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After hours nurse staffing, work intensity and quality of care – missed care study: New South Wales public and private sectors. Final report to the New South Wales Nurses and Midwives' Association.

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Abbreviations and Acronyms

ABS	Australian Bureau of Statistics
ACFI	Aged Care Funding Instrument
ADL	Activities of Daily Living
AHPRA	Australian Health Practitioner Regulation Agency
AIHW	Australian Institute of Health and Welfare
AiN	Assistants in Nursing
BSL	Blood sugar level
COAG	Council of Australian Governments
EB	Enterprise Bargaining
ED	Emergency Department
EN	Enrolled Nurse
GP	General Practitioner
HACC	Health and Community Care
HWA	Health Workforce Australia
ISOBAR	Identify-situation-observation-background-agreed plan-read back
MPC	Multi-purpose Centres
NEAT	National Emergency Admission Times
NHPPD	Nursing Hours Per Patient Day
NUM	Nurse Unit Manager
NSW	New South Wales
NSWNMA	New South Wales Nurses and Midwives Association
PRN	Pro re nata - When necessary
RN	Registered Nurse
RWC	Reasonable Workload Committee
SBREC	Social and Behavioural Research Ethics Committee

Executive Summary

In November-February 2014-2015, the Kalisch MISSCARE survey was administered to 4431 nurses and midwives using the NSW Nurses and Midwives' Association (NSWNMA) database. There are currently 59,212 financial members of the union. The survey was sent to 41,141 members and approximately 10 percent responded.

Missed Care

The MISSCARE survey was developed by Beatrice Kalisch who defines missed care as "required patient care that is omitted (either in part or in whole) or delayed" and is a response, she claims, to "multiple demands and inadequate resources". The MISSCARE survey has three components: demographic and workplace data; missed nursing care, which consists of a list of nursing tasks which had been identified; and reasons for missed care.

Core nursing tasks routinely omitted in Kalisch' studies are discharge planning and patient education, emotional support, hygiene and mouth care, documentation of fluid intake and output, ambulation, feeding and general nursing surveillance of the patient.

Nurses and midwives consistently attributed instances of missed care to inadequate staffing levels, unexpected heavy workloads, too few resources, lack of supplies, shift rosters with an inappropriate mix of nursing skills, inadequate handovers, orientation to the ward and poor teamwork.

Previous studies in South Australia and New Zealand

The MISSCARE survey was administered in Australia and New Zealand in 2012 and 2013. In Australia it was first administered under the auspices of the ANMF in South Australia in November-December 2012 to 354 South Australian nurses and midwives. In New Zealand, 191 nurses completed it in 2013. Both studies extended Kalisch's work to after-hour shifts.

The South Australian study found that nurses and midwives were most likely to report five key areas where care was missed: patient ambulation, mouth care, responding to patient's bells within five minutes, two hourly turns and monitoring patients' fluid input and output. Path analysis associated missed care with lack of resources, communication with other health providers, work intensity and unpredictable nursing workloads. The afternoon shift was identified as the one where care was most likely to be missed.

Similar results were obtained in New Zealand with 191 nurses and midwives. The tasks most likely to be reported as missed were ambulation, rounds, mouth care, fluid monitoring and patient washes. Missed care was associated with increases in acute care patients, urgent clinical situations, inadequate numbers of staff, unexpected rises in patient volume and heavy admission, discharge and transfer rates.

Both the NZ and Australian studies found some instances of rounding that limited missed care. Literature on rounding suggests that it can be used to prevent basic nursing care being omitted but critics of rounding suggest however, that it leads to routinisation of nursing care. While it is viewed by nurses and midwives as improving nursing assessment, it is seen as

inhibiting professional autonomy. As a consequence, the NSW study asked specific questions on rounding.

The NSW Context

Currently there are 225 public hospitals divided by peer group in NSW and 191 private hospitals divided into 18 categories according to specialization. There are 98,754 registered nurses and enrolled nurses and midwives in NSW, although just under 2000 are not practicing. This is 30 percent of the total number of Australian nurses/midwives and 27 percent of the enrolled nurse workforce. The ratio of nurses and midwives to the general population is low in NSW in comparison with other states at 928 per 100,000 people. Union membership is approximately 41 percent; this is higher in the public sector than in the private or aged care sectors.

There was an overall increase in patient admissions in the public hospital sector between 2013 and 2014 suggesting an increase in workloads for nurses and midwives, although the increase in employed nurses and midwives may mitigate this impact. The increase in nurses and midwives employed in the public sector was approximately 500.

Under the Enterprise Bargaining Agreements public hospitals must establish a Workload Committee made up of employees and employers to keep a close watch on nurses and midwives rostered each shift. The Nursing Hours Per Patient Day methodology is employed in NSW public hospitals along with other rostering tools associated with speciality areas.

Reports from the NSW Bureau of Health, Acute Admitted Patient Satisfaction Survey for public hospitals in 2013 shows a high level of attention to care by nurses. Items that are reflected in the Kalisch MISSCARE survey such as hand hygiene, medication, understanding discharge medication, access to call bells and teamwork between nurses and doctors show high levels of patient satisfaction. Issues requiring particularly diligent and responsive nursing care such as patient falls, pain management and hospital-acquired infections were also low. Some patients expressed dissatisfaction with the assistance they received at meal times along with their lack of involvement in discharge plans.

Results of the MISSCARE survey in NSW

The survey was sent to members working in public and private hospitals, inpatients, and aged care facilities. Members working in specific community facilities were not included.
However, some responses were included from community nurses who were attached to hospitals. in inpatient branches. The categories of nurses selected to do the survey comprised:

Public Hospitals: 30,458
Private Hospitals: 4,063
Aged Care Facilities: 6,620
Total 41141

The quantitative responses

- The majority of nurses and midwives who took part in the survey believed missed nursing care occurred occasionally, although statistically more staff believed missed care occurred frequently rather than not at all;
- Statistical variations in the frequency of missed nursing care were seen in the nature of the nursing care provided and with different shifts ;
- The most frequently missed type of nursing care was that designated as immediate or treatment priority, followed by high priority care. The least missed was low priority nursing care across all three shifts;
- The age and years of experience of the nurse/midwife was shown to have a significant influence on the frequency of missed nursing care during night duty;
- The gender of nurses or midwives was not a significant factor in either the frequency of missed nursing care or the reasons for it;
- The staffs' employment setting (rural or metropolitan) and employer type (public or private) are both predictor variables for the frequency of missed higher priority and treatment related nursing care, during day and afternoon shifts;
- Nurses working in aged care cited inadequate staffing levels as the main reason nursing care was missed, followed by changes in patient acuity;
- The employment (full or part-time) status of NSW nurses and midwives was a significant predictor of missed nursing care during day and afternoon shifts but not for night shifts;
- The level of nurses' and midwives' qualifications was a significant predictor of the frequency of missed nursing care during afternoon shifts;
- The country from which midwives and nurses obtained their qualifications was a significant factor in the frequency of missed nursing care across all shifts;
- The use of rounding is a significant predictor for missed nursing care on all shifts;
- Statistically significant inverse relationships were found between the frequency of missed care on all shifts for high priority and treatment related care compared with nurses' and midwives' assessment of the care they delivered. Their views were based on providing non-interrupted nursing care, delivering care in a manner that was consistent with their own expectations and providing care in the absence of any overarching guidelines or policies;
- The perception by nurses and midwives of adequate staffing levels was a predictor of the frequency of missed care, particularly during night and afternoon shifts;
- The health status of staff had a significant link to the frequency of missed nursing care during day shifts but not night shifts;
- The level of job satisfaction had a direct influence on the frequency of missed nursing care during night shifts;
- The level of team satisfaction was a significant factor in predicting the frequency of missed nursing care during all shifts;
- Preferred work schedules were a significant predictor of the frequency of treatment related and low priority missed nursing care on all shifts;
- Job satisfaction was a significant predictor for the frequency of missed nursing care on afternoon shifts and night duty;

- Job retention and staff movements were shown to be associated with all aspects of missed nursing care on all shifts;
- Lack of resources was the primary reason given by NSW nurses and midwives as to why nursing care was missed. They added that this factor was exacerbated by unpredictable workloads;
- Another significant reason given for missed nursing care was poor communications between nurses and midwives and other health care providers. The resulting tension was aggravated by nurses' and midwives' age, the predictability or otherwise of their workloads and their own assessment of their ability to deliver sound nursing care;
- A third significant factor in missed nursing care was the intensity of nurses' and midwives' workloads. This was further influenced by the type of worksite, the employment status of nurses/midwives and their work rosters.

The qualitative responses

Participants were also asked to complete a series of open ended questions about their perceptions of missed care and rounding. Their responses suggested that work intensification and staffing issues contributed to missed care. Nurses across all sectors associated the care required by older patients with complex care needs and multiple co-morbidities with increases in the volume and complexity of their workloads. Funding restrictions and the need to contain costs, notably for community services, has led to greater task orientation in nursing care.

Nurses and midwives pointed to understaffing as a major problem with their workloads. They asserted that the Nursing Hours per Patient Day (NHPPD) formula did not account for patient acuity and in fact it created difficulties when arguing for additional staff when work intensified. Likewise, Birthrate Plus, the tool used to ascertain the staff required for midwifery services in public hospitals in NSW, was seen as inherently flawed, as it does not factor care of the babies into the workload calculations or allow for changes in workloads arising from the number and types of births. Respondents also identified breaches of staffing ratios.

Missed nursing care was also attributed to too few senior staff on duty, registered nurses being replaced by nurse assistants and changing workloads across shifts. The rate at which patients are admitted and discharged was a significant contributor to fluctuations in workloads. This last issue has been exacerbated by NEAT requirements that patients not be held in emergency departments for more than four hours, which has led to pressure to free beds so that other patients can be admitted.

A final staffing issue concerns the lack of access to allied health and medical staff after-hours, which results in nurses spending considerable time chasing and waiting for medical staff. Other factors identified as leading to missed care are lack of managerial support, poor access to equipment and supplies, poor communication and handover practices, and staff attitudes. The tasks identified as being missed are basic nursing care and personal patient

care. Missed care is seen as leading to poor patient outcomes, patient dissatisfaction and contributing to unpaid overtime and staff attrition.

Responses to questions on rounding were mixed and suggest that the concept was poorly understood. Many respondents identified it as a poorly implemented and poorly documented additional task that detracted from time spent on patient care. Proponents of rounding however, believed it lead to increased patient satisfaction, enabled patient assessment, delivered basic care and improved patient safety.

Chapter One: Background to the Study

During November-January 2014-2015, a project team from Flinders University, in collaboration with the NSW Nurses and Midwives' Association (NSWNMA), administered the MISSCARE survey to branch members. Approximately 4431 nurses and midwives responded. The survey contained 10 demographic questions, 22 questions that explored working conditions, 20 questions concerning missed care (care that is omitted, postponed, or not completed) and 19 questions concerning perceived reasons care was omitted in the settings where the nurses/midwives practiced. There were also a series of questions on their experiences of missed care that sought to understand how nurses and midwives exercised autonomy of practice. In addition, participants were asked nine questions on rounding. Respondents were also asked to add comments of their own concerning missed nursing and midwifery care and why it occurred (Appendix A for survey). This report provides a summary of the results from the survey. It includes both quantitative and qualitative data.

Prior to presenting the survey findings a brief literature review provides an overview of the Missed Care literature with specific focus on the work of Beatrice Kalisch, some key findings from the emerging literature on Rounding, and a description of nursing and midwifery in the public and private sectors. In Chapter 2 we have attempted to retrieve data that might corroborate the survey findings, or throw further light on what nurses and midwives have reported in the survey. The survey findings are presented in Chapters 3, 4 and 5. The qualitative findings in Chapter 4, were drawn from over 900 responses by survey participants.

Missed care: a review of the literature

The MISSCARE survey was originally developed by Beatrice Kalisch who has done considerable work on missed nursing care in the US drawing upon scholarship which explores the impact of work environment, patient care demands and staffing issues on nursing outcomes (Kalisch, Lanstrom & Hinshaw 2009). She defines missed care as "required patient care that is omitted (either in part or in whole) or delayed" and acknowledges that it is a response to "multiple demands and inadequate resources" (Kalisch & Williams 2009: 1510). Her first foray into this area was the 2006 qualitative study on missed nursing care which became the foundation for the MISSCARE tool. In this first study, Kalisch (2006) identified a range of core nursing tasks that were routinely omitted. These included discharge planning and patient education, emotional support, hygiene and mouth care, documentation of fluid intake and output, ambulation, feeding and general nursing surveillance of patients to ensure their condition did not deteriorate. The nurses in her study identified staffing levels, unexpected heavy work increase, too few resources and lack of supplies, rostered shifts with an inappropriate mix of nursing skills, poor handover, inadequate orientation to the ward and lack of team work, as key factors in explaining missed care.

In later work, missed care is associated with three antecedents: 1) the labour resources available to provide patient care; 2) access to the material resources needed to provide patient care and 3) relationship and communication factors that impact on the capacity to deliver care (Kalisch et al., 2009; Kalisch & Williams 2009). This understanding underpins the

MISSCARE survey that was originally developed by Kalisch and Williams (2009) to measure the amount and type of care missed by nurses in acute settings and the reasons that care was omitted. The MISSCARE survey had three components: demographic and workplace data; nursing tasks identified in the 2006 study as being omitted (Kalisch 2006), and the reasons why this occurred.

Kalisch's subsequent work explored the impact of different work environments on omitted care. In 2009, she examined the impact of teamwork on missed nursing care, and argued that it was not simply due to the number of nurses rostered, but the skill mix of nursing staff that impacted on perceptions of whether care was missed. This study found that the different roles undertaken by staff were reflected in their perceptions of missed care, in that RNs were more likely than nurse assistants to report missed care and to associate it with an unexpected rise in patient volume or acuity, increased admissions and discharges, and access to material resources. The nature of teamwork was also the focus of a study by Kalisch and Kyung (2010). In this study they found that 11 percent of missed nursing care was associated with the poor teamwork. A more recent qualitative study compared differences in work environments between units with high and low levels of missed care. This study found that units with low levels of missed care had adequate and flexible staffing, continuous communication between staff, a strong team focus, shared accountability for monitoring and assessing work, sufficient backup, low RN turnover and smaller areas to monitor. Leadership was also found to be important and reduced patient loads allowed charge nurses to have more time for leadership (Kalisch, Gosselin & Choi 2012).

The MISSCARE survey was administered in Australia and New Zealand in 2012 and 2013. In Australia it was administered under the auspices of the Australian Nursing and Midwifery Federation (ANMFSA) in South Australia in November-December 2012-13 to 354 South Australian nurses (Blackman, Henderson, Willis et al., 2015; Verrall, Abery, Harvey et al., 2014). This study sought to extend Kalisch's work in exploring the incidence of missed care on after-hours shifts (defined as between 5.00pm and 9.00am and weekends) — when other allied health and medical resources are limited or not available. The study found the five tasks that nurses were most likely to report as missed were patient ambulation, mouth care, responding to patient bells within five minutes, two hourly turns, and monitoring fluid input and output (Willis, Hamilton, Henderson et al., 2013). Path analysis associated missed care with lack of resources, problems communicating with other health providers, work intensity, unpredictable nursing workloads, and shift times — missed care was more likely to be reported on afternoon shifts. Nurses in rural settings who were dissatisfied with, or intending to leave nursing, were more likely to report care as being missed (Blackman et al., 2015). Responses to the open-ended questions identified that competing demands contributed to care being omitted along with ineffective methods of determining staffing levels and skill mix (Verrall et al., 2014). Similar results were obtained in New Zealand with 191 nurses. The tasks most likely to be reported as missed were ambulation, rounds, mouth care, fluid monitoring and patient washes. Missed care was associated with increased acuity of patient workload, urgent clinical situations, inadequate numbers of staff, unexpected rises in patient

volume and heavy rates of admissions, discharges and transfers (Harvey, Roberts, Buckley et al., 2013).

Impact of missed care

Ample research has been done on the relationship between staffing levels, variations in staff skills and patient outcomes such as mortality rates, and patient complications that are amenable to nursing care (nursing sensitive outcomes) (Aitken, Clarke, Sloane, et al., 2002; Aiken Cimiotti , Sloane et al., 2011; Alameddine, Baumann, Laporte et al., 2012; Duffield, Diers, O'Brien-Pallas et al., 2011; Needleman, Buerhaus, Mattke et al., 2002). Underpinning much of this research is the assumption that patient outcomes will be adversely affected by structural factors such as lower levels of staffing, particularly lower levels of RN staffing, which is generally measured by hours of care provided by RNs per day (Burston, Chaboyer & Gillespie 2013). Needleman et al., (2002) for example, undertook exploratory research that drew on existing administrative data involving 11 States in the United States to determine the relationship between reduced staffing levels and care outcomes. This was ascertained by measuring the incidence of in-hospital mortality rates and nurse sensitive outcomes including urinary tract infections, pneumonia, shock, upper gastrointestinal bleeds and failure to rescue. They found that increased hours of care per day by RNs was associated with a reduction in complications and length of stay but not in mortality rates. Similarly, Mark et al., (2004) found little association between nursing sensitive outcomes such as decubitus ulcers, pneumonia and urinary tract infections and RN staffing levels. However, an association was found between RN staffing levels and mortality rates**.** More recently Cho, Sloane, Kim et al., (2015) found that patient mortality rates were linked to overall staffing levels, nurses' levels of education and the quality of the work environment as measured by Practice Environment Scale of the Nursing Work Index. This tallies with work undertaken by other researchers (Sovie et al., 2001; Kovner et al., 2002) which considered the total hours of nursing care as well as the hours of care provided by RNs. They concluded that both factors are significant in determining patient outcomes.

Less is known about the relationship between missed care and patient outcomes, although poor patient outcomes are, presumably less likely to occur when nursing care is delivered. In a study of nurses in five countries, Aiken, Clarke Sloane et al., (2001), found that nurses reported poor staffing, along with omitted care and self-reported errors in the administration of medications, infections and patient falls resulting in injuries. This study did not however, establish any relationship between the variables. Schubert, Glass, Clarke et al., (2008) reported on a multi-hospital, international project which studied the association between rationing of nursing care and six patient outcomes: patient satisfaction**,** medication errors**,** patient falls, nosocomial infections, critical incidents and pressure ulcers. They found that rationed or omitted care was a significant predictor of negative patient outcomes. In their systematic literature review of rationing care, Papastavrou et al., (2013) established that the dominant rationale for missed care in the early part of the 21st century was attributable to insufficient resources for nurses to adequately care for patients**.** Moreover, this phenomenon had become global. Rationing has a detrimental impact on patient outcomes and is a major challenge to quality assurance, risk management and nurse satisfaction. Papastavrou et al.,

(2013) situate Kalisch's studies among those that directly explore rationing and its impact on patient care and safety. Other approaches view missed care from either an ethical standpoint, or identify rationing as part of an organisational approach to nursing that can lead to dissatisfaction or burnout (Papastavrou et al., 2013)

Rounding

Rounding was introduced to ensure nurses deliver full, appropriate and timely care to patients but it is used increasingly to prevent care being missed. It is presented as a strategy in which patients are central to the ward routine (Dix 2012) and involves nurses carrying out regular and standardised checks on all patients at set intervals to assess and manage their fundamental care needs. The purported benefits of rounding are "an opportunity [for nurses] to involve patients in their care, and [to] show care and concern for patient well-being and healing" (Tea, Ellison & Feghali 2008, 327-328). It ensures nurses are in touch with patients at regular intervals and is viewed as a means of reducing the use of call bells and patient falls (Helm, 2009; Studer Group 2007; Krepper et al., 2012) and reducing demands on nursing time (Snelling 2013).

Rounding has been associated with greater patient satisfaction (Mitchell, Lavenberg, Trotta et al., 2014; Woodard 2009; Bougault, King, Hart et al., 2008) and reduced patient use of call bells and approaches to nursing stations (Meade, Kennedy, Kaplan 2010). There is less evidence that it improves patient safety and outcomes. Bougault et al., (2008) found that rounding was associated with a reduction in falls, a finding that was replicated by Meade et al., (2010). Tucker, Bieber, Attlesey-pries et al., (2012) found that the incidence of falls decreased marginally during a trial period in which rounding frequency was monitored, however, the number of falls returned to previous levels a year after the trial. Likewise, Woodard (2009) argues that improvement in patient safety only occurs when an experienced RN has undertaken rounding.

Currently, there is scant literature on nurses' perceptions of rounding and that which is available reveals nurses' concerns with the amount of documentation required. Neville, Lake LeMunyon et al., (2012) found that while nurses believed mandatory rounding improved nursing assessment, they regarded it as inhibiting professional autonomy, created additional documentation and was difficult to accommodate within existing work demands. Walker, Duff and Fitzgerald (2014) identified that nurses' resistance to rounding is driven by a belief that it was already in operation and that documentation would require additional work. Orthopaedic ward nurses made similar claims in a study by Tucker et al., (2012). In that study nurses reported that rounding created an additional documentation load. Additionally, there were concerns that regular prompting of toileting was inappropriate for surgical patients who are otherwise healthy (Tucker et al., 2012).

Chapter Two: Study Methods and Context

The survey approach

Data were collected through the administration of the MISSCARE survey. Permission to administer the survey was successfully sought from Beatrice Kalisch. The team modified the demographic section of the survey to better fit with the terminology used, and the work environments in New South Wales. The questions identified what peer hospital nurses and midwives worked in, as well as six questions on rounding. These were done in response to union consultation. In the previous survey in South Australia, we added questions that identified missed care across the three shifts, and these were maintained for the NSW study. The Social and Behavioural Research Ethics Committee (SBREC) at Flinders University conducted an ethics review with final approval received on October 29, 2014 (See Appendix B Information letter).

The survey was administered online via *Survey Monkey*. Recruitment occurred through the New South Wales Nurses and Midwives' Association (NSWNMA). The NSWNMA sent electronic invitations in November 2014 to members working in the inpatient sections of public hospitals, private hospitals and aged care facilities. Other branches, such as specific community facilities were not surveyed, however, some responses were gathered from members who worked as community nurses. Members were assured that the data would remain confidential and would not be communicated to anyone beyond the research team at Flinders University. Members were encouraged to participate as the research would assist to identify missed care. The survey was available online for members through to the end of February 2015 as the Christmas period is a disruptive time. A total of 4431 nurses and midwives completed the survey. This was approximately 10 percent of the total membership, although not all members got access to the survey.

Analysis of the data was done in two parts. The quantitative data was performed using *SPSS Version 20* and this is presented in Chapter Three. There were 900 written responses to survey questions. These were analysed using NVivo and are thematically presented in Chapter Four. The final section, Chapter Five, brings together both the quantitative and qualitative analysis with the literature on missed care.

Developing a hierarchy of missed care

Over the last few years we have conducted the MISSCARE survey at three different sites. Reflecting on the trends, we have hypothesised that there is a hierarchy of care tasks and that this influences how nurses and midwives rationalise decisions about what tasks might be missed, prioritised or allocated to another shift. As a consequence, we have classified the survey items into three major groups, based on the acuity of the patient's illness, which in turn determines the priority for when nursing care is to be optimally delivered (Alfaro-Lefevre 2008). This classification is based on high priority patient problems (such as vital signs), second level or treatment related problems (e.g. minimising infection) and level three priority nursing care (low priority nursing care) such as lack of patient knowledge and documentation requirements. In the analysis presented in Chapter 3 we take up these three

classifications and examine when and if they are missed. The hierarchy is outlined below in Table 2.1.

Table 2.1: Hierarchy of missed care items after Alfaro-Lefevre (2008)

Lower Priority	Intermediate priority	High priority
46. Input/output	40. Ambulation	45. Vital signs
47. Documentation	41. Feeding	52. Hand washing
48. Patient education	42. Turning	54. BSL
49. Affect support	43. Sit up	55. Assess
53. Discharge planning	44. Med administration	56. IV lines
	50. Hygiene	57. Call bell
	51. Mouth wash	
	58. PRN med	
	59. Effect of medication	
	60. toileting	
	61. Wound care	

The study context: Health care and nursing and midwifery in NSW public and private sectors

This study applies the tool developed by Kalisch and Williams (2009) to survey nursing and midwifery staff working in hospitals and community settings in New South Wales. New South Wales has the largest population of all Australian states with 7.1 million people (ABS 2014a). Ideally, the MISSCARE results should be measured against nurse sensitive outcomes within the jurisdiction for the same time, in order to judge the impact of missed or rationed care on patient outcomes. However, it was not possible to access this data although we have commented on some of this research in the literature review and, as indicated above, we have noted missed care according to priority set out by Alfaro-Lefevre (2008).

In order to gain some insight into the results presented below on missed care we have examined two sets of data. The first is the number of nurses and midwives employed in NSW hospitals over a determined period in 2012-2013-2014 compared with increases in care, along with some commentary on how staffing is organised in public hospitals in NSW. The second set of data provide the results of patient views on nursing and midwifery care in public hospitals. The first measure provides a crude estimate of work intensification, although there would be a myriad of variables not recorded that might impact on any such claim. The results from the acute public hospital patient satisfaction survey provide the reader with further insights into the work involved in nursing. This survey reports on what patients experience or think about nursing care in the public sector of the NSW health care system. We present it here as a data set for comparison with the qualitative comments contained in this report. In the final section of this chapter we outline some of the approaches taken to staffing by nurses in NSW in line with the Enterprise Bargaining Agreements.

Number of Nurses and midwives in NSW: Crude estimates of work intensification

Hospitals in NSW are either public or privately funded. Public hospitals are divided into 15 categories or peer groups for statistical reporting (See Table 2.2). There are 225 public hospitals in New South Wales, and seven psychiatric hospitals (AIHW 2014).

Table2. 2: Public Sector Peer Group Hospitals

	Principal referral and specialist women's and children's hospital (A1) Large major city acute care hospital (B1) Large regional/remote acute care hospital (B2) Medium acute care hospital in a major city (C1/C2) Medium acute care hospital in a regional area (C1/C2) Small regional acute care hospital (small country towns) (D1) Small remote hospitals but not multi purpose services (D3) Small non-acute hospital Multipurpose service (E2)n Hospices (E3)n Rehabilitation (E4)n Other non-acute (e.g. geriatric treatment centres combining rehabilitation and palliative care with a small number of acute patients) (E9) Psychiatric (F) Other hospitals/services (e.g. prison medical services, dental hospital) (G) Residential aged care facility

There are also 192 private hospitals, and these are comprised of 92 overnight stay and 100 day care hospitals. Private hospitals are categorised into 18 classes according to the extent of their licence (NSW Government 2015). Fifteen of these hospitals are co-located with a public hospital, although only three have emergency departments (AIHW 2014).

