Links:

- [How we collect personal information](#)
- [How we use your personal information](#)
- [The CRANA Website](#)
- [Personal information collected](#)
- [Other Information](#)
- [When we disclose your personal information](#)
- [Help us to ensure we hold accurate information](#)
- [You can access your personal information](#)
- [Security of your information](#)
- [What else you should know about privacy](#)
- [How to contact us](#)

How we collect personal information

CRANA collects personal information in a number of ways, including:

- directly from you, such as when you enter your personal details during registration or application for products and services, when you provide information by phone or in documents such as a membership form;
- from third parties such as credit reporting agencies or your representatives;
- from publicly available sources of information;
- from the organisations identified below under "When we disclose your personal information";
- from our own records of how you use your CRANA services: or
- when legally required to do so.

How we use your personal information

Your personal information may be used to:

- identify you and to assist you to subscribe to our services more easily;
- provide the services you require;
- administer and manage those services, including charging, billing and collecting debts;
- gain an understanding of your needs in order for us to provide you with better, more personalised services that are tailored to your needs;
- inform you of ways the services provided to you could be improved;
- conduct appropriate checks for credit-worthiness and for fraud;
- research and develop our services;
- maintain and develop our business systems and infrastructure, including testing and upgrading of these systems;

Your personal information is also collected to promote and market to you other services which we consider may be of interest to you. We will use the opt-out method, whereby we will send you such material provided to you without response or request. You may notify us at any time that you do not

Appendices

wish to receive such material by calling us on 61 8 8953 5244 or by using the [Contact Us](#) page to send your request via email.

The CRANA Website

CRANA provides a range of services, either direct by CRANA or through affiliated organisations. Most of these services are provided on the CRANA.org web site, which consists of one web address (known as 'domains') - CRANA.org.au, as well as other affiliated domains.

Marketing information provided by CRANA is determined by the resources you acquire. Advertisements will also be presented to you, but the placement of these is not related specifically to any details we hold about you.

Personal information collected

The types of personal information we collect from you will depend on how you use our products and services. Such information may include your name, date of birth, gender, current and previous addresses, telephone/mobile phone number, email address, bank account or credit card details, occupation, and your CRANA username or password. We may also collect details of your CRANA services (including their status) and your personal interests.

If you choose not to provide personal information, we may not be able to provide you with the services you require, or the level of service on which we pride ourselves.

Other Information

We record other information as well. This information is used to further the aims and objectives of the organisation. Whenever you visit the CRANA website, we record the time, date and state within Australia of the request.

CRANA uses "cookies". Cookies are pieces of information that a web site can transfer to an individual's computer hard drive for record keeping. Cookies can make using our website easier by storing information about your preferences. This will enable you to take full advantage of the services we offer. The use of cookies is an industry standard and you'll find most major websites use them. Most Internet browsers are pre-set to accept cookies. If you prefer not to receive cookies, you can adjust your Internet browser to disable cookies or to warn you when cookies are being used.

CRANA uses Driver Web Designers to analyse usage statistics on our website. This analysis is performed using data collected from the CRANA.org website.

When we disclose your personal information

For the purposes set out above (under "How we use your personal information") we may disclose your personal information to organisations outside CRANA. Where appropriate, these disclosures are subject to privacy and confidentiality protections. The organisations to which we usually disclose information include:

- outsourced service providers who manage the services we provide to you, including:
 - client enquiries;
 - mailing systems;
 - billing and debt-recovery functions;
 - information technology services;
 - market research;
- your representatives (eg your authorised representatives or legal advisers);
- credit-reporting and fraud-checking agencies;
- our professional advisers, including our accountants, auditors and lawyers;
- government and regulatory authorities and other organisations, as required or authorised by law;
- organisations involved in:
 - a transfer/sale of all or part of our assets or business (including accounts and trade receivables); and
 - managing our corporate risk and funding functions (eg securitisation);

Appendices

Help us to ensure we hold accurate information

CRANA takes all reasonable precautions to ensure that the personal information we collect, use and disclose is accurate, complete and up-to-date. However, the accuracy of the information we hold depends to a large extent on the information you provide. That's why we recommend you:

- let us know if there are any errors in your personal information; and
- keep us up to date with changes to your personal information such as your name or address.

You can easily enact an edit or deletion of the personal information you provide to us (unless it is mandatory information required for your membership application), but to do so, you will need to contact us.

If you wish to access or modify personal information which you have provided, please call us on 61 8 8953 5244 or by using the [Contact Us](#) page to send your request via email.

You can access your personal information

You have a right to access your personal information, subject to some exceptions allowed by law. If you would like to do so, please call us on 61 8 8953 5244 or by using the [Contact Us](#) page to send your request via email. You may be required to put your request in writing for security reasons. CRANA reserves the right to charge a fee for searching for and providing access to your information.

Security of your information

We take reasonable steps to ensure that your personal information is stored securely. Transmissions sent to or from our offices are routinely monitored for quality control and systems administration. Unfortunately, no data transmission can be guaranteed to be 100% secure. While we strive to protect your personal information from misuse, loss and unauthorised access, we cannot guarantee the security of any information you transmit to us or receive from our products or services. These activities are conducted at your own risk. Once we receive your transmission, we make our best effort to ensure its security.

Credit card information is among the most important data we collect. CRANA keeps no electronic record of card details, to minimise the risk of unauthorised use of such information. For obvious reasons, please do not send credit card information through unsecured email.

What else you should know about privacy

Remember to close your browser when you have finished your user session. This is to ensure that others cannot access your personal information and correspondence if you share a computer with someone else or are using a computer in a public place like a library or Internet cafe. You as an individual are responsible for the security of and access to your own personal files.

Please be aware that whenever you voluntarily disclose personal information, that this information can be collected and used by others.

Ultimately, you are solely responsible for maintaining the secrecy of your personal and account information. Please be careful and responsible whenever you are using the Internet and our website.

How to contact us

If you have any questions in relation to privacy, please contact us on 61 8 8953 5244 between 9.00 am and 5.00 pm, Monday to Friday CST.

