**Title:** Obtaining ethical-approval for researching hospital-based childbirth using video ethnographic approaches

**Short Title:** Ethical-approval for video-ethnographic research of childbirth in hospitals

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**Abstract**

The Birth Unit Design project was a 2012 Australian ethnographic study that used video recording to investigate the physical design features in the hospital birthing space that might influence both verbal and non-verbal communication and the experiences of childbearing women, midwives and supporters.

Obtaining human research ethics approval was challenging due to what we perceive as a range of issues on the part of an ethics committee with a traditional view of research as based on experiments. This included: a poor understanding of video-ethnographic research**;** a paradigmatic view of thepolitics and practicalities of modern childbirth processes**;** a desireto protect institutions from litigation; and what we perceived as a somewhat paternalistic and outmoded approach towards protecting participants, one that was at odds with our aim to facilitate situations in which women could make flexible, autonomous decisions about how they might engage with the research process.

Protecting participants is a fundamental requirement for ethical approval. In this case, however, the perceived need for protection was overly burdensome and against the wishes of the participants themselves; ultimately this limited the capacity of the study to improve care for women and babies.

Constructive suggestions are offered for researchers and health research ethics committees involved in processes associated with the granting of ethical approvalfor research involving video ethnography in childbirth settings. The complexity of issues within childbirth settings, as in most modern healthcare settings, should be analysed using a variety of research approaches, beyond efficacy-style randomised controlled trials, to expand and improve practice-based results.

**Keywords**

Video ethnography; ethical-approval challenges; Australian ethical process; childbirth; women’s experiences of labour and birth; birth unit design; midwifer

# Introduction

Childbirth is a physical and social experience, with communication and social support being essential components for positive outcomes.[1](#_ENREF_1) The environment in which childbirth occurs influences the social nature of the experience and there is evidence to support ‘home-like’, comfortable environments for birth.[2-5](#_ENREF_2) Most women in Australia and other westernised countries give birth in hospitals, in environments that are not usually home-like or conducive to supporting the normality of childbirth.

Evidence suggests that, for women in labour, admission into hospital environments may contribute to a ‘fear cascade’[6](#_ENREF_6) which could inhibit pain-reducing hormones and increase cortisol and stress-hormones.[7](#_ENREF_7) The environment in which labour and birth occurs could then influence both the physical outcomes and also the quality of communication between women and care providers and between care providers. Our research has been interested in this interplay between hospital birth rooms and the quality of communication and support provided by the care providers (usually midwives) to women and their families and we sought to further explore the relationships in an ethnographic study called the Birth Unit Design study. The aims of the study were to investigate, using video-ethnography, how the physical space of the birth environment might impact on communication and experiences of women, their supporters and health care providers, primarily midwives (Box 1).

In July 2010, we applied to the local Human Research Ethics Committees (HREC) for ethical approval. The Australian HREC system is akin to the Internal Review Board (IRB) in the USA, the Research Ethics Board (REB) in Canada and the Research Ethics Committee (REC) in the UK. As is required, we applied for ethical approval to the local HREC prior to commencing the study. Approval, however, was not granted until eight months later, following protracted negotiations with the HREC and major modifications to the research design.

The aim of this paper is to explore the complex issues around: the duty of ethics committees to ‘protect’ childbearing women; women’s rights when participating in research involving their labours and births; and the challenge of ‘fitting’ ethnographic research into a HREC paradigmatic view of childbirth in institutions. We aim to provide reflection on our ethical-approval experience that will be of use to HREC committees and researchers who use video ethnography in vulnerable populations in the future. Initially we will describe the Birth Unit Design study before explaining the process of obtaining HREC approval for the study.

### *The Birth Unit Design study*

The Birth Unit Design study was a qualitative, descriptive observational study that used video-ethnography and interviews as data-collection methods. The aim of the study, as conveyed to the HRECs, was to explore the relationship between the physical design of institutional birth spaces and the behaviour, experiences and communication between birthing women, their supporters and midwives. Our premise was that most typical birth units increase maternal stress levels and may therefore influence the neurophysiology of birth, leading to slow labour, uterine inertia, fetal distress and a range of interventions, including an increased rate of caesarean section.[8](#_ENREF_8) Our goal was to increase understanding of how future birth unit design might reduce stress and increase the likelihood of straightforward and more satisfying birth experiences—for women, their supporters and health care providers.[6](#_ENREF_6), [8-12](#_ENREF_8)

A comprehensive description of the research methods is described by Harte et al.[13](#_ENREF_13) We intended to recruit up to 12 women with uncomplicated pregnancies who were due to give birth in either a standard hospital labour ward, or a birth centre unit located within a hospital. We aimed to film each woman’s experience from entry to the hospital, throughout labour and birth and for a short period after the birth of the baby. This would involve the woman, her supporters and health care providers consenting to being filmed. Although this was an interdisciplinary study involving researchers from architecture, public health, communication and midwifery­, midwives who were most familiar with the environments and the process of labour and birth were to undertake the filming.

