Failure to Rescue: A Descriptive Study of the Experience of Nurses in the Intervention for Patients at Risk in the Acute Ward Setting.

Doctor of Nursing.
University of Technology,
Sydney, New South Wales.
Bernadette Eather.
2010.

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.

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

Signature of Candidate

Acknowledgements

I would like to take this opportunity to express my extreme gratitude to the many people who assisted, supported and encouraged the work presented in this thesis. Firstly to Professor Judith Donoghue, who started me on this journey, believed in this work (and me) from the very beginning and demonstrated unwavering patience with me during my periods of vacillation. Her continued encouragement and commitment to teaching have made this journey possible. To Professor Peter Kam and Dr Christine Jorm, who provided leadership and collaboration on the one day snap shot study and the establishment of the Recognition, Response, Escalation, Escort system (R2E2). The resources provided by Peter and Christine were invaluable to me to guide the direction of this research, and for that I am very thankful. To the medical and nursing staff represented in this thesis, who gave willingly and generously of their time, I am extremely grateful. By willingly sharing their stories they have provided comprehensiveness to the descriptions in this thesis which would not have been possible without their honesty and openness. My heartfelt thanks is given to Ms Danielle Murphy who spent countless hours assisting me in the collection of data, calculating Modified Early Warning Scores (MEWS), taking notes at meetings, encouraging staff to participate in the questionnaires and meetings and providing a sounding board for me. Ms Nicky Bennie provided invaluable assistance in formatting this thesis, constructing diagrams, typing meeting notes and generally encouraging me when I needed it most and I am very grateful to her. I would also like to acknowledge Dr Nicholas Hardwick for proof reading this thesis for me and for providing academic input. To the staff of the faculty at UTS who provided support and guidance throughout this journey, my sincere thanks. To my supervisor Professor Mary Chiarella, I would like to extend my humble gratitude. For her unwavering belief in my work and exceptional generosity in support and encouragement I am eternally grateful. It is her shoulders I have stood on in order to finish this work and I am forever in her debt. To my friends and family, who continually supported and encouraged me throughout this process, I am extremely thankful. To my children Samuel, Jackson and Bronte who are as excited as I am about the completion of this work, and who are my greatest source of pride, I extend my thanks for believing unreservedly in me. Finally to my husband Warren, I extend my most heartfelt gratitude, his unfailing belief in me and abiding encouragement of this work have made its completion possible.

Abstract

The research represented in this thesis describes the experience of nurses in the intervention for patients at risk in the acute ward setting. Specifically, the research focusses on 'failure to rescue' as a concept which can, and as this research demonstrates, does, result in adverse patient outcomes. It identifies, describes and analyses four distinct elements of this type of failure in the clinical setting: 1) failure to recognise the level of risk to the patient; 2) failure to respond to the patient's level of risk; 3) failure to elevate patient risk to ensure an appropriate response; and 4) failure to challenge a perceived risk to patient safety.

Through the use of patient stories, which describe the failure of the health care system and nursing staff to consistently and effectively intervene for patients at risk, the experience of nurses is analysed and compared to *images* of nurses present in the literature. These images are: the nurse as the 'ministering angel'; the 'domestic worker'; the 'doctor's handmaiden'; the 'subordinate professional'; and finally the 'autonomous professional'. The nurses in this research were viewed in these images by the organisation, the doctors and the nurses themselves. These views, and the reality they create, contribute to the inability of nurses to effectively intervene for patients at risk and pose a considerable threat to patient safety.

The information gathered in this research describes the nurses' actions, the nurses' beliefs and the dissonance between the nurses' actions and beliefs in relation to the intervention for patients at risk. This research makes it apparent that nurses play a vital and important role in ensuring patient safety through the intervention for patients at risk, but at times this role is neither recognised nor understood by both the health care system and the nurses themselves. The research argues that it is this lack of understanding and recognition which presents significant barriers for nurses to intervene consistently and effectively for patients at risk.

