Infection Prevention and Control Programs in Community-Based Home Visiting Nursing in Southeast Queensland, Australia: A Case Study

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ABSTRACT

In Australia, healthcare settings are required to obtain and maintain formal accreditation by the Australian Council on Health Care Standards. One area of this accreditation is infection prevention and control. In addition to accreditation, healthcare settings are required to appoint an infection control professional to coordinate the local infection control programs. In addition to these requirements, healthcare settings in Queensland are required by law to implement an infection control management plan and take reasonable precautions to minimise the risk of Healthcare-Associated Infections [HAIs] through the identification of the infection risks and measures to be taken to prevent or minimise these risks. Such efforts must be consistent with relevant national infection control guidelines for healthcare settings. The National Health and Medical Research Council [NHMRC] published the Australian Guidelines for the Prevention and Control of Infection in Healthcare in which they established six key elements of a successful infection prevention and control program. The NHMRC guidelines are considered to be fundamental because they are based on the best available evidence and address the critical aspects of infection prevention and control in healthcare settings. The NHMRC guidelines are hospital-based.

Healthcare services are now expanding to community contexts. As healthcare services extend from hospitals to the community, so do the risks of HAIs transmission. There is limited research that explores infection prevention and control programs in a community context, especially in home-healthcare services. Furthermore, the community context is different from the context of a hospital setting. It is uncontrollable, unpredictable and there is less access to essential resources for home visiting nurses to perform their jobs. Therefore, policies relevant to hospital settings need to be developed to suit the community context. This difference between community and hospital settings in the work environment context highlights the need to explore what infection prevention and control programs govern community-based home visiting nursing [CBHVN] to understand how they are structured and how they operate. The aim of this study was to examine the structures that govern infection prevention and control in community settings and to determine how they operate.

Donabedian’s framework of quality assessment (2005) was adopted as a conceptual framework to undertake a case study of CBHVN in Queensland [case studies] (Yin, 1994). The case subjects were CBHVN organisations. The context was
Southeast Queensland and the issue was infection prevention and control programs within CBHVN. The study was conducted on four different CBHVN organisations located in Southeast Queensland. In order to understand the issue, it was essential to understand how infection prevention and control programs are structured and managed in each organisation. Data were triangulated from multiple sources to enable a thorough understanding. Three different data collection strategies were used in this study: document reviews, individual interviews and focus group interviews. The documents reviewed are related to infection control and were reviewed to develop an understanding of the structure of infection prevention and control programs in each organisation and how the programs are expected to operate formally. Individual interviews with home visiting nurses and managers were conducted to explore how infection prevention and control programs actually operate and to explore the challenges faced by home-visiting nurses while implementing infection prevention and control programs in a community context. Following this, a cross-case analysis of the four organisations was conducted to identify the differences and similarities across the four organisations and to identify challenges that home-visiting nurses face while implementing infection prevention and control practices in the community context. After that, focus group interviews were conducted with home-visiting nurses to explore solutions to the issues raised from the document reviews and individual interviews. Follow-up individual interviews were also conducted with the managers to obtain their perspective on the raised issues. Finally, an initial framework for infection prevention and control programs for CBHVN was developed.

Donabedian’s theory was used as a conceptual structure for this study. The structure, processes and outcome strategies of infection prevention and control programs in CBHVN was explored in each organisation. The findings reveal that infection prevention and control programs were informally structured in CBHVN. The structure varied from one organisation to another. However, there were some common elements among all organisations. Generally, the infection control elements included: governance of infection control, infection control policies for client care, staff development and training, staff health, surveillance systems, and strategies to address environmental contexts. Infection prevention and control in the community context depended mainly on education more than the other elements. As for infection control processes, various infection control processes were implemented by each CBHVN organisation. However, there were some common processes that were used by all four
organisations, such as hand hygiene competencies, standard precautions, and evaluating staff performance. Infection control was difficult to evaluate in CBHVN due to a lack of appropriate tools for the community context. Evaluation mainly depended on client feedback and compliance with annual infection control training. There were issues with regard to implementing infection control in a community context that were raised in this study. Those issues included environmental challenges, the lack of available equipment and the lack of community-based clinical guidelines.