The recruitment plan was that a research midwife would explain the purpose of the study to potentially eligible women during their 36-week antenatal clinic visit. The process of how participants could grant consent would be explained during this initial conversation and revisited at regular intervals to ensure an ongoing consent process.

The proposal was that filming would focus on how the physical space of the room and the objects within it were used by the woman, her supporters and caregivers and would explore verbal and non-verbal communication within those spaces. Two research team members were to coordinate the filming and recording of field notes, to include usual ethnographic observations, such as: use of the space and objects; acts and activities; events and time frame; and responses and feelings of the participants and the researchers.[14](#_ENREF_14) Video footage would then be shared with the woman, her supporters and caregivers in subsequent separate interviews, eliciting reflection on the experience as influenced by the physical environment.[13](#_ENREF_13) The Birth Unit Design study received national competitive funding in late 2009 (Figure 1). **We then began ethical approval processes in July 2010, which will be described in the next section.**

# The HREC approval process in Australia

Gaining ethical approval from a review panel with specific training in ethics and research provides assurance to researchers and research participants that the study will not contravene their rights as autonomous individuals and that the research will be conducted and reported on ethically. In Australia, these ethical principles are clearly articulated in the *National Statement on Ethical Conduct in Human Research,*[15](#_ENREF_15) published by the National Health and Medical Research Council (NHMRC) and was referenced by us and by the HRECs in their reviews of our research.

The HREC process requires researchers to complete an application form that seeks responses to questions about the design and conduct of the study that may have ethical implications. **Developed by the Australian Governments’ National Health Medical Research Council (NHMRC), the National Ethics Application Form, or ‘NEAF’, is a “dynamic, interactive, web-based tool for researchers of all disciplines to complete research ethics proposals for submission to Human Research Ethics Committees (HRECs).”** [**16(para1)**](#_ENREF_16)

For research conducted in a health facility, a Site Specific Approval must also be obtained for each subsequent facility the researchers wish to access, with the approval tabled with the coordinating HREC committee for a designated health service area. **The first NEAF approval we received** **applied to one of the two area health services.**

**University ethics approval was also required “to ensure that people carrying out research under the auspices of the University are committed to high standards of conduct and practice and to the maintenance of their own reputation and that of the University.”**[**17(para1)**](#_ENREF_17)

### *Our experience of the process*

The research was planned to take place in two area health services, located within hospitals, so we first applied for the Australian HREC approval via the NEAF process. Of the three HRECs we worked with (one main NEAF HREC, one site-specific hospital and our university), the main NEAF HREC was the one with whom we encountered the most challenges.

Each submission of the NEAF presented us with issues. The first impression we received was that our study was not deemed scientific. We used the strategy of resubmitting with rephrased ‘quantitative’ language in order to address these concerns. During the second phase of clarification, however, it became clear to us that these *scientific* concerns may have stemmed from poor understanding of ethnographic methods. We addressed this by describing in more detail the proposed benefits and standards of ethnographic research, as well as emphasising the grants and peer reviewed publications received for the study (see Table 1). During the third clarification phase, the underlying currents of paternalism and litigation rose to the surface in, what can be argued was, an over-protective stance for both the participants and the institutions, **as based on the written and verbal communications from the HREC.**

After the second of three rounds of written and verbal questions from the HREC we sought a face-to-face meeting with them. This meeting heightened numerous concerns, which revolved around how we would attend to filming potentially litigious acts, such as staff error and whether it was appropriate to film if women were unclothed. Additionally, concerns were expressed about how we would: ensure privacy; create anonymity; gain informed consent; ensure participants could communicate their desire to withdraw from the study; address potential data insufficiency; and ensure a researcher would be present to film. We saw these as reasonable questions in support of ethical qualitative research, however many of these issues had previously been provided in our application; the questions seemed to us to correspond to a lack of contextual understanding.

After three resubmissions, we finally received approval; we were then required to repeat the process of applying for approval via the Site Specific Application process with the second area health service. Lastly we applied for host University HREC approval, which was quickly granted. In accordance with the university ethics protocol, the study finally received full approval from all three HREC bodies in March 2011 [HREC/10/HAWKE/135 and SSA/10/SG/190]; this was eight months after the ethics application process had begun.