Alternatively, you can:

- use the [Contact Us](#) page to send your questions and comments via email; or
- write to our Business Manager, at PMB 203 Alice Springs NT 0872.

APPENDIX 8. CONSENT FORM MANINGRIDA WOMEN



Lesley Barclay Ph 02 9514 2977
lesley.barclay@uts.edu.au
 Sue Kildea Ph 0418 289 199
sue.kildea@uts.edu.au
 Centre for Family Health and Midwifery
 PO Box 123, Broadway, NSW, 2007.

I _____ agree that I have listened to the information session about this research project and I would like to be involved as a member of the participatory action research group that is being formed, or just tell my story. I understand I will be working with Sue Kildea and talking to community members about cultural needs around birthing business and how we can work with the midwives, nurses and doctors to plan the maternity services for the community.

I understand that after we have talked to community members the participatory action research team will bring all the information together and turn it into an education guide for the midwives, doctors and nurses. We will then check the stories and photos with the community members and the Health Centre Staff to see if we need to change anything in the guide and then we will make the changes. I understand I will be working with Sue Kildea who is doing her doctoral degree. I know Sue is working with Lesley Barclay (her supervisor) at the Centre for Family Health and Midwifery, University of Technology, Sydney.

I realise I can stop doing this project any time I want to and that decision is up to me and my family. I am aware that I can contact Sue Kildea or Lesley Barclay if I have any worries about the research project. I agree that Sue Kildea has answered all my questions fully and clearly and has given me a copy of this form. I agree that the information gathered from this project may be published only if the whole group agrees and I can decide if I want to be written down as an author or not.

 Signed by _____/_____/_____

 Witnessed by _____/_____/_____

 Interpreted by (if needed) _____/_____/_____

NOTE:
 This study has been approved by:
 1. The University of Technology, Sydney Human Research Ethics Committee. If you have any complaints or reservations about any aspect of your participation in this research which you cannot resolve with the researcher, you may contact the Ethics Committee through the Research Ethics Officer, Ms Susanna Davis (ph: 02 - 9514 1279, Susanna.Davis@uts.edu.au). Any complaint you make will be treated in confidence and investigated fully and you will be informed of the outcome.
 2. The Top End Human Research Ethics Committee. If you have any complaints or reservations about any aspect of your participation in this research which you cannot resolve with the researcher, you may contact the Ethics Committee through the secretary, Ms Gabrielle Falls (ph: 08 - 89228624). Any complaint you make will be treated in confidence and investigated fully and you will be informed of the outcome.

APPENDIX 9. CONSENT FORM PAR TEAM



University of Technology, Sydney

Lesley Barclay Ph 02 9514 2977
lesley.barclay@uts.edu.au
Sue Kildea Ph 0418 289 199
sue.kildea@uts.edu.au
Centre for Family Health and Midwifery
PO Box 123, Broadway, NSW, 2007.

I _____ agree to participate in the research project '**An action research project to develop and evaluate a 'Guide to Birthing Business in the Bush**. This is being conducted by Sue Kildea, Centre for Family Health and Midwifery, University of Technology Sydney, for the purpose of her doctoral degree.

I understand that the purpose of this study is to develop a guide that assists remote area maternity service providers develop a better understanding of the issues that are important to the community in which they are working. I understand that my participation in this research will involve working through the guide and then giving feedback to Sue Kildea about the guide.

I am aware that I can contact Sue Kildea (0418 289 199) or her supervisor Lesley Barclay (02 9514 2977) if I have any concerns about the research. I also understand that I am free to withdraw my participation from this research project at any time I wish and do not need to give a reason for this.

I agree that Sue Kildea has answered all my questions fully and clearly and has given me a copy of this form. I agree that the research data gathered from this project may be published in Sue Kildea's doctorate or any other form and will not identify me in any way.

Signed by

____/____/____

Witnessed by

____/____/____

NOTE:

This study has been approved by:

1. The University of Technology, Sydney Human Research Ethics Committee. If you have any complaints or reservations about any aspect of your participation in this research which you cannot resolve with the researcher, you may contact the Ethics Committee through the Research Ethics Officer, Ms Susanna Davis (ph: 02 - 9514 1279, Susanna.Davis@uts.edu.au). Any complaint you make will be treated in confidence and investigated fully and you will be informed of the outcome.
2. The Top End Human Research Ethics Committee. If you have any complaints or reservations about any aspect of your participation in this research which you cannot resolve with the researcher, you may contact the Ethics Committee through the Secretary, Ms Gabrielle Falls (ph: 08 - 89228624). Any complaint you make will be treated in confidence and investigated fully and you will be informed of the outcome.
3. The Central Australian Human Research Ethics Committee. If you have any complaints or reservations about any aspect of your participation in this research which you cannot resolve with the researcher, you may contact the Ethics Committee through the Secretary, Ms Edith Morris (ph: 08 - 89517777 - via Rehabilitation Ward). Any complaint you make will be treated in confidence and investigated fully and you will be informed of the outcome.

APPENDIX 10. CASE STUDY THREE INTERVIEW QUESTIONS

How can we make maternity care culturally safe?

What kind of cultural knowledge is important for the midwives to know?

What food taboos exist around pregnancy and childbirth and is this important for health practitioners to know about?

What bush tucker or bush medicine is important in pregnancy?

What concerns do you have about health in the community?

What is going well in the community?

What cultural and ceremonial practices are important for the staff to know about?

How do you know which elders to talk to when you are concerned about a woman in pregnancy?

Which elders have knowledge of birthing practices and should this be incorporated into health care or education?

What should we do if women with risk factors want to stay in Maningrida for birth?

Is there particular language or guidelines when talking about birthing business with the women?

How could the transition to working in Aboriginal health be made easier?

What are the benefits and disadvantages of birthing in Darwin, the regional centre?

How can we change the disadvantages?

What are the benefits and disadvantages of birthing in Maningrida?

These were the points and questions that I added to the interview plan:

Language / skin group

Number of children

Tell us about your births – what was good and what was bad

Did you ever have any problems when birthing

Who was present when you birthed

Can you tell us about ceremonies that are important to you?

What do you tell the young girls about childbirth?