There are 98,754 registered nurses, midwives and enrolled nurses in NSW (AHPRA 2013); just under 2000 were not practicing. This number increases to 102,000 with student nurses. This is 30 percent of the total number of Australian nurses and midwives and 27 percent of the enrolled nurse workforce. The majority of nurses and midwives are female (96,789 — 88.24 percent) while males account for 11.76 percent. New South Wales has 261 nurse practitioners, and 28 midwife practitioners. As a result of migration from the UK, approximately 20 disability, 203 mental health, and 100 paediatric nurses have a sole qualification in these specialities that restrict their practice. The majority of nurses and midwives in NSW are aged between 50 to 59 years (AHPRA 2014). Union density for nurses and midwives in NSW is high at around 60 percent. At the time of the survey union membership was just under60,000.. New South Wales has one of the lowest ratios of nurses per 100,000 population: approximately 928:100,000 (compared with South Australia's 960:100,000). This discrepancy increases when the numbers of employed enrolled nurses are taken into account (NSW 150 per 100,000 and SA 400 per 100,000) (HWA 2011).

Increases in staffing across the NSW public sector are difficult to gauge. The 2013 Annual report for the Bureau of Health records an increase of 4600 positions in nurses and midwives since March 2011 (Bureau of Health NSW 2014). The annual report states there were 1800 new graduate positions however, nurse turnover is eight percent. Staff attrition follows a U curve with nurses in the age cohort 30 to 50 being more likely to leave the profession than those aged over 50 (HWA 2014). Overall nursing numbers increased from 43,492 to 44,046 between 2013 and 2014, with similar increases in medical and allied health staff. The majority of staff (73 percent) employed in the NSW public healthcare sector are engaged in clinical activities compared with those involved in non-clinical roles. The number of para-professionals decreased from 3152 to 3114. Sick leave for 2014 ran at around 6 percent, only a minor increase on 2010-2011 rates (Bureau of Health NSW 2014). We were unable to gain figures for the private sector.

Increases in work volume in NSW public hospitals: Measuring increased productivity

The quarterly hospital performance results for the period the survey was live are not yet publically available through the NSW Bureau of Health. As a consequence, we have used the figures from the previous quarter, July to September 2014. These are outlined in Table 3 below) and they have been compared with the same quarter in 2013. They show a steady increase in patient admissions of two percent overall. These figures can be further broken down into acute and non-acute, overnight and same day care. There is an overall trend toward increased patient load between 2013 and 2014 in the same period. This may well have been accommodated through an increase in the number of nurses and midwives employed in the system, the employment of other grades of health professionals, or various re-designs of care.

Table 2.3: Increase in patient episodes of care July-Sept quarter between 2013 and 2014

Item	Jul-Sept 2014	Jul-Sept 2013
All admitted patients	468,600	+10,704 (2%)
Acute – overnight	244,728	+3200 (1%)
Acute – same day	2014835	+6.734 (3%)
Non-acute overnight	15,222	+397 (3%)
Non-acute same day	3,815	+373 (11%)

(Bureau of Health NSW 2014)

Added to the overall increase in patient load, NSW Health continues to improve its performance in meeting the targets for elective surgery waiting times. During the time the survey was conducted, 97 percent of patients in the three urgent categories were admitted within the prescribed timeframe. There was also a 1.3 percent increase in surgical cases performed (Bureau of Health NSW 2014). Overall there was a 2.9 percent increase in emergency presentations in the 2012-2013 period, with an 8.9 percent increase in hospital admissions compared to 2012-2013. National Emergency Admissions Targets (NEAT) were achieved in 71 percent of cases in 2013 increasing to 75.9 percent in 2014, an increase of 9 percent over the previous year (Bureau of Health NSW 2014: 26).

The figures presented do not provide a conclusive answer to work intensification. There is an increase in patient load, a marked improvement in meeting national targets for emergency and elective admissions, but at the same time the number of nurses and midwives employed in the public acute hospital sector increased too. Some understanding of the ratio of nurses and midwives to patients would be required to make a judgement.

Nursing staff levels across the sector: can a ratio be determined?

Determining nurse staffing levels in NSW hospitals is a complex affair based on Enterprise Bargaining arrangements, the status of the hospital and nurse specialisation. For example, peer group hospitals A, B and C use the Nursing Hours Per Patient Day (NHPPD) formula, but nurses working in theatre might use the Australian College of Operating Room Nurses (ACORN 2015) standards, while midwives might apply a modified version of Birthrate Plus. Calculating the number of nurses per shift also needs to take into account skill mix, patient acuity and the location of the health unit (NSWNMA 2014). The major tool for calculating the number of nurses rostered in any one shift is the NHPPPD. While the NHPPD does not indicate nurse-patient ratios, ratios can be calculated from the formula. For example a NHPPD of 6.0 in an acute hospital ward with around 27 patients can provide sufficient nursing hours across the 24 hours equivalent to 1:4/1:4/1:7 nurse to patient ratio (NSWNMA 2014). It is also possible to determine the ratios in speciality areas where other measures are employed. Wise et al., (2015) examined staffing in a number of Accident and Emergency Departments in public hospitals in NSW as part of the union's campaign for ratio staffing. The system used in emergency departments in NSW is divided into six levels based on the level of trauma and emergencies managed at the site; it also takes into account the triage categories of urgency (1-5) set by the Australian College of Emergency Physicians. They used the number of beds, treatment spaces and patients as the units to be counted, along with the number of nurses rostered. They found ratios of three staff to eight patients in level 6 emergency departments, but in some cases the ratio rose to one nurse to seven patients in rural hospitals.

Ensuring that adequate numbers of nurses and midwives are rostered on a ward or unit is usually managed by the Nurse Unit Manager (NUM). Hospitals and health units employing nurses and midwives are required to have a local Reasonable Workload Committee (RWC) which consists of equal numbers of employees and employers (NSWNMA 2014). Nurses and midwives may request a spot check of the staffing at any time and where deficits are noted, this must be rectified immediately (NSWNMA 2014). What has probably not been factored into nurses' and midwives' workloads is the increase in administrative duties linked to quality assurance. Garling (2008) reports that nurses and midwives complained to him that they often had to fill in six-page forms such as falls risk or workplace assessments that were not factored into their workload. Another factor that needs to be taken into account in this report is the work of nursing assistants (AiNs). Unlike other states, NSW employs nursing assistants who have completed a TAFE Certificate, level 3 course. AiNs undertake much of the basic nursing care, such as washing and mouth care. It is unclear what tasks AiNs perform that were included in the Kalisch survey, but it is likely to vary across sites.

Triangulating Patients' Views of Nurses' care: the Adult Admitted Patient Survey 2013

The second set of data that provide a benchmark for evaluating the results of the missed care survey come from the 2013 Adult Admitted Patient survey (Bureau of Health NSW, 2014). This survey, conducted by the NSW Bureau of Health, is limited to public hospitals. The survey is posted to 6000 public patients each month with the results collated for the year. At the time of writing, the 2013 survey was available along with a range of questions and responses that used a five point Likert scale (Bureau of Health NSW, 2014).

Thirty five thousand patients completed the survey in 2013; 64 percent rated their care as very good, and 77 percent indicated they would speak highly of their hospital experience. We examined those activities and attitudes from the NSW Bureau of Health study that captured nurses' work and most emulated missed care tasks or reasons for missed care in order to provide some comparisons with our own study. The study divided questions into ten broad categories: overall experience, access, physical environment, communication and respect, engagement and participation, comprehensive and patient-centred care, assistance, safety and hygiene, trust and confidence (Bureau of Health NSW, 2014). Specific questions that it was hoped would illuminate the findings from the MISSCARE survey focussed on team communication, discharge planning, person centred care, patient safety, hygiene and medication management.

According to the survey data, the majority of patient respondents (42 percent) were aged between 55 to 74, 53 percent were women and 46 percent were men. Significantly, the majority (45 percent) had less than twelve years education; 11 percent speak a language other than English at home and less than two percent were of Aboriginal or Torres Strait Islander origin. The spread across the Quintiles of Disadvantage is reasonably predictable ranging from the most disadvantaged at 23 percent through to 25 percent-24 percent-16 percent and 13 percent for the least disadvantaged (Bureau of Health NSW, 2013)

When examining nursing care incidents it was found that only two percent of patients had a fall while in hospital, and three percent of these patients were aged in the 75+ age group. Only one percent of patients had a pressure wound during their hospital stay, and the majority of these were in the 75+ aged cohort. Ninety-one percent of patients were of the view that on discharge (Kalisch item) the information they were given on medications was just right. Less than one percent of patients rated their nursing care as very poor, three percent as poor, and 96 percent rated it as very good to good. Ninety-six percent of patients stated that nurses were available when they needed to talk to them; 89 percent indicated that the nurse always checked their identity when treating them. Sixty-five percent of patients reported that they observed nurses always washing their hands (Kalisch item), using gel or wearing gloves before touching them, while a further 18 percent said this occurred nearly always; only five percent reported that these measures never happened and 12 percent did not know. The majority (82 percent) of patients stated they were confident in the nurse treating them, and a further 17 percent indicated they felt this way sometimes. Up to 83 percent of patients reported that their call bell was in easy reach (Rounding item), 11 percent stated it was not always within reach, and six percent said that it was never so. The most dissatisfied group

were those aged between 17 to 34 years of age (Bureau of Health NSW, 2013). These results illustrate that considerable attention is given to patient care.

Results for tasks shared between nurses and other health professionals also rated highly, but not as highly as tasks carried out exclusively by nurses. For example, six percent of patients acquired an infection during their hospital stay. Seven percent of these occurred in patients aged between 17 to 54 years of age while six percent were reported in those aged 55 and above. These occurrences would not be due solely to nurses' hand hygiene, but also to that practiced by doctors and allied health professionals. Public hospitals in NSW perform well within the rates for hand washing compliance set by the Council of Australian Governments (COAG) of 2.0 per 10,000 bed days (Bureau of Health 2015). Twenty-two percent of patients reported that their pain was not consistently well managed, or not managed at all (three percent) during their hospital stay with the younger cohort 17-34 reporting the highest level of dissatisfaction. Patients' observations of teamwork between doctors, nurses and midwives (Kalisch item) indicated that 89 percent regarded it as very good or good; fewer than nine percent believed it was poor to very poor (Bureau of Health NSW, 2013). Over 56 percent of patients reported not getting sufficient help either sometimes or always with managing their food. Those aged 35-54 were the least satisfied with 26 percent reporting this occurred sometimes and 29 percent that this was always an issue (Kalisch item). In most states patient feeding is no longer categorised as a nursing task however, it is not clear who is responsible for it.

Items in the survey that indicated a reasonable level of patient dissatisfaction were linked to workloads and the availability of staff to meet patients' needs. For example, only 42 percent of patients stated they were always able to access staff for assistance, with 44 percent stating this happened sometimes, 11 percent saying it happened rarely and two percent stating it never occurred. Given this finding, it is not surprising that 10 percent of patients reported that there were not enough nurses on duty to care for them, while a further 31 percent reported that this sometimes occurred (Kalisch item). All age cohorts shared this observation equally. Less than 63 percent reported being fully satisfied and engaged in their discharge planning (a Kalisch item); 26 percent were somewhat satisfied. However, 74 percent thought they were given adequate information to manage at home with another 20 percent partially satisfied. The cohort aged between 17-34 were the least satisfied (Bureau of Health NSW, 2013).

The results of the Adult Admitted Patient Survey cannot be compared with the MISSCARE survey for NSW, but it is notable that despite nurses and midwives reporting difficulties with missed care, generally the level of patient satisfaction was good . This data is best read as a barometer of nurses' and midwives' efforts to meet patient care needs with 99 percent of patients reporting that nurses were kind and caring on all or most occasions or sometimes (Bureau of Health, NSW 2013).

Concluding comments

As noted, it is not possible to provide data that demonstrates the work intensification of nurses and midwives in NSW hospitals given the paucity of available data. However,

increases in work productivity were noted with increases in admissions, elective surgery numbers, NEAT measures and overall efficiency. Further, over the period under investigation, an additional 500 nurses and midwives were employed in the public sector. In order to reliably demonstrate increased work intensification, data on staffing levels would be required per hospital. A commentary on the staffing methodology used in the public sector has been provided, but it is not possible to access data to ascertain how well this methodology is implemented. However, as Wise et al., (2015) note, there is evidence, particularly in smaller regional hospitals, that NHPPD ratios are not adhered to. The next section examines what nurses and midwives report about care they miss, and how they explain this.

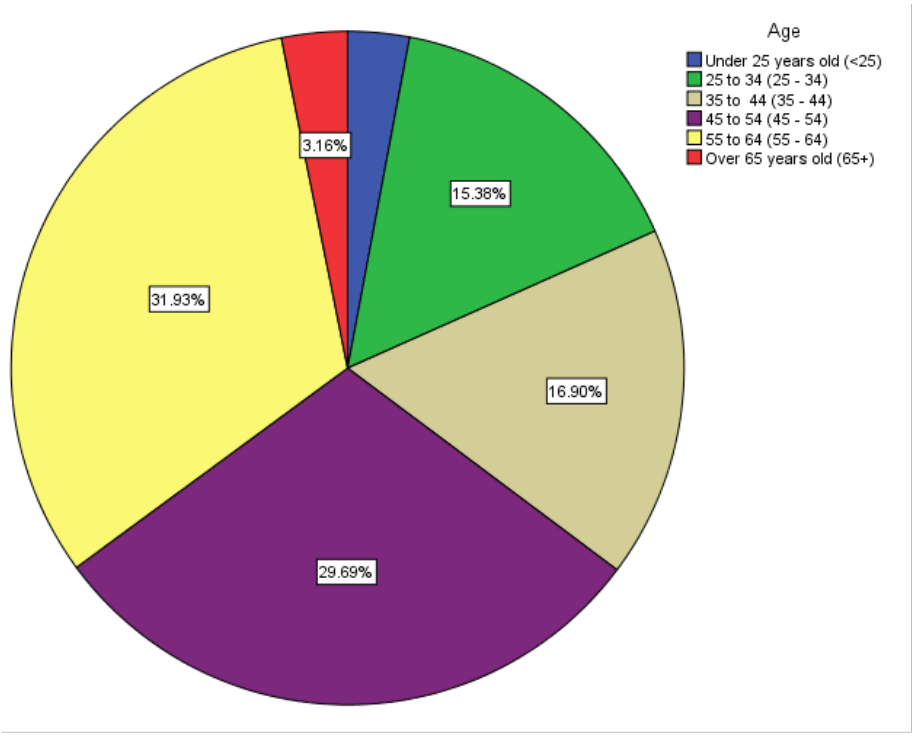
Chapter Three: Results of the survey

Demographic and descriptive results

A total of 4431 survey responses were received from NSW nurses and midwives. A full description of the participants' data follows in chart form and is expressed in percentages for easier reference. Of the total number of respondents, approximately 21 percent (934) did not complete all aspects of the survey including basic demographic data. As a consequence, the figures and analyses presented in this report are based on the total number of completed surveys from 3,486 nurses and midwives.

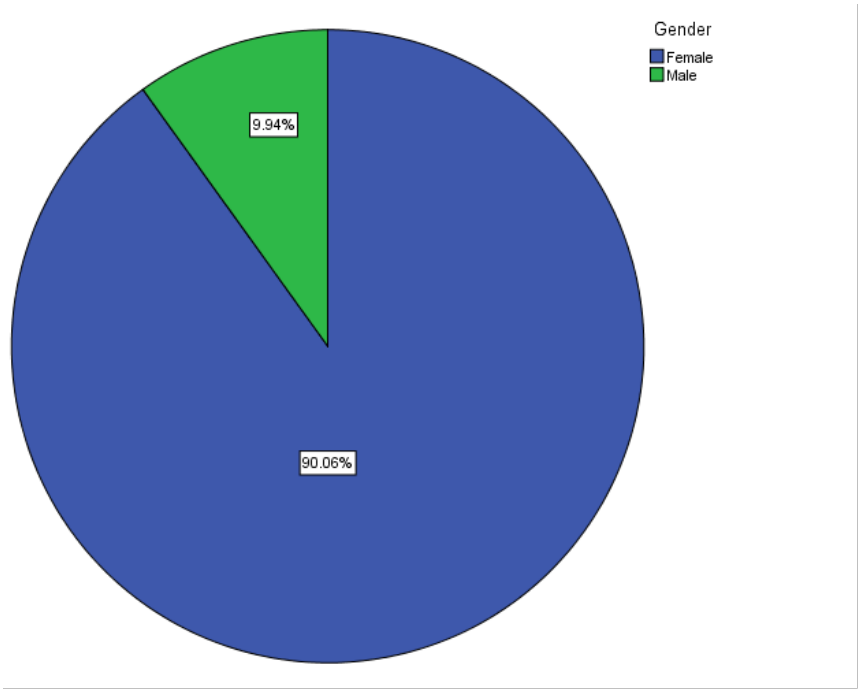
In providing demographic and descriptive data, we noted if this impacted on missed care across the three shifts and whether or not missed care fell into one of the three priority categories. This classification is based on high priority patient problems such as missing vital signs, second level or treatment related problems, for example minimising infection, and level three or low priority nursing care such as lack of patient knowledge and documentation (Alfaro-Lefevre 2008).

Figure 3.1: Age distribution of New South Wales nurses and midwives responding to missed nursing and midwifery care survey



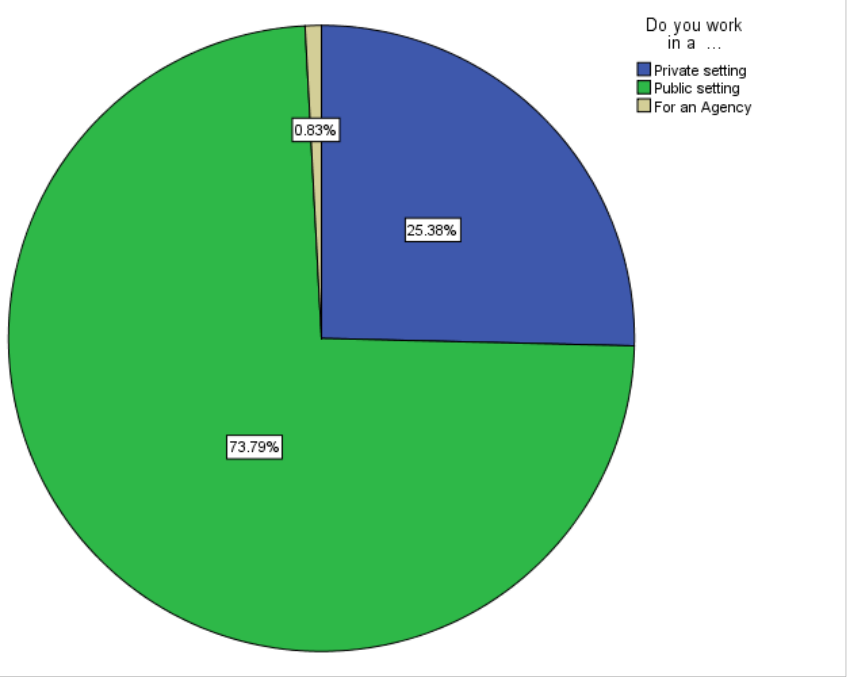
Two thirds of all surveyed nurses and midwives were over the age of 45; the lowest proportion was less than 25 years of age. The age of the nurse was a predictor of the frequency of missed care for high and low priority nursing care on night shifts (see Figures 3.25 and 3.26).

Figure 3.2: Distribution of surveyed NSW nurses based on gender



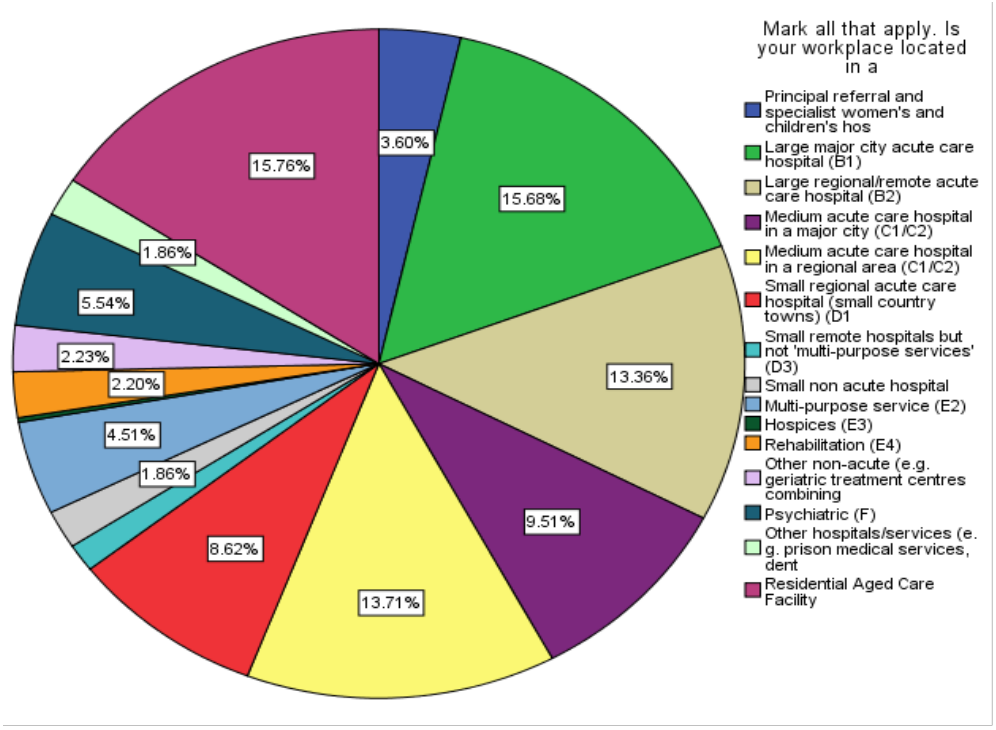
Fewer than 10 percent of the nurses and midwives participating in this survey were male. Gender was not a predictor for the frequency of missed nursing care, or a factor in why nursing care was missed.

Figure 3.3: Distribution of NSW nurses and midwives based on employment sector



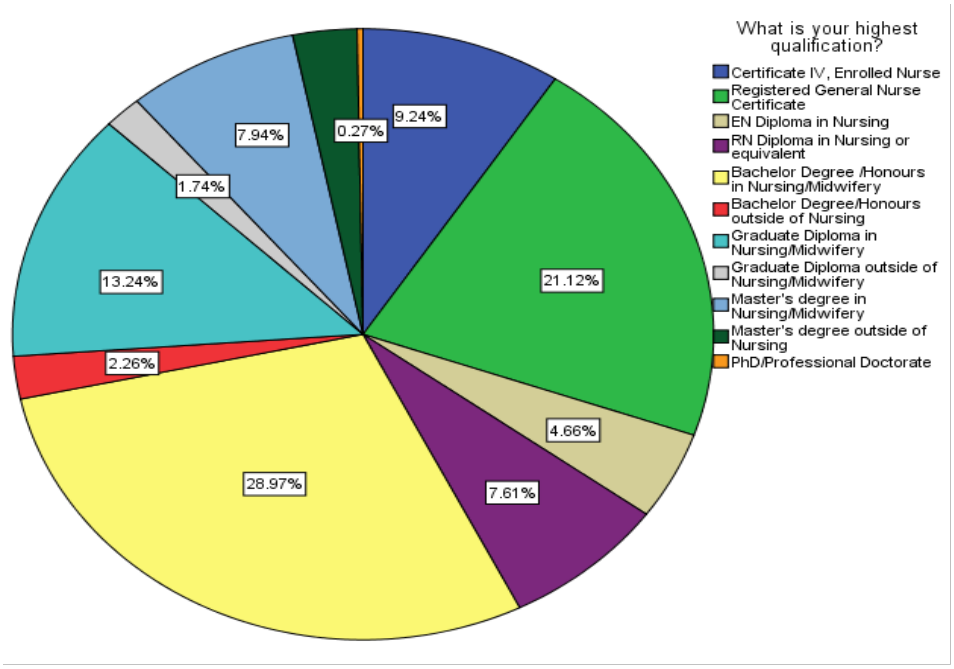
Almost three quarters of the nurses and midwives surveyed were employed in public sector health care agencies with the remainder being employed in the private sector. Agency (self-employed) nurses and midwives were in the minority. The figures on nurses working in the residential care sector is explored in more detail in Figure 3.4, but 644 nursing staff (16 percent) indicated they were working in this sector. Determining whether aged-care nurses were employed in either the private or public sectors could not be reliably inferred in this study. Private sector hospital nurses and midwives reported significantly more missed nursing care, particularly on day shifts, than nurses and midwives working in the public sector.

Figure 3.4 Distribution of NSW nurses' and midwives' workplaces



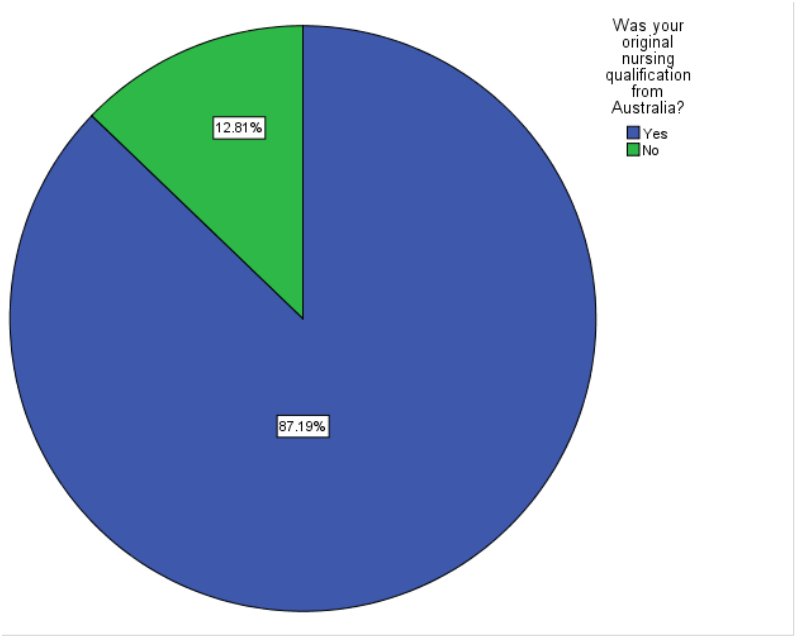
From the figure above, it can be seen that well over half of the respondents were employed in city based hospitals (Children's Hospital and services coded as B1 and C1/C2, with regional, rural and remote areas making up another 38 percent of the nursing population. Differentiating between public and private sector health care centres (see Figure 3.3) in terms of city or regional type is not readily apparent. Incidents of missed care, particularly high priority nursing care, occurred more frequently among nurses and midwives employed in city-based hospitals than those working in rural hospitals.