### *Composition of the principal HREC*

The principal HREC (hereafter referred to as ‘the HREC’) who reviewed our application was composed of 19 individuals. The majority were from a quantitative, clinical or medical-specialist background, which is common in hospital-based committees. This “preponderance of institutional and scientist members”[18(p294)](#_ENREF_18) on ethics review boards is not unique. The Australian HREC must also have members who are either lay-people or religious ministers. There is no specific requirement for experience or expertise with qualitative research or with the particular issues associated with research with labouring women or birth settings.

# Understanding and addressing the HREC issues

To analyse the HREC submission process, we shall discuss our perspectives on the HREC’s issues with our submission **by drawing on the literature describing similar experiences of researchers in other contexts**. We shall then explain how we addressed each concern.

### *The HREC litigation-related concerns*

The HREC was concerned about what we would do if, during filming, “serious unexpected event(s)” were to occur. Our initial response that “we would stop filming” did not satisfy the HREC. We elaborated:

In the case of a serious event, filming will cease, however, any footage accidentally made will not be erased. The aim of this research is not to capture obstetric interventions or emergency situations. In our practice, emergency situations are precipitated by maternal and fetal indicators that the normal process of labour and birth [has gone] awry. That said, practitioners generally have warning prior to emergency situations of birth.[19(p17)](#_ENREF_19)

The HREC expressed concern that the woman or families might want us to keep filming if an emergency arose during labour and appeared to find it hard to accept that, as researchers and midwives used to working in this environment, we would respect the interactions between the caregivers and the families and cease filming if such an event were to occur. Other researchers who have conducted video-research in birth settings have also had to deal with HRECs’ litigation-related concerns during initial research stages.[20](#_ENREF_20)

### *Multiple site approval*

This study was being undertaken at two sites; therefore we had to receive ethical clearance from two site-specific HREC’s. The primary reason for selecting these sites was because they had been part of a prior audit, which contributed to the Birth Unit Design Spatial Evaluation Tool (BUDSET): a tool developed and tested to “assess the optimality of birth units and determine which domain areas may need to be improved”. [6(p43)](#_ENREF_6)

The HREC advised that we should have a *random* sample of sites. This suggested to us that the committee might not fully understand common ethnographic research methods. *Purposive* sampling is an important method for qualitative research to ensure a specific range of data, rather than using a random sample, such as is used with cause and effect quantitative-type experiments.[21](#_ENREF_21)

Many have suggested streamlining the multiple site ethical process[22](#_ENREF_22), [23](#_ENREF_23) to allow an approved application to gain approval at subsequent sites without having to repeat the entire process; this had yet to occur in our local ethics-review area. Although we did not encounter additional problems at the second site, the application and approval process to gain ethical clearance remained cumbersome, daunting and inefficient, as reported by other Australian researchers.[22](#_ENREF_22), [23](#_ENREF_23)

# Addressing the HREC’s concerns

In order to address the HREC’s concerns, we resubmitted the project three times, with changes in terminology and amendments to inform and reassure the HREC as to our intentions. This process required extended time and resources that had been planned for commencement of the research and had financial implications for the research project. It involved salaried research assistant time for several months in order to attend to the rewriting and resubmissions, as well as material resources (for example multiple copies of documents), which can, in some cases, total tens of thousands of printed pages, such as in large multi-site studies.[24](#_ENREF_24)

In our assessment the HREC’s concerns were often directly related to their poor understanding of video-ethnography. Furthermore, committee members appeared not to understand the basic woman-centred interactions that occur between a midwife and a birthing woman, or indeed that the birthing woman is an autonomous, self-determining individual, capable of making her own decisions.

Additionally, it is important that research investigating complex healthcare problems, such as those in childbirth settings, utilise the wide range of research methods available beyond that of reductionist randomised controlled trials. As Kessler and Glasgow state, “such trials are limited in their ability to address the complex populations and problems we face”.[25(p637)](#_ENREF_25) Indeed, there is a growing realisation of the importance of supporting, as Klassen et al describe, “behavioral and social science perspectives in clinical research, the formation of interdisciplinary research teams, and use of multi-faceted approaches”.[26(p377)](#_ENREF_26)

*De-identification as a compromise*

 Offering a de-identification process and coding or changing of participants’ names to maintain their privacy and anonymity addressed some HREC concerns. All participants were offered the option to have video footage edited to blur their faces (or body parts); three of the six women and one supporter of 28 total participants selected this option, given that it was offered. **No participants initiated this pixilation process.**

 **De-identification in visual research is an area of further challenge within the ethics process. As Jordan states, “anonymization of research photographs of identifiable individuals is technically and ethically problematic for researchers.”**[**27(p446)**](#_ENREF_27) **Wiles et al concur stating, “ongoing tensions [exist] between, on the one hand, research participants’ rights and researchers’ desire for participants to be seen as well as heard and, on the other hand, researchers’ real and perceived ethical responsibility to safeguard participants.”**[**28(p41)**](#_ENREF_28)