What is working well in the community at the moment?

What is not working so well in the community at the moment?

What do you believe the young girls should be doing around birth?

What sort of things do you think are important for the health staff to know about?

(Field Notes, October 02).

APPENDIX 11. CASE STUDY FOUR, FLYER

Are you interested in Indigenous maternal health in remote areas?

**BIRTHING BUSINESS
IN THE BUSH**

Would you like to learn more about traditional birthing?

Would you like to have a step-by-step guide to assist you to better understand and plan maternity services within your community?



Sue Kildea is a remote area midwife who is currently working with the Maningrida women in Arnhem Land to prepare a web based 'Guide to Birthing Business'. The guide includes: birthing stories and traditional practices from Maningrida women; troubleshooting examples which may assist you in your own community; and, current clinical information on issues that are commonly seen in remote area maternity care.

Sue is looking for people who would be interested in evaluating the guide as a part of her research. What would be involved? You would need:

- ◊ to consent to participating in the research;
- ◊ access to a computer with a CD drive (you get to keep the CD when you are finished) or we could make it available over the internet for you;
- ◊ spare time to look through the CD and try out the guide in your community;
- ◊ time to talk to Sue about it on the telephone (Approx 1/2-1 hour).

Sue is hoping to send out the CD's around October and follow up with the phone interview in Jan / Feb 2004.

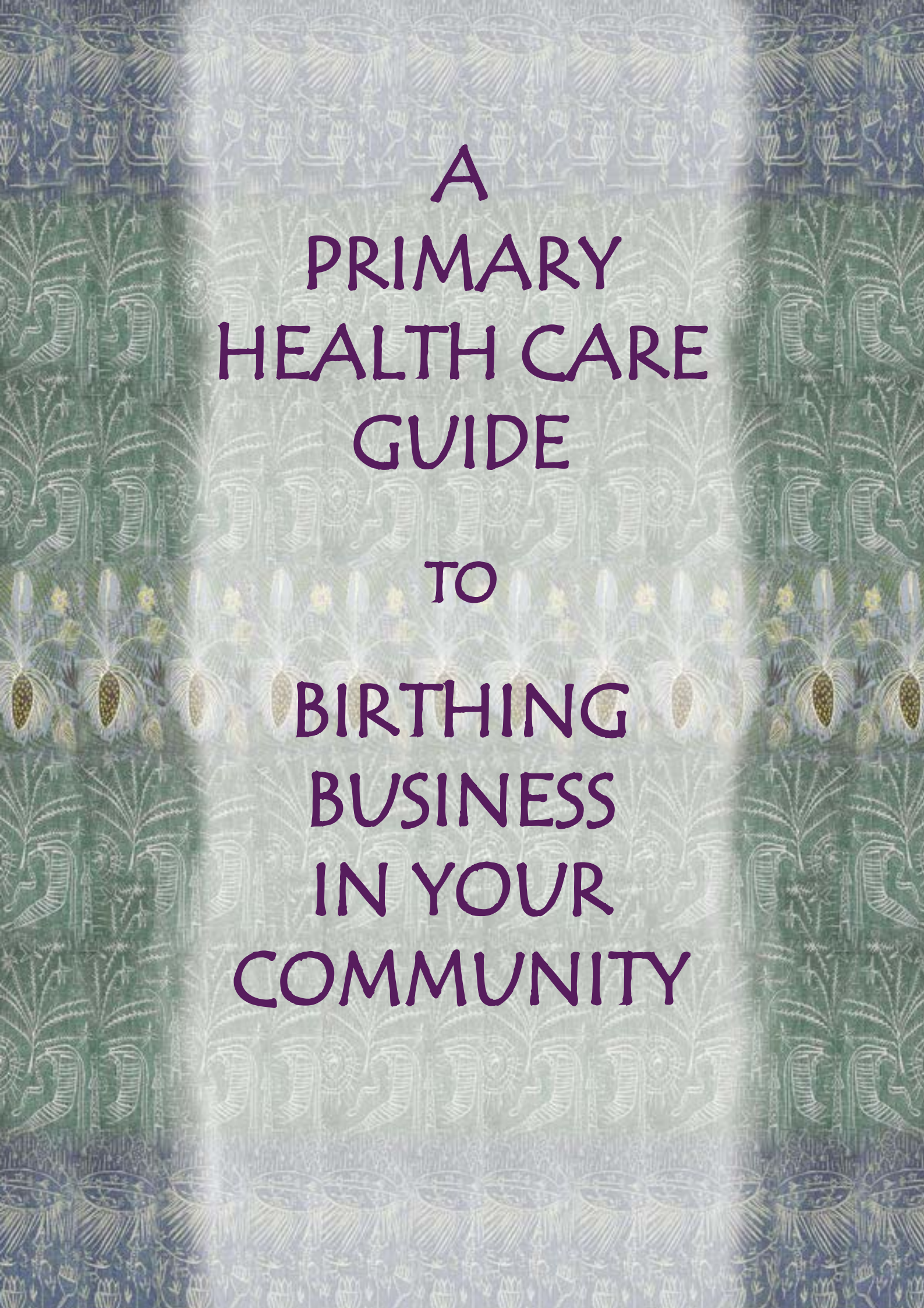
If you are interested please email
sue.kildea@uts.edu.au or phone 0418 289 199

APPENDIX 12. BIRTHING BUSINESS IN THE BUSH WEBSITE

NOTE TO EXAMINERS:

This disc is provided to make viewing of the website more convenient and not reliant on download speeds and cable size. Ideally the homepage should open when the disc is inserted. However, some computers may not be able to read the disc or the executable files. If this occurs try accessing the disc through the index.html file, as this should open the home page of the CD and all other pages will be viewed through the links. Some of the links in the website may not be recognised by some computers. If this occurs, each of these documents can be found in pdf format through the documents folder.