Figure 3.5: Distribution of qualifications held by surveyed NSW nurses and midwives



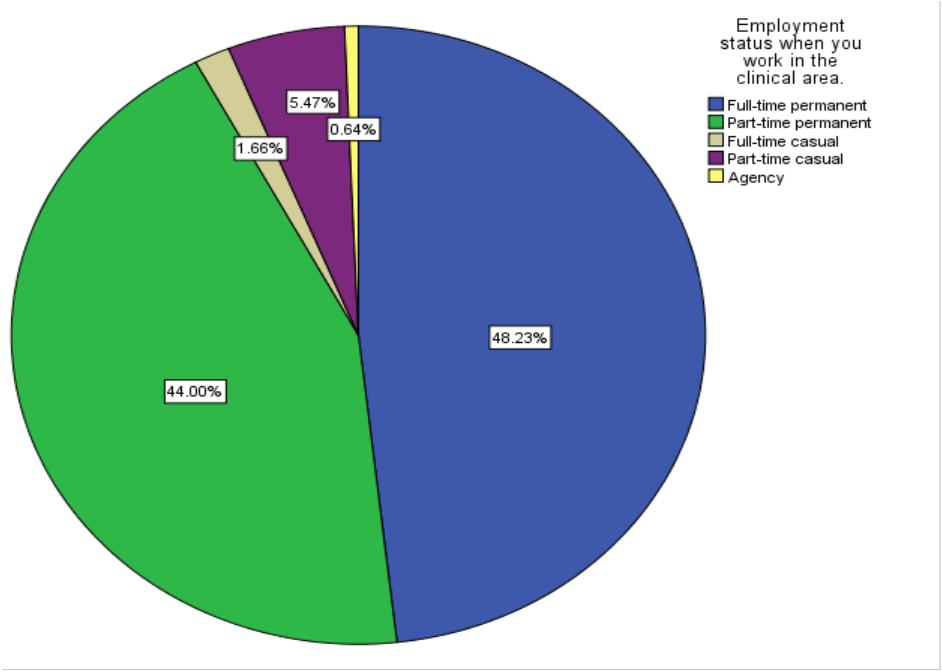
Approximately 16 percent of those surveyed, were qualified enrolled nurses while another 28 percent held registered nursing qualifications obtained through hospital-based training or were issued a diploma from recognised teaching institutions. The remaining participants (56 percent) held Bachelor degrees in nursing or above. The level of qualifications obtained by nurses and midwives was not a predictor of missed nursing care on any of the three shifts

Figure 3.6 Countries of origin of nurses' and midwives' qualifications



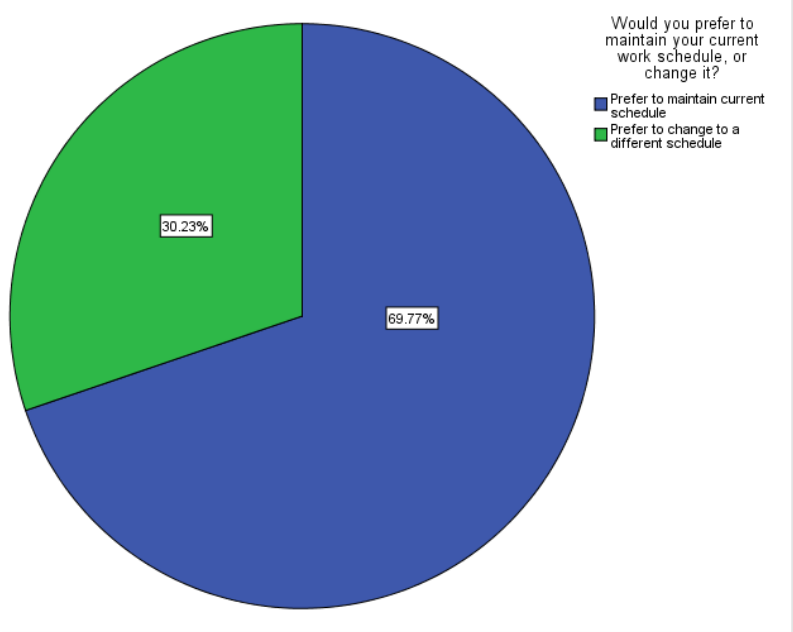
Just under 13 percent of the NSW nurses and midwives who took part in the survey, stated that their nursing qualifications were obtained in a country other than Australia. Australian qualified nurses and midwives believed they were able to identify more missed day care than their non-Australian cohorts. However, the reverse was indicated for missed nursing care on night shifts.

Figure 3.7: Distribution and employment status of NSW nurses and midwives



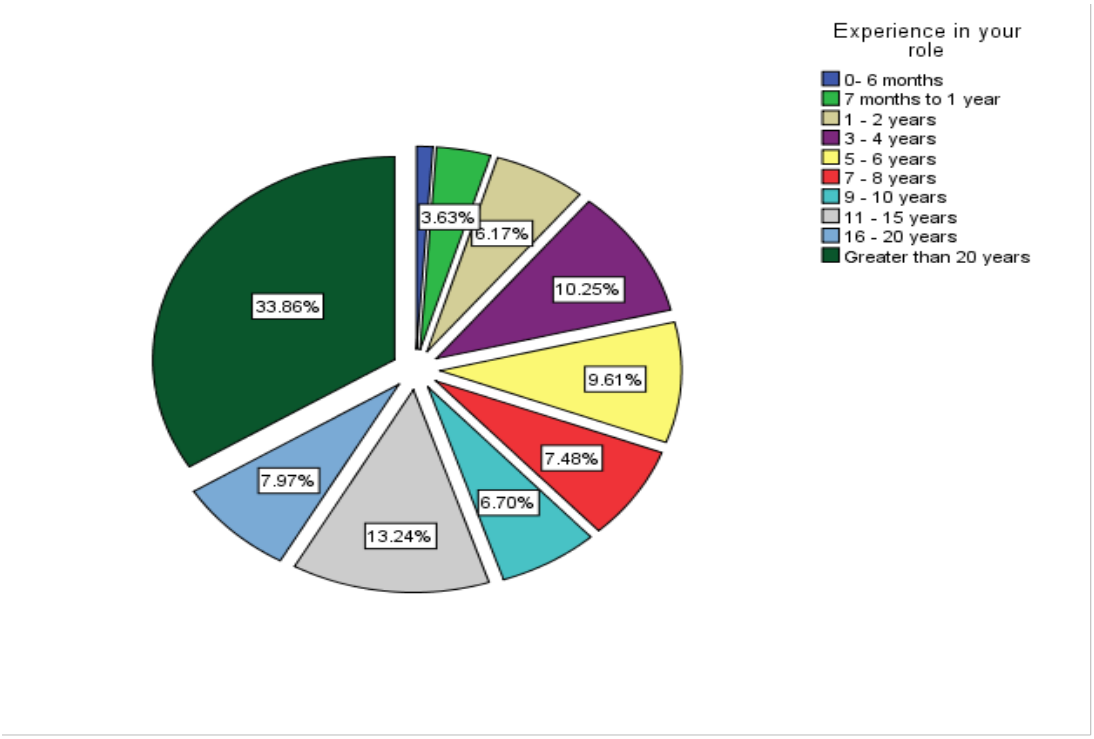
The number of combined fulltime permanent and casual staff constituted half of all nurses and midwives in NSW who took part in the survey. Apart from a small number of nurses and midwives working with an agency, 44 percent of the remaining nurses and midwives are employed on a permanent part-time basis. Employment status was a predictor in the frequency of missed nursing care on day shifts.

Figure 3.8: Proportion of NSW nurses' and midwives' preferences for maintaining or changing current work rosters



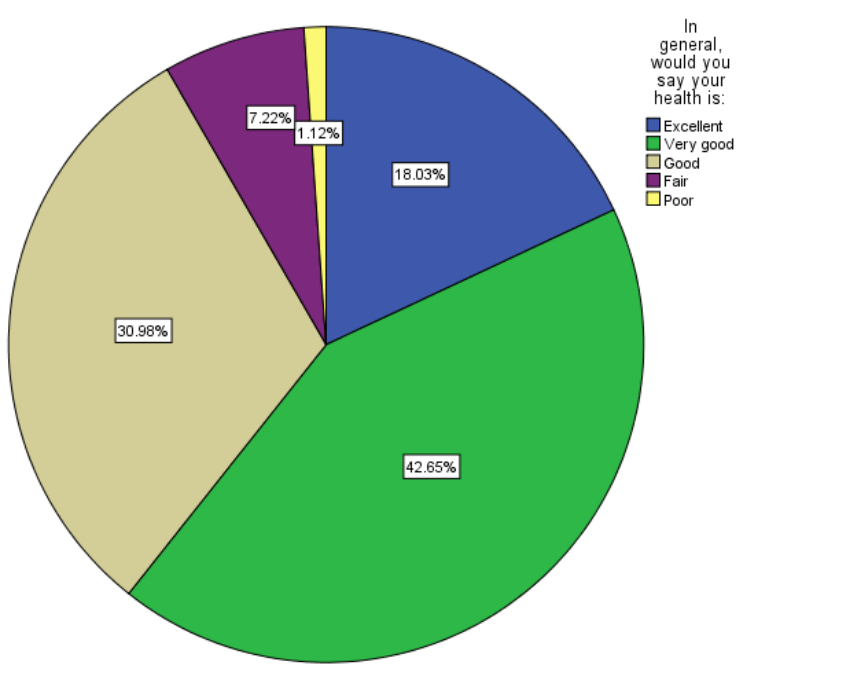
Well over two-thirds of nurses and midwives wished to retain their current work schedule and their preferences had a significant part in predicting the frequency of treatment related and low priority nursing care on day and night shifts (see Figures 3.21 and 3.26).

Figure 3.9: Distribution of NSW nurses and midwives according to years of experience



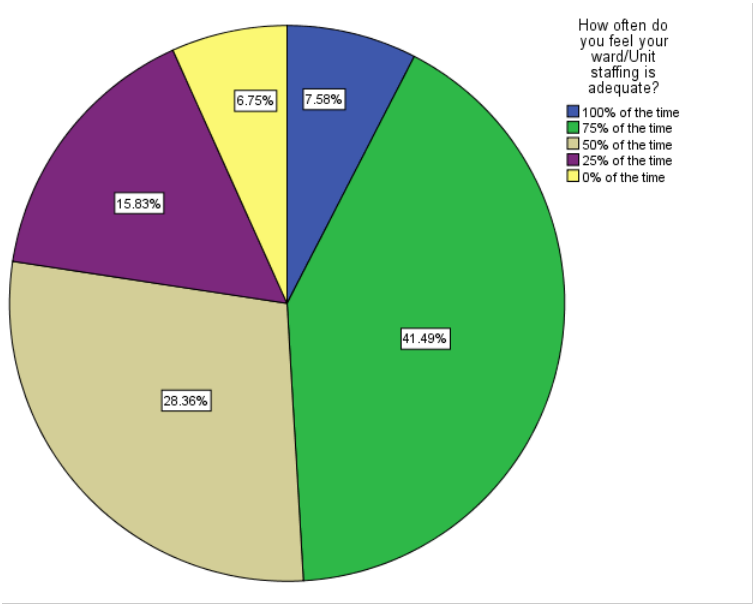
Just over one quarter of the nurses and midwives surveyed had six years nursing experience or less; just over quarter had up to fifteen years experience and the remaining 41 percent had sixteen to twenty years or more. While not a significant predictor for the frequency of missed nursing care of any type during day shifts, the frequency of missed low priority nursing care is influenced by the years of experience of the nurse or midwife.

Figure 3.10: Self-rated personal health status of NSW nurses and midwives



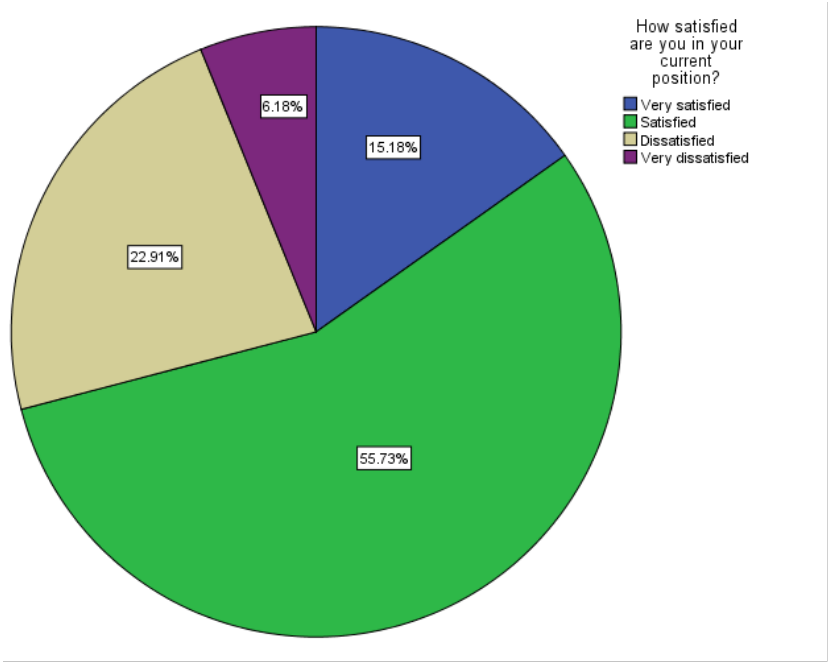
The figure above shows that well over 60 percent of the NSW nurses and midwives surveyed described their health as very good to excellent. A small number believed their health to be either fair to poor. The health or otherwise of nurses and midwives has been shown to have a significant link to the frequency of missed nursing care and is specifically related to low priority nursing and midwifery care during day shifts (see Figure 3.21). It was not a significant factor for night shift staff.

Figure 3.11: Adequacy of staffing in NSW nurses' and midwives' work areas



A little less than 50 percent of the respondents believed that their work areas were adequately staffed 75 to 100 percent of the time. Nearly 7 percent believed that staffing was not adequate all the time; a similar proportion of nurses thought staffing was adequate at all time. Perceptions of staff adequacy were predictors of the frequency of missed care, particularly on night shift (Figure 3.25, 26 and 27).

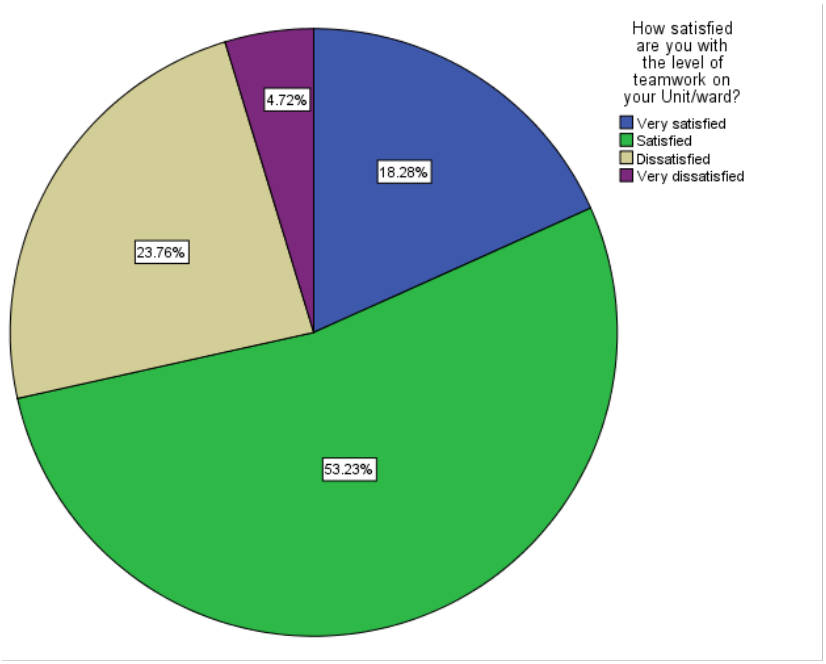
Figure 3.12: Proportion of NSW nurses and midwives satisfied with their current job



Just over 70 percent of surveyed nurses and midwives indicated satisfaction (or higher) with their current employment. Just under a quarter of the nurses and midwives were dissatisfied with their employment, with a minority expressing their dissatisfaction more strongly. Job satisfaction was a significant predictor of the frequency of missed nursing care on night duty,

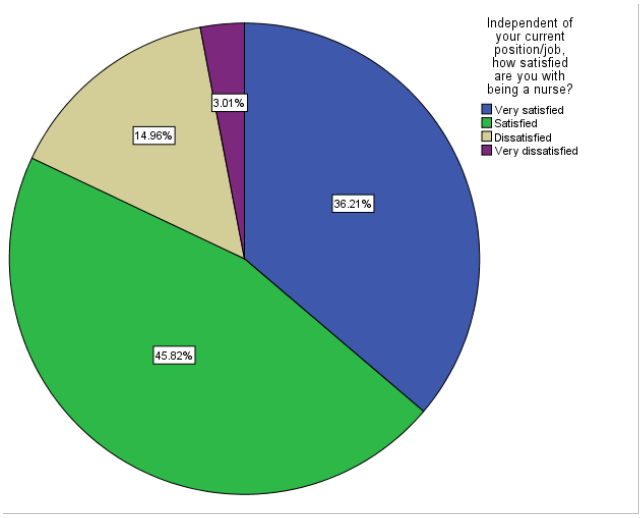
particularly with treatment related and low priority nursing care, and higher priority care on day shift.

Figure 3.13: Proportion of NSW nurses and midwives indicating satisfaction with the level of teamwork in their work area



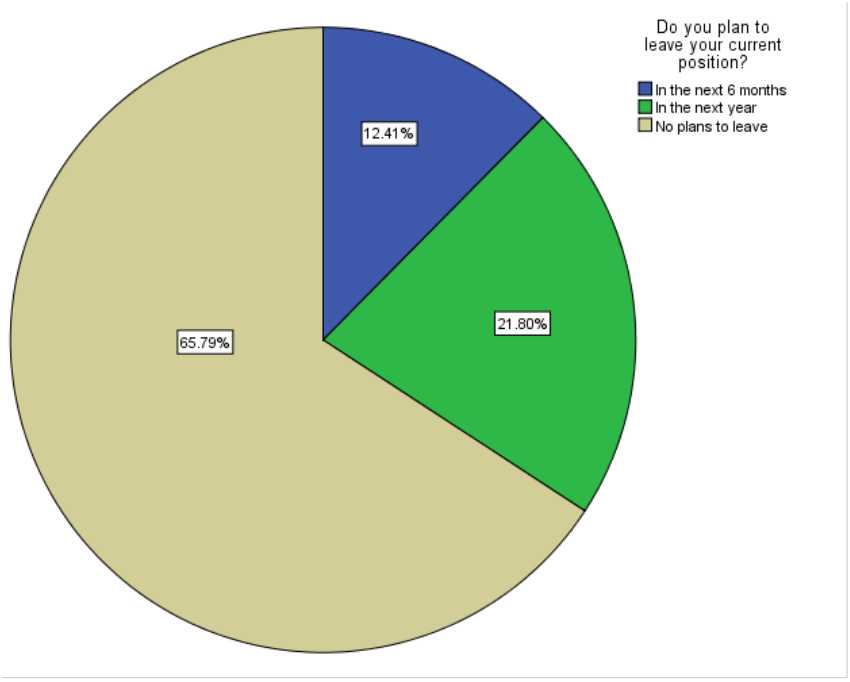
Over 70 percent of respondents were satisfied, or very satisfied, with the teamwork in their work units, while just over a quarter expressed dissatisfaction. The level of team satisfaction was a significant factor in predicting the frequency of missed nursing care, particularly in relation to higher priority nursing care during day shifts (Figure 3.20) and higher and treatment oriented nursing care on night duty.

Figure 3.14: Proportion of NSW nurses and midwives indicating satisfaction with being a nurse/midwife



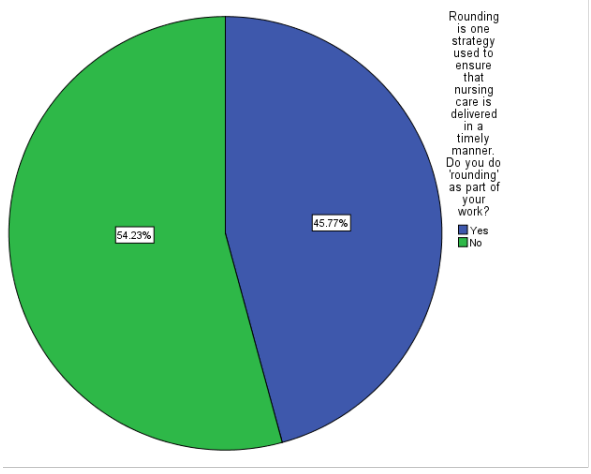
Less than 18 percent of NSW nurses and midwives were dissatisfied with their current role, while the majority (46 percent) stated they were satisfied. There is a direct link between respondents' levels of satisfaction with their roles and the frequency of missed nursing care, specifically treatment priority nursing care during night shifts (Figure 3.27).

Figure 3.15: Percentage of NSW nurses and midwives indicating preference for retaining current job



Approximately 66 percent of those surveyed were willing to remain in their current work, while 21 percent indicated they intended to leave within the next year and a small number wanted to leave within the next six months. Job retention and staff movement is associated with missed high and low priority nursing care during day shifts (see figure 3. 20 and 21) and all types of nursing care on night duty.

Figure: 3.16: Proportion of the surveyed nurses and midwives in NSW who practice workplace rounding



Just over half of the nurses and midwives surveyed said that rounding is not used as part of their workplace practices. Where rounding is used, the incidences of missed nursing care is said to be more frequent than workplaces where this not practiced, particularly on day shifts. Rounding is not a significant predictor of missed care on night shift.

Frequency and type of missed nursing care over a 24 hour period

Nurses and midwives were offered five options for estimating the frequency that nursing care was missed in their clinical areas — never, rarely, occasionally, frequently or always missed — and they were asked how their estimates applied to all three shifts. The range of tasks included:

Table 3.1: List of nursing tasks with numbering according to survey and according to results

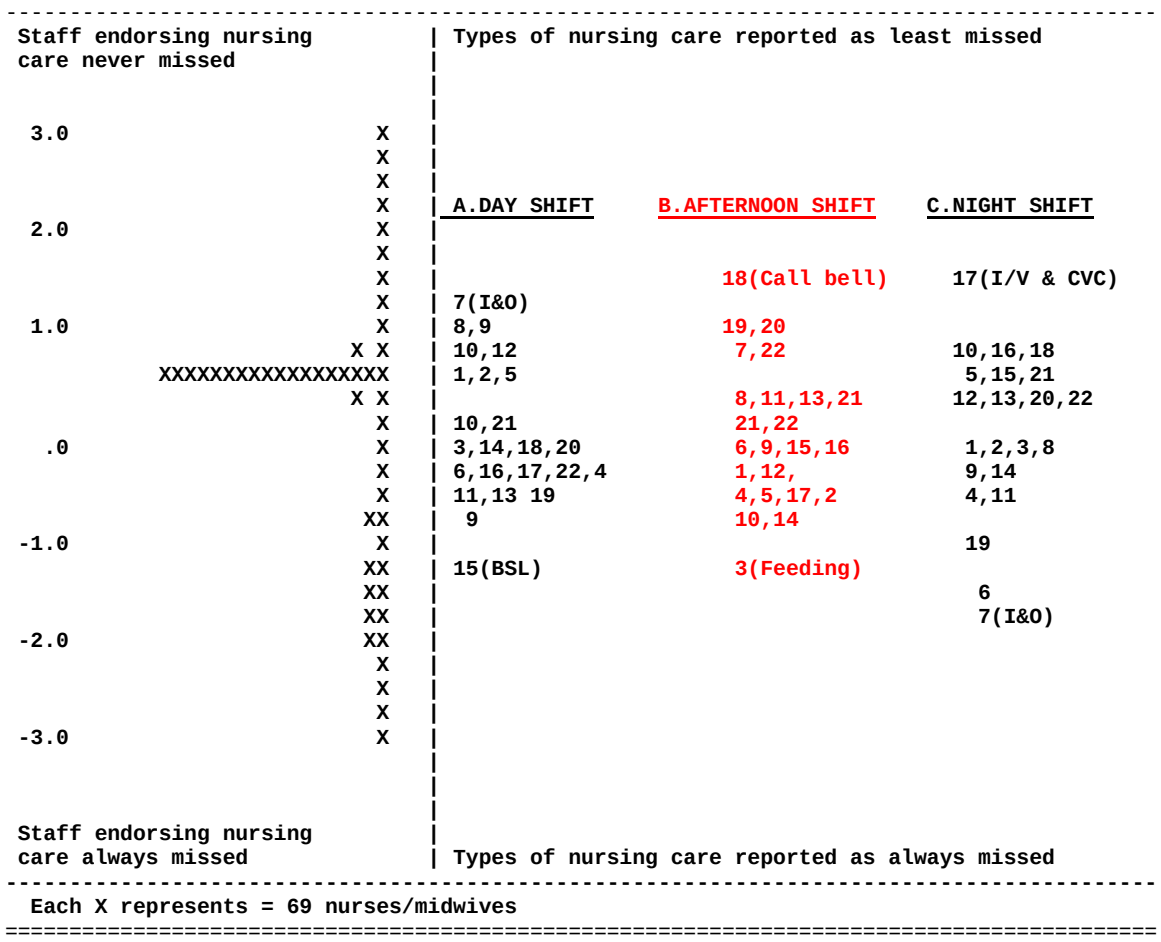
1. 40	Ambulation three times a day as ordered
2. 41	Turning patient every two hours
3. 42	Feeding patients while food is still warm
4. 43	Setting up meals for patients who feed themselves
5. 44	Medication administration within 30 minutes before and after scheduled time
6. 45	Vital signs assessed as ordered
7. 46	Monitoring fluid intake/output
8. 47	Full documentation of all necessary data
9. 48	Patient education about illness, tests and diagnostic studies
10. 49	Emotional support to patient and family
11. 50	Patient bathing/skin care
12. 51	Mouth care
13. 52	Hand washing
14. 53	Patient discharge planning and education
15. 54	Bedside glucose monitoring as ordered
16. 55	Focussed reassessment according to patient condition
17. 56	IV/central line site care and assessment according to hospital policy
18. 57	Response to call bell/light initiated within five minutes
19. 58	PRN medication requests acted on within 15 minutes
20. 59	Assess effectiveness of medication
21. 60	Assist with toileting needs within five minutes of request
22. 61	Skin/wound care

Figure 3.17 below indicates midwives' and nurses' perceptions about the frequency of missed nursing care on a continuous (midwives' and nurses' consensus) scale (much like a ruler) and simultaneously plots which types of nursing care are missed, based on the nurse's perceptions (a conjoint measure). Each x in the figure represents 69 staff and these are dispersed up and down the consensus scale, left of the vertical dotted line. Nurses located at the top of the scale (opposite logit +3) indicate that nursing care is rarely missed while nurses near the bottom

(opposite logit -3) believe that nursing care is frequently missed by staff. The majority of staff consensus scores are located just above the central point of the scale (at zero point), indicating that most nurses and midwives believed that missed nursing care was an occasional to frequent occurrence. It is noted from the consensus scale that a large number of staff (located opposite logit -2.0 to -3.0) indicated that missed nursing care occurred frequently.