This modification to the footage could be viewed as a reasonable requirement to help build trust with the participants and ensure ethical behaviour (for example, allowing individuals to express their autonomy). It may, however, have resulted in considerable consequences for our research. A blurred face in the video footage inhibits accurate analysis of facial expressions. Pixilating participants’ faces altered our ability to assess some non-verbal communication, such as eye contact, facial expressions, and glances. As [Mehrabian29](#_ENREF_29) formulated, 55% of meaning derived from interactions are in facial expressions. These tensions were juggled by taking detailed field notes while honouring our offer to pixilate faces or body parts as requested. We join others, such as Lowrance,[30(p5)](#_ENREF_30) who claim “serious privacy and confidentiality impediments continue to hamper research”, such as amending research to ‘protect’ participants as the risk is deemed greater than is actual.

**Some visual researchers object to anonymising images, such as pixilating faces, as they perceive the participants’ voice and rights to be diminished in such cases. Some even perceive anonymised images as appearing ‘criminalised’ and disturbing to look at.**[**28**](#_ENREF_28) **There is a recent account of an Australian HREC believing the use of facial pixilation might “change the visual narrative and as a result decrease the validity of the research”.**[**31(p320)**](#_ENREF_31) **De-identification as a compromise may not be such a straightforward solution. The idea that blurring faces will solve ethical challenges may not be sufficient. Perhaps attentive use of images during dissemination may be more appropriate. Nutbrown, in her research with young children, states that “through continued questioning of the pictures we use, and vigilance over how we use such photographs in dissemination, we can still avoid the need to blur children out by masking their faces thus limiting our interpretation of their meanings.”**[**32(p11)**](#_ENREF_32)

*Modifications to 'thank you’ gift for participants*

The main provisos we agreed to in order to satisfy the HREC, were that, in addition to offering pixilation, the baby’s birth could not be filmed for research purposes, nor could the baby’s birth be filmed to give as a gift to the woman and her supporters. (Our previous intention was to offer this as a ‘thank you’ gift). These stipulations appeared to originate from the HREC’s concerns about video footage usage in potentially litigious circumstances. Our view is that the modifications may have played a role in deterring participants who might have desired to have a filmed version of their baby’s birth. This hallmark occasion recorded for posterity could be considered an appropriate thank you for participation.[33](#_ENREF_33) The researchers saw the ‘risk of coercion’ from providing parents this video footage as negligible. From our experience in practice, it was thought participants would have enjoyed receiving a film of their baby’s birth; personal birth films having become commonplace in contemporary birth culture. Our compromise, allowed by the HREC as appropriate, was a ‘welcome to the baby’ film instead, which was to be taken shortly after the baby’s birth, showing the parents greeting their new baby and offered to them as a gift.

#### Informed consent in the context of video-ethnographic research

#### The HREC asked for clarification regarding our proposed informed consent process. Again, we saw this as a suggestion that the HREC had a poor understanding of video-ethnographic methods. We offer here our explanation of the on-going consent process, with the hope that this may prevent delays for others facing the same difficulties in obtaining ethical clearance for the use of video in ethnographic studies.

Unlike quantitative studies with set procedures, where a one-time upfront consent process is sufficient, with video-ethnographic studies, the consent is best acquired in an on-going process.[34](#_ENREF_34), [35](#_ENREF_35) In our case it began with intentions of the study; how we would be in the room with the camera (including showing pictures of ourselves with the camera, so that the potential participants would be familiar with what the research would ‘look’ like); and what would occur during the filming and interviews. We explained that if any of the participants at any time wished to stop their participation, it would be an option to do so without any repercussion or hesitation on our part. This was reiterated after the birth and again during the interviews. The interviews were conducted at the participants’ choice for location (for instance, their own home), where they were invited to reflect on their experiences, using stimulus video clips from the labour. This ongoing consent process, respect for participants’ preferences and reciprocal relationship-building are considered essential elements to reflexive ethnographic research, especially in private settings such as birth units.[36](#_ENREF_36)

# Assessing the research merit as part of ethical considerations

It would be unethical for HRECs to approve any study that was not well designed and that would therefore be unable to produce meaningful results. For this reason, HRECs must be able to judge the study design’s merits, as well as consider whether ethical principles have been addressed. It seems, however, that hospital-based HRECs in Australia may not always fully understand the nature of qualitative video-ethnographic research.