Key words:

Failure to rescue, patient safety, deteriorating patient, rapid response, patient risk, case study, focus groups, PDSA, beneficence, nonmaleficence, patients' advocate, subordinate professional, doctor's handmaiden, autonomous professional, graded assertiveness.

Table of Contents:

Certificate of authorship/originality	ii
Acknowledgements	iii
Abstract iv	
Key words: iv	
Table of Contents:	i
List of Tables: vi	
List of Diagrams:	vii
List of Cases; viii	
Glossary ix	
1. Chapter One: Introduction	1
1.1 Structure of the Thesis	
1.2 Patients' Stories	
Patient History 1: Failure to respond.	
Patient History 2: Failure to recognise	
Patient History 3: Failure to communicate	
Patient History 4: Failure to escalate	
· · · · · · · · · · · · · · · · · · ·	
Patient History 5: Failure to escort	
Patient History 6: Mr C. with chest pain; no response requested	
Patient History 7: Failure to elevate	
Patient History 8: Failure to challenge	
1.3 Conclusion	
2. Chapter Two: The Research Setting	
2.1 Introduction	
2.2 My Role	
2.2.1 Bias and Influence	
2.3 The Clinical Context	
2.4 Approval by Ethics Committee	
2.5 The Nature of a Professional Doctorate	
2.6 Limitations to the Research	
2.7 Conclusion	
3. Chapter Three: Patient Safety Literature	33
3.1 Introduction	33
The Development of the Patient Safety Agenda	33
3.2.1 Failure to rescue	
Failure to recognise and 'scoring systems'	
Failure to respond and the role of 'response teams'	47
3.3 Conclusion	
4. Chapter Four: Literature for Analysis	52
4.1 Introduction	
4.2 Stock Stories and Outsider Stories	52
4.3 The Nurse as a 'Ministering Angel' (an Outsider Story).	
4.3.1 Summary of the elements of the ministering angel image	
4.4 The Nurse as a 'Domestic Worker' (a Stock Story)	
4.5 The Nurse as the 'Doctor's Handmaiden' (a Stock Story)	
4.5.1 Summary of the elements of the doctor's handmaiden im	

4.6	The Nurse as a 'Subordinate Professional' (a Stock Story)	. 64
4.6.1	Summary of the elements of the subordinate professional image	. 68
4.7	The Nurse as an 'Autonomous Professional' (an Outsider Story)	
4.7.1	Summary of the elements of the autonomous professional image	. 71
4.8	The Images in Clinical Practice	. 71
4.8.1	The role of the individual clinician in patient safety	. 72
4.8.2	The role of the nurse as the patient's advocate	. 75
4.9	Conclusion	. 78
5. Cha	pter Five: Study One: Recognition, Response, Escalation and	
	R2E2)	. 80
5.1	Introduction	
5.2	Aim and Research Questions for Study One	
5.3	Method of Study One	
5.3.1	Plan Do Study Act (PDSA) Cycles	
5.4	Incident Investigation	
5.4.1	Stage three: Determination of which incidents require investigation	
5.4.2	Stage four: Gathering of information	
5.4.3	Stage five: Mapping the events	
5.4.4	Stage six: Analysis of the information	
5.4.5	Stage seven: Development of recommendations	
5.5	Focus Groups	
5.5.1	PLAN: Plan the focus groups	
5.5.2	DO: Conduction of the focus groups	
5.5.3	STUDY: Analysis of the data	
5.5.4	ACT: The redirection of information back to staff	
5.6	My Management of the Incidents	
5.6.1	Review of Patient History 1: Failure to respond to Mr R	
5.6.2	Review of Patient History 2: Failure to recognise Mrs D.	
5.6.3	Review of Patient History 3: Failure to communicate Mr S	
5.7	Results of Focus Group discussions	
5.7.1	Failure to recognise	
5.7.2	Failure to respond.	
5.7.3	Summary of issues in the cases involving failure to recognise and respond	
5.7.4	Communication	
5.7.5	Responsibility for change	
5.7.6	Conclusion from focus group discussions on incident reviews	102
5.8	Addressing Failure to Recognise-PDSA Cycles one and two	
5.8.1	PDSA Cycle one: The identification of an objective measure of a patient's	
	clinical condition	
5.8.2	PDSA Cycle two: The documentation of a patient's MEWS	109
5.8.3	PDSA Cycles three, four and five: Addressing the failure to respond	110
5.8.4	PDSA Cycle three: The determination of a trigger for the protocol	112
5.8.5	PDSA Cycles four and five: Response criteria and escalation	114
5.8.6	PDSA Cycle six: Changes to the escalation protocol	
5.8.7	PDSA Cycle seven: The addition of escort requirements	
5.8.8	Summary of the implementation of the R2E2	119
5.8.9	R2E2 outcomes	
5.9	The Resolution of Failure to Rescue Incidents?	
5.10	Conclusion	122
6 Cha	nter Six: Study Two: Moral Agency	124