The findings of this study showed that infection prevention and control programs were informally and poorly structured in CBHVN. The available infection control processes developed for acute settings were not always appropriate for the community context. There were challenges that were not addressed in the available infection control policies, procedures and guidelines. Home-visiting nurses were doing their best to provide good quality care to their clients in less than optimal environments. The knowledge derived from this study is significant because it highlights the challenges and the issues that home-visiting nurses face while implementing infection control practices in a community context. Addressing those issues while developing policies and procedures for infection control and while establishing infection prevention and control programs for the community context will lead to better understanding of the difference between community-based and acute healthcare environments and the need to develop infection prevention and control programs and guidelines that are more practical, reasonable and applicable for home-visiting nurses in the community-based context.
STATEMENT OF ORIGINALITY

This work has not been previously submitted for a degree or diploma in any university. To the best of my knowledge and belief, this thesis contains no material previously published or written by another person, except where due reference is made in the thesis itself.

Ohood Felemban

20 August 2014
**TABLE OF CONTENTS**

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABSTRACT</td>
<td>III</td>
</tr>
<tr>
<td>STATEMENT OF ORIGINALITY</td>
<td>VI</td>
</tr>
<tr>
<td>TABLE OF CONTENTS</td>
<td>VII</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td>XIII</td>
</tr>
<tr>
<td>LIST OF FIGURES</td>
<td>XIII</td>
</tr>
<tr>
<td>ACRONYMS</td>
<td>XIV</td>
</tr>
<tr>
<td>KEY DEFINITIONS AND TERMS</td>
<td>XV</td>
</tr>
<tr>
<td>PUBLICATION ARISING FROM THE THESIS</td>
<td>XVII</td>
</tr>
<tr>
<td>ACKNOWLEDGMENTS</td>
<td>XVIII</td>
</tr>
<tr>
<td>CHAPTER 1 - INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>Background of the research</td>
<td>1</td>
</tr>
<tr>
<td>The research problem</td>
<td>3</td>
</tr>
<tr>
<td>Aim of the study</td>
<td>6</td>
</tr>
<tr>
<td>Research question</td>
<td>6</td>
</tr>
<tr>
<td>Significance of the research</td>
<td>6</td>
</tr>
<tr>
<td>Structure of the thesis</td>
<td>7</td>
</tr>
<tr>
<td>CHAPTER 2 – LITERATURE REVIEW</td>
<td>9</td>
</tr>
<tr>
<td>Introduction</td>
<td>9</td>
</tr>
<tr>
<td>Infection prevention and control for quality healthcare</td>
<td>10</td>
</tr>
<tr>
<td>Infection and disease transmission</td>
<td>11</td>
</tr>
<tr>
<td>Standard precautions and transmission-based precautions</td>
<td>13</td>
</tr>
<tr>
<td>Infection prevention and control programs</td>
<td>14</td>
</tr>
<tr>
<td>Infection control management plans</td>
<td>18</td>
</tr>
<tr>
<td>Frameworks for infection prevention and control programs and plans across Australia</td>
<td>19</td>
</tr>
<tr>
<td>Infection prevention and control programs in community-based home visiting nursing</td>
<td>19</td>
</tr>
<tr>
<td>Program elements in community-based home visiting nursing</td>
<td>20</td>
</tr>
<tr>
<td>Infection control management plans in community-based home visiting nursing</td>
<td>27</td>
</tr>
<tr>
<td>Significance and limitations of the literature and existing research</td>
<td>27</td>
</tr>
<tr>
<td>Conclusion</td>
<td>29</td>
</tr>
<tr>
<td>CHAPTER 3 - RESEARCH DESIGN AND METHODOLOGY</td>
<td>31</td>
</tr>
<tr>
<td>The conceptual framework for the study</td>
<td>31</td>
</tr>
<tr>
<td>The case study methodology</td>
<td>33</td>
</tr>
<tr>
<td>Types of case studies</td>
<td>34</td>
</tr>
<tr>
<td>Defining the case</td>
<td>36</td>
</tr>
<tr>
<td>Methods</td>
<td>37</td>
</tr>
<tr>
<td>The data-gathering plan</td>
<td>38</td>
</tr>
<tr>
<td>The cases and data: accessing the field</td>
<td>39</td>
</tr>
<tr>
<td>The processes for selecting documents and participants</td>
<td>40</td>
</tr>
<tr>
<td>The recruitment processes</td>
<td>42</td>
</tr>
<tr>
<td>Recruitment of agencies and access to documents</td>
<td>42</td>
</tr>
<tr>
<td>Recruitment of participants for individual interviews</td>
<td>43</td>
</tr>
<tr>
<td>Recruitment of participants for the focus groups</td>
<td>44</td>
</tr>
<tr>
<td>Data Collection Procedures</td>
<td>45</td>
</tr>
<tr>
<td>Document review</td>
<td>45</td>
</tr>
<tr>
<td>Interviews and focus groups</td>
<td>46</td>
</tr>
<tr>
<td><em>Individual interviews</em></td>
<td>46</td>
</tr>
</tbody>
</table>
CHAPTER 4 – THE CASES ............................................................... 59
Introduction .................................................................................. 59
The context ................................................................................... 59
Case Report 1 ............................................................................... 62
Description of the case ................................................................ 62
An overview of infection control in this organisation .................. 62
Element 1: Governance of infection control ............................... 63
Lines of responsibility and accountability .................................... 63
‘Seeking assistance’ — systems for consultation .......................... 66
Mechanisms for monitoring and evaluating infection control outcomes (quality assurance) ......................................................... 67
Reporting and feedback mechanisms for infection control .......... 68
Element 2: Infection control policies and procedures for client care 69
Hand hygiene ............................................................................. 70
Standard precautions .................................................................. 71
Sharps management .................................................................... 71
Waste management ..................................................................... 73
Spill management ........................................................................ 74
Specimen collection and transportation ........................................ 74
Client education ......................................................................... 75
Element 3: Staff development and training in infection control .... 76
Element 4: Staff health and safety ............................................... 82
Personnel health ......................................................................... 82
The management of needlestick injuries, exposure to blood and body fluid and exposure to infectious disease ................... 83
Element 5: Surveillance systems .................................................... 85
Element 6: The environmental context ....................................... 86
Resources (the unavailability of equipment) ............................... 86
Clients’ home environments ......................................................... 90
Clinical guidelines designed for nurses working in community settings ................................................................. 92
The case summary ....................................................................... 93
Case Report II ............................................................................. 95
Description of the case ............................................................... 95
An overview of infection control in this organisation .................. 95
Element 1: Governance of infection control ............................... 96
Infection control requirements ..................................................... 96
The line of accountability and responsibilities ............................ 98
Consultation strategies ............................................................... 98
The monitoring and evaluation of infection control (outcomes) .... 99
The reporting and feedback mechanism ...................................... 100
Element 2: Infection control policies and procedures for client care 102
Hand hygiene ............................................................................ 103
Standard precautions ................................................................. 103
The aseptic technique ................................................................. 104
Sharps management .................................................................. 104
Waste management .................................................................. 106
Spill management .................................................................................................................. 106
Specimen collection and transportation .............................................................................. 107
Client education .................................................................................................................... 108