To the right of the vertical dotted line, are the numbers that indicate the particular nursing care activities identified in the survey. The item numbers are represented three times in Figure 3.17 to represent nursing care survey items that are thought to be OR were missed on day, afternoon and night shifts. Again these are located on the same scale as the nurses and midwives' consensus scores and are arranged hierarchically according to the frequency that respondents believed each aspect of nursing care was missed. To the immediate right of the vertical dotted line are the missed nursing care items that are grouped together according to the three shift times.

Figure 3.17: Conjoint estimates of nurses' and midwives' consensus for the frequency and types of missed nursing care over the three shifts.



Missed nursing care during day shifts

Of the twenty-two items representing missed nursing care during day shifts, item 15 (monitoring Blood Sugar Levels or BSL), is located at the lower end of the scale opposite logit -1.5 and shows that BSL monitoring is missed frequently by day staff. Similarly, items 9, 11, 13 and 19 are the next frequently missed nursing activities. These items cover providing patient education (9), patient bathing (11) hand washing (13) and giving PRN medication promptly (19). Conversely, day nursing staff seldom missed monitoring patients' fluid intake and output (7), documentation (8), setting up patients to eat meals (4) and providing prompt administration of medications (5).

Missed nursing care during afternoon shifts

Part B of Figure 3.17 deals with afternoon shifts and it can be seen that the range of scores for missed care were consistent with those recorded on morning shifts. The missed care items range from -1.5 to +1.5 logits for the afternoon shift, which like the morning shift, suggest that missed nursing care does not happen continually, but is not never experienced either. The spread of scores suggests that missed care ranges between being rarely missed to frequently missed. At the lower end of the scale in Part B of Figure 3.17, it can be see that during an afternoon shift the nursing care most frequently missed was feeding patients promptly (3) followed by turning patients (2), providing patients with emotional support (10) and doing patient discharge planning (14). A similar pattern of missed nursing care occurred with setting up patients for meals (4), administration of medications being delayed (5) and monitoring I/V & CVC lines (17). These items are missed frequently during late shifts.

Afternoon staff maintained that they answered patients' call bells promptly (18), administered PRN medication requests promptly (19) and followed up by checking the effectiveness of the medication (20). Staff on afternoon shifts occasionally missed monitoring patients' fluid balance and wound care (Items 7 and 22 respectively).

Missed nursing care on night shifts

From Part C of Figure 3.17, it can be seen the spread and range of missed care scores for the night shift is greater than the previous two shifts. This large range of missed care scores from logit -1.75 to +1.5 suggests there is greater variation in the frequency and types of nursing care being missed on this shift, compared to early and late shifts. Staff on night duty stated that maintaining patients' intravenous and central venous lines (17) are the least missed of all the tasks delivered on night duty. Providing emotional care to patients was missed a little more frequently (10), as was assessing patients' illness/condition (16) and responding to patients' call bells (18). The care most frequently missed entailed monitoring patients' fluid balance (7), monitoring patients' vital signs (6) and giving PRN medications within 15 minutes (19).

Missed nursing care variations according to shift

When comparing morning and afternoon shifts for instances of missed care, it was found that nearly half of the items surveyed varied depending on the time of the shift. This can be seen by re-examining Figure 3.17 and comparing the location of the various numbers representing

missed nursing care during the morning (Part A) and the evening shift (Part B) on the logit scale.

When comparing episodes of missed care between morning and afternoon shifts, those that happened least frequently were documentation (Item 8 (1.5), turning patients (Item 2 (1.2), providing patients with emotional support (Item 10 (1.1), feeding patients promptly (Item 3 (1.1), administering medications with minimum delay (Item 5 (0.9) and attending to patients' mouth care (Item 12 (0.8). Conversely, afternoon nursing staff omitted four items — hand-washing (Item 13 (1.2), bedside monitoring of BSL (item 15 (1.2), and responding to patient call bells (Item 18 (1.1) and evaluating the effectiveness of prescribed medication (Item 20 (0.9).

Numerous aspects of missed nursing care remain unaffected by the shifts worked by nurses and midwives. In other words, the difference in frequency of missed care across morning and afternoon shifts as rated by nursing staff, was insignificant. These items included attending to patients' toileting needs promptly (21), monitoring vital signs (6), assessing the patient according to their condition (16), monitoring IV and central lines (17) and wound care (22).

When comparing missed care between day and night shifts, there are some significant differences. Night staff indicated that they were less likely to miss the following items: assessing patients for changes in their condition, monitoring parenteral fluids and bedside BLS levels (Items 16, 15 and 17 respectively). They also believed that they missed taking vital signs and documenting nursing care less frequently than morning staff (Items 6 and 8). Night staff also report less missed care than afternoon nursing staff in the following areas, namely administering prescribed medications, providing emotional support for patients and monitoring parenteral fluids (Items 5,10,17). However, night staff miss monitoring patients' vital signs and providing timely PRN medications more frequently than afternoon staff.

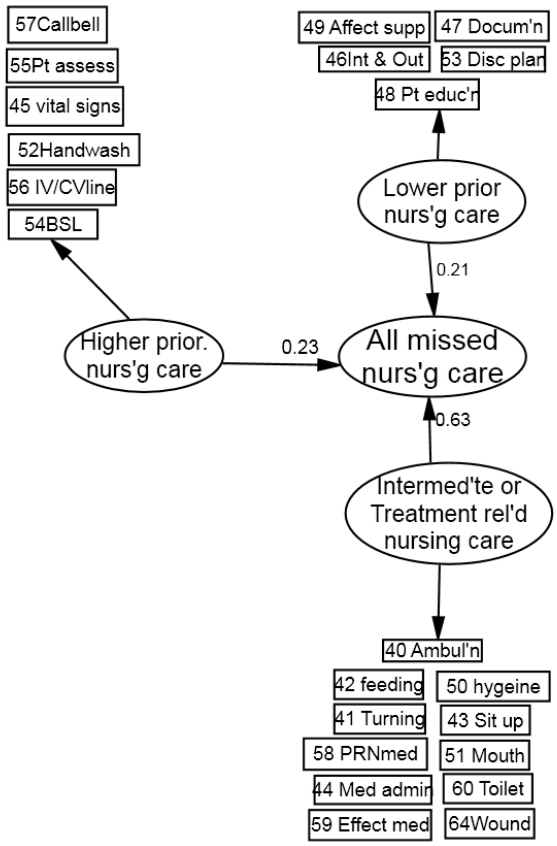
Frequency of missed nursing care: constructs of nursing care

In order to explore the interactive effects other factors exert on the frequency of missed nursing care, the survey items have been classified into three major groups to clarity of what types of nursing care are missed. The classification is based on the acuity of patients' illnesses, which determines the priority of nursing care required (Alfaro-Lefevre, 2008). Classifying missed nursing care data is based on high priority patient problems such as vital signs, second level (treatment related) problems such as minimising infections, and level three (or low) priority nursing care, such as addressing lack of patient knowledge and documentation requirements. These three categories are now used to define and explore what types of nursing care are missed, together with the factors that impact on care delivery on the three shifts.

From Figure 3.18 below, it can be seen that all the nursing care items surveyed (shown as rectangles) have been grouped into one of three subgroups (represented as ellipses) and their relationship to the total amount of estimated missed nursing care. Figure 3.18 reveals that the

most frequently missed form of nursing care of all the activities surveyed is intermediate or treatment related care. This can be seen by the co-efficient of +0.63 leading from the treatment related variable to the overall missed care variable. The next most frequently missed type of nursing care is high priority care, with level three, or low priority nursing care, being missed the least. The co-efficient estimates of +0.23 and +0.21 demonstrate this respectively. In these figures items have been numbered 39 to 61 according to the survey.

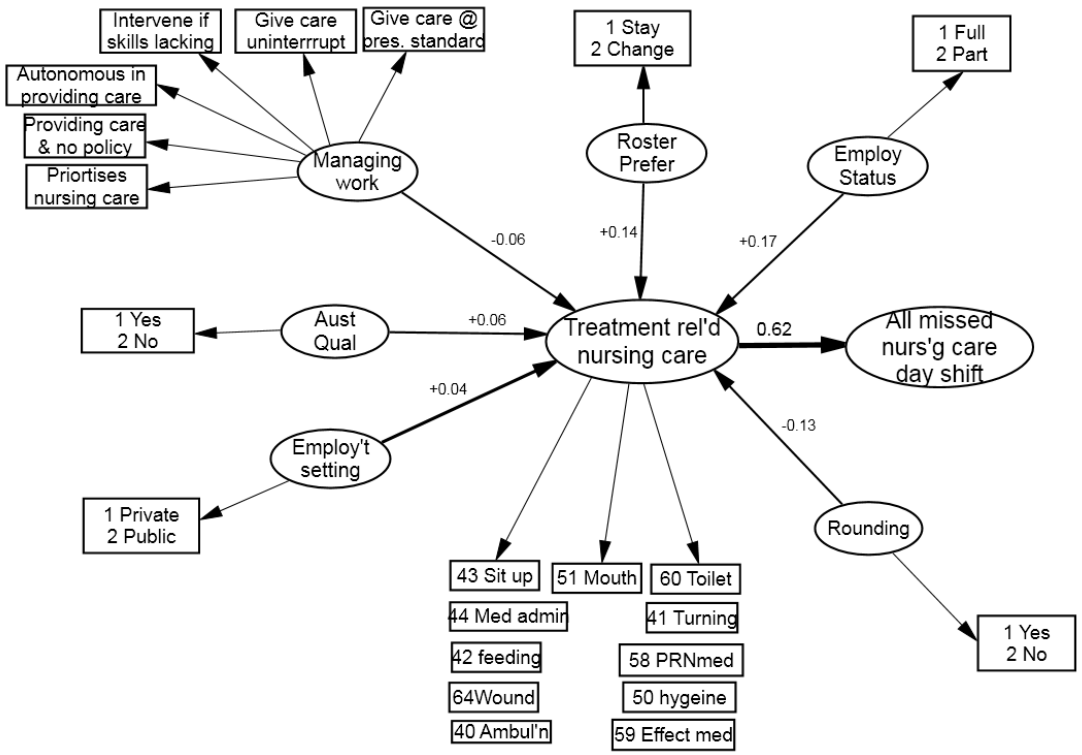
Figure 3.18: Descriptions and classifications of missed nursing care and their influence on all nursing care missed



Factors influencing the frequency of intermediate or treatment-related missed nursing care during day shift

Figure 3.19 below, identifies six factors that have a direct influence on the frequency of missed care during day-shifts. Missed care on this shift occurs more frequently in private sector hospitals, than public sector health agencies hospitals and is more commonly identified by nurses and midwives employed full-time and with Australian qualifications. Missed care was also noted by staff who prefer to stay on their current roster. The staff that stated rounding was practiced in their work area were also more likely to report missed nursing care. Another factor that influenced the frequency of missed care was the ability of nurses and midwives to deliver uninterrupted care, provide care when there were no guidelines and to act autonomously.

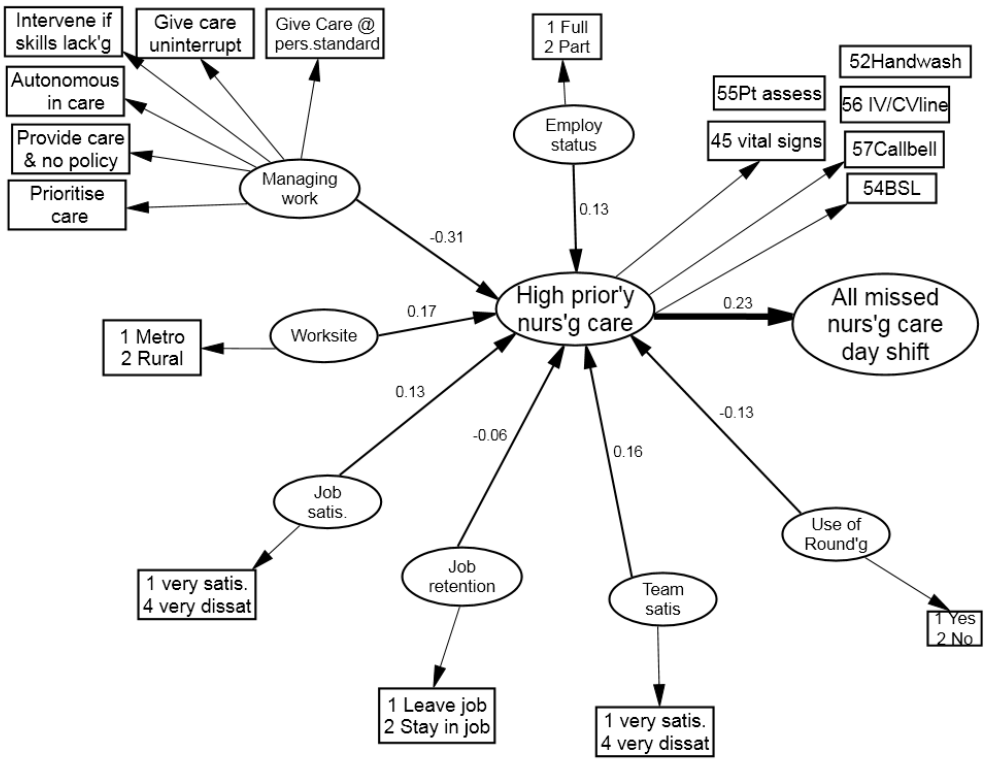
Figure 3.19: Factors influencing missed intermediate (treatment-related) care on day shifts



Factors influencing the frequency of missed high priority nursing care during day shifts

Figure 3.20 examines the factors that contribute to high priority nursing care being missed during day shifts. The biggest factor influencing high priority missed nursing care is the self-rated abilities of the nurses and midwives (co-efficient -0.31). This indicates that when nurses and midwives experience difficulties with managing their work (such as handling interruptions, prioritising nursing care, working autonomously) the greater the frequency of missed nursing care. This is particularly so for nursing staff employed in metropolitan hospitals as distinct from the rural sector, and for nursing staff employed full-time, compared to those employed on a part-time basis (co-efficient -0 13). Factors such as staff preferring their current job and wishing to stay in it and dissatisfaction with nursing staff teamwork were not associated with increased incidences of missed high priority nursing care. However, a link is suggested in clinical areas where rounding is practiced (-0.13), of increased incidences of missed nursing care.

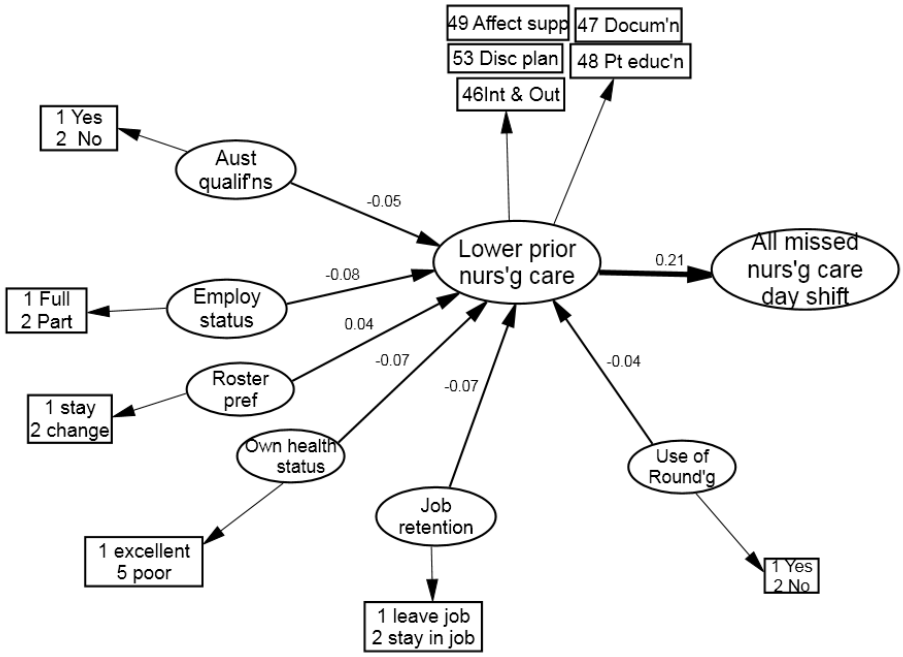
Figure 3.20: Factors influencing missed higher priority day shift nursing care



Factors influencing the frequency of missed low priority care during day-shifts

Figure 3.21 shows that care for patients assessed as level 3 or low priority, was missed the least of all three types. In Figure 3.21, a co-efficient of 0.21 exists between the variable identifying all missed care and the variable showing low priority missed care. Part-time nursing staff (-0.08) report more missed low priority nursing care than full-time staff; and nurses and midwives with overseas qualifications report that this type of nursing care is missed more frequently than nurses with Australian qualifications (-0.05). Nurses and midwives who indicated a preference to stay with their current work schedule (+0.04) and had no plans to leave their job (-0.07), were more likely to report miss nursing care than nurses and midwives who wanted to change rosters and who wished to leave their current job. Respondents' own ratings of their health as less than excellent (-0.07) was associated with reporting of more frequent instances of missed care. Missed low priority care was not influenced by nurses' and midwives' abilities to manage such things as patient care being interrupted, prioritising care, and functioning autonomously.

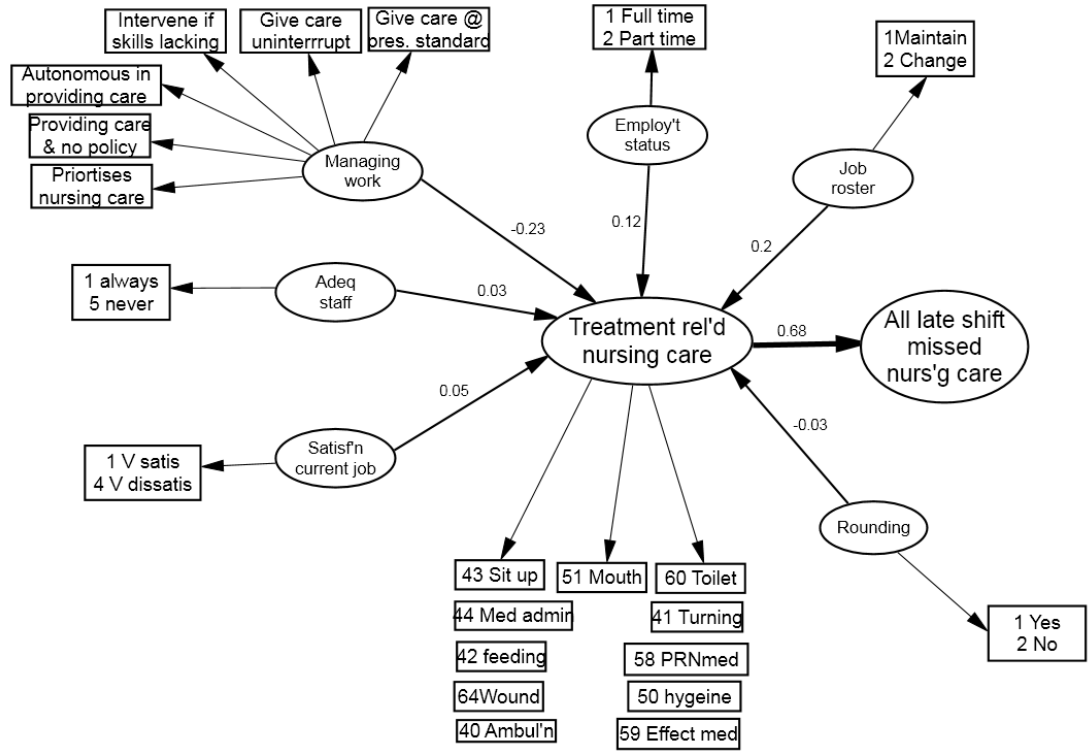
Figure 3.21: Factors influencing missed low priority nursing care during day shifts



Factors influencing the frequency of missed intermediate care during afternoon shifts

As with day shifts, instances of missed care on afternoon shifts were influenced by six related factors (see Figure 3.22). More incidents of missed care were identified by full-time staff, staff who were assigned to their preferred roster, and nurses and midwives experiencing difficulties with managing some aspects of their work including rounding. Nursing care that was missed on afternoon shifts was not related to the hospital sector, nor was it linked to where nurses and midwives' gained their initial qualifications. Respondents working afternoon shifts who believed they had adequate staff and were satisfied with their current job, did not believe there were more instances of missed care for high priority patients during afternoon shift, than on the other two shifts.

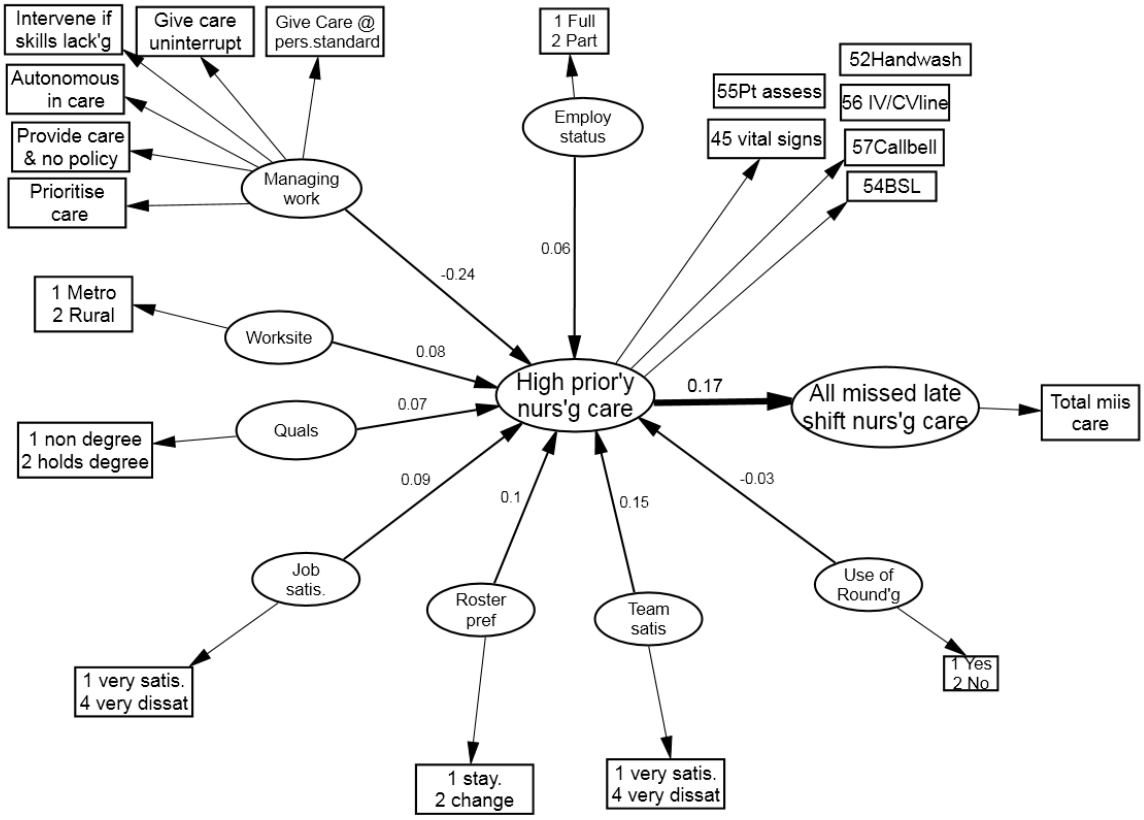
Figure 3.22: Factors influencing missed intermediate nursing care during afternoon shifts.



Factors influencing the frequency of missed high priority nursing on afternoon shifts.

The frequency of missed high priority nursing care during afternoon shifts is influenced by inter-related factors (see Figure 3.23). Full-time, metropolitan-based nurses and midwives and those nurses and midwives who do not have an undergraduate degree, are the most likely to report increases in missed nursing care with loadings of +0.06, +0.08 and +0.07 respectively. This is the first time in this study that the level of qualifications held by staff has been directly attributed to the frequency of missed care. Again, respondents' dissatisfaction with their current job, rosters or team work were not related to identifying more aspects of missed nursing care on afternoon shifts (+0.09, +0.1.0 and +0.15 respectively). However, it is significant that rounding and not managing their workloads to their own, or others, satisfaction e.g. working less autonomously, care being interrupted, or delivering care at a level that is inconsistent with their own expectations, all contributed to increases in identification of missed nursing care.