6.1	Introduction	124
6.2	Aim and Research Questions for Study Two	
6.3	Method for Study Two	
6.3.1	PLAN	
6.3.2	DO: Introduction of the questionnaire to staff on the ward	132
6.4	Investigation of Patient History 6	
6.5	Results of Initial Discussions with Staff	
6.5.1	Summary of discussions following the introduction of the Moral Sen	
	Questionnaire	
6.5.2	STUDY: Results of the Moral Sensitivity Questionnaire	
6.5.3	Discussions with staff about their responses to the Moral Sensitivity	
	Questionnaire	138
6.5.4	Summary of discussions with staff about the results of the Moral Sen	
	Questionnaire	-
6.5.5	ACT: Decisions and activities which arose from the discussions with	
	about the results of the Moral Sensitivity Questionnaire	
6.6	Conclusion	
	apter Seven: Study Three: Case Study Focus Groups	
7.1 CII	Introduction	
7.1	Aim and Research Questions for Study Three	
7.3	Method of Study Three: Case Study Focus Groups	
7.3.1	PLAN: Development of a case for discussion	
7.3.1	DO: Conduct of the focus groups	
7.3.3	STUDY: Analysis of information from case study focus groups	
7.3.4	ACT: Staff interviews	
7.3. 4 7.4	Focus Group Discussions from Patient History 9	
7.4.1	Detailed structure of focus group questions	
7.4.2	Results of discussion on <i>failure to recognise</i>	
7.4.3	Results of discussion on communication.	
7.4.4	Results of discussion on <i>failure to respond</i>	
7.4.5	Results of discussion on total patient allocation	
7.4.6	Conclusion to Patient History 9	
7.4.0	Exploration of Failure to Elevate: Patient History 7	
7.5.1	My investigation of the incident	
7.5.2	Focus group discussion on Patient History 7	
7.6	Exploration of Failure to Challenge: Patient History 8	
7.6.1	My intervention for the patient	
7.6.2	Focus group discussion on Patient History 8	
7.6.3	Interviews with nursing staff involved in Patient History 8	
7.6.4	Conclusion to discussions on Patient History 8	
7.0. 4 7.7	•	
	Comparison between Case Study Discussions (Study Three) to Mora ity Questionnaire Responses (Study Two)	
7.7.1		
7.7.1	Incongruity in data	
	Congruence in data	
7.7.3	Repeat of the Moral Sensitivity Questionnaire	
7.8	Conclusion	
	apter Eight: Analysis	
8.1	Introduction	
8.2	First Stage Analysis	
8.2.1	Method of first stage analysis	191

