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**The Use of Knowledge of Respiratory Physiology in Critical
Care Nurses' Clinical Decision-making**

**A thesis presented in partial fulfilment of the requirements
for the degree of**

Master of Arts

in

Nursing

**at Massey University, Albany,
New Zealand.**

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2005

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ABSTRACT

The knowledge and experience of expert nurses has long been recognised as contributing to early identification of patient problems, early intervention and an improved patient outcome. The present study sought to answer the research question, following completion of a critical care specialty practice programme, do nurses use knowledge of respiratory physiology in their clinical decision-making? An evaluation methodology using a managerial perspective was used to compare the use of knowledge of respiratory physiology in critical care nurses' clinical decision-making with the respiratory physiology recommended in the *New Zealand Standards for Critical Care Nursing Education* (Critical Care Nurses' Section, 2000).

Using intensity sampling, 27 nurses who had completed a critical care specialty practice programme and who were currently working in the critical care units of two tertiary hospitals in a large metropolitan city within New Zealand were selected. Quantitative and qualitative methods were used to collect data. Data analysis was completed using descriptive statistics, correlations and identification of common terms and themes.

The results showed that following completion of a critical care programme, critical care nurses demonstrated a low to medium level of knowledge of respiratory physiology in their clinical decision-making. In the total group, no statistically significant associations were found between the use of knowledge of respiratory physiology in clinical decision-making and age, experience, academic level, use of guidelines and protocols, standards and integrated care pathways, conference attendance, reading of journals and accessing the World Wide Web for literature. Qualitative analysis identified factors contributing to the low to medium use of knowledge as being nurses' high reliance on intuitive knowledge, lack of in-depth discussion of respiratory concepts in critical care programmes, lack of opportunity in the clinical practice environment to discuss respiratory physiology and lack of collaborative practice.

The study identified the need for more collaborative practice and for clinical nurse educators firstly, to have a closer relationship with the critical care programme providers to ensure adequate theoretical content and secondly, to work with nurses in the clinical setting.

PREFACE

This thesis is titled *The use of knowledge of respiratory physiology in critical care nurses' clinical decision-making*. The research has been completed to fulfil the requirements of a Masters of Arts (Nursing) degree through Massey University. The researcher for this study is Alison Pirret, who is employed as a registered nurse, intensive care, Middlemore Hospital and is also self-employed as a clinical nurse specialist intensive/acute care.

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Approval for this research was obtained from both the Massey University Human Ethics Committee and the Regional Ethics Committee. Due to the requirement to maintain confidentiality and anonymity of the participants and critical care units involved in this study, the specific Regional Ethics committee will not be named in this document.

TABLE OF CONTENTS

ABSTRACT.....	III
PREFACE	V
Acknowledgements.....	vi
TABLE OF CONTENTS.....	VII
LIST OF TABLES	XI
LIST OF TEXT BOXES.....	XII
CHAPTER ONE: INTRODUCTION.....	1
The New Zealand context	1
The research question and aims of study	2
Overview of the thesis	3
Summary	4
CHAPTER TWO: LITERATURE REVIEW.....	5
Format of literature review	5
The literature search process	7
Definition of clinical decision-making	8
Decision-making theory	9
<i>Information processing theory</i>	<i>9</i>
<i>Hypothetico-deductive theory.....</i>	<i>10</i>
<i>Analytical theory</i>	<i>11</i>
<i>Skill acquisition theory.....</i>	<i>12</i>
Intuitive and analytical decision-making processes	13
Factors that influence clinical decision-making	16
Problems associated with research methods.....	22
Role extension and expansion.....	24
Bioscience in clinical decision-making.....	25