If, in spite of these attempts, it is still not possible to view the disc, please view it online at the following address: www.maningrida.com/mac/bwc.index.html



**A
PRIMARY
HEALTH CARE
GUIDE**

TO

**BIRTHING
BUSINESS
IN YOUR
COMMUNITY**

Acknowledgements

This Guide has been developed as a part of the Birthing Business in the Bush Website, which should be used as a reference for the Guide. Both were developed as a Participatory Action Research (PAR) Project and have had the assistance of numerous people. Many remote area nurses and midwives have given their time for reviewing and feedback: particularly the Women's Health Educators for the Northern Territory (NT) (esp. Sandy McElligot, Sharon Weymouth and Glenda Gleeson); the Health Centre Staff in Maningrida (esp. Hellen Matthews, Suzanne Peel, Leonie Conn, Abbey Harwood and Christine Haigh); Ree Dunn and Jeanette Boland. Lesley Barclay was the project director and Sue Kildea the project officer. Sue Kildea and Molly Wardaguga (SAHW – retired) were co-researchers on the project with the Participatory Action Research Team, which included Maningrida women, Aboriginal Health Workers, Remote Area Nurses and Midwives, Local Medical Officers, Women's Centre Co-ordinators (Kim Short, Genevieve Meehan, Jill White and Carol Holt), Women's Health Educators and an ex-Remote Area Nurse Midwife.

The women of Maningrida and its outstations have generously shared their time to develop the Birthing in the Bush Website and the learning from that has been channeled into the development of the Guide. The women who have told their stories include: Molly Wardaguga, Deborah Wurrkidj, Margaret Dawumal, Elizabeth Gandabuma, Mary Mason, Dora Daiguma, Phyllis Dungudja, Marie Jingu-wa-rumba, Nancy Du-urrunga Cooper, Sharon Bonson, Janice Mundarwili, Janet Gunamarnay, Theresa Djangala, Margaret Cooper, Dorothy Djilu, Elaine Ngalingali, Esther Djaliba, Ruby Malaridja, Sonia Namarnyilk, Rosie Wulurnurga, Joy Garlbin, Verity Bengarra, Amanda Djawarbuma, Sarah Lee James, Katie Cooper, Wendy Gaborrod, Beverly Garadaba, Trixie Nadjerrerr, Margaret Fry, Dorothy Galaledba, Daisy Fry, Alice Gunwarbi, Josephine Darcy, Jenny Anne Darcy, Shirley Mininjarla, Elizabeth Mipalangok, Mary Djadbalag, Dixie Wurpamira, Nellie Guiyulin, Clair Lairabidiwanga Brian, Selma Campion, Jill Ganinydja, Kerryantha James, Tinica Wilson, Charlie Nanguwerr, Nancy Gununwanga, Trudy Nicky, Margot Gurawiliwili, Julieanne Garadaba, Lena Guriniya, Mabel Anaga Bana Buda, Barbara Mondalmi and Mara Mira.

The Bawinanga Women's Centre, Maningrida, and the Centre for Family Health and Midwifery, University of Technology, Sydney have been joint partners on this project. Additional support has been received from the Council of Remote Area Nurses of Australia and the Department of Health and Community Services, Darwin; in particular the Women's Health Strategy Unit. Many of the organisations in Maningrida have assisted with the logistics of the project, in particular: The Bawinanga Aboriginal Corporation, The Mala'la Health Centre, The Malabam Health Board and The Maningrida School.

The project was funded by the Australian Government Department of Health and Ageing through a Rural Health Support, Education and Training (RHSET) grant.

Artwork: The Guide has been designed by Liquid Rain Design using photos of Screen Prints designed by Belinda Guringa, Kate Muwulga and Lena Guriniya all from Maningrida.

This Guide was written and developed by Sue Kildea (with the PAR Team) through the Centre for Family Health and Midwifery, University of Technology, Sydney, 2004.

Contents

| | |
|--------------------------------|----|
| Introduction | 2 |
| Why did we do it? | 2 |
| Community Demographics | 3 |
| Community Orientation | 3 |
| Communication in the Community | 4 |
| Birthing Business – Cultural | 6 |
| Cultural Business | 6 |
| Before Pregnancy | 7 |
| Before Birth | 8 |
| During Birth | 10 |
| After Birth | 12 |
| Clinical Audit | 15 |
| Community Overview | 15 |
| Before Birth | 16 |
| During Birth | 18 |
| After Birth | 20 |
| Resources | 21 |
| Local Dictionary | 22 |
| Planning | 24 |
| References | 25 |

Introduction

This guide has been developed as a tool to assist you to become more familiar with the maternal health issues that are important to the community within which you are working. The time it takes to work through this guide is totally dependent on you and how it suits your working environment. It may take several months to progress through this guide or you may find that it can be done in a shorter time frame. Under each heading there is a suggested section that can be done early after your arrival in the community and a second section that can be done soon after you have been in the community for a while. The section titled 'Clinical Audit' shows you some of the statistics important to women's health in remote areas. Once again it is up to you if you decide to fill out every section. There are no 'right' answers and some of the questions may not be appropriate to the area you working in.

The guide has been developed with women in Maningrida, a remote community in Arnhem Land, Northern Territory (NT), and many of the health concerns are taken from NT statistics (though the issues are very similar across remote Australia). Many of the answers will need to be discussed with health workers and local community women and it will be as you talk with them that you will learn more about the issues that are important to them and their community. The Guide has been developed as a companion to the Birthing in the Bush Website and looking through this Website (see address below) will let you see how the issues in the community you are working in differ, or are similar to, the Maningrida area.

WHY DID WE DO IT?

There is strong evidence to support the value of community participation in health care planning but little has been done to adapt these principles to remote areas[1]. Some communities will have local Community Health Boards and although many of these are being newly established and receive variable length of training in health and management issues, it is important to work with these elected members of the community towards joint planning of services. Similarly health care providers have not been given training to support them to work in this type of role and the overwhelming acute load in remote communities can sometimes mean that you never really get out of the Health Centre to do the things that have a more primary health care approach. This makes talking to community members about what they think can be done to improve health difficult. It is hoped this guide can assist you to become more familiar with the community. Most importantly, it aims to integrate community beliefs and values into maternal health care planning which in turn will assist the health service in meeting the needs of the community.