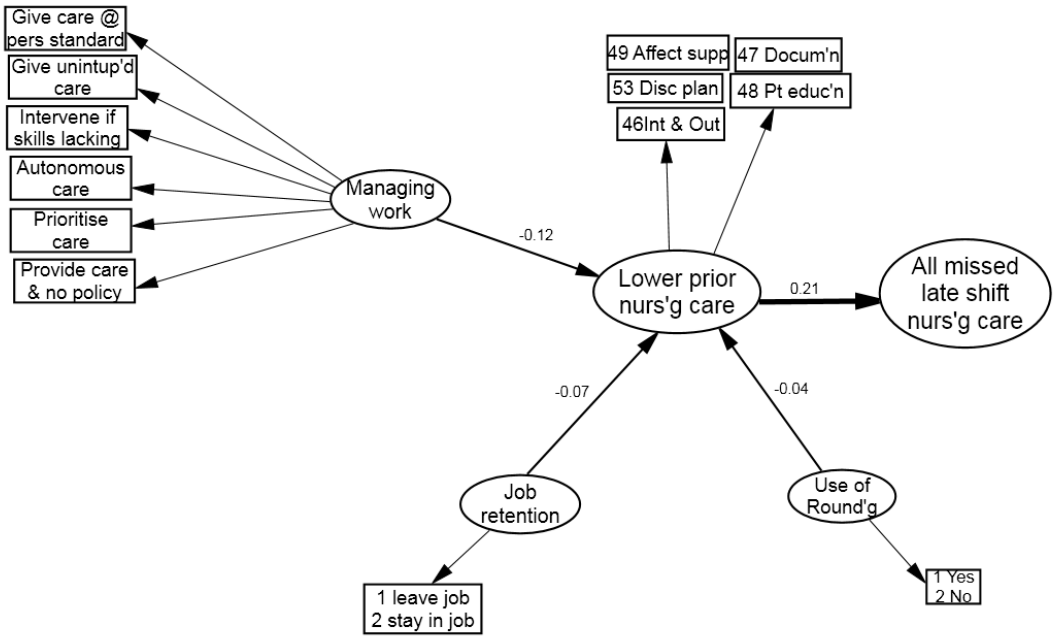
Figure 3.23: Factors influencing missed high priority care during afternoon shifts



Factors influencing the frequency of missed low nursing care during afternoon shifts

The frequency of missed low priority care during late shifts is explored in Figure 3.24, which shows that only three variables have an impact on this type of missed care. The use of rounding and staff who do not intend to leave their current employment, both have an impact on the frequency of missed care reported during this shift. Unlike staff on day-shifts where the origin of nurses' and midwives' qualifications, and health and employment status were linked to increases in missed care, the variables cited above have no impact on missed afternoon nursing care. The capacity of nurses and midwives to manage some aspects of their work, such as dealing with interruptions and functioning autonomously, are predictors of missed nursing care that were not a feature of missed care during day shifts.

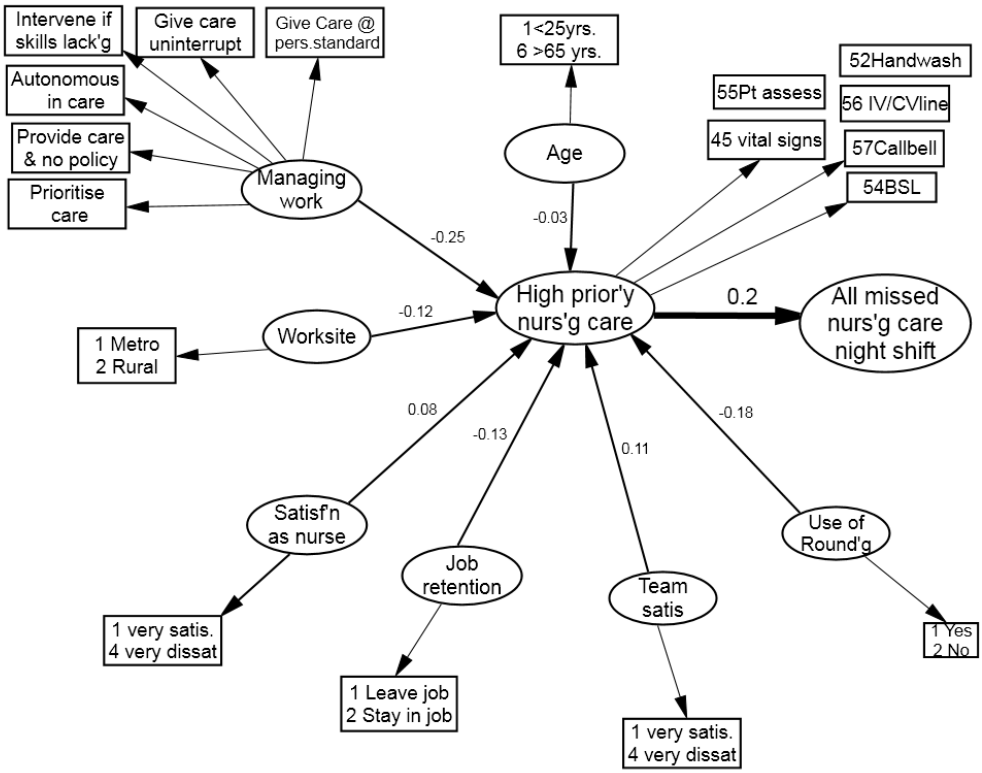
Figure 3. 24: Factors influencing missed low priority nursing care on afternoon shifts



Factors influencing the frequency of missed intermediate priority or treatment nursing care on night shifts

The frequency in the pattern of missed intermediate priority nursing care during night duty is similar to that of missed care during day and afternoon shifts (see Figure 3.25). Night duty staff employed in the rural sector, indicate that missed nursing care occurs more often than among their metropolitan cohorts (the reverse of missed day nursing care).

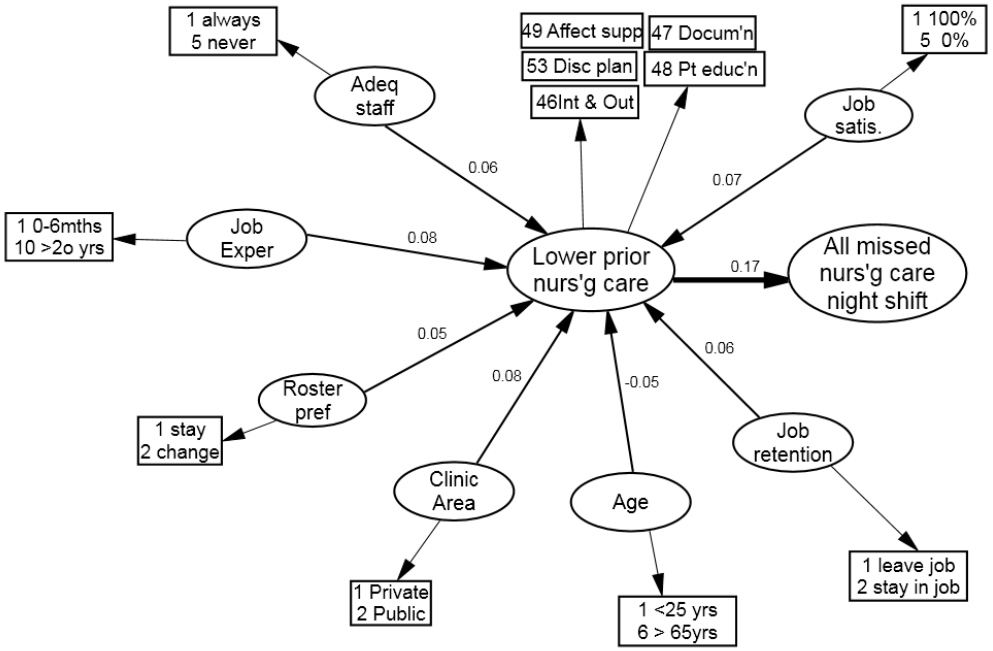
Figure 3.25: Factors influencing missed high priority nursing care on night shifts



Factors influencing low priority night shift missed nursing care

With reference to Figure 3.26 below, it can be seen that older nurses and midwives working in the private sector, or who have less clinical experience or wish to leave their current job, report more frequent missed low priority nursing care when on night duty. This can be seen by the co-efficient values of -0.05, +0.08, +0.08 and +0.06 respectively. These outcomes occur despite staff indicating that they preferred their current roster, believe they had adequate staff and are satisfied with their job overall (+0.05, +0.06 and +0.07 respectively). It is worth noting that rounding is not a statistically important contributor to missed nursing care on night duty. Similar results were seen for the variable that represents staff and the complexity of their work in that these factors had no influence on the frequency of missed low priority nursing care.

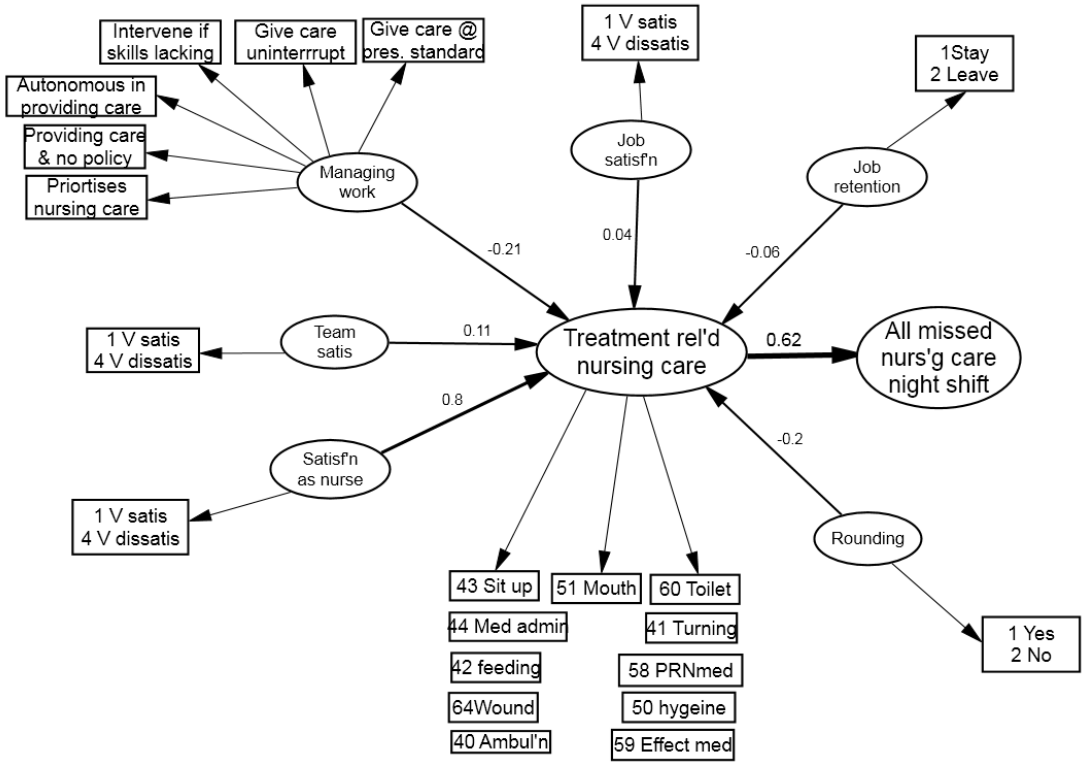
Figure 3.26: Factors influencing missed low priority nursing care on night shifts



Factors influencing missed intermediate or treatment priority care during night shifts

When exploring missed intermediate priority nursing care by night staff (Figure 3.27), it can be seen that rounding and the ability of nurses and midwives to manage their work effectively are related to increases in missed nursing care on night shifts with co-efficients of -0.2 and -0.21 respectively. There is an association too between staff wishing to leave their current work and increases in missed nursing care (-0.06). Nevertheless, night staff providing level two (intermediate care) were not dissatisfied with their role as a nurse/midwife, nor were they dissatisfied with their team members or with their current job (+0.08, +0.11 & +0.04 respectively).

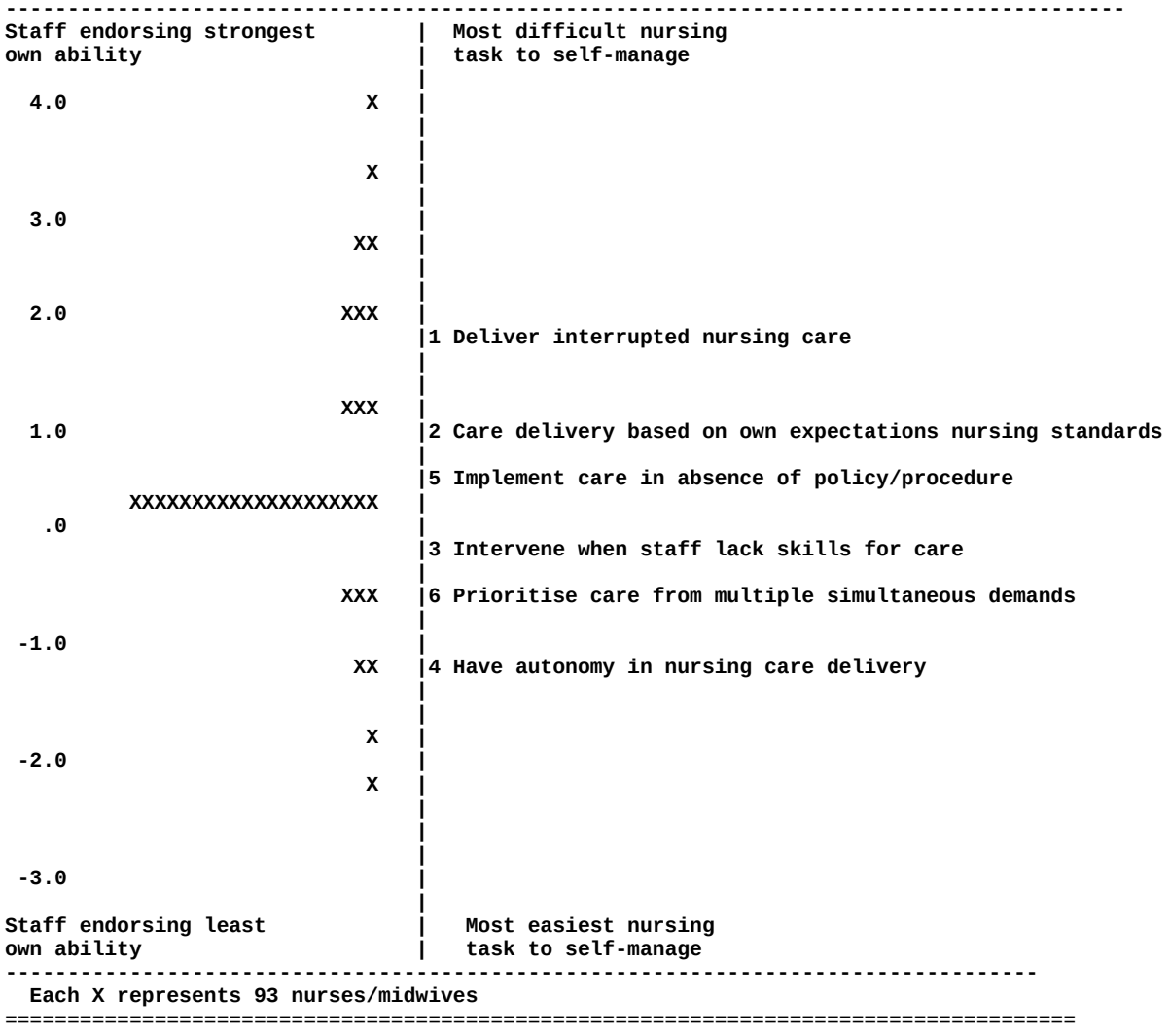
Figure 3.27: Factors influencing missed intermediate or treatment-related nursing care on night shifts



Nurse' and midwives' self-rated ability to deliver nursing care

New to this survey were items related to the individual nurses and midwives'/midwives' view of the complexity of dealing with missed nursing care and the impact this has on their day to day practices in the clinical setting. In essence the six items were used to gauge how staff respond to the clinical environment, when missed care was a feature. Figure 3.28 below features the self-rated ability of nurses and midwives to manage aspects of their care in the clinical environment arising for four options (very easy, easy, and hard to very difficult tasks for the nurse/midwife to do). To the left of the vertical dotted line are a series of Xs, each representing 93 nurses/midwives and located up and down the self-rated ability scale. The majority of the participants locate their abilities to manage aspects of their work midway in the ability scale (at logit +0.2). Co-located at that point in particular and to the right of the interval scale are the six items representing aspects of managing nursing work. Note that items 5, 2 and 1 occur at logits + 0.5, +0.9 and +1.75 respectively indicating that these tasks are increasingly more difficult for nurses and midwives to self-mange in their work. Conversely, items 3, 6 and 4 are progressively less difficult for staff to manage.

Figure 3.28: Conjoint estimates of nurses/midwifes' own ability to manage nursing care.



From Figure 3.28 above, six items relate to participant's estimates of their own abilities to clinically manage nursing care in their areas of practice. The notion of self-efficacy as a basis for informing nursing behaviours is well understood. In the context of missed nursing care, estimating the self-rated ability of participant nurses/midwives facilitates understanding of how attributes of the participant nurses and midwives may impact on how and why missed nursing care occurs. In Figure 3.28, to the right of the vertical dotted line, it can be seen that there is a hierarchical differentiation between the six items associated with self–efficacy in managing nursing care. According to the respondents the most difficult aspect of managing nursing care is to deliver uninterrupted nursing care. Less arduous but still difficult for staff was to deliver nursing care that they saw was consistent with their own standards of clinical practice or how they would prefer to execute nursing care. Still less difficult for the participants was to provide nursing care where there was little information about nursing care provision. For example, where there was no policy or procedure to refer to. It becomes easier to self-manage when the nurses and midwives perceive that they could intervene with nursing

care when they believed that staff did not possess the skills or qualifications for the practice that was demanded of them. Nurses and midwives were reasonably confident that they were able to prioritise care, when other concurrent demands were present and that they could practice autonomously.

These findings indicate that nursing care delivery is interrupted and staff experience difficulty with this. Extrapolating, it would be reasonable to assume that interrupted care can lead to omissions or missed care when nurses and midwives are called upon to simultaneously do other tasks. However, this does tend to negate the fact that nurses and midwives indicated that they did not have a great amount of difficulty with prioritising nursing care (Item 6). While the range of missed nursing skills as surveyed does not seem to be overly taxing in terms of range of skills that would be required of a registered nurse, it is possible that nursing staff who do experience difficulty with undertaking specific nursing skills of which they are uncertain, would find this problematic when there are too few resources to refer to (Item 5). This situation could reasonably be manifested in missed or inappropriate nursing care. Providing nursing care that is inconsistent with the nursing staffs' own expectation of the standard of care was problematic for participants (Item 2). In terms of missed care, how might this evolve or manifest itself? Does witnessing inferior or missed care act as incentive for nurses and midwives to strive to provide care at a higher level, such as, care that is consistent with their own and nursing practice standards or is the effect more negative? Alternatively, if nurses witness inferior and/or missed care within a work culture where there is a "this is the way we do things around here" mentality, does this thinking shape how inferior or missed nursing care becomes perpetuated?

It is feasible that staff who lack autonomy in their clinical practice, have little determination or effect on patient care, and experience dissatisfaction with their work and nursing roles which contributes to missed nursing care. Participants in this survey did not experience threats to their autonomy for practice. Lack of expertise was not identified as a problem underlying missed care with this cohort of nurses and midwives as they indicated that intervening in nursing care when other staff seem to lack the skill, was not problematic.

Interrupted nursing care appears to be the norm for the nurses and midwives surveyed. What is not clear is to what extent such interruptions to nursing care constitute missed or omitted care. Almost counter intuitive to the findings of missed care is that the surveyed nurses and midwives reported that they did not find it a problem to be autonomous in their delivery of nursing care, and prioritising simultaneous nursing care demands was only slightly more difficult. Implementing nursing care in the absence of policy/procedure/guidelines was not seen as a very difficult issue impacting on how nurses and midwives manage care and even easier for the nurses and midwives was their ability to intervene in providing care if and when other staff lacked skills to do so. Examining the range of nursing skills offered in the survey, and in light of their responses about skills and mastery levels, the complexity of skills required by staff would not seem to be readily apparent. Additionally, the skillmix in the clinical area does not seem to be a factor for missed care either because nurses and midwives

indicated that providing nursing care when others lack the skills to do so was not an issue. This might also suggest that the skillmix of qualified staff numbers rostered is also adequate.

Reasons for missed nursing care

The last portion of the missed care survey explored reasons for why missed care occurred and 18 items were listed. The scale used to measure the directions and intensity of all of these reasons consists of four options that ranged from no reason, to minor, moderate or significant reasons. Table 3.2 lists these.

Table 3.2: Descriptions of the types of reasons why reported nursing care was missed

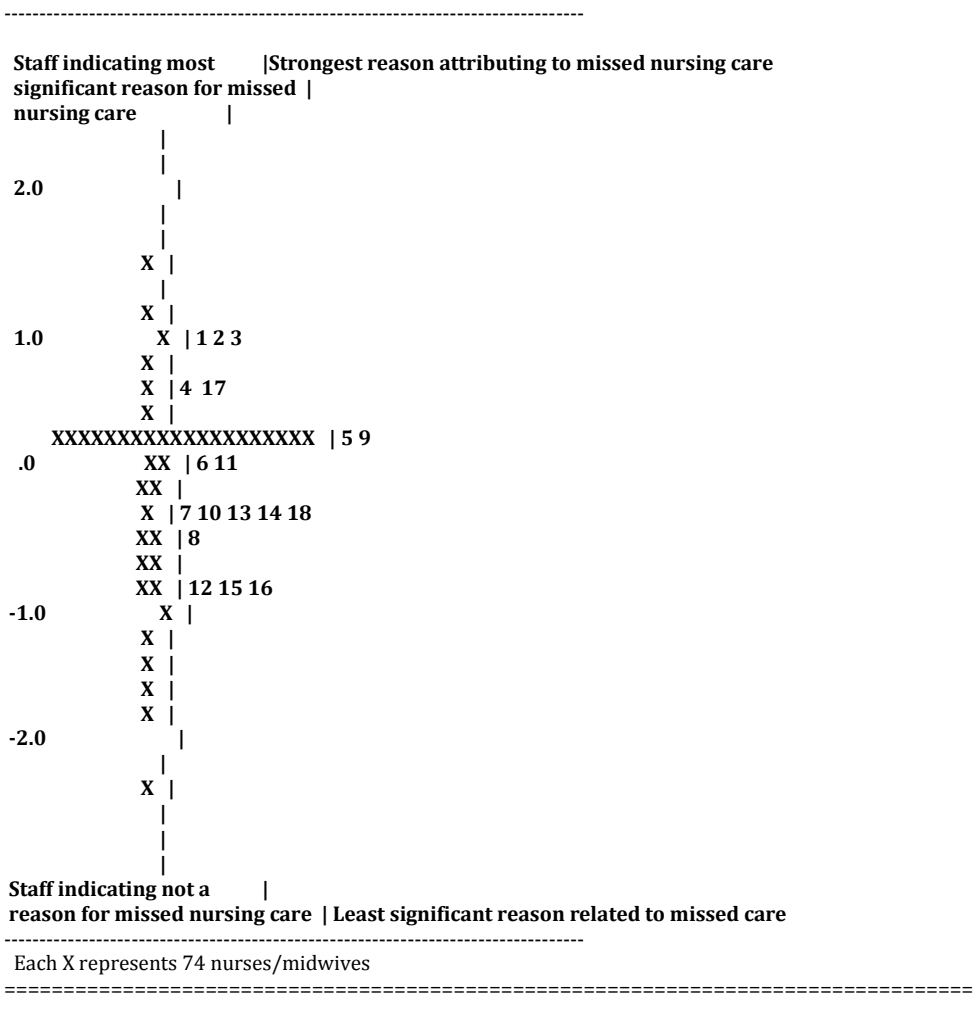
Item no	Reason for reported missed nursing care	Item No	Reason for reported missed nursing Care
1	Inadequate number of staff	10	Supplies/equipment not functioning properly when needed
2	Urgent patient situations (e.g worsening patient condition)	11	Lack of back up support from team members
3	Unexpected rise in patient volume and/or acuity on the ward/unit	12	Tension or communication breakdowns with other ancillary/support staff
4	Inadequate number of assistive and/or clerical personnel (e.g. care assistants, ward clerks, porters)	13	Tension or communication breakdowns in the nursing/midwifery team
5	Unbalanced patient assignment	14	Tension or communication breakdowns with medical staff
6	Medications not available when needed	15	Nursing assistant/carer did not communicate that care was not provided
7	Inadequate handover from previous shift or patient transfers into ward/unit	16	Nurse/carer assigned to patient off ward/unit or unavailable
8	Other departments did not provide the care needed (e.g. physiotherapy did not ambulate)	17	Heavy number of admissions and discharges
9	Supplies/equipment not available when needed	18	Registered Nurses and midwives not available or not available in a timely manner

Figure 3.29 identifies nurses' and midwives' beliefs as to why nursing care is missed based on their views of how important each of the factors were in contributing to missed care. To the right of the vertical line in Figure 3.29, are the item numbers that represent each of the

eighteen given reasons for missed nursing care addressed in the survey. To the left of the vertical line are a series of X's, each representing 74 nurses and midwives. Those nurses and midwives who believed the reasons given in the survey were largely responsible for missed care are located in the upper range of the logit scale (adjacent to logit +1.5) with other nurses and midwives believing that the factors given in the survey were less attributable for missed nursing care. The X located at the bottom of the scale, are those nurses and midwives who believe that the reasons given in the survey, were only minor reasons for care being missed.

With reference to Table 3.2 and Figure 3.29, it can be seen that items 1, 2 and 3 are cited as being of equal importance in accounting for why nursing care is missed. These relate to inadequate number of staff, urgent patient situations (which require staff attention) and unexpected rises in patient numbers or acuity, respectively. As these items occur unilaterally on the Rasch scale, each is thought to be a moderate reason for missed care.

Figure 3.29: Reasons for missed nursing care based on nurses'/midwives' attribution scores.