Summary	30
CHAPTER THREE: RESEARCH DESIGN	32
Theoretical Framework	32
Methodology.....	34
Method.....	37
<i>Demographic data</i>	<i>38</i>
<i>Factors that influence professional culture.....</i>	<i>38</i>
<i>Access to ongoing knowledge development.....</i>	<i>38</i>
<i>Knowledge of respiratory physiology.....</i>	<i>39</i>
<i>General comments</i>	<i>41</i>
Ethical Considerations	42
Participant Selection	43
Ensuring a sound research process.....	44
Summary	47
CHAPTER FOUR: DATA ANALYSIS TECHNIQUES	49
Overview.....	49
Demographic analysis	50
Analysis of factors influencing professional culture	51
Analysis of access to ongoing knowledge.....	52
Knowledge of respiratory physiology	53
<i>Use of knowledge of respiratory physiology in clinical decision-making.....</i>	<i>53</i>
<i>Arterial blood gas analysis.....</i>	<i>54</i>
<i>Knowledge of respiratory concept definitions.....</i>	<i>55</i>
<i>Correlations between aspects of respiratory knowledge</i>	<i>56</i>
<i>Discussion of respiratory concepts in practice</i>	<i>56</i>
Analysis of factors that influence clinical decision-making.....	57
Analysis of general comments	57
Summary	57
CHAPTER FIVE: RESULTS	59
Participant demographics.....	59
Factors that influence professional culture.....	64

Access to ongoing knowledge development.....	68
Respiratory knowledge	69
<i>The use of knowledge of respiratory physiology in clinical decision-making</i>	<i>70</i>
<i>Arterial blood gas analysis.....</i>	<i>75</i>
<i>Knowledge of respiratory concept definitions.....</i>	<i>77</i>
<i>Correlations between aspects of respiratory knowledge</i>	<i>77</i>
<i>Discussion of respiratory concepts in practice</i>	<i>78</i>
Factors influencing the use of respiratory knowledge in clinical decision-making	82
Issues raised in general discussion.....	84
<i>Intuitive knowledge.....</i>	<i>91</i>
<i>Lack of collaborative practice.....</i>	<i>91</i>
<i>Effect of reduced medical resources</i>	<i>93</i>
<i>Need for encouragement</i>	<i>94</i>
<i>Individual professional responsibility.....</i>	<i>98</i>
Summary	98
CHAPTER SIX: DISCUSSION.....	100
The use of knowledge of respiratory physiology in clinical decision-making... 	101
Factors that influence clinical decision-making	103
Intuitive and analytical decision-making processes	105
Clinical language	106
Critical care programmes.....	108
Clinical support	110
Autonomous and collaborative practice.....	112
Individual professional responsibility	114
Limitations of the Study.....	115
Future Directions.....	116
Summary	117
CHAPTER SEVEN: CONCLUSION.....	119
The literature review	119
The research design.....	120
Data analysis techniques.....	121

Research results	121
Discussion	122
Summary	123
REFERENCES	125
LIST OF APPENDICES	137
APPENDIX A: CLOSED-ENDED QUESTIONNAIRE	138
APPENDIX B: OPEN-ENDED QUESTIONNAIRE	142
APPENDIX C: ARTERIAL BLOOD GAS ANALYSIS	143
APPENDIX D: CARD MATCHING	144
APPENDIX E: CONFIDENTIALITY AGREEMENT	146
APPENDIX F: INFORMATION LEAFLET	147
APPENDIX G: CONSENT FORM	149
APPENDIX H: TRANSCRIBER'S AGREEMENT	151

LIST OF TABLES

Table 1.1	Basic knowledge areas (Toth & Ritchey, 1984)
Table 5.1	Demographic data of total group (n = 27)
Table 5.2	Demographic data of Unit One participants (n = 13)
Table 5.3	Demographic data of Unit Two participants (n = 14)
Table 5.4	Tasks completed by participants
Table 5.5	Example of grading and classification of a respiratory concept.
Table 5.6	Knowledge scores of respiratory concepts used
Table 5.7	Concepts incorrectly matched
Table 5.8	Correlations between the use of knowledge of respiratory physiology and other factors
Table 5.9	Unit One correlations between the use of knowledge of respiratory physiology and other factors
Table 5.10	Unit Two correlations between the use of knowledge of respiratory physiology and other factors

LIST OF TEXT BOXES

- | | |
|---------|---|
| Box 5.1 | Limitations of protocols, guidelines, standards and integrated pathways on clinical decision-making |
| Box 5.2 | The lack of clinical and management support in ongoing knowledge development and clinical decision-making |
| Box 5.3 | The use of respiratory concepts in the clinical practice setting |
| Box 5.4 | Lack of inclusion in discussion of respiratory concepts in the clinical practice setting |
| Box 5.5 | The clinical language associated with respiratory concepts |
| Box 5.6 | The use of intuitive knowledge in critical care nursing |
| Box 5.7 | The negative effect of lack of collaborative practice on clinical decision-making |