This guide is not meant to replace any other processes that are already in place. Some of the questions may seem simple and others obvious, but they are designed to help the newly arriving practitioner who will be involved in women's health, become familiar with the community, the health centre environment, and people in the community. This guide can be printed off on a yearly basis and some, though not all, of the sections could be updated. When you leave the community this guide would be a good resource and historical account for the new staff that replace you. It would be best for them to commence working through a new guide themselves; however the information you have collected helps to leave a record of things that were important at that time in the community. The Women's Business Manual[2] also has a lot of information about Women's Business and Birthing and should be used in conjunction with this Guide and Website.

Have you asked the health workers if they want to be involved in Women's Business?

(If there is a health worker who is interested in Women's Business make sure you do all of the following activities together. If not perhaps there is someone in the community you could be buddied up with to assist you).

...A primary health care guide to birthing business in the bush...

Community Demographics

COMMUNITY ORIENTATION

Many communities have a Community Atlas or Community Profile that will give you an overview of the community and will contain the answers to some of these questions.

How many people live in the community?

How many outstations are there and do people live there all year round?

Do you provide health visits to the outstations and if so how often?

What languages are spoken in the community? Some communities will only have one language that everyone speaks whereas others will have many. An example is Maningrida where there are 3 major languages and 11 dialects.

Who are the landowners for the local area?

How many Health Workers and other staff are there working in the health centre, and what language group/s and family group/s do they belong to?

Community Demographics

Questions to be considered after you have settled in

Have you met all the health workers? Some may not be currently working, may have recently retired, or could be on leave. These health workers are often invaluable when you need assistance with members of their extended family, particular when there are differences in understandings around health issues. It is helpful to have met them and introduced yourself. Perhaps you could ask one of the other health workers to introduce you to them. You could list their names, family groups and the languages they speak here.

COMMUNICATION IN THE COMMUNITY

Is there a Health Board (or equivalent) in the community? Where is it and who is on it?

Is there a Women's Centre or similar organisation in the community where women meet (Arts and Crafts / Pottery or Sports Centre)? Go and visit and see what activities they do there. Talk to the co-ordinator and the women who meet there to organise a time to talk about Women's Business. What do they think is important for women in the community?

Community Demographics

Does the community have the Strong Women Strong Babies Strong Culture program (SWSBSC), or similar (Grandmothers Program, Community Nutrition Workers, Maternal Child Health Community Program)? If yes, then organise a time to meet with these women to talk about working together on Women's Business. Think about organising regular meetings to share ideas and planning. This is particularly important if there is an antenatal woman or a mother with her new baby you are concerned about. The Strong Women can help you talk to family members and find solutions to issues of concern. List the groups and women with their family and language group here.

Questions to be considered after you have settled in

Which members of the Health Board should you talk to about Women's Business? With the health worker arrange a time to go and introduce yourself and talk to them about their concerns in relation to Women's Business (make sure you talk to the Health Centre Manager about this first).

What types of Women's Business activities have happened in the past? For example Women's Weeks, Skinny Kids Program and Meals on Wheels. It is important to know what has happened in the past, every community is different and what works in one will not necessarily work in another.

What have the women in your community recommended? In Maningrida the women identified a wish to go bush and camp together once a year with the young girls, the health centre staff and the elders in the community to share stories, ideas and education. It may take some time to build a relationship of trust before such ideas are given.

Birthing Business – Cultural

CULTURAL BUSINESS

Does it make a difference what language or skin group the women are from as to who they would want caring for them antenatally or during birth? In some communities this is an issue and in others it does not matter at all, you need to ask.

When women go to the regional centre for birth are they funded to have a support person (escort) go with them and if so how is this organised in the community? The role of the escort is to support and keep company. They should not be a minor and need to be able to stay with the woman the whole time she is in the regional centre.

Questions to be considered after you have settled in

If there is no support person funded is this something that is considered important to the woman and her family?

Is there any way the community can assist families to save money before the baby is due, so a family member can go to the regional center as an escort?

...A primary health care guide to birthing business in the bush...

Birthing Business – Cultural

Ask each of the current and retired health workers what experience they have in maternal and infant care or if they have done any midwifery training. Listen to their stories. Many of the older AHW's may have been into the regional centre for several months midwifery training and others have done apprenticeship training on site. Many will have had a lot of experience birthing babies. Like Molly and Margaret in Maningrida, some will also be experienced in birthing in the traditional way. Write some notes here.

BEFORE PREGNANCY

Questions to be considered after you have settled in

Health Promotion

Does school screening involve anything special for the teenage girls that will help them be better prepared for a healthy planned pregnancy? eg. contraception, safe sex, pregnancy education or Hb testing? Ensuring reproductive age women are not malnourished or anaemic and have worming treatments made available regularly helps to optimise pre-pregnant health. If you know of women who are planning a pregnancy it is ideal that they take folic acid as prevention against Neural Tube Defects.

How can you be involved in the next school screening and what should you plan to do?

Birthing Business – Cultural

Who do you need to talk to about health promotion activities at the school? In some communities the health centre staff are involved in regular education sessions at the school. This is an excellent time to talk to the young girls and can be a lot of fun too. If you are not sure what to talk about, or what resources to use, talk to the AHW's and Women's Health Educator in your area. If you do not do this regularly then perhaps talk to the teachers about doing occasional health promotion sessions with the schoolgirls. Make sure you involve AHW's or senior community women in any sessions you do.

BEFORE BIRTH

Community Knowledge

What foods are recommended in pregnancy and freely available in the community?

Are there any foods that are not allowed during pregnancy amongst the different groups in this community?

If you have concerns about an antenatal women who is it best to talk to in your community? This differs depending on the community. In some areas there are Strong Women Workers and this is a part of their job, in other areas you should talk to the health workers or the woman's auntie or mother. Talk to the women in the community about this and see what they suggest. If you need to explain things to the family it is important to involve an AHW (still working or retired) who could sit with the family to help you explain the problem to avoid misunderstandings.

Birthing Business – Cultural

Questions to be considered after you have settled in

Cultural Business

Are there any foods that should be avoided if a woman has had a miscarriage? Ask 5-10 antenatal women about this. (In Maningrida women who have had a miscarriage are not allowed to eat foods that have been hunted).