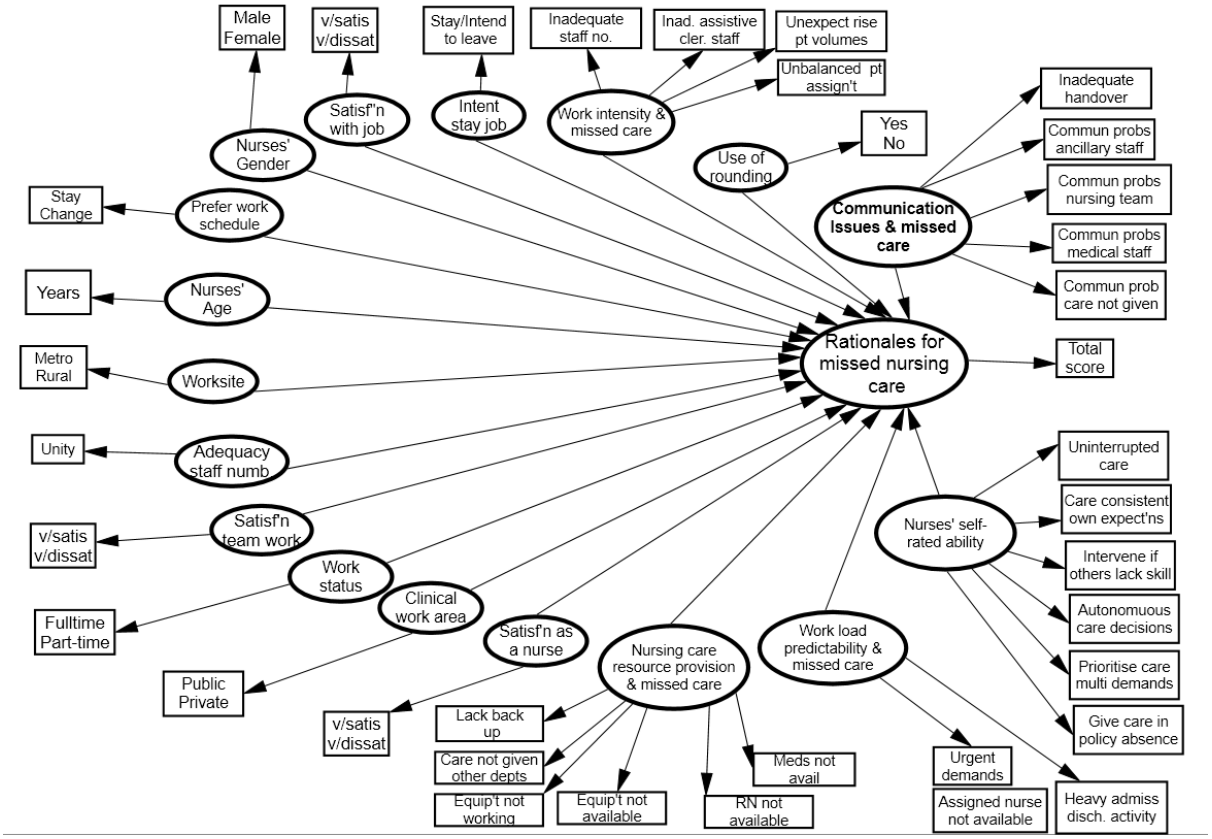


Of marginally less importance are items 4 and 17 which are described as inadequate number of assistive personnel to nurses and midwives (such as ward clerks, porters) and heavy admission and discharge patient demands (Items 4 and 17 respectively). Minor reasons for missed nursing care arise from items 12, 15 and 16 where communication problems with ancillary staff, poor communication regarding whether or not care was completed and absence of rostered staff from the clinical area having minimal effect on care completion.

Predicting why nursing care is missed

Figure 3.30 proposes which factors are thought to influence the reasons why nursing care is missed. This hypothetical model is developed from the variables contained in questions to the missed care survey (Refer to questions 1 to 33 and question 52 in appendix A), which are demonstrated as the variables contained within the small rectangles in Figure 3.30. These factors (termed manifest variables) in turn reflect latent variables (developed in the diagram as ellipses) which will, it is hypothesised, influence the magnitude behind the reasons why nursing care is missed.

Figure 3.30: Hypothetical model demonstrating the variables influencing why nursing care is missed.



Participant nurses and midwives' demographic factors are identified in this study as age, gender, worksite, clinical area of employment and work status. Affective measures were participant nurses and midwives' perceptions about clinical and work related areas and are

reflected in their attitudes toward their roster time of work, their satisfaction at being a team member, a nurse, and with their current job, and whether or not they intend to leave their current job. They were further asked if rounding is practised in their clinical area and to what extent they are satisfied with the adequacy of staff within their work area. The last five domains explored as factors that influence why nursing care is missed relate to the provision of resources (to provide nursing care) in the work area, to what extent communication between clinical and other team members influence care omission and how might nursing workload and nursing work intensity influence missed nursing care. Lastly, the nurses and midwives' own ability (self- efficacy) to manage aspects of nursing is also explored. In total 17 variables are believed to have a significant influence in accounting for why nursing care is missed.

The following variables were found not to have a statistically significant influence of why nursing care was missed in the clinical environments studied in this project. Participant nurse *gender*, whether they had *gained their qualifications in Australia or overseas*, nor the *level of their qualification (below or above Bachelor level)* had any effect. Similarly, the nature of the worksite either being *private or public* had no influence, or the nurses and midwives' ratings about their *current level of health*, levels of *staff adequacy*, or their *satisfaction with their involvement as a clinical team member.* Their *level of clinical experience* was not a significant influence on the magnitude of why nursing care was missed nor was *their intention to stay or leave* their current employment.

In Figure 3.31 and Table 3.3, the variables that have a statistically significant direct influence on the nurses and midwives' beliefs as to why nursing care is missed are listed. The scope of that influence is expressed in a co-efficient, together with a listing of additional variables that influence why care is missed indirectly[1]

[1] Indirect influence occurs when another secondary variable simultaneously influences a major or primary variable).

Figure 3.31: Final model predicting those variables influencing why nursing care is missed

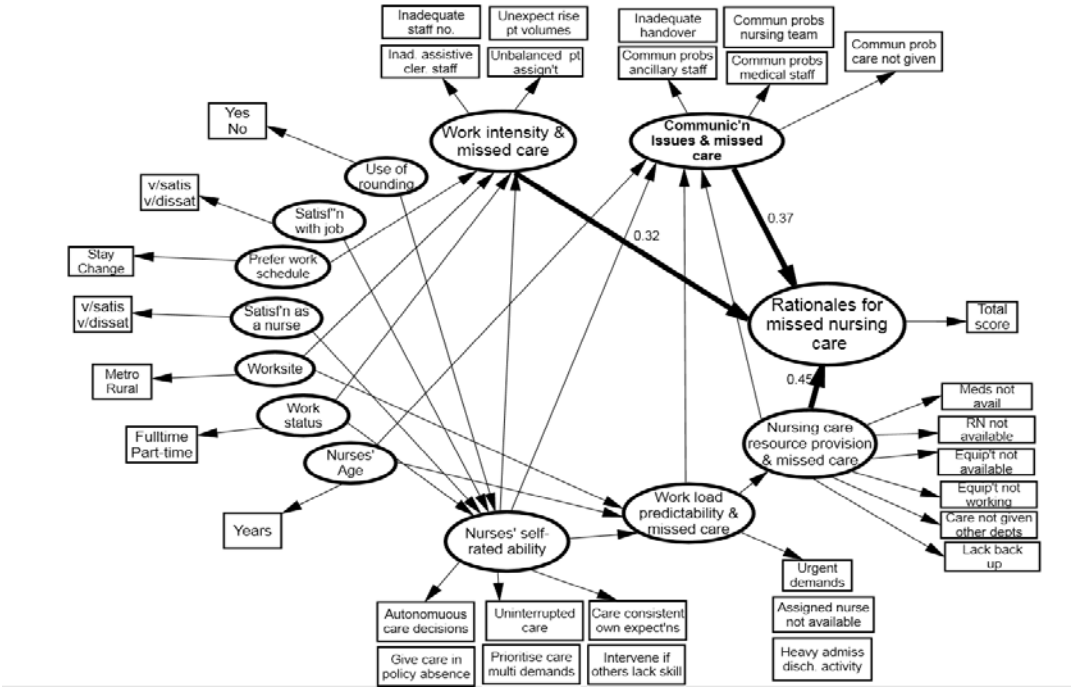


Table 3.3: Variables found to predictive of why nursing care is missed

Major variable or factor attributing to missed nursing care	Magnitude of **direct** influence on why nursing care is missed (co-efficient)	Other influences on this major variable (= having an **indirect** effect on why care is missed)
Provision of resources for nursing care	+0.45	Workload predictability
Communication between clinical & other team members	+0.37	Nurses and midwives' age, Workload predictability & Nurses and midwives' self-rated ability
Workload intensity	+0.32	Worksite, Work status, Roster preference

From Table 3.3, it can be seen that three variables are statistically significant (with little variance between them) in terms of their intensity on the nurses and midwives' perception about why care is missed. The provision of resources to provide nursing care remains the cardinal reason in their eyes however, this factor is further exacerbated by variables that impact on the predictability of their work. In this context, these two factors have an additive effect on each other. In effect where there are inadequate resources for nursing care, in the presence of unpredictable nursing volume the attribution of missed nursing care is compounded. Communication tension between staff was also cited by participants as a

significant attribution for missed nursing care. Such tensions are derived from issues related to nursing resources provision and the unpredictability of the work nurses and midwives do. Contributing to the communication tensions is the age of the nurse (aged 34 years and lower) and their own levels of ability (self-efficacy) to manage their work and particularly to provide uninterrupted nursing care and care that is at a standard to what they think should be provided to patients. The last significant reason underlying why nursing care is missed are work intensity factors such as high turnover of patients. This is directly impacted upon by other intervening factors such as worksite (city/metropolitan hospitals), work status (working more than 30 hours per week) and rosters (preference to stay on current roster of work) and self-ability to manage work (inability to provide uninterrupted nursing care in particular).

Summary of findings

New South Wales nurses and midwives indicate that nursing care is missed. The frequency and type of nursing care that is significantly missed varies according to the shift time (most frequently during day shifts) and the particular nature of the nursing care required to be given (treatment-related nursing care is missed most frequently). Predictive factors associated with the frequency of missed care include staffs' employment status (full or part-time), job roster preferences, worksite type (rural or metropolitan and private or public sector), and satisfaction with current job and levels of teamwork. In the clinical areas identified as using rounding, this practice is seen to be associated with an increased frequency in missed nursing care. Factors associated with missed nursing care include the provision of clinically-related resources, communication tension within the clinical environment and workload intensity.

Chapter Four: Qualitative Findings

Additional information was collected through open-ended questions that asked respondents to comment further on missed care in their work area. The following data was collated from responses to the following question: “Is there anything else you would like to tell us about missed care?” This question was completed by 947 participants. The answers to this question addressed both the causes and the impact of missed care.

Causes of missed care

Work intensification

Participants associated missed care with having insufficient staff to meet the demands of nursing care. Work intensification was seen as another causal factor by nurses and midwives who associated it with the increasing complexity of their roles. This view is exemplified by the following quote from an experienced RN:

> I have been nursing for 30 years, hospital trained. There is a huge amount to our role from when I first trained, we have less nurses than ever, and our role keeps on expanding. We can’t cover all the things we need to do because of this. (114)

The increasing complexity of nursing roles has resulted in part, from increasing patient acuity. Nurses working in hospital, community and aged care services all argued that they were managing patients with more complex needs and multiple co-morbidities. Hospital nurses associated the increasing complexity of patient needs with the aging of the population. One nurse said that:

> …due to the increase in elderly in the ward it makes our nursing day very hard. Acuities are higher. Patients to me are a lot sicker and have more co-morbidities. Doubles our workload. (243)

Another hospital nurse said: “We are caring for sicker patients on the wards because the increase in chronic illnesses mean that often our patients are older and have multiple problems apart from the presenting one.” (569) Nurses and midwives in community services stated that increasing acuity was related to earlier discharge from hospital and poor discharge planning. One community nurse stated that “With hospitals trying to discharge patients asap and be then taken into care of the community nurses, the community services cannot meet the demand to a satisfactory standard." (137) Another community nurse argued that, "The client could be discharged to the community with a wound either surgical or pressure related" without an assessment being done of mobility status and capacity to undertake ADLs (728).

Aged care nurses also argued that there was increased acuity among residents. One nurse described “aged care [as] sub acute care” (535) while another said, “residents are coming in older with more medical conditions and many diabetes and cancer diagnoses. Lots of wound infections need constant dressings attended.” (490). For a third nurse:

> The type of patients we are receiving into aged care has changed over the years that I have worked in this field. Where once they were frail and largely bed/chair bound aged, now they are living much longer, have complex medical needs and have increasing dementia/psychiatric diagnoses, wandering and behaviours. (484)

A third factor identified by nurses and midwives as contributing to work intensification is cost containment. In the public sector, nurses and midwives argued that "successive governments have cut back health spending with a concurrent increase in the negative indicators of every aspect of care". (89) This is viewed as leading to nursing care "being performance driven, task orientated and not primarily patient orientated". (147) For community nurses, cost containment was identified as contributing to the privatisation of service delivery and competition for funding. One community nurse said, "our whole community nursing sector will soon be deprived of HACC funding which will reduce our staff severely and undermine quality of care accordingly". (515) Another community nurse noted that "all services and departments will be forced by this scheme [activity based funding] to compete against each other for the reducing funds we are allocated...Everything has gone to 'here today gone tomorrow' private contract[ors]". (741) Nurses and midwives in private hospitals and residential aged care stated that cost containment had a direct impact on staffing and quality of care. Nurses in the private sector argued that the owners of private hospitals have "no idea about health care, it is all about profit" (545) and that "private hospitals are all about money". (499) Likewise a nurse in residential aged care stated that "it seems that the bottom line, the dollars are the most important to my organisation". (519)

Staffing issues

Staffing levels were consistently identified as inadequate and a contributor to missed care. Missed care was directly related by participants to "short staff [and] too many patients to one nurse"(2), "missed nurses" (17) and reduced staff numbers. (95) The nurses and midwives identified a number of factors that contributed to poor staffing. Among them were: staffing models, in particular, staffing ratios; staff skill mix; changing workloads across shifts; and poor support from other staff.

Staffing ratios

Staffing ratios were a major factor in staffing issues. The primary concern raised by participants about staffing ratios was that they do not account for patient acuity. One nurse said that "staffing is done on hours per day per patient care in this facility and takes no account of the acuity of the patient, leaving minimal staffing with some very difficult/heavy patients to care for". (42) The establishment of ratios created difficulties in arguing for further staff when work intensified. Another nurse stated that missed care is "usually a patient acuity issue as management work on a purely numbers based system for staffing [and I] find it very difficult to make them listen that we need more staff when we have a lot of very heavy patients". (631) As a consequence, nurses missed care due to "increasing patient complexity and no capacity to expand nursing hours to meet any variation in need". (599)

A second issue in relation to staff ratios concerned the ratios established for some services, most notably rural and remote hospitals and midwifery or maternity services. Participants from rural hospitals argued that they had insufficient hours allocated to deliver the care required as poor access to resources led to other demands on nursing time. One nurse stated:

> ...nurse/patient ratios are less in country hospitals supposedly because the acuity is less. That may be so in some instances, but the time spent getting a doctor to come from a

> busy ED to attend a patient in need of review, chasing up medication orders, clarifying same, facilitating an urgent transfer, ordering extra medications which have not arrived from the pharmacy situated 150km away and making some sort of arrangement to procure other or same medications from a different source can [take up] most of the hours of the shift. (298)

As a consequence, “the implementation of nursing hours has had a somewhat negative impact on rural hospitals as the management give you less staff to look after the number of patients”. (144)

The primary concern for midwives in relation to ratios was that workloads are unpredictable and babies are not included in ratios. One midwife observed that the tool used to staff midwifery services in NSW public hospitals Birthrate Plus, “doesn’t work [as] we are constantly short of appropriate staff”. (830) Ratios were viewed as being higher than on other wards which may not reflect the reality of midwifery work which experiences “changes in acuity and surge activity” of births (829) and additional work associated with managing women who have caesarean sections (333) and pre-term babies. This was identified as problematic by one midwife who said, “more and more babies need observations, BSL’s, antibiotics [and] assistance with feeding." (847) Ratios were also identified by RN’s working in aged care which has “has no nurse/patient ratio requirements...[which] puts patients/residents care at risk and it also places huge pressure on staff members”. (23)

A final issue about staffing ratios was a perception that they were not being honoured; a nurse working in a rural setting stated, “the union push for less patients per nurse is not applicable to us. Our health service just ignores this as they detest the union”. (613) Other services have established ratios but adopt practices that result in higher patient to staff ratios. These practices include not factoring ‘specialled’ patients into patient numbers, sending staff to relieve in other areas without replacing them, not providing adequate staffing to cover higher acuity outlying patients and not replacing sick staff. For example, one nurse stated, “If we are lucky we get a special for the shift (usually on night duty), but the special comes out of our allocated staff numbers on morning and late shift, not an additional staff member". (248) Another said, “our manger insists when we have a heavy workload in emergency and/or acute care, that we borrow staff from aged care, which means staffing in aged care is compromised, so nursing care is also compromised”. (681)

Skill mix

A second staffing issue related to skill mix. Nurses and midwives argued that senior staff were being replaced by less experienced RNs or staff without wide breadth of practice, AiNs were being used inappropriately to cover staff in areas providing complex care, and that specialist areas such as maternity services were being staffed by generalist nurses. A number of more experienced nurses and midwives argued that there were, “not enough senior/experienced staff to deal with [the] acute clinical needs of patients”. (935) The employment of less experienced staff was viewed by some as increasing the risk of mistakes being made. Another senior nurse stated, “each government, in an attempt to save money, has compounded this problem [missed care] by removing corporate knowledge, (senior

experienced staff that teach as well as supervise), and replacing them with inexperienced unqualified novices who make mistakes rather than decisions". (70) For other nurses, particularly those in aged care, mistakes arose from not having sufficient time to supervise junior staff. An RN in aged care stated, "newly graduated RN's are...not given any real supervision or training due to no other RN's [being] around or [being] too busy providing their own care to residents". (241) Others identify issues with finding time to supervise AiNs resulting in RNs "need[ing] to trust that staff have been delivering hands on care and informing us of changes". (732)

The use of AiNs was also cited as adding to the workload of RNs in hospitals. Participants identified a trend towards temporary or permanent replacement of RNs with AiNs. One nurse stated, "the staff that have either left or are on workers comp or sick leave or are seconded to other areas are not being replaced at the same level, [that is] RNs are being replaced by AiNs". (261) Another noted: "the increase in the number of AiNs being used to backfill [RNs on] sick leave is way too high (almost every occasion of leave) [and this] places greater pressure on the RNs left on the floor". (775) AiNs were also said to be unable to do much of the work required (897) A nurse said:

> ...when there is an AiN assigned to the ward, the team leader is forced to work with that AiN with a patient load as well as carry out duties as a team leader. This is a huge strain on RNs and basically makes the role of team leader disliked. (865).

This is even more problematic in wards requiring specialist skills. A midwife cited "skill mix [as] a major problem where I work. There are too few trained midwives for the volume of patients, so RNs, ENs and AiNs are used to make up staff numbers but they are not skilled in looking after maternity patients". (781) Likewise, "the introduction of three AiNs and four ENs in an acute medical oncology/palliative care ward, has made skills mix (sic) awful...patients suffer as there are not enough RNs to deliver essential opioids and chemotherapy". (308)

Changing workloads across shifts

A third staffing issue relates to factors that lead to fluctuations in workload across shifts. Workload can be impacted by unexpected events and emergencies; patient throughput resulting from admissions, discharges and movement of patients between wards to free beds for patients from the emergency department; competing demands; and the employment of casual staff for shorter shifts. Many participants noted that: "staff[ing] is based on what is on the ward now and doesn't cater for when emergencies occur"(32), resulting in nurses and midwives prioritising crisis care over the needs of other patients when emergencies occur (81). The prioritising of crisis care is particularly evident in emergency departments. One nurse stated that, "in ED it is all about prioritising care in an often dynamic, very busy area. Basic nursing care, such as feeding patients, turning patients, bathing etc is not a high priority in the ED". (7) Capacity to deliver basic nursing care in ED has been further eroded by National Emergency Access Target (NEAT) policies which require patients in public hospitals to be either discharged or moved to the wards within four hours. Another ED nurse identified "more stress in ED to move a patient to the ward despite not having been able to finish doing what the doctor has ordered". (24) Sudden changes in workloads due to

emergencies were also identified by mental health nurses and midwives. For mental health nurses this resulted from patients experiencing increasing “risk either to themselves or others” (56) and for midwives a “great influx of women”. (77)

Throughput of patients also contributed to fluctuations in workloads during shifts. Demand for beds has resulted in increased pressure to discharge patients earlier in the day and to move patients between wards to free up beds. One nurse commented, “there is lots of time frame we have to fit in, time frame of transferring patient to the ward, time frame to d/c [discharge] patient...pressure from patient flow manager...pressure from [the] bed manager...NUM etc”. (290) Many nurses and midwives identified pressure to discharge patients early in the day, which compromises their ability to provide other care. One nurse noted:

> ...our ward has been told our first discharge has to be out by 8am! All other discharges, they want down in our discharge lounge — preferably by 10am. This doesn't allow for care to be given, especially to day 1 post op patients, nor can they be adequately monitored. (221)

Other nurses and midwives mentioned being pressured to admit or transfer patients after-hours to meet NEAT requirements. One nurse noted that, “some patients can be in as many as five wards during their hospital stay — patients are frequently transferred [in the] early hours of the morning” (72). Likewise, a nurse working afternoon shifts stated:

> Due to the increased volume of patient movements in and out of the unit on afternoon shift I believe this is the shift when most missed care occurs as staff are so busy making sure patients have everything they need for discharge or transfer, or admitting new patients & chasing medications after pharmacy hours etc. Also with patients from ED needing to meet NEAT they often come to us without having had a meal, or with observations that are not 'between the flags' which we then have to deal with. (773)

The capacity to complete tasks during shifts is also compromised by juggling competing demands. The tasks most commonly identified as creating unnecessary work were the amount of documentation and completion of mandatory online education. Nurses and midwives objected to additional documentation when it was seen as meeting organisational and reporting requirements, rather than patient needs. One nurse commented:

> Nurses are continuously having additional paperwork added to their load, e.g. patient rounding tick boxes, ward audits, pressure area assessment on Wednesday, falls risk assessment on Friday, whilst at the same time they are given higher acuity patients and less skilled staff e.g. AiNs. When will they realise that patients will be safer when the highly skilled nurses are able to spend more time with patients? (714)

RNs in aged care highlighted the amount of documentation required for funding purposes. A nurse said for example that a “contributing factor [to missed care] can be the demands of completing documentation purely for funding purposes (ACFI). This takes a considerable amount of staff time and does not improve outcomes for the resident”. (853)

A final factor contributing to fluctuating workloads across shifts was the trend of employing staff for shorter shifts. This was noted by nurses and midwives working in hospital and aged care settings and resulted in the remaining staff having to undertake additional work. A nurse in aged care said, "short-shifting often leaves my wing with only two, maybe three carers to tend to 38 residents after lunch. [The] post-lunch toilet/repositioning round cannot be effectively performed". (178) Similarly, a hospital nurse noted: "agency staff are only rostered for six hour PM and seven hour AM shifts, which can sometimes leave a gap in care or may mean the patient has to wait". (673)

Poor support from other staff members

Nurses and midwives mentioned a final staffing issue that increased nursing workloads and contributed to missed care — poor support from other staff. They cited significant time being spent on tasks that could be performed by support staff (e.g. ward clerks, cleaners and wardsmen); attending to services that could be provided by allied health staff; and chasing medical personnel. Nurses and midwives in metropolitan hospitals argued that they have less access to support staff than previously. One stated:

> …it isn't nurse ratios that are an issue, it is the lack of support staff we have...10+ years ago there were more ward assistance [assistants]/wardsmen and these staff actually assisted with mobilising and getting people out of bed...now there are significantly less wardspersons and they are just glorified porters who do not actually touch patients". (597)

Lack of support staff was identified as a more common problem after-hours and by nurses and midwives working in rural settings. One nurse stated:

> Nursing staff are picking up everyone else's jobs in rural settings especially after-hours, no security, no clerical, no wardspersons, no cleaners, increased difficulties in accessing mental health support, transport issues for getting patients to referral and base hospitals after hours [and] supporting locum [doctors] who are then expected to work greater than 48 hours on continual call. (179)

Lack of access to allied health staff was also identified as increasing nurses' workloads, particularly in community, rural and aged care settings. One nurse stated, "In our unit it is really the allied health component that causes significant loss of nursing time due to inequity of access to social work across all geographical areas [where] the nursing team works". (13) Another noted that "We don't have enough support staff like social worker[s] or psychologist[s]...Lots of non nursing work has to be done by nurses due to [the] above lack". (118)

Finally, nurses and midwives identified concerns with access to and working with medical officers. Nurses working in aged care and private hospitals cited difficulties in accessing medical support. A nurse working in aged care stated that, "medical care is...not provided in a timely manner due to not having a resident medical officer. GPs provide care and some rarely visit. Often they will be contacted several times by the RN before they respond". (242) Likewise, "medical support and reviews in private hospitals is (sic) poor especially for

elderly medical patients". (207) Nurses in public hospitals pointed to difficulties with time management arising from "poor medical coverage"(428) and "chasing [doctors] for anything and everything". (438) This becomes particularly difficult when nurses are being pressured by management to free beds for new admissions and are dependent on medical staff to complete the required paperwork. Another nurse said: "Delays can occur when medical staff are not available to attend to paperwork etc to admit/discharge patients". (663)

Other issues

Participants identified other issues unrelated to staffing and workloads that increased the potential for missed care, namely lack of managerial support. This was widely perceived as managers being too focused on cost containment and being out of touch with the realities of care delivery. This perspective is exemplified by the following quote:

> Nursing management are (sic) often out of touch with what is required on the ground to fulfil all nursing care procedures required to give high standards of care. Many managers have not worked clinically for some time and are more concerned about budget and 'theoretical' quality than actual standards of care which would lead to good quality care. (584)

A further factor that increased the risk of missed care was lack of access to equipment and resources, with nurses citing broken or missing equipment and medication, and running out of stock. Lack of stock was particularly evident at the end of a budget period. A hospital nurse associated missed care with "the end of the month syndrome, when supplies run low and staff work without equipment until we come to re-ordering time". (147) A nurse from aged care said:

> At our facility we are forced to bring our own protective gloves as often supplies run low. Registered nurses at times bring wound care dressings that they have purchased from the local chemist when on consecutive days there are no supplies at the facility. They are told that there are budget concerns. AiNS at least once a month, have no washcloths to bath the residents. We often cut up kitchen Chux to bath residents with. (568)

Poor communication and handovers were also implicated in missed care. While not widely cited, some nurses and midwives identified communication difficulties arising from employing staff who have English as a second language. (191) Poor handover when transferring patients between services and wards and between shifts was also mentioned. One nurse said that missed care occurred when "we receive referrals from other facilities on occasion [and] the handover is inadequate". (642) Another nurse said extra work was required to compensate for poor handover. "Poor handover practice means one spends more time getting up to speed on the current status of residents". (831) Care was also missed due to poor communication among the health care team with one nurse stating: "Lack of communication is usually the main reason for missing nursing care or inadequate care. The health team will change their plan of care and not tell nursing staff and we happen to read the notes at a later time". (431)

The attitude of staff was a further concern of nurses and midwives in relation to missed care. While not mentioned by many participants, a group of nurses and midwives associated missed care with poor staff attitudes and laziness. This view is expressed in the following quote: “Having appropriate staffing including skill mix and willing (not lazy) staff would ensure that nursing care is not missed”. (875)

Impact of missed care

Participants also identified tasks that they viewed as being missed and the impact these had on both patients and nurses.