Element 3: Staff development and education ....................................................................... 108
The orientation program ....................................................................................................... 108
Resources for staff development ......................................................................................... 111

Element 4: Staff health and safety ........................................................................................ 112
Personal health and the immunisation program .................................................................... 112
The management of needlestick injuries and exposure to blood and body fluids .............. 113

Element 5: Surveillance systems .......................................................................................... 114

Element 6: The environmental context ............................................................................... 116
Resources (unavailability of equipment) ............................................................................... 117
Environmental hygiene ....................................................................................................... 121

The case summary ............................................................................................................... 122

Case Report III ..................................................................................................................... 124
Description of the case .......................................................................................................... 124
An overview of infection control in this organisation .............................................................. 124

Element 1: Governance of infection control ....................................................................... 125
The line of accountability and responsibility ........................................................................ 127
Consultation strategies .......................................................................................................... 128
The monitoring and evaluation of infection control ................................................................. 130
The reporting and feedback mechanism ............................................................................... 132

Element 2: Infection control policies and procedures for client care ................................... 133
Hand hygiene ........................................................................................................................ 133
Personal protective equipment (PPE) .................................................................................... 133
The aseptic technique ............................................................................................................ 134
Sharps management .............................................................................................................. 134
Waste management ............................................................................................................. 135
Spills management ............................................................................................................... 135
Staff health ............................................................................................................................ 136
Monitoring and review ......................................................................................................... 136
Specimen collection and transportation .............................................................................. 136
Client education ................................................................................................................... 137

Element 3: Staff development and education ....................................................................... 139
The orientation program ....................................................................................................... 140
The education calendar ........................................................................................................ 142
Safety meetings ..................................................................................................................... 143
External resources ................................................................................................................ 144

Element 4: Staff health and safety ........................................................................................ 145
Immunisation ......................................................................................................................... 145
Exposure and prevention ....................................................................................................... 145
Staff illness and leave ........................................................................................................... 146