What should be done if a woman has a miscarriage or a stillbirth in the health centre?

In some areas the health centre may need to be smoked, others will not require this. Ask the health workers what should occur. Sometimes the family may want to bury the baby in a special place, often with another relative (eg. great grandmother) who has already passed away. To find the cause of the miscarriage or stillbirth you may need to discuss the possibility of sending the products of conception, or the baby, into the regional centre for pathology testing or autopsy. If the family are happy for this to occur, once completed, the baby can be returned home for the appropriate burial and ceremony, though some families may not want this done. If you have a camera in the community it is a good idea to ask about taking photos and they can be left in the file. Many families will return, sometimes years later, and ask for these. Did you know there is a Northern Territory SIDS support group. Women from remote communities have used the phone service for support, make sure you give them the number to use if they want to. You may need to ask again after 1-2 weeks.

Birthing Business – Cultural

DURING BIRTH

Cultural Business

Who should be with the women when they birth and which community members could you call if a woman goes into labour in the community? In addition to other health professionals it is important to encourage support people (aunty, grandmother, health worker, traditional midwife, and for some women their partner) to come and stay with the woman in labour, there is strong evidence to suggest that the presence of support people improve outcomes in labour and birth.

If there is no medical backup in the community who can you call to assist you if a women is going to give birth? You may need to have different women listed below for different language or family groups.

Planning

Do you have an emergency pack ready for births that occur out in the community? If so, where is it kept, what is in it, and what other equipment do you need to collect before you go? (eg. Syntocinon from the fridge, oxyviva, protocol or Women's Business Manual). Knowing your equipment and being sure it is working can make a difference to the outcome in any emergency. You should always be prepared; know who to call for help; and follow your protocols. Don't forget to fill in the paperwork and send a form to the Midwives Data Collection if a woman births in the community.

Birthing Business – Cultural

Questions to be considered after you have settled in

Cultural Business

What is the husband's / partner's role in birth? Ask 5-10 antenatal women about this. Though traditionally, partners/fathers did not attend the birth some couples today are deciding they should both be present for birth or the partner may want to be nearby.

What are the roles of the mother, auntie, sister and elders during birth? Ask 5-10 antenatal women and / or elders about this.

What positions are used for birth? Traditionally women were in upright positions for birth, this position should be encouraged as it assists birth. Often placing a mattress on the floor is the best way of doing this, as with any labouring woman they may find it difficult to move off the bed once getting on it and they might just want to sleep. If they are in labour you should facilitate and encourage upright positions. If the labour is progressing quickly you may not want a woman in the upright position until you are prepared for the birth. In this situation the 'all fours position' may be appropriate.

Birthing Business – Cultural

Discuss with the other health staff in the community what you should do if a woman wants to have her baby in the community? Does your organisation have a policy about this? Women all over Australia are starting to demand better choices in childbirth. This can be difficult in the community setting where there are limited resources. It is important to remember that what ever you say, women perform their own risk assessment and make decisions that are best for their families.

Discuss with the other health staff in the community how they feel about non-Aboriginal women who want to stay in the community for birth? (As mentioned above there is a groundswell of women around Australia making choices in childbirth that are not necessarily in line with the current health care policies. Informing women about the available resources, discussing the available options, respecting a woman's choice and documenting these conversations in the medical records are important considerations for health care providers).

AFTER BIRTH

Cultural Business

Ask a sample of older women (5-10) what you should do with the placenta if a woman births in the health centre and document their responses here. Regardless of the consensus, each individual woman who births her placenta in the Health Centre should also be asked and her wishes followed.

Does this differ for different groups within the community?

Birthing Business – Cultural

Is there some form of ceremony (like the smoking ceremony) that is important for women and babies following childbirth? If so, ask if you could attend one and learn about it. Often these occur in the community and the health centre staff can be unaware of them. If any woman is having problems with breastfeeding or infections then this ceremony could be important, as described in the Website, it will assist in making the milk strong, stopping the bleeding and preventing infections.

Questions to be considered after you have developed relationships of trust within the community

When you are asking these questions it is important to remember that some people will not be able to talk about some of these things. Listen and look carefully at their body language as that might not want to be rude to you, but you may be putting them in an awkward position

Community Knowledge

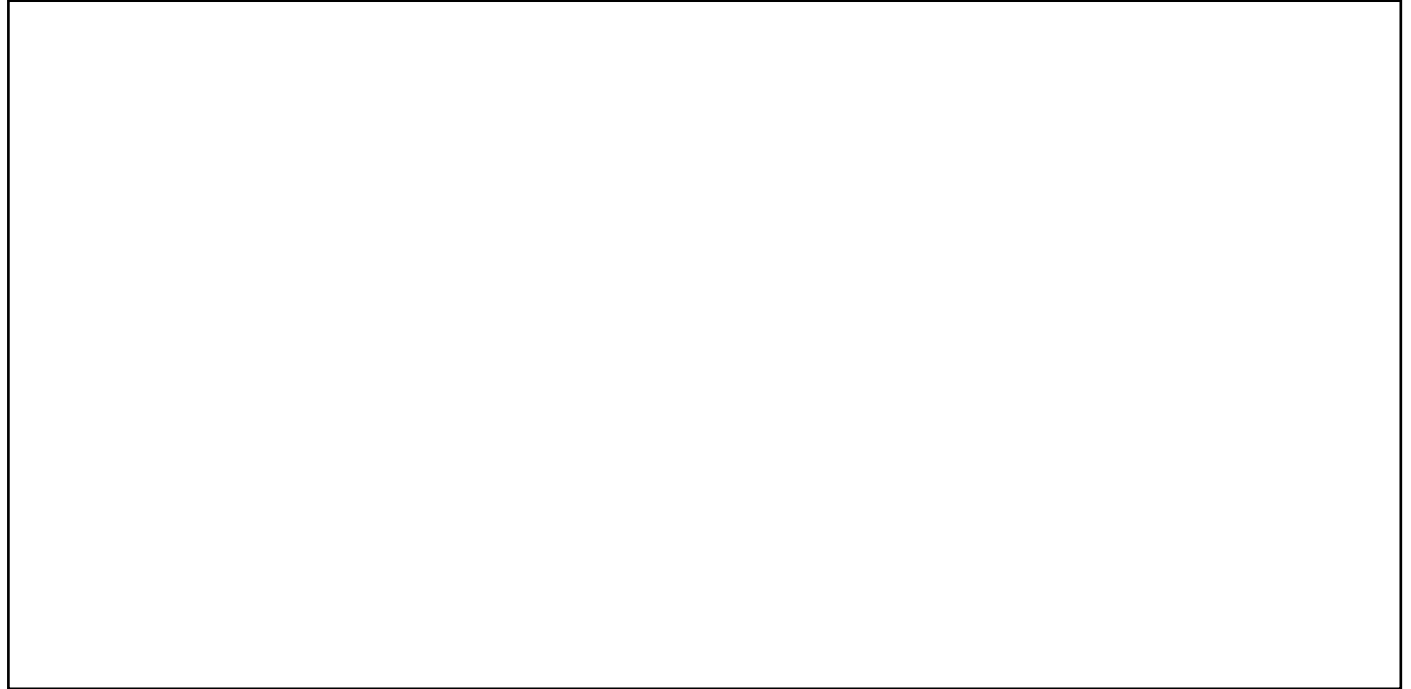
In some communities there are women who have been involved in birthing babies for many years, though many are old and have not done so for quite some time. In this guide we have called them 'traditional midwives'. It is particularly important to know who these women are (as well as the AHW's experienced in childbirth) if there is no midwife in the community.