Tasks perceived as missed

Tension between staffing levels and work demands was seen as leading to “task orientated care”. (78) Nurses and midwives are required to prioritise care and that which is foregone is often basic nursing and interpersonal care. One nurse stated:

> Most of the medically important care is done but documentation is often missed or retrospectively made up. Not much actual nursing care that is not a direct treatment occurs. Not a lot of emotional support or basic nursing care is attended [to]. (55)

Nurses and midwives argued that they have little time to provide personal care. A senior RN bemoaned lack of time to perform tasks which increased patient satisfaction.

> Often it's the things that are mandated that we do and the things that are more personal and make a difference to how the client feels about their care are left as they are not mandated. But they are the things that make a person’s stay in hospital more pleasant! (114)

In addition, care that is viewed as basic, such as attending to hygiene, toileting, feeding and turning patients was cited as being missed. A nurse from aged care stated that “oral hygiene is often ignored by AiN's. Eye care [is] frequently missed by AiN's. Catheter care and perineal hygiene [is] frequently missed by AiN's”. (656) In hospitals, a nurse argued: “…the first things to go are those that relate to basic care as in pressure relief, mobility and mouth/teeth cleaning. Basically the non-accountable stuff”. (673) Another nurse argued that staffing compromised patient assessment and effective risk management. For this nurse, “Other skills being neglected are the assessment, management and recognition of risks such as falls and delirium". (237) Aged care nurses prioritised physical care over mental health care (18) and mental health nurses prioritised mental health care over physical care (370). Nurses in community settings mentioned difficulties in attending to referrals in a “timely manner because of the amount of unfinished work that has not been attended to”. (674) Another nurse argued that, “tasks such as checking bloods, making appointments etc are often missed”. (567)

Impact on patient outcomes

Failure to deliver basic nursing care is associated by some nurses with poor patient outcomes. One nurse stated that patients are experiencing “malnutrition, pressure injury, [and] poor

hygiene". (836) For another nurse, missed care "frequently cause[d] deterioration in [a patient's] condition thus increasing their length of admission and frequency of treatments". (311) For yet another nurse, "patient safety is severely compromised". (355) Missed care was also associated with decreased patient satisfaction. Nurses with recent experience of hospitalisation reported poor patient care. A nurse described her experience in hospital:

> I hear call buzzers ringing for ages. I see patients requesting bedpans not receiving them until too late, then suffer the indignity of a wet bed, I smell that a patient is soiled, while nurses come and go pretending not to notice. I see meal trays left because a patient cannot feed themselves. I know family who always visit at meal times because they feel their parent (or whoever) may not be fed otherwise. I see pumps alarming for too long. (180)

Other nurses felt that they were unable to provide emotional support for patients and their families. One said, "can we have time to hold someone's hand as they die and assist the families through this difficult time?"(61).

Impact on nurses and midwives

Missed care also had an impact on nurses and midwives. Respondents mentioned stressors such working additional shifts, doing unpaid overtime and missing meal breaks so that their work was completed. A nurse working on a casual basis said, "…I see staff right across the hospital miss meal breaks & work beyond their shift times without claiming overtime. It seems to be a common occurrence. I am told the managers won't approve the overtime!" (214) Other nurses said they were pressured to take extra shifts so that wards were covered. One nurse stated that their:

> …workplace complains about lack of staff but refuse to hire/increase nurses' contracts. There is no respect for nurses' time off to the point where nurses are working 10-12 days in a row. Management also keeps a record of [whether] you turn down extra shifts regardless of reason. (532).

Pressure to deliver care under unfavourable conditions contributed to work dissatisfaction. Many nurses and midwives felt they had failed if they had not provided all the care required. One nurse said:

> If it has been an extremely busy, stressful shift and I know I haven't achieved all I need/like to, I leave the ward feeling dissatisfied, upset and sometimes unsupported due to high levels of expectation placed on myself and that of others as to what should be achievable in patient care per shift. (48)

Dissatisfaction, in turn, was associated with staff retention issues and the inability to catch up. One nurse argued, "once the event has been missed, because you were dealing with another priority, there is no catch up, the job remains undone". (381) Another nurse claimed:

> If nursing/midwifery staff continue to be disillusioned with the system they work [in] they will keep leaving in droves. Lack of support is a huge issue and things only seem to get worse. Senior staff are unhappy and often resort to bullying and harassment of more junior staff. Only the most resilient survive and unfortunately patients suffer. (759)

Rounding

Participants were asked three open questions about rounding. The first asked participants how they understood rounding in the context of their workplace. The second question was: “If you are charting or documenting rounds what aspects of care are you recording?” while the third question asked: “in your opinion, how does rounding contribute to quality patient care?"

Understanding of rounding

Participants’ responses as to how they understood the term rounding suggested that many were unfamiliar with the term. With those who offered a definition, there was some confusion as to whether bedside handover or doctors and allied health staff rounds constituted rounding. Other participants associated rounding with regular observations of vital signs, or rounds by senior nursing staff at the commencement of the shift. Participants who had some understanding of rounding, cited the common feature as checking patients at regular intervals, most commonly hourly. The purpose of rounding was understood to be to observe every patient but also to meet patient needs. Issues associated with rounding included regular toileting, pain relief, checking drains and pumps, ensuring call bells were within reach, repositioning patients and checking patients' safety (particularly for mental health patients). Documentation of rounding was also frequently mentioned.

Documentation of rounding

The question of what information is documented during rounding, revealed respondents were confused as to the purpose of rounding. Answers included documenting treatment changes in patients' clinical records; recording information according to ISBAR; and documenting vital signs. Other participants stated that they documented all care given. Most commonly however, participants said that they documented pain levels, position in bed, toileting, whether the patient was awake or asleep, whether devices (e.g pumps, drains etc.) had been checked, nutrition, hydration and safety. In mental health settings, safety checks involved checking patients for self-harm.

Contribution of rounding

While the question was worded in a manner that implied rounding contributes to patient care, opinions as to its value were divided. Many participants indicated that they could not see the value in rounding or alternately viewed it as an unproductive additional task. The primary objections to rounding were that it was time-consuming, detracted from patient care and that the documentation associated with rounding was often incomplete, inaccurate and unnecessary. Advocates of rounding assert that it enhances patients' satisfaction as they have regular contact with nursing staff; ensures basic care is delivered; enables timely assessment of patients and greater opportunity therefore, to identify changes in patient condition; improves patient safety, particularly in relation to falls and self-harm; and reduces use of call bells. Rounding, it was also claimed, increased accountability and assisted nurses and midwives to meet their duty of care. It was noted however, that staffing has to be sufficient for rounding to be effective.

Concluding Comments

Answers to the open questions highlighted the effects of work intensification and staffing issues on missed care. The specific issues cited were: increasing patient acuity; cost cutting; staffing models; skills mix; fluctuations in workloads across shifts; and lack of, or poor access to, support staff and administrative, allied health or medical staff. Other factors contributing to missed care were managerial attributes; lack of equipment and resources; poor communications and handovers, and nurses' attitudes. Missed care was associated with poorer patient outcomes and satisfaction, and with unpaid overtime and staff attrition. Participants were also asked to comment on rounding. Rounding was found to be poorly understood with the majority of respondents viewing it as an additional and unproductive task.

Chapter Five: Bringing it together

This chapter brings together key findings from the quantitative and qualitative data to identify the factors which contribute to missed care and that which is most likely to be missed. Where data is available, comparison will be made with results from the survey conducted in South Australia and New Zealand.

Causes of missed care

Work intensification

A significant factor in missed care in this, and comparable surveys, is work intensification arising from staff shortages. These shortages are associated with inadequate numbers of nursing, assistive and clerical staff, as well as sudden changes in patient volume and/or patient acuity arising from a worsening patient situation or heavy admissions and discharges. Figure 3.31 demonstrates that four factors (inadequate staff numbers, inadequate number of assistive or clerical personnel, unexpected rise in patient acuity and/or volume of patients and unbalanced patient allocation) account for 32 percent of the variance in missed care. Communication issues accounted for 37 percent of missed care, and access to resources for 45 percent. Access to resources is directly related to fluctuations in workload suggesting it is viewed as being more problematic when workloads increased unexpectedly. Similar responses are obtained when exploring responses to the scale items. Table 5.1 summarises the five factors most commonly identified as increasing missed care in New South Wales, South Australia and New Zealand. As can be seen from Table 5.1, there is a significant overlap in the factors which are seen as contributing to missed care; and all are related to staffing levels or acuity of patients.

Table 5.1: Five top reasons for missed care in NSW, SA and New Zealand

NSW	SA	New Zealand
Provision of resources for nursing care	Unexpected rise in patient volume and/or acuity on the ward/unit	Increased acuity of patient workload
Urgent patient situations (e.g. worsening condition of patient)	Inadequate number of staff	Urgent clinical situations
Unexpected rise in patient volume and/or acuity on the ward/unit	Urgent patient situations (e.g worsening patient condition)	Inadequate number of staff
Inadequate number of assistive and/or clerical personnel (e.g. care assistants, ward clerks)	Heavy admission and discharge activity	Unexpected rise in patient volume
Heavy admission and discharge activity	Inadequate number of assistive and/or clerical personnel (e.g. care assistants, ward clerks)	Heavy admission, discharge and transfer activity

Table 5.2 compares the top five reasons for missed care cited by nurses working in the public and private sectors in NSW. While there is an overlap in the reasons offered, nurses working in the private sector identified a more concern with the number of staff, while nurses in the public sector highlighted the role of throughput and acuity in creating missed care.

Table 5.2: Five top reasons for missed care in the public and private sectors in NSW

Public	**Private**
Unexpected rise in patient volume and/or acuity on the ward/unit	Inadequate number of staff
Inadequate number of staff	Urgent patient situations (e.g. worsening patient condition)
Urgent patient situations (e.g. worsening patient condition)	Inadequate number of assistive and/or clerical personnel (e.g. care assistants, ward clerks, porters)
Heavy admission and discharge activity	Unexpected rise in patient volume and/or acuity on the ward/unit
Inadequate number of assistive and/or clerical personnel (e.g. care assistants, ward clerks)	Unbalanced patient assignment

These findings are reinforced by the answers given to the open questions. The respondents pointed to having to manage more complex and older patients with multiple co-morbidities across all sectors as the main cause of heavier workloads. For many respondents, attempts to contain costs have also contributed to work intensification. In the public sector, privatisation of service delivery and changes in funding models have resulted in community nurses meeting increasing demands with reduced funding while nurses in the private and aged care sector highlight the direct relationship between profit and staffing levels.

Staffing issues

Nurses and midwives in all sectors cited staffing shortfalls as a problem at least some of the time; only 8 percent stated that they always had adequate staff. Forty-one per cent stated that staffing levels were adequate 75 percent of the time, while 28 percent of respondents believed staffing levels were adequate 50 percent of the time. Seven percent of respondents thought that staffing levels were never adequate. Factors viewed as contributing to staffing issues were workload models, staff skill mix, fluctuations in workloads across shifts and poor support from other staff.

Workload models were identified as problematic for three reasons. Most frequently, nurses and midwives argued that Nursing Hours per Patient Day (NHPPD) formulas cannot account for fluctuations in acuity and throughput of patients during shifts. A few respondents compared experiences of staffing ratios in NSW unfavourably with similar experiences in Victoria. Literature exploring the impact of mandated staffing ratios is mixed. Twigg,

Duffield, Bremner et al., (2012) argue that the NHPPD formula is only effective when the skill mix is included in calculations guaranteeing RN staffing levels. This is demonstrated by data from California that established mandated RN staffing ratios. Sochalski, Konetzka, Zhu et al., (2008) using data before implementation of California's mandated minimum ratios, found that a rise in RN levels of roughly 1.2 percent per year, was associated with lower mortality for patients with acute myocardial infarction. They also found that reductions in mortality associated with increased nursing staff were greatest for hospitals that began with the worst staffing ratios. Likewise, Aiken L, Sloane D, Cimiotti et al., (2010) found that nurses in California had lower patient loads on average than nurses in two other States without mandated ratios. Lower ratios were associated with significantly lower mortality rates, decreases in nurse burnouts and job dissatisfaction; nurses also reported better quality of care. On the other hand, Cook, Gaynor, Stephens et al., (2012: 341) reported that the law assuring minimum staffing ratios in California "…had the intended effect of decreasing patient/nurse ratios in hospitals that previously did not meet mandated standards. However, these improvements in staffing ratios do not appear to be associated with relative improvements in measured patient safety in affected hospitals."

A second issue was the level at which ratios were established for rural and midwifery services. Staff in rural hospitals argue that staffing levels are inadequate and do not account for lack of assistive and support staff, or poor access to resources. Findings suggest that rural and metropolitan services experience significant differences in missed care only in relation to high priority care. Nurses in metropolitan services report greater levels of missed care during day and afternoon shifts, while nurses in rural hospitals report higher levels of missed care on night duty. This finding may reflect differences in the acuity of patients managed in these services but also fluctuations in workloads. Midwives cited issues with the staffing model Birthrate Plus, which fails to account for sudden changes in workloads due to births and exclusion of babies from patient numbers. They argue that there can be significant work in managing pre-term babies or babies delivered by caesarean section. Nurses in aged care cited poor RN: patient ratios which, they said, put patients at risk.

A third concern was the failure of services to honour workload models. In some cases this is associated with open hostility to unions but more frequently, ratios are breached by stealth, through non-replacement of staff, not providing additional staff when patients are specialled, and moving staff from one ward to another with heavy workloads without replacing those staff on the original ward.

Besides the matters cited above that are directly related to workloads, a second issue is the skillmix of staff. Respondents stated this occurred when experienced staff were replaced with recent graduates or staff lacking a wide range of skills and experience in a variety of areas, and using AiNs in wards where there were patients with complex needs. As a result of these practices, the ratio of RNs to patient decreases and the workload of RNs becomes intensified. Nursing skillmix has been associated in nursing research with patient outcomes with poorer RN: patient ratios contributing to poorer outcomes on a range of nurse sensitive indicators. These include urinary tract infections; mortality rates; pressure ulcers; pneumonia and deep

vein thromboses (Needleman, Buerhaus, Mattke 2002; Twigg, Duffield, Bremner et al., 2012). Secondly, increased RN workloads lead to greater difficulties in supervising recent graduates, ENs and AiNs. This is particularly evident in aged care where recent graduates are not adequately supported and RNs have to rely on other staff to report changes in the condition of residents.

A third concern of staff related to fluctuations in workloads across shifts. While not directly contributing to missed care, fluctuating workloads are felt when access to resources is poor. Further, "urgent patient situation", "unexpected rise in patient volume and/or acuity" and "heavy admission and discharge activity" are all cited as common reasons for missed care. The responses to open questions suggest that the workload during shifts is impacted by unexpected events, patient throughput, competing tasks, in particular, documentation and employment of staff for shorter shifts. The impact of unexpected events was most commonly identified by nurses working in emergency departments, where the introduction of NEAT policies that require patients to be moved after four hours lead to the transfer of patients to the wards with tasks not completed. NEAT policies have also increased the workload on wards due to patient throughput and pressure to discharge or move patients to accommodate new admissions.

Respondents also identified difficulties with managing competing tasks. When nurses were asked to rate their capacity to manage their tasks, they said having their work interrupted was as the most difficult thing to manage. The most frequently mentioned activity respondents cited as interrupting patient care was documentation which they viewed as meeting organisational requirements rather than patient needs. A final factor contributing to fluctuating workload across shifts was the employment of staff for shorter shifts. While this was not widely cited, respondents said it created additional work for other nurses who have to cover additional patients for part of the shift.

A final staffing issue relates to support from other staff and the impact lack of support has on nurses' workloads. Nurses and midwives stated that significant time was spent undertaking tasks that could be performed by support staff such as ward clerks, cleaners and wardsmen, particularly in rural services and after-hours. Rural services also identified difficulties that arose when allied health staff could not be accessed. Difficulties accessing allied health staff were also experienced by nurses in community and aged care services. Nurses said that they had to do tasks outside nurses' responsibilities, in order to compensate for the lack of allied health staff. A final issue concerns access to medical staff. Nurses in private services and aged care cited difficulties in accessing medical support, while nurses in public hospitals mentioned tasks being delayed, particularly admissions and discharges, as a result of competing medical demands. Considerable time was also spent chasing medical staff.

What nurses in aged care say about missed care

It is also possible to examine differences in the responses nurses working in aged care provide. These are outlined in Table 5.3 below.

Table 5.3: Reasons given why aged nursing care is missed

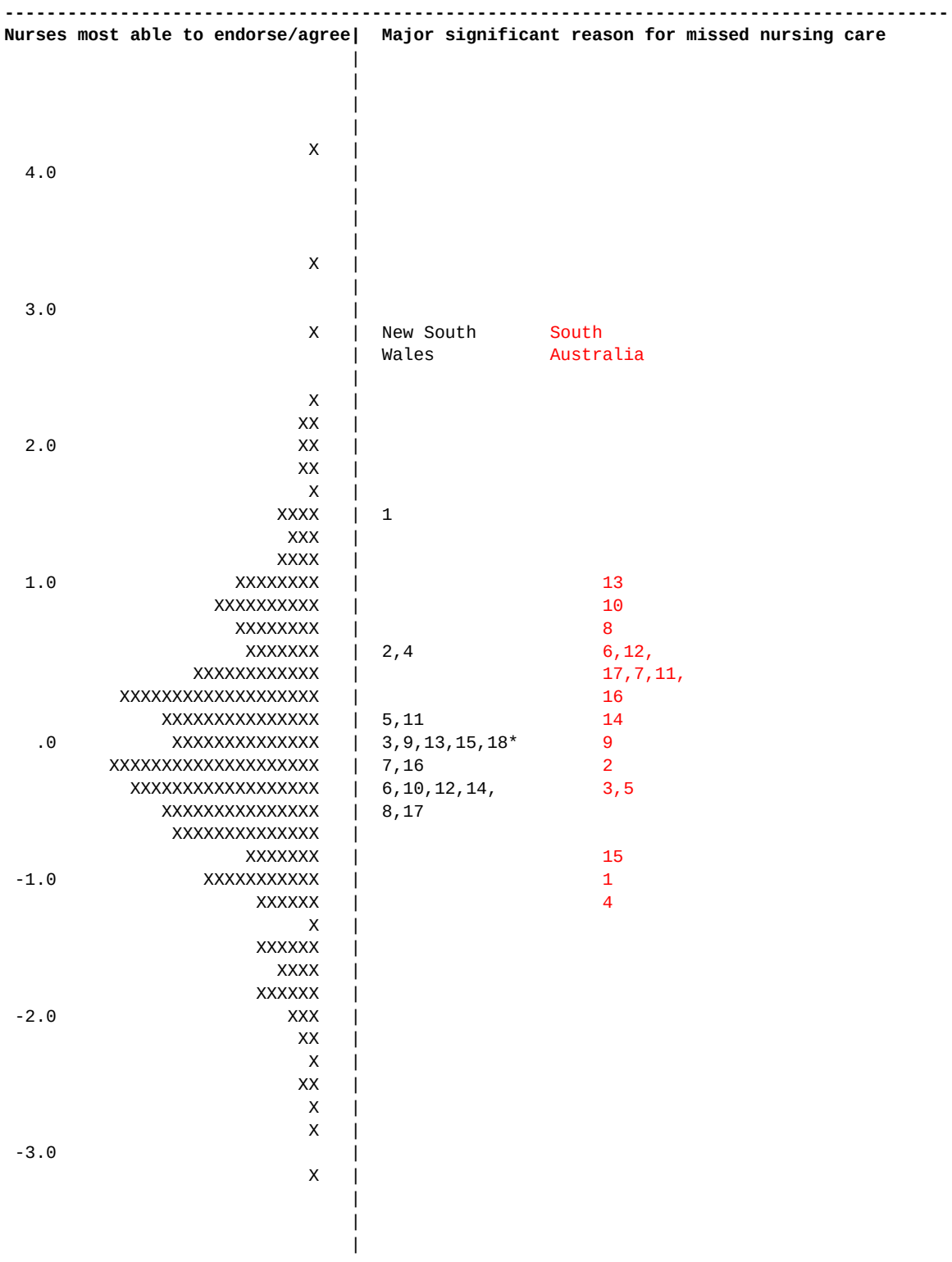
Item no.	Reason for missed aged nursing care	Item no.	Reason for missed aged nursing care
1	Inadequate number of staff	10	Supplies/equipment NOT functioning properly when needed
2	Urgent patient situations (e.g. worsening patient condition)	11	Lack of back up support from team members
3	Unexpected rise in patient volume and/or acuity on the ward/Unit	12	Tension or communication breakdowns with other ANCILLARY/SUPPORT DEPARTMENTS
4	Inadequate number of assistive and/or clerical personnel (e.g. care assistants, ward clerks, porters)	13	Tension or communication breakdowns within the NURSING TEAM
5	Unbalanced patient assignment	14	Tension or communication breakdowns with the MEDICAL STAFF
6	Medications not available when needed	15	Nursing Assistant/Carer did not communicate that care was provided
7	Inadequate handover from previous shift or patient transfer into ward/Unit	16	Nurse/Carer assigned to the patient off ward/Unit or unavailable
8	Other departments did not provide the care needed (e.g. physiotherapy did not ambulate)	17	Heavy admission and discharge activity
9	Supplies/equipment NOT available when needed	18	Not able to access a registered nurse in a timely manner OR registered nurse is NOT available

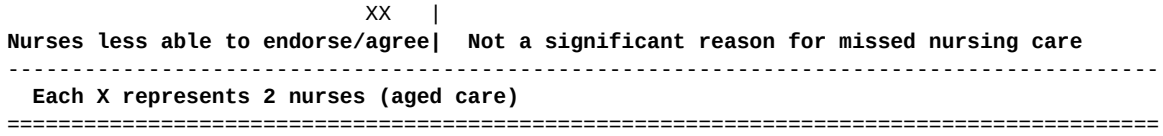
The responses from both NSW and SA nurses are listed below on a map divided vertically by a dotted line. To the right of the dotted vertical line are the reasons for missed nursing care items (shown both for NSW and SA participants) ordered hierarchically from the most important reason to the least important reason for missed nursing care. To the left of the vertical dotted line are X's, each representing two aged care nurse respondents. These are ordered hierarchically. At the top are the reasons aged care nurse most commonly gave for missed nursing care with those at the bottom receiving less consensus.

In consultation with the table above it can be seen that the most significant reason behind missed care in NSW in Figure 5.1 was item 1 and in SA item 13, (inadequate number of staff and communication tension between nursing staff respectively). Moving down the scale it can then be seen that the second most significant reasons for NSW missed care were changes in patient acuity and inadequate assistive/clerical personnel (items 2 and 4 respectively) while in SA, lack of functioning equipment (item 10) was seen as the next most significant reason behind missed care.

Exploring factors that were thought to have a minimal impact of why care is missed, NSW nurses articulated that items 8 and 17 were not significant (other staff not providing care and admission /discharge rates) where as in SA inadequate staff (item 1) and inadequate assistive staff were seen as not being particularly important in contributing to missed nursing care

Figure 5.1: Reasons for missed nursing care: aged care sector by Australian State





Other issues

Respondents to the open questions identified a range of other unrelated issues that contribute to missed care. Among these are lack of support from nursing managers who are viewed as being driven by financial concerns and out of touch with the realities of nursing work. Lack of access to equipment and resources was also viewed as increasing the risk of missed care. Resource issues accounted for 45 percent of missed care when path analysis was undertaken. Nurses in many sectors identified an end of month syndrome resulting in lack of resources prior to reordering, which resulted in having to chase equipment and stock from other wards or nurses themselves providing essential stock such as wound dressings. Poor communication and inadequate handover of patients were also implicated in missed care. Communication issues accounted for 37 percent of missed care when path analysis was undertaken. Communication issues arose with inadequate nursing handovers and having to spend time determining what patient care was required, and with communicating changes in medical orders. A final concern of nurses and midwives in relation to missed care was staff attitudes. While this was only mentioned by a few staff there is a belief that missed care occurs as some nurses are lazy.

Impact of missed care

Table 5.4 summarises the tasks most commonly identified as being missed by respondents in NSW, SA and New Zealand. Results are not directly comparable as there was some change in wording and removal and addition of items (e.g. interdisciplinary case conferences) in different versions of the survey

Table 5.4: Tasks most commonly identified as being missed in NSW, SA and New Zealand

NSW day shift	NSW late shift	NSW night shift	SA	New Zealand
BSL monitoring	Feeding patient while food is warm	Monitoring input/output	Interdisciplinary case conferences	Ambulate patient
Patient education	Emotional support	Vital signs as ordered	Ambulate patient	Rounds
Patient bathing and skin care	Patient discharge planning	Prn medications within 15 minutes	Mouth care	Mouth care
Hand washing	Setting up patients for meals	Setting up patients for meals	Respond to bell in 5 minutes	Fluid monitoring

PRN medication within 15 minutes	Medication administered within 30 mins of schedule	Patient bathing and skin care	Turn patient 2 hrly	Patient washes

Despite this, there are some commonalities. Tasks for this survey were divided into three categories: low, intermediate and high priority care (see Table 2.1). High priority care involves more complex and technical tasks that require judgement such as patient assessment, taking vital signs and BSLs. Intermediate tasks involve tasks that could be considered basic nursing care such as bathing, feeding, toileting, turning and providing medication to patients. Low priority care relates to planning activities and documentation. When collated, intermediate priority nursing tasks account for 63 percent of reported missed care across all shifts. This finding is reinforced by answers to the open questions which suggest that interpersonal and basic nursing care are the tasks that are most likely to be omitted when work intensifies.

The failure to deliver basic nursing care is associated by some nurses with poor patient outcomes. While it is beyond the scope of this survey to establish a relationship between perceptions of missed care and patient outcomes, nurses report issues around patient safety, hydration and nutrition and skin integrity due to missed care. Other nurses felt that they were unable to provide emotional support for patients and their families leading to reduced patient satisfaction with care.

Missed care was also viewed as impacting nurses and midwives. Respondents reported working unpaid overtime to ensure that tasks were completed. When respondents were asked if they had worked overtime in the last three months, 71 percent indicated that they had worked either unpaid overtime or were called in for extra shifts with nearly 16 percent indicating that they had worked more than 20 hours overtime. There is also evidence that pressure to deliver care under unfavourable conditions contributed to work dissatisfaction. When asked about satisfaction with their current position, 28 percent of respondents expressed dissatisfaction with their current job and 18 percent expressed dissatisfaction with being a nurse or midwife. Dissatisfaction in turn, was associated with issues of staff retention. Of respondents to this survey, 34 percent indicated that they were planning to leave their current position within the next year. This number may have been inflated however, by the age composition of the sample and respondents who were planning to retire.