8.2.2	Results of first stage analysis	192
8.2.3	Failure to recognise	192
8.2.4	Failure to respond	196
8.2.5	Failure to elevate	199
8.2.6	Failure to challenge	203
8.3	Summary of First Stage Analysis	208
8.4	Second Stage Analysis	208
8.4.1	Method of second stage analysis	
8.4.2	Results of second stage analysis	
8.4.3	Failure to recognise	
8.4.4	Failure to respond	
8.4.5	Failure to elevate	
8.4.6	Failure to challenge	222
8.5	Summary of Second Stage Analysis	
8.6	Third Stage Analysis	
8.6.1	Method of third stage analysis	
8.6.2	Results of third stage analysis	
8.6.3	The justification of behaviour	
8.6.4	Tyranny of niceness, ethos of individual accountability and the 'allocation'	
	patient safety responsibility	
8.6.5	Satisfaction when liked by the patient	
8.6.6	The non-collaborative nurse physician relationship	
8.6.7	Nursing work under the control of doctors and doctors have the ultim	
	responsibility for patients	240
8.6.8	Nurses unable to challenge doctors, when disagree about patient mans	
8.6.9	Nurses able to challenge doctors when disagree about patient manage	ment 242
8.6.10	Nurses being unable to implement solutions without the doctor's perm	nission242
8.6.11	Culture of exclusion- the doctor's paternalism being more important t	
	patient's autonomy	244
8.6.12	The role of the nurse as the patient's advocate	245
8.6.13	Summary of the third stage of analysis	247
8.7	Conclusion	255
9. Cł	napter Nine: Discussion	256
9.1	Introduction	
9.2	Failure to Rescue	
9.3	Mitigating Failure to Recognise and Failure to Respond Incidents	257
9.3.1	Addressing failure to recognise	
9.3.2	Addressing communication issues	
9.3.3	Addressing failure to respond	
9.3.4	Conclusion to the section on a system for the management of deterior	ating
	patients	
9.4	The Role of Nurses in the Intervention for Patients at Risk	
9.4.1	Failure to recognise	
9.4.2	Failure to respond	
9.4.3	Failure to elevate	
9.4.4	Failure to challenge	
9.5	The Image of the Autonomous Professional	
9.6	Graded Assertiveness	
9.7	A New Role for Nurses.	
9.7.1	Function of the role	
972	Summary of SAN role	321

9.8	The Relevance of this Study to Patient Safety in NSW	322
9.8.1	Acting on the responsibility to solve the problem of patient safety	323
9.9	Conclusion	329
10. Cha	npter Ten: Epilogue	. 331
	pendices	
11.1	Appendix 1. MEWS criteria (Subbe et al., 2001)	
11.2	Appendix 2. MEWS criteria (Pittard, 2003)	
11.3	Appendix 3. MET criteria (Buist et al., 2002)	
11.4	Appendix 4. The PART criteria (Goldhill et al., 1999)	
11.5	Appendix 5. Elements of autonomy in knowledge and education and	
autonom	y in regulation and management in image of autonomous professional	
(Chiarell	a, 2002)	339
11.6	Appendix 6. Reasons for alterations in the original questionnaire	
11.7	Appendix 7. R2E2 Protocol	
11.8	Appendix 8. Discussion on failure to recognise	
11.9	Appendix 9. Discussions on communication	
11.10	Appendix 10. Discussion on failure to respond	
11.10.1	Sub-group responses on failure to respond.	
11.11	Appendix 11. Discussion on total patient allocation	
11.11.1	Sub-group responses on total patient allocation	
11.12	Appendix 12. Discussion on Patient History 7	
11.13	Appendix 13. Discussions on Patient History 8	
11.14	Appendix 14. Interview of Patient History 8	
11.15	Appendix 15. Table of comparison between Case Study responses and M	
	ty Questionnaire responses	
11.16	Appendix 16. Follow up results of Moral Sensitivity Questionnaire	
11.17	Appendix 17. Patient History 9: Mr L., Synthesised patient history	
11.18	Appendix 18. Participant consent and revocation form	
12. Ref	Ferences	. 379

List of Tables:

Table 1. Structure of the Thesis	12
Table 2. Patient demography during research period; bed numbers and occupancy rate in the acu	te care
surgical ward	29
Table 3. Iterative steps in PDSA Cycles	84
Table 4. The severity index in use at the time of the study	87
Table 5. Key contributory factors explored in Patient History 1	89
Table 6. Results of patient outcomes in the snap shot study in my research	106
Table 7. Comparison between the results of The Royal London Study (RLS) with my research	106
Table 8. Comparison between the results of my research with the MEWS study in Wrexham	108
Table 9. Frequency of 322 MEWS' over an eight-week period.	113
Table 10. MEWS >/= 4 by treating team over an eight week period	113
Table 11. Patient outcomes pre and post implementation of the R2E2	120
Table 12. Adaptations of items in questionnaire	128
Table 13. Staff's initial response to the Moral Sensitivity Questionnaire	134
Table 14. Results of the Moral Sensitivity Questionnaire	136
Table 15. Discussions with staff about the results of the Moral Sensitivity Questionnaire	140
Table 16. Questions developed prior to focus groups on Patient History 9	164
Table 17. Additional questions for the focus groups	166
Table 18. Additional questions for the sub-group	167
Table 19. Dissonance between groups on failure to recognise	168
Table 20. Dissonance between groups on failure to respond	170
Table 21. Dissonance between groups on total patient allocation	
Table 22. Pre-set questions for focus group discussions on Patient History 7	176
Table 23. Pre-set questions for focus group discussions on Patient History 8	180
Table 24. Pre-set questions for interviews on Patient History 8	183
Table 25. First stage analysis - failure to recognise	193
Table 26. First stage analysis - failure to respond	196
Table 27. First stage analysis – failure to elevate	
Table 28. First stage analysis- failure to challenge	203
Table 29. Codes of failure to recognise	209
Table 30. Second stage analysis- failure to recognise	214
Table 31. Codes of failure to respond	214
Table 32. Second stage analysis- failure to respond	217
Table 33. Codes of failure to elevate	217
Table 34. Second stage analysis – failure to elevate	221
Table 35. Codes of failure to challenge	222
Table 36. Second stage analysis – failure to challenge	228
Table 37. Total categories for second stage analysis	229
Table 38. Summary of third stage analysis	250
Table 39. Elements for an effective system for the management of deteriorating patients- R2E2	<u> </u>
Table 40. Failure to recognise	<i>273</i>
Table 41. Failure to respond	${276}$
Table 42. Failure to elevate	$\frac{270}{279}$
Table 43. Failure to challenge	289
Table 44. Summary of stages of the intervention for patients at risk by nurses	302

List of Diagrams:

- 1. Diagram 1: Flow chart of the progress of the development of Studies One, Two and Three
- 2. Diagram 2: The Clinical Practice Improvement Model (NSW Department of Health, 2002)
- 3. Diagram 3: Timeline mapping the events of Patient History 1
- 4. Diagram 4: Cause and Effect diagram for Patient History 1
- 5. Diagram 5: Flow chart of Study One
- 6. Diagram 6: Flow chart of Study Two
- 7. Diagram 7: Flow chart of Study Three
- 8. Diagram 8: Receptivity to change continuum (Chiarella, 2007)
- 9. Diagram 9: Ethoses of nurses and subsequent practice zones
- 10. Diagram 10: The current process of consent
- 11. Diagram 11: The role of the SAN in the process of consent

List of Cases:

Anderson and the Medical Practitioners Act, 1938-1964, Johnson and the Medical Practitioners Act, 1938-1964 (1967) 85 WN Pt 1 (NSW) 558 (cited as Re Anderson & Re Johnson)

Bergen v Sturgeon General Hospital et al, (1984) 28 CCLT 155

Elliot v Bickerstaff [1999] NSWCA 453

Hillyer v Governors of St Bartholomew's Hospital [1909] 2 KB 820

Hospital Nurses (State) Award [1936] AR 247 (cited in text as 1936b)

Ingram v Fitzgerald [1936] NZLR 905

Inquest touching the death of HAB Adelaide Coroner's Court, 11 & 25.2.92, Mr KB. Ahearn