Element 5: The surveillance system .................................................................................... 147

Element 6: The environmental context ............................................................................... 149

The case summary ............................................................................................................... 155

Case Report IV ....................................................................................................................... 157
The description of the case .................................................................................................... 157
An overview of infection control in this organisation .............................................................. 157

Element 1: Governance of the infection control program ................................................... 158
The line of accountability and responsibility ....................................................................... 160
The monitoring and evaluation of infection control ............................................................... 162
The reporting and feedback mechanism .............................................................................. 163

Element 2: Infection control policies and procedures for client care ................................... 164
Standard and transmission-based precautions ....................................................................... 164
Staff health and client health ............................................................................................... 166
Environmental cleaning ....................................................................................................... 167
Pets ......................................................................................................................................... 167
Element 3: Staff development and education .................................................. 172
  Formal (mandatory) education ..................................................................... 172
  Informal education ....................................................................................... 173
Element 4: Staff health and safety ................................................................. 174
  Personal health and hygiene ....................................................................... 174
  The health status and precautions .............................................................. 175
  The management of injuries and exposure to blood and body fluids .......... 176
Element 5: The surveillance system ................................................................. 177
Element 6: The environmental context ......................................................... 179
The case summary ......................................................................................... 181
Cross-Case Analysis ..................................................................................... 183
  Element 1: Governance of infection prevention and control .................... 183
  Element 2: Infection control policies for client care .................................. 186
  Element 3: Staff development and education for infection control .......... 189
  Element 4: Staff health .............................................................................. 190
  Element 5: The surveillance system for monitoring infections ............... 190
  Element 6: The environmental context ...................................................... 191
Conclusion .................................................................................................... 192

CHAPTER 5 – RETURNING TO THE CASES ...................................................... 193
  The management of infection control in community-based home visiting nursing .................................................. 193
    The responsibility of infection control ..................................................... 193
    Monitoring staff compliance with infection control practices .................. 195
    Evaluation of infection control ................................................................. 198
  Monitoring infections in the community context: Surveillance .................. 199
    Environmental challenges ..................................................................... 201
      Poor client personal hygiene ................................................................. 201
      Environment hygiene ......................................................................... 203
    Lack of resources (equipment and facilities) ........................................... 208
      Lack of proper or appropriate hand-hygiene facilities ......................... 208
      Lack of wound dressing materials ......................................................... 210
      Sharps disposal ................................................................................... 212
  Infection control policies for community-based home visiting nursing ........ 215
  Suggestions for improvement .................................................................... 217
Conclusion .................................................................................................... 220

CHAPTER 6 - DISCUSSION .............................................................................. 221
  An overview of the chapter ....................................................................... 221
  Paper 1: Governance and management of infection prevention and control programs in community-based home visiting nursing in Australia .................................................. 223
    Abstract .................................................................................................. 223
    Introduction ............................................................................................ 225
    Methodology .......................................................................................... 227
    Findings .................................................................................................. 229
      The structure of infection prevention and control programs .................. 229
      Responsibility of infection prevention and control programs management 229
      Managing infection prevention and control programs ......................... 230
    Discussion .............................................................................................. 239
    Conclusion ............................................................................................. 243
  Paper 2: Infection control policies for client care in community-based home visiting nursing 247
Abstract .................................................................................................................. 247
Introduction ............................................................................................................. 249
Methodology ............................................................................................................ 250
Findings .................................................................................................................... 251
  Hand-hygiene policies ............................................................................................. 252
  Standard and transmission-based precautions policies ........................................... 253
  Aseptic technique policies ..................................................................................... 254
  Sharps policies ....................................................................................................... 254
  Exposure to blood/ body fluid and spill management policies ............................... 255
  Clinical waste ........................................................................................................ 256
  Specimen collection and transportation policies ................................................... 256
  Client education ..................................................................................................... 257
  Policies review and assessment ............................................................................. 258
Discussion ................................................................................................................ 258
Implications .............................................................................................................. 261
Conclusion ................................................................................................................. 262

Paper 3: Infection control education programs for community-based home visiting nursing: An Australian Study ......................................................... 265
Abstract .................................................................................................................... 265
Introduction .............................................................................................................. 267
Methodology ............................................................................................................. 268
Findings .................................................................................................................... 270
  Governance and responsibility of infection control education ........................... 270
  Structure of infection control education ............................................................... 270
  Processes of infection control education ............................................................... 271
  Outcomes management mechanisms .................................................................. 276
Discussion ................................................................................................................ 276
Implications .............................................................................................................. 280
Conclusion ................................................................................................................. 281