The potential challenge of getting ethical clearance for qualitative research has previously been recognised. For example, Richards and Schwartz reported that, “A major reason for advocating guidelines for qualitative health services research is the growing evidence that medical research ethics committees have difficulty assessing ethical issues arising in relation to qualitative studies.”[37(p136)](#_ENREF_37) In Australia the [National Health and Medical Research Council](https://www.nhmrc.gov.au/) provides advice and a protocol in an attempt to alleviate some of this burden for HRECs: “Section 1.2: Where prior peer review has judged that a project has research merit, the question of its research merit is no longer subject to the judgement of those ethically reviewing the research”.[15(p10)](#_ENREF_15)

We had been awarded two competitive peer reviewed grants from peer review committees. It is possible that, if the HREC had accepted our study’s research merit based on these previous peer review processes, as the NHMRC recommends,[15](#_ENREF_15) our approval might have been granted more expediently and many restrictions that were placed on the methods we used may have been avoided.

### *Who was the HREC protecting?*

While it may have appeared that the HREC’s decision-making process focussed on the women’s needs, in reality their decisions often prioritised the needs of the health care providers and the health services. At times it seemed that they were focussed on the litigious possibilities of filming birth. A persistent apprehension about litigation appeared to be prioritised over the potential needs of birthing women undergoing straightforward, uncomplicated labour and birth, that is: a sensory rich environment in which women can find privacy and safety, without undue distractions that take her away from her undisturbed birthing zone.[9](#_ENREF_9) The HREC’s considerations for ‘minimising risk’ had a different translation into practice from our own, as midwives and designers. We join others in asserting that birth environments should not *automatically* favour the caregivers’ perceived surveillance needs, but balance clinical needs with women’s needs for privacy and safety–for both the physical and the intangible inner self.[9](#_ENREF_9), [38](#_ENREF_38), [39](#_ENREF_39)

The extended time period for ethics approval and the required modifications to the study design are a concern because, arguably, they were due to the methodological preferences and prior experiences held by some HREC members who reviewed our application.

In addition, we suggest that the HREC adopted what can be perceived as a paternalistic approach towards protecting childbearing women, who they perceived as a vulnerable population**,** unable to make decisions for themselves about how and whether they wanted to participate in our research. In our estimation, the HREC’s protective efforts towards the participants became overprotective, which may have inhibited the research quality and the childbearing women’s rights to make autonomous choices around participation in this particular study. In our opinion, in studies such as ours, women, their supporters, and the midwives who attend them will quite readily state ‘that’s enough’ if they wish to retract their consent. We agree with Raudonis, that “Health care providers must tread a fine line between appropriately protecting vulnerable populations and paternalistic decision-making supposedly made in the patient’s best interest”.[40(p242)](#_ENREF_40)

**This issue of paternalism from ethics committees is an area of on-going tension, especially in visual research, as Wiles et al suggest:**

**It is important that researchers using visual data engage in debates about ethical research practice and issues of paternalism and agency in order that visual research is used in ethically appropriate ways that help to further our understanding of the social world.**[**28(p51)**](#_ENREF_28)

 **Researchers working with hospital based ethics committees also commonly perceive paternalistic tendencies, creating unnecessary challenges for conducting ethical research. As Parnis states, “Cutcliffe’s (2002) argument that an element of paternalism that exists across the attitudes and actions of ethics committees can have a “direct impact on the empowerment of certain groups of people” (p. 204) fits with our experience.”** [**34(p694)**](#_ENREF_34) **The perception of paternalism also resonates with our experience.**

# Discussion

We faced particular issues in obtaining HREC approval for the Birth Unit Design study. In particular, we were undertaking a video ethnographic study, which is not well understood by hospital-based researchers who usually come from a positivist paradigm.

### *Ethnography and ethical approval*

Ethnographic studies are challenging to describe before they are conducted as they are undertaken whilst immersed within a specific social context, with many factors yet to be discovered during data collection.[14](#_ENREF_14) HRECs often desire accurate predictions for research, however ethnographic researchers cannot provide these due to the flexible nature of human experiences.[41](#_ENREF_41) It can, therefore, be challenging to discern “which rules and ethical guidelines apply to the social study of medicine”.[41(p1745)](#_ENREF_41) In this light, the issues to be considered for gaining ethical approval for clinical trials versus those for ethnographic research need to be differentiated.[37](#_ENREF_37)

In a 2011 study, ethnographers were surveyed on issues experienced in the ethical approval process in the USA, Canada, Australia, New Zealand and the United Kingdom.[42](#_ENREF_42) A salient finding was the ethnographers’ perceptions regarding requests by ethics committee for research protocol modifications; these were commonly deemed detrimental or neutral to the research outcome and/or protection for the participants. Ethnographic ethical challenges may be compounded when the population invited to participate in the research–in our case birthing women–seems to be considered by the HREC as vulnerable, thereby unintentionally excluding them from research and, in doing so, possibly even causing harm from exclusion.[43](#_ENREF_43), [44](#_ENREF_44)