Rounding

This survey also included questions about the frequency and impact of rounding on nursing practice. Rounding has been identified as a means of increasing patient satisfaction by ensuring basic nursing care occurs (Dix 2012). It is viewed as reducing demands on nursing time through less use of call bells due to regular contact with patients. It has also been identified as a means of reducing falls and preventing critical incidents (Helm 2009; Studer group 2007; Krepper, Vallejo, Smith et al., 2012). Of the respondents to this survey, 54 percent stated that they practiced rounding. This number needs to be viewed with caution

however, as participants' responses to the question about what they understood about rounding suggested that it was poorly grasped by many participants, with some indicating that they did not know the term. The tasks that are most commonly included in rounding were level of pain, position in bed, toileting, whether the patient was awake or asleep, devices (e.g.: pumps, drains) had been checked, nutrition and hydration and safety. When the impact of rounding on missed care was analysed, it was found that rounding was inversely related to missed care. That is, missed care was more likely to be reported by nurses practicing rounding. This may be a misunderstanding of what rounding is, but it may also reflect greater awareness of basic care needs due to rounding. It is also likely that rounding has been introduced to services in which basic nursing care is not occurring regularly.

When respondents were asked to reflect on the value of rounding, the results were mixed. Most commonly nurses and midwives viewed it as creating additional work that detracted from patient care and as being poorly implemented and documented. For those respondents that saw value in rounding, it was viewed as contributing to patient satisfaction through regular contact with nursing staff, ensured basic care was delivered, enabling timely assessment of patients and improved patient safety, particularly in relation to falls and self-harm and reduced use of call bells.

What else is happening in NSW?

In chapter three, data was presented from the Adult Admitted Patient Survey (Bureau of Health NSW 2014) that indicated high levels of patient satisfaction with nursing care, despite areas where care was not perceived to be optimal. While the Adult Admitted Patient Survey is limited to the public hospital sector it does provide further insight into nursing work, this time from the patient's perspective and it is worth seeing if there are any shared perceptions. In the MISSCARE survey nurses reported that on the late shift, discharge planning was missed and there was little time to provide emotional support. Patients' views differ somewhat from these observations, obviously because the questions asked do not overlap. Ninety-one percent of patients reported that on discharge the information they received on their medications was appropriate and 96 percent indicated that when they needed to talk to a nurse this need was met to their satisfaction. However, fewer, than 63 percent reported full satisfaction and engagement in their discharge planning, with 26 percent only somewhat satisfied. Consistent with nurse's views of not capturing every patient, 74 percent of patients thought they were given adequate information to manage their discharge to home with another 20 percent partly satisfied. Where nurses reported poor levels of team work, patients indicated that the team work at least between doctors and nurses appeared to be good to very good (89 percent) (Bureau of Health NSW 2014). With the exception of team work, these tasks fall under the low priority categorisation of nursing tasks where there are fewer incidents of missed care (Alfaro-Lefevre, 2008).

There would also appear to be some congruence between what nurses say about hand washing and patient observations with only 65 percent of patients reporting that nurses always washed their hands, and nurses themselves indicated that this is a task that is missed. Patient responses are also close to nurses' and midwives' views on the issue of medication

and pain relief. Twenty-two percent of patients reported their pain was not consistently well managed, or not managed at all (3 percent) with nurses on all three shifts indicating that medication within the prescribed time frame was difficult to achieve. Admittedly not all medication is for pain relief and it is not solely a nursing responsibility. Nurses also identified missed care with setting meals up for patients. This is confirmed by the patient survey where 56 percent of patients reported that they did not get sufficient help to manage their food either sometimes or always with the 35-54 aged cohort the least satisfied reporting 26 percent as sometimes and 29 percent that this was always an issue. Alfaro-Lefevre (2008) categorises this as an intermediate nursing task and as this study suggests, these tasks are the ones most often missed.

It is not surprising given the qualitative comments from nurses that workloads are problematic in the survey results, that patients reported that they could not always access a staff member to assist them (58 percent) and that 10 percent of patients were of the view that there were too few nurses on duty. In chapter 3, we noted that despite the pressures of work and nurses identifying missed care, patients appeared to be satisfied with their care. It is noted that while the two surveys are not comparable, there is congruence between patients' observations and nurses' reporting of missed care. Certainly the evidence from NSW Health (Bureau of Health NSW 2015) on the overall performance of the public health sector in meeting COAG targets, suggests that all health professionals are either working harder, or the elusive re-designed efficient models of care are highly productive.

As a final comment it is not clear what AiNs do in the way of nursing care that are part of the MISSCARE survey. In the qualitative data, nurse and midwives note that AiNs are sometimes substituted for RNs or Midwives. AiNs were not included in respondents to this survey. Their scope of practice does extend to patient hygiene (showering, washing hair, shaving, mouth care etc), toileting, ambulation, feeding and setting up of meals and simple wound dressing. They are also able to admit patients, do patient observations and weigh patients. AiNs are also responsible for cleaning and making beds, and attending to the care of equipment (NSW Health 2010). Further research may be required to determine the impact of employment of AiNs upon missed care.

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Appendix A: NSW Version of MISSCARE Survey

Missed Nursing Care Survey New South Wales

Thank you for participating in our survey. This survey will help us to learn more about nurses' work environments and the care they provide, particularly in the period 'after hours', including weekends. Our questions focus specificallly on the clinical setting adn the shifts you may work during this time.

***1. Do you currently work as a nurse in a clinical setting at least once each fortnight?**

- Yes
- No

About you

2. Gender

- Female
- Male

3. Age

- Under 25 years old (<25)
- 25 to 34 (25 - 34)
- 35 to 44 (35 - 44)
- 45 to 54 (45 - 54)
- 55 to 64 (55 - 64)
- Over 65 years old (65+)

4. Do you work in a ...

- Private setting
- Public setting
- For an Agency

Missed Nursing Care Survey New South Wales

***5. Mark all that apply. Is your workplace located in a**

- Principal referral and specialist women's and children's hospital (A1)
- Large major city acute care hospital (B1)
- Large regional/remote acute care hospital (B2)
- Medium acute care hospital in a major city (C1/C2)
- Medium acute care hospital in a regional area (C1/C2)
- Small regional acute care hospital (small country towns) (D1)
- Small remote hospitals but not 'multi-purpose services' (D3)
- Small non acute hospital
- Multi-purpose service (E2)
- Hospices (E3)
- Rehabilitation (E4)
- Mothercraft (E5)
- Other non-acute (e.g. geriatric treatment centres combining rehabilitation and palliative care with a small number of acute patients) (E9)
- Psychiatric (F)
- Other hospitals/services (e.g. prison medical services, dental hospital) (G)

Other (please specify)

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Missed Nursing Care Survey New South Wales

6. What is your main area of practice?

- Aged Care
- Community Health
- Critical Care/Intensive Care
- Education
- Family/Child Health
- Management/Administration
- Medical/Surgical
- Mental Health
- Midwifery
- Peri-operative
- Rehabilitation
- Research

Other (please specify)

7. Do you spend the majority of your working time in this area?

- Yes
- No

8. Is this your main job?

- Yes
- No

Other (please specify)

Missed Nursing Care Survey New South Wales

9. What is your highest qualification?

- Certificate IV, Enrolled Nurse
- Registered General Nurse Certificate
- EN Diploma in Nursing
- RN Diploma in Nursing or equivalent
- Bachelor Degree /Honours in Nursing/Midwifery
- Bachelor Degree/Honours outside of Nursing
- Graduate Diploma in Nursing/Midwifery
- Graduate Diploma outside of Nursing/Midwifery
- Master's degree in Nursing/Midwifery
- Master's degree outside of Nursing
- PhD/Professional Doctorate

Other (please specify)

10. Was your original nursing qualification from Australia?

- Yes
- No

If no, list country where you were first qualified as a nurse

Missed Nursing Care Survey New South Wales

11. Job Title/Role in the clinical area

- Carer/Personal Care Assistant
- Enrolled Nurse
- Registered Nurse/Midwife
- Clinical Nurse/Midwife or equivalent
- Clinical Nurse Consultant or equivalent
- Nurse/Midwife Manager or equivalent
- Nurse Practitioner
- Practice Nurse
- Nursing Director or equivalent
- Director of Nursing
- Academic (e.g. Lecturer, Researcher)

Other (please specify)

12. Employment status when you work in the clinical area.

- Full-time permanent
- Part-time permanent
- Full-time casual
- Part-time casual
- Agency

Other (please specify)

13. Number of hours usually worked per week.

- less than 30 hours per week
- 30 hours or more per week

14. Which of these categories best describes your rostered/scheduled work hours. Mark all that apply.

- [ ] All early or day shifts
- [ ] All late or evening shifts
- [ ] All night shifts
- [ ] Monday to Friday only
- [ ] Weekends only
- [ ] Rotating roster/shifts (morning, afternoon/evening and weekends)
- [ ] Rotating roster/shifts (morning, afternoon/evening, nights and weekends)
- [ ] Irregular schedule
- [ ] Split shifts
- [ ] On call

Other (please specify)

15. Would you prefer to maintain your current work schedule, or change it?

- ( ) Prefer to maintain current schedule
- ( ) Prefer to change to a different schedule

16. If you could change your current work schedule, which would you prefer?

- ( ) Days (8 - 12 hour shift)
- ( ) Afternoon/Evening (8 - 12 hour shift)
- ( ) Nights (8 - 12 hour shift)
- ( ) 7 day roster
- ( ) 5 day roster (Monday to Friday only)
- ( ) Set rotating roster (e.g. 6 week rotation)
- ( ) Flexible working time rostering/scheduling

Briefly explain why you would change

Missed Nursing Care Survey New South Wales

17. Experience in your role

- 0- 6 months
- 7 months to 1 year
- 1 - 2 years
- 3 - 4 years
- 5 - 6 years
- 7 - 8 years
- 9 - 10 years
- 11 - 15 years
- 16 - 20 years
- Greater than 20 years

Other (please specify)

18. This question relates to the length of your working hours. How many hours will you usually work in a shift?

- Less than 4 hours
- 5- 8 hours
- 9-12 hours
- Greater than 12 hours

Other (please specify)

19. Thinking about the hours you are employed, how many times in the past 3 months did you work more than your contracted hours?

- Less than 5 times
- 5-10 times
- 11-15 times
- 16-20 times
- Greater than 20 times
- Never

Other (please specify)

20. In the past 3 months how many hours of overtime did you work?

- Less than 5 hours
- 6 - 10 hours
- 11 - 15 hours
- 16 - 20 hours
- Greater than 20 hours
- Did not work overtime

Other (please specify)

21. In the past 3 months, how many rostered shifts did you NOT work because of illness,injury,and/or significant fatigue.

- None
- 1 shift
- 2-3 shifts
- 4-6 shifts
- over 6 shifts

Comment

22. In the past 3 months how many shifts did you work even though you were sick, injured or significantly fatigued?

- None (Go to question 24)
- 1 shift
- 2-3 shifts
- 4-6 shifts
- over 6 shifts

Other (please specify)

Missed Nursing Care Survey New South Wales

23. Please mark all that apply. I worked while sick, injured or significantly fatigued because

- [ ] I did not have any leave left
- [ ] I felt an obligation to my colleagues
- [ ] We were short staffed
- [ ] I felt fit to work
- [ ] Financial reasons

Other (please specify)

24. In general, would you say your health is:

- ( ) Excellent
- ( ) Very good
- ( ) Good
- ( ) Fair
- ( ) Poor

25. How often do you feel your ward/Unit staffing is adequate?

- ( ) 100% of the time
- ( ) 75% of the time
- ( ) 50% of the time
- ( ) 25% of the time
- ( ) 0% of the time

26. On the last shift you worked, how many patients did you care for?

27. On the last shift you worked how many patient-admissions did you have (i.e. includes transfers into the Unit/ward)?

28. On the last shift you worked how many patient-discharges did you have (i.e. includes transfers out of the Unit/ward)?

29. How satisfied are you in your current position?

- Very satisfied
- Satisfied
- Dissatisfied
- Very dissatisfied

Other (please specify)

30. How satisfied are you with the level of teamwork on your Unit/ward?

- Very satisfied
- Satisfied
- Dissatisfied
- Very dissatisfied

Other (please specify)

31. Do you plan to leave your current position?

- In the next 6 months
- In the next year
- No plans to leave

32. Independent of your current position/job, how satisfied are you with being a nurse?

- Very satisfied
- Satisfied
- Dissatisfied
- Very dissatisfied

Other (please specify)

Managing care in your workplace

Healthcare organisations engage in a number of practices to ensure that quality nursing care is delivered by staff. Rounding is one such practice.

Missed Nursing Care Survey New South Wales

33. Rounding is one strategy used to ensure that nursing care is delivered in a timely manner. Do you do 'rounding' as part of your work?

- Yes
- No

***34. How do you understand 'rounding' in the context of your workplace?**

35. How frequently does your workplace expect you to conduct rounds?

- Half hourly
- Hourly
- As decided by you
- No specific requirement

Other (please specify)

***36. How is rounding recorded in your workplace?**

- Not recorded
- Recorded in a 'rounding chart' that is included in the medical record/casenotes
- Recorded in a 'rounding chart' that is NOT included in the medical record/casenotes
- Recorded elsewhere

Other (please specify)

37. If you are charting or documenting 'rounds' what aspects of care are you recording?

***38. In your opinion, how does 'rounding' contribute to quality patient care?**

Missed Nursing Care Survey New South Wales

SECTION A: MISSED NURSING CARE

Nurses frequently encounter multiple demands on their time, which may require them to reset priorities and not accomplish all the care needed by their patients. To the best of your knowledge, how frequently are the following elements of nursing care MISSED (not done, omitted, left unfinished) by nursing staff (including you) on the shifts below? The times indicated in this section refer to the standard shift length times in your workplace. Early, late and night shifts worked Monday to Friday inclusive of weekends. Please mark all that apply.

39. Ambulation three times a day or as ordered

	Never missed	Rarely missed	Occassionally missed	Frequently missed	Always missed	N/A
Early or day shift	○	○	○	○	○	○
Late or evening shift	○	○	○	○	○	○
Night shift	○	○	○	○	○	○

Comment

40. Turning patient every 2 hours

	Never missed	Rarely missed	Occassionally missed	Frequently missed	Always missed	N/A
Early or day shift	○	○	○	○	○	○
Late or evening shift	○	○	○	○	○	○
Night shift	○	○	○	○	○	○

Comment

41. Feeding patients while food is still warm

	Never missed	Rarely missed	Occassionally missed	Frequently missed	Always missed	N/A
Early or day shift	○	○	○	○	○	○
Late or evening shift	○	○	○	○	○	○
Night shift	○	○	○	○	○	○

Comment

42. Setting up meals for patients who feed themselves

	Never missed	Rarely missed	Occassionally missed	Frequently missed	Always missed	N/A
Early or day shift	○	○	○	○	○	○
Late or evening shift	○	○	○	○	○	○
Night shift	○	○	○	○	○	○

Other (please specify)

43. Medications administered within 30 minutes before or after scheduled time

	Never missed	Rarely missed	Occassionally missed	Frequently missed	Always missed	N/A
Early or day shift	○	○	○	○	○	○
Late or evening shift	○	○	○	○	○	○
Night shift	○	○	○	○	○	○

Comment

44. Vital signs assessed as ordered

	Never missed	Rarely missed	Occassionally missed	Frequently missed	Always missed	N/A
Early or day shift	○	○	○	○	○	○
Late or evening shift	○	○	○	○	○	○
Night shift	○	○	○	○	○	○

Comment

45. Monitoring intake/output

	Never missed	Rarely missed	Occassionally missed	Frequently missed	Always missed	N/A
Early or day shift	○	○	○	○	○	○
Late or evening shift	○	○	○	○	○	○
Night shift	○	○	○	○	○	○

Comment

Missed Nursing Care Survey New South Wales

46. Full documentation of all necessary data

	Never missed	Rarely missed	Occassionally missed	Frequently missed	Always missed	N/A
Early or day shift	○	○	○	○	○	○
Late or evening shift	○	○	○	○	○	○
Night shift	○	○	○	○	○	○

Comment

47. Patient education about illness, tests and diagnostic studies

	Never missed	Rarely missed	Occassionally missed	Frequently missed	Always missed
Early or day shift	○	○	○	○	○
Late or evening shift	○	○	○	○	○
Night shift	○	○	○	○	○

Comment

48. Emotional support to patient and/or family

	Never missed	Rarely missed	Occassionally missed	Frequently missed	Always missed
Early or day shift	○	○	○	○	○
Late or evening shift	○	○	○	○	○
Night shift	○	○	○	○	○

Comment

49. Patient bathing/skin care

	Never missed	Rarely missed	Occassionally missed	Frequently missed	Always missed	N/A
Early or day shift	○	○	○	○	○	○
Late or evening shift	○	○	○	○	○	○
Night shift	○	○	○	○	○	○

Comment

50. Mouth care

	Never missed	Rarely missed	Occassionally missed	Frequently missed	Always missed	N/A
Early or day shift	○	○	○	○	○	○
Late or evening shift	○	○	○	○	○	○
Night shift	○	○	○	○	○	○

Comment

51. Hand washing

	Never missed	Rarely missed	Occassionally missed	Frequently missed	Always missed	N/A
Early or day shift	○	○	○	○	○	○
Late or evening shift	○	○	○	○	○	○
Night shift	○	○	○	○	○	○

Comment

52. Patient discharge planning and education

	Never missed	Rarely missed	Occassionally missed	Frequently missed	Always missed	N/A
Early or day shift	○	○	○	○	○	○
Late or evening shift	○	○	○	○	○	○
Night shift	○	○	○	○	○	○

Comment

53. Bedside glucose monitoring as ordered

	Never missed	Rarely missed	Occassionally missed	Frequently missed	Always missed	N/A
Early or day shift	○	○	○	○	○	○
Late or evening shift	○	○	○	○	○	○
Night shift	○	○	○	○	○	○

Comment

54. Focused reassessments according to patient condition

	Never missed	Rarely missed	Occassionally missed	Frequently missed	Always missed	N/A
Early or day shift	○	○	○	○	○	○
Late or evening shift	○	○	○	○	○	○
Night shift	○	○	○	○	○	○

Comment

55. IV/Central line site care and assessments according to hospital policy

	Never missed	Rarely missed	Occassionally missed	Frequently missed	Always missed	N/A
Early or day shift	○	○	○	○	○	○
Late or evening shift	○	○	○	○	○	○
Night shift	○	○	○	○	○	○

Comment

56. Response to call bell/light initiated within 5 minutes

	Never missed	Rarely missed	Occassionally missed	Fequently missed	Always missed	N/A
Early or day shift	○	○	○	○	○	○
Late or evening shift	○	○	○	○	○	○
Night shift	○	○	○	○	○	○

Comment

57. PRN medication requests acted on within 15 minutes

	Never missed	Rarely missed	Occassionally missed	Frequently missed	Always missed	N/A
Early or day shift	○	○	○	○	○	○
Late or evening shift	○	○	○	○	○	○
Night shift	○	○	○	○	○	○

Comment

58. Assess effectiveness of medications

	Never missed	Rarely missed	Occassionally missed	Frequently missed	Always missed	N/A
Early or day shift	○	○	○	○	○	○
Late or evening shift	○	○	○	○	○	○
Night shift	○	○	○	○	○	○

Comment

59. Assist with toileting needs within 5 minutes of request

	Never missed	Rarely missed	Occassionally missed	Frequently missed	Always missed	N/A
Early or day shift	○	○	○	○	○	○
Late or evening shift	○	○	○	○	○	○
Night shift	○	○	○	○	○	○

Comment

60. Skin/Wound Care

	Never missed	Rarely missed	Occassionally missed	Frequently missed	Always missed	N/A
Early or day shift	○	○	○	○	○	○
Late or evening shift	○	○	○	○	○	○
Night shift	○	○	○	○	○	○

Comment

61. Interactions with patients and/or significant others (e.g. family)

○	○	○	○

62. Offer patient choices of nursing care

○	○	○	○

SECTION B: REASONS FOR MISSED NURSING CARE

Missed Nursing Care Survey New South Wales

63. Indicate the reasons which contributed to MISSED care in your ward/Unit. Please mark one box for each item.

	Not a reason	Minor reason	Moderate reason	Significant reason	N/A
Inadequate number of staff	○	○	○	○	○
Urgent patient situations (e.g. worsening patient condition)	○	○	○	○	○
Unexpected rise in patient volume and/or acuity on the ward/Unit	○	○	○	○	○
Inadequate number of assistive and/or clerical personnel (e.g. care assistants, ward clerks, porters)	○	○	○	○	○
Unbalanced patient assignment	○	○	○	○	○
Medications not available when needed	○	○	○	○	○
Inadequate handover from previous shift or patient transfer into ward/Unit	○	○	○	○	○
Other departments did not provide the care needed (e.g. physiotherapy did not ambulate)	○	○	○	○	○
Supplies/equipment NOT available when needed	○	○	○	○	○
Supplies/equipment NOT functioning properly when needed	○	○	○	○	○
Lack of back up support from team members	○	○	○	○	○
Tension or communication breakdowns with other ANCILLARY/SUPPORT DEPARTMENTS	○	○	○	○	○
Tension or communication breakdowns within the NURSING TEAM	○	○	○	○	○
Tension or communication breakdowns with the MEDICAL STAFF	○	○	○	○	○
Nursing Assistant/Carer did not communicate that care was provided	○	○	○	○	○
Nurse/Carer assigned to the patient off ward/Unit or unavailable	○	○	○	○	○

Heavy admission and discharge activity					

Comment

Experiencing work: missing nursing care

In this section we you would like you to reflect upon how you manage to deliver care and some of the circumstances that may influence how you will do your work. How difficult or easy is it for you to do the following aspects of your work?

64. Deliver care that is consistant with your own expectations of nursing practice standards

Extremely difficult for me	Hard for me	Easy for me	Very easy for me

Other (please specify)

65. To deliver uninterrupted nursing care

Extremely difficult for me	Difficult for me	Easy for me	Very easy for me

Other (please specify)

66. Intervene to provide care when staff lack the skills to do so

Extremely difficult for me	Difficult for me	Easy for me	Very easy for me

Other (please specify)

67. Deliver nursing care based on your own discretion

Extremely difficult for me	Difficult for me	Easy for me	Very easy for me

Other (please specify)

68. Deal with peer pressure/conflict about an aspect of nursing care delivery.

Extremely difficult for me | Difficult for me | Easy for me | Very easy for me

Other (please specify)

69. Implement nursing care in the abscene of policies/procedure guidelines

Extremely difficult for me | Difficult for me | Easy for me | Very easy for me

Other (please specify)

70. Priortise care when multiple stimulanteous clinical demands are made of you

Extremely difficult for me | Difficult for me | Easy for me | Very easy for me to do

Other (please specify)

The quality of care delivered on your Unit

71. Overall, how do you rate the quality of care provided on your Unit?

Very poor | Poor | Fair | Good | Very Good

Other (please specify)

72. Overall, how do you rate the the completeness/entirety of nursing care delivered in your Unit?

Very poor | Poor | Fair | Good | Very Good

Other (please specify)

Missed Nursing Care Survey New South Wales

73. Overall, how do you rate the timeliness of the nursing care provided on your Unit?

Very poor	Poor	Fair	Good	Very Good
○	○	○	○	○

Other (please specify)

***74. How often do you think that nursing care is missed on your ward/Unit? For example, 10% of the time nursing care is missed. Please indicate below a number as a percentage?**

75. Is there anything else you would like to tell us about missed nursing care?

THANK YOU

We appreciate your time. If you would like more information about the study you are welcome to contact

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Appendix B: Social and Behavioural Research Ethics Committee

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INFORMATION SHEET

After hours nurse staffing, work intensity and quality of care

Research Team

Dr Ian Blackman
Prof Eileen Willis
Prof Patti Hamilton
Dr Julie Henderson
Dr Luisa Toffoli
Ms Claire Verrall
Ms Leah Couzner
Ms Liz Abery

Purpose of the Research

The survey is one aspect of a larger study exploring the impact of missed care on the delivery of nursing care. The survey explores aspects of care which are not performed and reasons for this. The data from this study will be compared with similar studies undertaken in the US, New Zealand and in South Australia to determine how differences in work and health policy environments impact on nurses' capacity to deliver nursing care.

What will you be asked to do?

We will ask you to complete an online survey related to aspects of nursing care missed and the circumstances under which this occurs. The questionnaire will have 3 main sections:

1) Demographic questions,
2) Questions about capacity to perform nursing care
3) Questions about why care was missed

The survey should take about 20 minutes. Participation is entirely voluntary and you are free to not answer questions or to withdraw from the questionnaire at any stage.

Benefits of the Research

This research will provide information about when nursing care is missed and the circumstances under which this occurs. The majority of studies on missed care have been done in the Northern Hemisphere, and in intensive care units or on medical and surgical

wards. Little has been done on wards or in the community context. This study will provide a more complete picture. As the report will be given to the New South Wales Nurses and Midwives Association (NSWNMA) it also has the potential to inform health and nursing services and Union policy in regard to after-hours staffing in NSW.

How will confidentiality be maintained?

No identifying information will be collected and the raw data will not be viewed by anyone outside of the immediate university research team. Demographic data will be used to identify patterns in responses and where the numbers of respondents in any category is small the responses will be aggregated to prevent the possibility of identification of the respondent.

How will this data be used?

The data will be used to determine the factors which impact on nurse capacity to deliver care across different settings and the results compared with similar research undertaken in the US, South Australia, and New Zealand. Upon the completion of the study a report will be provided to the NSWNMA outlining the key findings and brief description of findings provided for dissemination to NSWNMA members via the NSWNMA website.

Funding and Dissemination

The research is funded by a Flinders University Faculty of Health Science Seeding Grant. The research will lead to a report and publications in peer reviewed journals. Results of the study will be made available to participants at the end of the project via the NSWNMA website.

How can I find out more information?

Further information about this project can be obtained from Dr. Ian Blackman: telephone on 08 8201 3477 or email (Ian.Blackman@flinders.edu.au).

This research project has been approved by the Flinders University Social and Behavioural Research Ethics Committee (Project number 6731). For more information regarding ethical approval of the project the Executive Officer of the Committee can be contacted by telephone on 8201 3116, by fax on 8201 2035 or by email human.researchethics@flinders.edu.au