Paper 4: Staff health and safety in community-based home visiting nursing ......... 284
Abstract .................................................................................................................... 284
Introduction .............................................................................................................. 286
Methodology ............................................................................................................. 288
Findings .................................................................................................................... 289
  Structure of staff health ....................................................................................... 289
  Processes to manage staff health ....................................................................... 290
Discussion ................................................................................................................ 297
Conclusion ................................................................................................................. 299

Paper 5: Surveillance activities in community-based home visiting nursing .......... 303
Abstract .................................................................................................................... 303
Introduction .............................................................................................................. 305
Methodology ............................................................................................................. 307
Findings .................................................................................................................... 308
  Structure of surveillance system ....................................................................... 308
  Processes of monitoring and reporting HAIs ...................................................... 309
  Mechanism for evaluation of HAIs results ......................................................... 311
  Challenges in HAIs surveillance in community-based home visiting nursing .... 312
Discussion ................................................................................................................ 313
Conclusion ................................................................................................................. 314

Paper 6: Environmental and contextual factors and Infection prevention and control in community-based home visiting nursing in Australia: A case study .......... 318
Abstract .................................................................................................................... 318
Introduction .............................................................................................................. 319
Methodology ............................................................................................................. 320
Findings .................................................................................................................... 322
  The nature and management of the work environment .................................... 322
  Resources availability and management ......................................................... 330
Client’s personal hygiene ................................................................. 334
Discussion ......................................................................................... 335
Implications ....................................................................................... 338
Conclusion ......................................................................................... 339

CHAPTER 7 - CROSS-CASE REFLECTIONS, RECOMMENDATIONS AND
CONCLUSION ..................................................................................... 342

Summary of the significant findings .......................................................... 343
Limitations of the study ........................................................................... 346
Recommendations ................................................................................... 348
  Governance of infection control ......................................................... 348
  Infection control policies and procedures for client care ..................... 349
  Education and staff training ............................................................... 350
  Staff health and safety ...................................................................... 350
  Surveillance system ........................................................................... 350
  Environmental context ....................................................................... 350
Conclusion ............................................................................................ 351

REFERENCES ..................................................................................... 353

APPENDICES .................................................................................... 363

  Appendix 1 – Human Research Ethics Committee (HREC) approval ........ 364
  Appendix 2 – Invitation letter ............................................................ 365
  Appendix 3 – Project information sheet and consent form (AGENCY) .... 366
  Appendix 4 – Ethic approval (Organisation A) ...................................... 371
  Appendix 5 – Ethic approval (Organisation B) ....................................... 372
  Appendix 6 – Ethic approval (Organisation C) ....................................... 373
  Appendix 7 – Ethic approval (Organisation D) ....................................... 374
  Appendix 8 – Poster for promoting the project ..................................... 375
  Appendix 9 – Participant information (Individual interview) and consent form .... 376
  Appendix 10 – Participant information (Focus group) and consent form .... 381
  Appendix 11 – Document checklist and questions guiding data collection and analysis .... 386
  Appendix 12 – Individual interview: Managers and infection control coordinators .... 389
  Appendix 13 – Individual interview: Home visiting nurses .................... 390
  Appendix 14 – Follow-up interview guide with managers ...................... 391
  Appendix 15 – Focus group guide ...................................................... 392
  Appendix 16 – Research Log ................................................................ 393
  Appendix 17 – Interview and focus groups log system ......................... 394
LIST OF TABLES

Table 1 – Infection control elements of the Association for Professionals in Infection Control and Epidemiology [APIC] and the Society for Healthcare Epidemiology of America [SHEA] (Rhinehart & McGoldrick, 2006) ......................................................... 25
Table 2 – Data gathering plan ........................................................................................................... 38
Table 3 – Data gathering and analysis plan .................................................................................... 53
Table 4 - Infection control manual ............................................................................................... 126

LIST OF FIGURES

Figure 1 – Chain of infection (Wilson, 2006) .............................................................................. 12
Figure 2 — Comprehensive infection prevention and control program (Adapted from Bellen, 1996, p.7) ................................................................. 23
Figure 3 – Study conceptual framework; Infection Control in Community-Based Home-Visiting Nursing (based on Donabedian, 2005) ................................................. 32
## ACRONYMS