### *Moving forward in a constructive way*

 We support others’ proposals for the improvement and streamlining of HREC processes in Australia, which might include: creating an ethnographic-specific HREC;[45](#_ENREF_45) ensuring HREC’s members’ expertise diversity; or providing a wider range of training, to include assessment for ethnographic and exploratory studies.[18](#_ENREF_18), [46](#_ENREF_46) Moreover, reflecting on and analysing the ethical review process can be useful for social science research. The HREC may have more easily understood our research if there had been more members on the committee who were familiar with ethnography, descriptive, exploratory studies or, especially, studies involving video ethnography.

 There are many forms of HRECs composed of members with a wide expertise range. Yet, the challenges repeatedly faced by video-ethnographers,[47](#_ENREF_47) indicates a need for systemic change in HRECs ability to understand a variety of research methods.[48](#_ENREF_48) We suggest it is a shared responsibility to improve ethics and research outcomes. Researchers can work to draft more HREC friendly procedural applications, while HRECs can broaden understanding for ethnographic research methods.

We suggest that there should be timely discussions between HREC members and researchers about what constitutes both the ‘vulnerability’ and agency of participants, and how this should be addressed - particularly within the context of childbirth research. The aim would be to ensure that the ethical approval processes are rigorous and yet not held up unnecessarily.

# Conclusion

Due to an array of reasons, human ethics committees often have a poor understanding and appreciation for ethnographic studies. We argue this misunderstanding results in institutional overprotection: one which views birthing women incapable of making flexible, autonomous decisions and results in significant delays and, likely unnecessary, compromises by the researchers. Impeded ethical clearance is a problem that can be addressed with various straightforward solutions. Hospital based ethics committees need to get more skills and knowledge in qualitative, exploratory and ethnographic studies.

Research conducted in hospitals and health care settings must accommodate such places’ complexities. Non-linear and complex aspects, actors and factors within these settings require a methodological range to study how to improve outcomes. Single quantitative studies that are neat and tidy will not always work. Therefore qualitative studies are needed, especially ethnographic methods trying to explore underlying aspects and influences. Our Birth Unit Design study is one example of this.

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Uncategorized References

1. Hunter B, Berg M, Lundgren I, et al. Relationships: The hidden threads in the tapestry of maternity care. *Midwifery*. 2008; 24: 132-7.

2. Johanson R, Newburn M and Macfarlane A. Has the medicalisation of childbirth gone too far? *BMJ*. 2002; 324: 892-5.

3. Lepori B. Freedom of movement in birth places. *Children’s Environments*. 1994; 11: 1-12.

4. Shin J-H, Maxwell LE and Eshelman P. Hospital birthing room design: A study of mothers' perception of hominess. *Journal of Interior Design*. 2004; 30: 23-36.

5. Fannin M. Domesticating birth in the hospital "family-centered" birth and the emergence of "homelike" birthing rooms. *Antipode*. 2003; 35: 513-35.

6. Foureur M, Leap N, Davis D, et al. Developing the Birth Unit Design Spatial Evaluation Tool (BUDSET) in Australia: A qualitative study. *The Health Environments Research & Design Journal*. 2010; 3: 43-57.

7. Schmid V and Downe S. Midwifery skills for normalising unusual labours. In: Walsh D and Downe S, (eds.). *Essential midwifery practice: intrapartum care*. Oxford, UK: Wiley-Blackwell, 2010, p. 159-90.

8. Foureur M, Davis D, Fenwick J, et al. The relationship between birth unit design and safe, satisfying birth: Developing a hypothetical model. *Midwifery*. 2010; 26: 520-5.

9. Foureur M. Creating birth space to enable undisturbed birth. In: Fahy K, Foureur, M., Hastie, C (ed.). *Birth territory and midwifery guardianship*. Oxford, UK: Elsevier, 2008, p. 57-78.

10. Foureur M, Homer C, Fenwick J, et al. Theorising the relationship between birth unit design and the communication patterns of labouring women and their maternity care providers. University of Technology, Sydney: Australian Research Council (ARC) DP110104108, 2010, p. 125.

11. Foureur M, Leap N, Davis DL, et al. Testing the birth unit design spatial evaluation tool (BUDSET) in Australia: A pilot study. *The Health Environments Research & Design Journal*. 2011; 4: 36-60.

12. Sheehy A, Foureur M, Catling-Paull C, et al. Examining the content validity of the birthing unit design spatial evaluation tool within a woman-centered framework. *The Journal of Midwifery & Women’s Health*. 2011; 56: 494-502.