Do they have a special name for these women in your community?

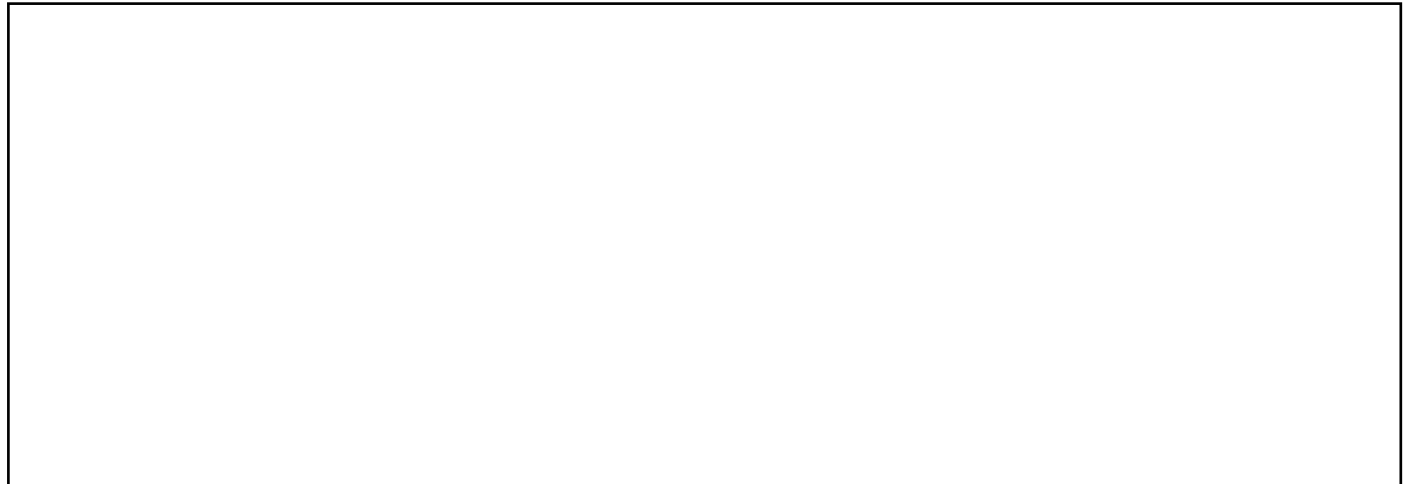
Who are the traditional midwives in the community? If you have not met the traditional midwives then ask the health workers if it would be acceptable to go and listen to them tell you about their experience. You may need to do this with interpreters and/or family members present. Be guided by the health workers. Listening to the women's stories can often guide you about cultural issues that are still important today.

Birthing Business – Cultural

Do any of these women still want to be involved in birthing business or could they assist you when talking to the younger girls about birthing issues? Working in partnership with these senior women could take place in the Health Centre whilst doing antenatal checkups or education; at the school; Women's Centre; or other community venue. Try to involve AHW's as well.



Ask if there are local 'traditional healers' in the community and if pregnant women use them. Do many of the community members utilise the skills of these practitioners? Traditional healers are also known as: medicine men / witch doctors / Ngungkari and bush doctors. Often working together can lead to better outcomes, though this may not be appropriate in the community you are working in, or for pregnant women. It may take time for you to learn and be sensitive when asking such questions. People may not want to answer truthfully if they think you will be critical of their practices and beliefs.



Clinical Audit

Some parts of this section may be difficult and time consuming to answer. You may not have the time to do this whole section in your position at the moment. It is still important to read as you will learn about the clinical problems that occur in remote communities. If you read it first you will see that several of the questions could be answered at the same time, when you access the medical records. If you are unable to do it yourself a visiting student who is interested in small projects could work with you on it. Once it is completed it could be used as a resource to monitor trends or to evaluate any new interventions, so keep a record in the Health Centre.

Common problems for pregnant women, particularly Aboriginal women, in remote areas of Australia include anaemia, urinary tract infections (UTIs), sexually transmitted infections (STIs), preterm labour and preterm birth. Many of these can result in babies being born with a low birth weight or even stillbirths. Below are some suggestions on how you might be able to measure the performance of your service against these issues in your area. Once you have a base line then you can use this as a benchmark to plan and then measure how you might be able to improve. Be cautious with interpretation and comparison of these numbers, as the figures will be small. Use the tables on the next few pages to fill in your statistics.

COMMUNITY OVERVIEW

Are you and your health centre collecting many statistics locally?