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>CA-MRSA</td>
<td>Community-Acquired <em>Methicillin Resistant Staphylococcus Aureus</em></td>
</tr>
<tr>
<td>CBHVN</td>
<td>Community-Based Home Visiting Nursing</td>
</tr>
<tr>
<td>EN</td>
<td>Enrolled nurse</td>
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<tr>
<td>HAIs</td>
<td>Healthcare-associated infections</td>
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<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
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<td>HVN</td>
<td>Home-visiting nurse</td>
</tr>
<tr>
<td>ICMP</td>
<td>Infection control management plan</td>
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<td>NHMRC</td>
<td>National Health and Medical Research Council</td>
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<td>PPE</td>
<td>Personal protective equipment</td>
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<tr>
<td>RN</td>
<td>Registered nurse</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organization</td>
</tr>
</tbody>
</table>
KEY DEFINITIONS AND TERMS

Healthcare-associated infections (HAIs) are “infections that patients acquire during the course of receiving treatment for other conditions within a healthcare setting” (Centres for Disease Control and Prevention [CDC], 2010, p.1).

Standard precautions refer to those work practices that are applied to everyone regardless of their perceived or confirmed infectious status to ensure a basic level of infection prevention and control. Implementing standard precautions as a first-line approach to infection prevention and control in the healthcare environment minimises the risk of transmission of infectious agents from person to person, even in high-risk situations (National Health and Medical Research Centre, 2010, p.21).

Transmission-based precautions are applied to patients suspected or confirmed to be infected with agents transmitted by the contact, droplet or airborne routes (National Health and Medical Research Centre, 2010, p.93).

Infection Prevention and Control Program is a health care facility or organization (e.g., hospital, long-term care, continuing complex care, home care) program responsible for meeting the recommended mandate to decrease infections in the patient, health care providers and visitors. The program is coordinated by health care providers with expertise in infection prevention and control and epidemiology (Ontario Agency For Health Protection and Promotion, 2012, p. 5).

Infection control guidelines are recommendations that are developed to establish an accepted approach to infection prevention and control, focusing on core principles and priority areas for action. They provide a basis for healthcare workers and healthcare facilities to develop detailed protocols and processes for infection prevention and control specific to local settings (National Health and Medical Research Centre, 2010).

Infection control management plan (ICMP) is defined as an official and systemic clinical governance process that is designed to enable institutions to meet their infection prevention and control obligations and to ensure the safety and quality of the services provided (Shaban & Kralik, 2011, p. 173).

Community-Based Home Visiting Nursing (CBHVN) is a nursing and healthcare service provided by CBHVN organizations that employ qualified nurses to visit clients in their own environment and provide them with a wide range of nursing and healthcare services as per their needs (Kralik & Van Loon, 2011).

Home Visiting Nurse (HVN) is a qualified nurse who works in the CBHVN profession to deliver care to clients at their homes. This includes registered nurses and enrolled nurses.

Region is a specified area that is part of a country. In this study, “region” refers to Southeast Queensland.

Community-Based Home Visiting Nursing branch is a sub-branch of a larger (usually statewide) CBHVN organisation from which CBHVN services are conducted. Branches included this study are located in suburbs of Southeast Queensland.

A Regional Manager is a qualified person who is responsible for managing all services provided by an organisation in one specific region.
A Quality Manager is a qualified person who is designated to manage the quality assurance processes of all services provided by an organisation.

A Head of CBHVN Services is a qualified person who is designated to manage the CBHVN services in an organisation.

A Branch Manager is a qualified person who is responsible for managing and operating the services provided in one CBHVN branch of a larger CBHVN organisation.

A Senior Nurse is a qualified person who is designated to supervise home-visiting nurses who provide CBHVN services to clients at their homes.
PUBLICATION ARISING FROM THE THESIS

Papers that arise from this thesis are included in Chapter 6 of this thesis.
Completing my PhD degree has probably been the most challenging endeavour of my learning pathway. I owe my enormous debt of gratitude to Allah for his gracious blessings. I am also indebted to King Abdullah bin Abdul-Aziz Al Saud, a benevolent king and father, for funding my scholarship. I earnestly thank the Faculty of Nursing of King Abdul-Aziz University for their commendable support.

The best and worst moments of my doctoral journey have been shared with many people. It would not have been possible to write this doctoral thesis without the help and support of the many kind people around me, some of whom deserve a special mention here.

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