13. Harte JD, Leap N, Fenwick J, et al. Methodological insights from a study using video ethnography to conduct interdisciplinary research in the study of birth unit design. *International Journal of Multiple Research Approaches*. 2014; 8: 36-48.

14. Fetterman DM. *Ethnography: Step-by-step*. 3rd ed. Los Angeles: Sage, 2010.

15. NHMRC, ARC and AVCC. National statement on ethical conduct in human research. 2007.

16. Australian Government. NEAF - National Ethics Application Form. 2014.

17. University of Technology Sydney. Responsible Conduct of Research Policy. Sydney2014.

18. Schuppli CA and Fraser D. Factors influencing the effectiveness of research ethics committees. *Journal of Medical Ethics*. 2007; 33: 294-301.

19. Foureur M, Fenwick J, Davis D, et al. National Ethics Application Form (NEAF) Protocol-1011-370M: "Exploring the influence of design on communication in maternity care" Version 3. 2011.

20. Callaghan H. Birth dirt. In: Kirkham M, (ed.). *Exploring the dirty side of women's health*. Oxon: Routledge, 2007, p. 8-25.

21. Tongco MDC. Purposive sampling as a tool for informant selection. *Ethnobotany Research & Applications*. 2007; 5: 147 - 58.

22. Roberts LM, Bowyer L, Homer CS, et al. Multicentre research: Negotiating the ethics approval obstacle course. *Medical Journal of Australia*. 2004; 180: 139.

23. Driscoll A, Currey J, Worrall-Carter L, et al. Ethical dilemmas of a large national multi-centre study in Australia: Time for some consistency. *Journal of Clinical Nursing*. 2008; 17: 2212-20.

24. Vaughan G, Pollock W, Peek MJ, et al. Ethical issues: the multi-centre low-risk ethics/governance review process and AMOSS. *The Australian & New Zealand Journal Of Obstetrics & Gynaecology*. 2012; 52: 195-203.

25. Kessler R and Glasgow RE. A proposal to speed translation of healthcare research into practice: Dramatic change is needed. *American Journal of Preventive Medicine*. 2011; 40: 637-44.

26. Klassen AC, Creswell J, Plano Clark VL, et al. Best practices in mixed methods for quality of life research. *Quality of Life Research*. 2012; 21: 377-80.

27. Jordan SR. Research integrity, image manipulation, and anonymizing photographs in visual social science research. *International Journal of Social Research Methodology*. 2014; 17: 441-54.

28. Wiles R, Coffey A, Robinson J, et al. Anonymisation and visual images: Issues of respect, ‘voice’ and protection. *International Journal of Social Research Methodology*. 2012; 15: 41–53.

29. Mehrabian A. *Silent messages: Implicit communication of emotions and attitudes.* Belmont, CA: Wadsworth, 1981.

30. Lowrance WW. *Privacy, Confidentiality, and Health Research*. Cambridge: Cambridge University Press, 2012.

31. Pitt P. ‘The project cannot be approved in its current form’: feminist visual research meets the human research ethics committee. *The Australian Educational Researcher*. 2014; 41: 311-25.

32. Nutbrown C. Naked by the pool? Blurring the image? Ethical issues in the portrayal of young children in arts-based educational research. *Qualitative Inquiry*. 2011; 17: 3-14.

33. Grant RW and Sugarman J. Ethics in human subjects research: Do incentives matter? *The Journal of Medicine and Philosophy*. 2004; 29: 717-38.

34. Parnis D, Du Mont J and Gombay B. Cooperation or co-optation?: Assessing the methodological benefits and barriers involved in conducting qualitative research through medical institutional settings. *Qualitative Health Research*. 2005; 15: 686-97.

35. O'Reilly M, Parker N and Hutchby I. Ongoing processes of managing consent: The empirical ethics of using video-recording in clinical practice and research. *Clinical Ethics*. 2011; 6: 179-85.

36. Burns E, Fenwick J, Schmied V, et al. Reflexivity in midwifery research: The insider/outsider debate. *Midwifery* 2012; 28 52–60.

37. Richards HM and Schwartz LJ. Ethics of qualitative research: Are there special issues for health services research? *Family Practice*. 2002; 19: 135-9.

38. Buckley SJ. Undisturbed birth: Nature's blueprint for ease and ecstasy. *Journal of Prenatal & Perinatal Psychology & Health*. 2003; 17: 261-88.

39. Davis-Floyd R. The technocratic, humanistic, and holistic paradigms of childbirth. *International Journal of Gynecology & Obstretrics*. 2001; 75: S5-S23.

40. Raudonis B. Ethical considerations in qualitative research with hospice patients. *Qualitative Health Research*. 1992; 2: 238-49.