If so, what do they tell you about the community and is there anything in particular that pertains to women's health?

Clinical Audit

How many women in the community are of childbearing age (14-45yrs)? If you have a population list, this will be easy to find out. If not it might be more difficult to find out this information and you may have to estimate.

BEFORE BIRTH

Is anaemia a problem in the community? In 2001 an audit of 18 remote health centres in the NT showed that 27% of antenatal women had a Hb <100g/L at some stage of their pregnancy. The figures were higher in the Top End; for women having their first baby; and for women who presented later in pregnancy.

How many pregnant women had anaemia in the last calendar year and what percentage of these women had a Hb above 100gms/L by the time they birthed? You may need to find the birth book to see who has had a baby in this time period. If you are in a small community perhaps increase the time frame to more than one year to make sense of these small numbers of women across the population. You can estimate the prevalence of anaemia by seeing what percentage of pregnant women had anaemia during pregnancy and you can compare it to the 27% found in the above audit. Add your figures to the table titled 'Problems During Pregnancy'.

Clinical Audit

When you have this information think about what you would like to do about it. Is there something in particular you would like to talk to the women about and try to improve? If you put the information in the table then it would make it easier to compare the above results again next year to measure your progress

| |
|--|
| |
|--|

DURING BIRTH

How many births are there each year from your community? This information may be available in a birth book, from regional statistics, on the Intranet or from the Midwives Data Collection, which contains birthing statistics that are collected in each state and territory.

| |
|--|
| |
|--|

How many births usually occur in the community?

| |
|--|
| |
|--|

Are these births in the health centre or outside the health centre?

| |
|--|
| |
|--|

How many women presented with preterm labour (note preterm labour not preterm birth) in the last calendar year? This information could be available where you record data about medical retrievals from the community.

| |
|--|
| |
|--|

Clinical Audit

What do you think caused the women in your community to experience preterm labour?

You would need to look at their notes to get more accurate information about this.

How many babies from this community were born preterm (< 37 weeks) in the last calendar year? Use your community's statistics to fill in the charts below. (1999 Statistics have been used as they were the most complete for the information recorded in the following two charts).

| Percent of Preterm Births in 1999 | | |
|--|------------|----------------|
| | Indigenous | Non-Indigenous |
| Australia | 13% | 6.5% |
| Northern Territory | 15% | 9% |
| Your community 1999 | | |
| Average per year in your community since 1999 | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

Were any of these preterm births associated with a UTI or STI, if so how many?

Clinical Audit

How many babies were born with a low birth weight (<2,500gms) from this community in the last calendar year? You will only have a small number of births, which makes comparisons difficult - but it is interesting to check.

| Percent of Low Birth Weight Babies in 1999 | | |
|--|------------|----------------|
| | Indigenous | Non-Indigenous |
| Australia | 12.4% | 6.2% |
| Northern Territory | 14% | 7.5% |
| Darwin Rural | 13.2% | 14.7% |
| Darwin Urban | 8.9% | 7.7% |
| East Arnhem | 18.6% | 9.4% |
| Barkley | 8.9% | 7.1% |
| Katherine Region | 15.4% | 8% |
| Alice Remote | 16.6% | no births |
| Alice Urban | 8.5% | 4.8% |
| Your community 1999 | | |
| Average per year in your community since 1999 | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

AFTER BIRTH

When women return from giving birth they should have regular visits for their baby, but don't forget to ask how they are going. If they were anaemic before birth or had a post partum haemorrhage then they should have extra iron in their diet and may need supplements. If they had an STI in pregnancy it is important to check that it was appropriately treated and followed up as they can lead to a secondary post partum haemorrhage. Women usually have a 'Women's Check' six weeks after birth. Look in your local protocols to see what this involves.

How many women, in the last calendar year, had a post partum haemorrhage after birth?

Resources

Have you met the regional Women's Health Educator (WHE) (or equivalent) for your region? If not, you should take the time to contact this person, as they will often have knowledge about the community and past Women's Business activities in the community. They will also be able to assist you with resources and may be able to help you with education in the community. Education is often more appropriate if the elders and the health centre staff conduct it together. Then everyone can learn from one another and work with the younger girls more effectively. You may be able to apply for health promotion grants from the cancer prevention unit in Darwin to assist in health promotion projects in the community. The WHE will be able to help you with this.

Local Dictionary

To be considered after you have settled in

Write down the local words next to these words in case you need them in a hurry some time when you are waiting for a health worker or interpreter to arrive. There may be several different terms and possibly slang words used in the community that represent some of the terms below. .

| | |
|----------------------------------|--|
| Are you... | |
| Do you have... | |
| Pregnant | |
| Miscarriage | |
| Fetus | |
| Pain | |
| Contractions | |
| Breathe | |
| Don't Push | |
| Slowly | |
| Birth | |
| Baby | |
| Afterbirth / Placenta / Baby bag | |
| Urine / Urine infection | |
| Midstream urine | |
| Anaemia | |
| Iron | |
| Bleeding | |
| Sexually transmitted infection | |

...A primary health care guide to birthing business in the bush...

Planning

After working through this guide and talking to the women in the community use this section to record what you, the health workers, and the women you have discussed this with, consider to be the three most important things to do regarding Women's Business in the community.

What have women said they want? It will take some time to establish relationships of trust with the women and the more time you spend with them the more you will learn.

How will we do it?

Outcomes:

References

1. Commonwealth Department of Health and Aged Care, Education and training for consumer participation in health care, Final Report of Project. 2000, Prepared by Global Learning Services Pty Ltd for the Consumer Focus Collaboration: Canberra.
2. Congress Alukura and Nganampa Health Council Inc., Women's Business Manual 3rd edn. 1999, Alice Springs.
3. Evans, C., Antenatal Care in Remote Areas of the Northern Territory, A review of service delivery. 2001, Women's Health Strategy Unit, Northern Territory Department of Health and Community Services: Darwin.
4. Kildea, S., Wardaguga, M., Dawumal, M., Maningrida Women. (2004). Birthing Business in the Bush, Liquid Rain Design, Last updated: ... <http://www.maningrida.com/mac/bwc/index.html>

