A Web-enabled National Multi-Centre Study of Nurse Skill Matching to Patient Acuity and Risk in Intensive Care

Department of Population Health and Clinical Practice
Discipline of Nursing

The University of Adelaide

Amanda Rischbieth

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## TABLE OF CONTENTS

- **Student Declaration** .................................................................................. vi
- **Acknowledgements** .................................................................................. vii
- **Acknowledgement of Material Arising from the Thesis** ......................... viii
- **Glossary and Abbreviations** ...................................................................... ix
- **List of Figures** .......................................................................................... xiii
- **List of Tables** ........................................................................................... xiii

### CHAPTER 1 INTRODUCTION ............................................................................ 1

1.1. **Introduction** ........................................................................................... 1
1.2. **Nurse skill mix and nurse staffing decisions** ........................................... 4
1.3. **Nurse skill assessment in ICU** ................................................................ 5
1.4. **Understanding the context of the research** ............................................. 5
1.5. **Overview of background literature** ....................................................... 9
1.6. **Summary** ................................................................................................ 10

### CHAPTER 2 LITERATURE REVIEW .................................................................. 12

2.1. **Introduction** ........................................................................................... 12
2.2. **Literature search** ................................................................................... 12
2.3. **Literature review framework** ................................................................... 13

Issue 1: Nurse Labour (including shortage, casual and agency nurse labour) .......... 13
Issue 2: Nurse Skill and Risk management in ICU ............................................... 26
Issue 3: Workforce indicators, remuneration and workload ................................. 46
Issue 4: Outcome measurement in ICU ............................................................. 46
Issue 5: Nurse skill-matching to patient acuity .................................................. 50

2.4. **Summary of key literature** ....................................................................... 51
2.5. **Gaps in the literature** ............................................................................... 54
2.6. **Summary** ................................................................................................ 55
4.5. Thematic Analysis

Problems identified by SLNs regarding nurse number decisions - Summative Themes

Nurse allocation-to-patient decision problems - Summative Themes

SLN staffing solutions

4.6. Synopsis of Main Results

Critical care qualifications of employed ICU RNs and Shift Leader Nurses

Use of ENS

Nursing hours

SLN profile

SLN Shift Profile

Agency staff usage and skill assessment

Use of systems/tools within staffing decisions

5. Staffing problems identified by SLNs regarding nurse number decisions

5.2. Staffing problems identified by SLNs regarding nurse-to-patient allocation decision

5.2. Staffing solutions suggested by SLNs

5.7. Summary

CHAPTER 5 DISCUSSION

5.1. Introduction

5.2. Limitations

5.3. The Study

5.4. Complexity of nurse staffing systems

5.5. Deficit in skill assessment, skill and available skill information

5.6. A Staffing Decision Support Framework

5.7. Risk rating shift activity in ICU

5.8. Dissemination of findings

5.9. Conclusions

5.10. Recommendations
ABSTRACT

A web-enabled national multi-centre study of nurse skill matching to patient acuity and risk in intensive care

Background
Although there is substantive literature regarding nurse staffing utilisation models, there is a lack of evidence about the decision-making process involved in the matching of nurse skill levels to patient acuity.

Aim
This study aimed to identify tools, systems and processes that inform nurse skill-assessment and nurse-to-patient allocation decisions in Adult Level III Australian ICUs, and to develop a Nurse Skill Matching Decision-Support Framework that could be incorporated within an ICU risk management system.

Method
Data were collected primarily through a web-enabled survey questionnaire. Nursing Unit Managers (NUMs), and Shift Leader Nurses (SLNs) responsible for key staffing decisions were recruited from all of the 58 Adult Level III Australian ICUs. A high response (86.20%) was achieved. Data method triangulation using quantitative and qualitative data informed the study findings.

Findings
Key staffing problems related to nurse supply, emergency admissions and unpredictability of admission type; lack of nurse skill assessment and inadequate skill mix; budget constraints, staff/junior staff supervision and support, and staff conflict. Suggested solutions included skill database/list creation; control of patient admissions; and attention to detail in skill mix formulas. Autonomy and support for staffing decisions, adequate clinical resources and improved communication were sought.

Discussion
An inextricable link exists between staffing decisions and patient safety, outcome and risk, in the ICU. Staffing systems and associated decisions are complex and multi-faceted, making single-factor staffing models inherently limited. This study highlighted a broad culture of frustration with most current staffing systems in Australian ICUs. Evidence of potential clinical compromise and risk exposure resulting from poor skill matching to patient acuity was found, this being compounded by a skill shortage, lack of skill assessment, budget constraints and a lack of trust of shift leader decisions by managers. A Staffing Decision Support Framework is recommended for further development and potential use in ICUs.