41. Hoeyer K, Dahlager L and Lynöe N. Conflicting notions of research ethics: The mutually challenging traditions of social scientists and medical researchers. *Social Science & Medicine*. 2005; 61: 1741-9.

42. Wynn LL. Ethnographers' experiences of institutional ethics oversight: Results from a quantitative and qualitative survey. *Journal of Policy History*. 2011; 23: 94-114.

43. Carlton T, Callister LC and Stoneman E. Decision making in laboring women: Ethical issues for perinatal nurses. *The Journal of Perinatal & Neonatal Nursing*. 2005; 19: 145-54.

44. Spriggs M and Caldwell PHY. The ethics of paediatric research. *Journal of Paediatrics and Child Health*. 2011; 47: 664-7.

45. Newnham E, Pincombe J and McKellar L. Access or egress? Questioning the “ethics” of ethics committee review for an ethnographic doctoral research study in a childbirth setting. *International Journal of Doctoral Studies*. 2013; 8.

46. Guillemin M, Gillam L, Rosenthal D, et al. Investigating human research ethics in practice: Project report. Centre for Health and Society, The University of Melbourne, Melbourne, 2008.

47. Goldman R. Video representations and the perspectivity framework: Epistemology, ethnography, evaluation, and ethics. In: Goldman R, Pea R, Barron B and Derry SJ, (eds.). *Video Research in the Learning Sciences*. Abingdon, Oxon: Routledge, 2007, p. 3-38.

48. Coleman CH and Bouësseau M-C. How do we know that research ethics committees are really working? The neglected role of outcomes assessment in research ethics review. *BMC Medical Ethics*. 2008; 9.

49. Commonwealth of Australia. ARC Profile. 2013.

50. Commonwealth of Australia. Discovery Projects. 2013.

Box 1: From the Birth Unit Design study brochure distributed to potential participants

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| --- |
| The goals of the research are to provide increased understanding on which to base future birth unit design and to determine if the physical birth space has an influence on: * Communication between women, supporters, midwives & other care providers
* The physiology of labour and birth
* Women’s experiences & satisfaction
 |



Figure 1: Birth Unit Design study grant and ethics application timeline

Table 1: Peer review process details for Birth Unit Design study

|  |  |  |  |
| --- | --- | --- | --- |
| **Review process** | **Funding body/Peer review journals** | **Objectives/Criteria** | **Timeframe** |
| First grant review | The University of Technology Sydney (UTS) panel, for an internal Challenge Grant. | * Provide seed funding to encourage innovative research in a multidisciplinary, collaborative manner between researchers from traditional disciplines.
* Excellence and degree of innovation of the project, especially in terms of collaboration across disciplines and potential for the project to garner outside funding, as well as the potential for the research to contribute to issues of national significance (Kostulski, personal communication, 23rd May, 2013)
 | Six months: Applied – Sept 2009Awarded grant – March 2010 |
| Second grant review  | Australian Research Council (ARC) (Australia’s highest-status research organization) Discovery Project grant.The ‘College of Experts’ are drawn from a multitude of disciplines in the Australian research community — from higher education, industry and public sector research organisations. They are drawn together flexibly to form groupings of expertise to meet particular needs at different times. Members of the ARC College are appointed for periods of between one and three years.[49](#_ENREF_49) | * Support excellent fundamental research by individuals and teams
 | Seven months: Applied – March 2010Review by the College of Experts – August 2010Awarded grant – October 2010 |
| * Enhance the scale and focus of research in the National Research Priorities
 |
| * Assist researchers to undertake their research in conditions most conducive to achieving best results
 |
| * Expand Australia's knowledge base and research capability
 |
| * Foster the international competitiveness of Australian research
 |
| * Encourage research training in high-quality research environments
 |
| * Enhance international collaboration in research [50](#_ENREF_50)
 |
|  |  |
| Publications | Foureur, M., Leap, N., Davis, D., Forbes, I.F., & Homer, C.S.E. (2010). Developing the Birth Unit Design Spatial Evaluation Tool (BUDSET) in Australia: A qualitative study. *Health Environments Research & Design Journal (HERD), 3*(4), 43-57.Foureur, M., Leap, N., Davis, D.L., Forbes, I.F., & Homer, C. (2011). Testing the birth unit design spatial evaluation tool (BUDSET) in Australia: a pilot study. *The Health Environments Research & Design Journal, 4*(2), 36-60.Sheehy, A., Foureur, M., Catling-Paull, C., & Homer, C.S.E. (2011). Examining the content validity of the birthing unit design spatial evaluation tool within a woman-centered framework. *The Journal of Midwifery & Women’s Health, 56*(5), 494-502. doi: 10.1111/j.1542-2011.2011.00059.x |