Inquest touching the death of PDP, Perth Coroner's Court, 7.4.94, Mr DA. McCann

Lavere v Smith's Falls Public Hospital (1915) 24 DLR 866

MacDonald v York County Hospital et al; (1973) 41 DLR (3d) 321

Pillai v Messiter (no. 2) (1989) 16 NSWLR 197

Qidwai v Brown (1984) 1 NSWLR 100

Strelic v D Nelson & 2 Ors Unreported, Supreme Court of New South Wales, (6.2. 1996), Smart, J, no. 90012401

Van Wyk v Lewis [1924] App. D (S Afr) 438

Glossary

Angina	Chest pain caused by a lack of oxygen to the heart muscle
	(angina pectoris). Usually caused by a blockage of the arteries
	which supply blood to the heart muscle (Anderson, Anderson, &
	Glanze, 1994).
Aorta	The main blood vessel leaving the heart. Compromises four
	parts: the ascending aorta, the arch of the aorta, the thoracic
	portion of the descending aorta, and the abdominal portion of
	the descending aorta (Anderson et al., 1994).
Cardioversion	The restoration of the heart's normal rhythm by delivery of a
	synchronised electric shock through two metal paddles placed on
	the patient's chest. Cardioversion is used to slow the heart rate or
	restore the heart's normal sinus rhythm when drug therapy is
	ineffective (Anderson et al., 1994).
CT Scan	Computed Tomography scan (CT) is an X-ray technique that
	produces a film representing a detailed cross section of tissue
	structure (Anderson et al., 1994).
ECG (electro-	A graphic record produced by an electrocardiograph. The
cardiogram)	electrocardiograph is a device used for recording the electric
	activity of the heart muscle in order to detect transmission of the
	cardiac impulse through the conductive tissues of the muscle.
	Electrocardiography allows diagnosis of specific cardiac
	abnormalities (Anderson et al., 1994).
EN	Enrolled Nurse. A person enrolled by the Nurses' and Midwives'
	Board of New South Wales (NSW Department of Health).
Glasgow coma	A quick, practical, and standardised system for assessing the
score	degree of conscious impairment in a patient and for the
	prediction of the duration and ultimate outcome of a coma,
	primarily in patients with head injuries (Anderson et al., 1994).
	The score ranges from 3 through to 15, with 3 indicating deep
	unconsciousness and 15 indicative of someone who is alert,
	orientated and moving freely.
<u> </u>	

Hypotension	'Low blood pressure', an abnormal condition in which the blood
	pressure is not adequate for normal perfusion and oxygenation
	of the tissues (Anderson et al., 1994).
Hypoxia	An inadequate supply of oxygen to cells in the body (Anderson
	et al., 1994).
Infarction	A condition which occurs when there is a localised area of tissue
	death of a vessel or organ in the body due to the absence of
	oxygen supply.
Medical officer in	The medical registrar in charge of managing all medical patients
charge (MOIC)	on the wards after hours, including evenings, night duty and
	weekends.
Metastatic cancer	A secondary cancer that forms in the body as a result of an
	original (primary) tumour (Anderson et al., 1994). This is also
	referred, in layman's terms, to cancer which has spread to other
	areas in the body.
Midazolam	Midazolam hydrochloride, a sedative and hypnotic agent, which
	is also used as a short-acting sleep inducing agent (MIMS).
Morphine	Morphine sulphate, a narcotic analgesic agent (MIMS), which is
	primarily used for pain relief.
Mylanta	An antacid, used for the relief of gastric reflux, commonly
	referred to as heartburn (MIMS).
Myocardial	The death of a portion of the heart muscle caused by obstruction
infarction (MI)	in one of the arteries in the heart, or inadequate oxygenation to
	the heart muscle. The obstruction is most often a result of a
	blood clot or the deposit of fatty tissue caused by high
	cholesterol.
NOF	The narrow neck of the femur, located in the hip joint.
Not for CPR order	This is an order to instruct clinical staff not to perform
	cardiopulmonary resuscitation (CPR) in the event that a patient
	stops breathing or their heartbeat stops, when it is decided that
	CPR would not be in the best interest of the patient. The order is
	formed in consultation with the patient or their family or both.
Oliguria	Low urine output. A diminished capacity to form and pass urine,
	less than 500 ml in every 24 hours, so that the end products of

	metabolism cannot be excreted efficiently (Anderson et al.,
	1994).
Pressure ulcers	Also known as decubitus ulcer. It is an inflammation, sore, or
	ulcer in the skin over a bony prominence. It results from a lack
	of oxygen supply to the tissues because of prolonged pressure on
	that part of the body (Anderson et al., 1994).
Rapid AF	Atrial fibrillation (AF) and atrial flutter are abnormal heart
	rhythms in which the atria, or upper chambers of the heart, are
	out of synchronisation with the ventricles, or lower chambers of
	the heart. In rapid atrial fibrillation, the atria "quiver" chaotically
	and the ventricles beat irregularly (American Heart Association,
	2008).
Registrar	A medical officer who:
	has had at least three years' experience in public hospital service
	as defined under the award or any lesser period acceptable to the
	Health Administration Corporation, and,
	(ii) is appointed as a registrar by a hospital, and,
	is occupying a position of registrar in an established position as
	approved by the Health Administration Corporation (NSW
	Department of Health, 2008a).
Resident	A medical officer who has obtained full registration (NSW
	Department of Health, 2008a). Full registration is obtained after
	the medical officer has satisfactorily completed an intern year.
RN	Registered Nurse. A person registered by the Nurses' and
	Midwives' Board of New South Wales as a Registered Nurse or a
	Registered Midwife or both (NSW Department of Health).
Saturation	A measure of the degree to which oxygen is bound to red blood
	cells. It is expressed as a percentage of the possible limit
	(Anderson et al., 1994).
Scrub Nurse	A specially trained nurse in the operating suite who directly
	assists the surgeon performing the operative procedure.
Sepsis	Infection, contamination. The presence of bacteria (bacteremia)
	or other infectious organisms or their toxins in the blood
	(septicemia) or in other tissue of the body. Sepsis may be

	associated with clinical symptoms of systemic illness, such as
	fever, chills, malaise, low blood pressure, and mental status
	changes. Sepsis can be a life threatening disease calling for urgent
	and comprehensive care (Anderson et al., 1994).
Serenace	The generic name of this drug is haloperidol. It is a drug used to
	treat mental illnesses such as schizophrenia and mania, or severe
	anxiety, tension or excitement or severe agitation, hyperactivity
	and aggression in patients with mental or emotional illness
	(MIMS, 2008).
Stoma	An artificial opening of an internal organ on the surface of the
	body, created surgically, such as a colostomy (Anderson et al.,
	1994).
Tachycardia	Fast heart rate. A condition in which the heart muscle contracts
	at a rate greater than 100 beats per minute (Anderson et al.,
	1994).
TEN	Trainee Enrolled Nurse. A person who is being trained to
	become an enrolled nurse in a hospital recognised by the Nurses'
	and Midwives' Board of New South Wales as a training school
	for enrolled nurses (NSW Department of Health).
Trendelenberg's	A position in which the head is low and the body and legs are on
position	an inclined plane (Anderson et al., 1994). Occasionally used when
	a patient's blood pressure is so low in order to ensure maximum
	blood supply to the heart and brain.
Troponin	A protein in the heart muscle cell structure which is released
	when a patient is having a myocardial infarction. A blood test is
	required to measure a patient's troponin level in order to assist in
	the diagnosis of a myocardial infarction. If a patient's troponin
	level is elevated, it is indicative that they may have experienced
	cardiac ischaemia or a myocardial infarction.
VMO	Visiting Medical Officer, a senior admitting medical officer, who
	has completed specialised training, for example a cardiologist or
	an orthopaedic surgeon, on contract to a public hospital (NSW
	Department of Health, 2008b).