Missed Care: Community Nursing in Ireland

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Irish **Nurses** and **Midwives** Organisation
Working Together

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Abbreviations

ABA	An Bord Altranais
ADPHN	Assistant Director of Public Health Nursing
CAG	Comptroller and Auditor General
CCNCS	Community Client Need Classification System
CHD	Coronary Heart Disease
CHO	Community Health Organisation
CHSRF	Canadian Health Services Research Foundation
CI	Confidence Interval
CIHI	Canadian Institute for Health Information
COPD	Congestive Obstructive Pulmonary Disease
CPD	Continuing Professional Development
CRGN	Community Registered General Nurse
CSO	Central Statistics Office
CVD	Cardiovascular Disease
DHSSPS	Department of Health, Social Services and Public Safety
DoHC	Department of Health and Children
DoH	Department of Health
DoJ	Department of Justice
DPHN	Director of Public Health Nursing
ECOSOC	United Nations Economic and Social Council
EFA	Exploratory Factor Analysis
ESCPI	Easley Storfjell Client Classification System
GDS	Geriatric Depression Score
GMS	General Medical Service
GP	General Practitioner
HCCI	Home Care and Community Care Ireland
HIQA	Health Information and Quality Authority
HPDP	Health Promotion and Disease Prevention
HREC	Human Research Ethics Committee
HSE	Health Service Executive
ICGP	Irish College of General Practitioners
ICHN	Institute of Community Health Nursing
INMO	Irish Nurses and Midwives Organisation
IPA	Institute of Public Administration
KMO	Kaiser Myer Olkin (value)
NCNM	National Council for the Professional Development of Nursing and Midwifery
NFP	Nurse Family Partnership
NHS	National Health Service
NICE	National Institute for Health and Care Excellence
NISRA	Northern Ireland Statistics and Research Agency
NMBI	Nursing and Midwifery Board of Ireland
NOCA	National Office for Clinical Audit
NPOB	Nurses Per Occupied Bed
NPWT	Negative Pressure Wound Therapy
OECD	Organisation for Economic Co-operation and Development

OR	Odds Ratio
ORC	Office of the Refugee Commission
PCRC	Primary Care Research Committee
PCT	Primary Care Team
PHIT	Population Health Information Tool
PHN	Public Health Nurse
PSSRU	Personal Social Services Research Unit
QALY	Quality Adjusted Life Years
RCN	Royal College of Nursing
SPSS	Statistical Package for the Social Sciences
UCD	University College Dublin
UK	United Kingdom
UN	United Nations
UNHCR	United Nations High Commissioner for Refugees
US	United States
WHO	World Health Organization

Executive Summary

This study examines the context of community nursing (Public Health Nurses and Community Registered General Nurses) in Ireland. Despite many reports pointing to the need for service reform since 1975, community nursing in Ireland has remained static in terms of demographic change, policy change and structural change within health services delivery. This study applies the concept of missed care and uses a health economics approach to generate data on the work of community nurses. Three methods of data collection are used: a community based missed care survey to look at community nurses experience of missed care within a week timeframe; four semi-structured interviews to explore the concept of contemporary missed care in Ireland; and a focus group to develop the impact of missed care through a health economy lens.

Within the community based survey, all 64 domain questions demonstrated some level of missed care. For the purposes of reporting, a cut off of 50% of respondents reporting missed care was used and responses were collapsed into two categories: no missed care and missed care. Missed care was observed for both public health nurses and community registered nurses at over the 50% threshold for health promotion, care management, disadvantaged groups, older people, administration, family support, the provision of other services and home nursing care, education (typically continuous professional development) and within primary healthcare teams. For public health nurses, missed care was also observed within child health and child protection. The data from the interviews and the focus groups supported the findings within the survey. Reasons for missed care were similar to Kalisch et al's (2009 a, b) findings for acute care settings: inadequate staffing levels, unanticipated rise in client volume and acuity/complexity and a lack of administrative support. In particular, missed care was associated with having to provide long term cover when colleagues were sick, on leave or had retired. This is a consequence of the staffing moratorium and other aggravating factors such as increased complexity within client care, early discharge and demographic changes. Issues such as fragmented communication between care settings and other disciplines also impacted on missed care. Role boundaries were seen as fluid and community staff did not appear to have control over what constituted legitimate caseloads under their generalist role. The lack of comprehensive leadership in community nursing and career clinical development for community nurses was also identified.

The findings are significant in the context of both the job descriptions (particularly the public health nurse) and health policies in Ireland which emphasise a health promotion and vertical equity approach to care. The experiences of the community nurses demonstrate that they are prioritising clinical work (injections, dressings) and legislation obligations (child notifications and child protection) and although missed care was identified at lower rates in these domains, this was at the expense of health promotion and disease prevention. However, in applying case scenarios based on cost benefit analysis of addressing health promotion areas in a comprehensive way, clear potential economic savings can be made. Consequentially, urgent reform is required in terms of ensuring comprehensive care is delivered by a community nursing workforce that can adequately contribute to contemporary health demands at primary, secondary and tertiary care levels for individuals, families and communities.

Sixteen recommendations are made from this study:

1. In the context of the long-standing policy of developing primary care, it is recommended that a Commission be established, to report within one year, to determine the roles that nursing/midwifery will play as a central component of any developed primary care system.
2. This Commission should examine structures, governance, skill mix, career advancement pathways for PHNs and the possible role of all nurses and midwives in the community. All further

reform needs to be underpinned by evidence based healthcare imperatives, which are appropriately resourced and which are in line with policy objectives and legislative requirements.

3. It is recommended that, as an absolute priority, integrated care, in terms of acute and primary services, must be developed, audited and nursing should be central to this process.
4. It is further recommended that immediate attention be given to developing greatly improved communication pathways, between hospital and community based nurses and midwives, to ensure the optimum care is provided to all patients/clients.
5. As part of this Commission, an immediate needs assessment should be carried out for resources, such as administrative support and technology needs, to maximise the potential and presence of nurses/midwives in the community.
6. It is recommended that, in order to fully utilise the community nursing service, it be provided with the physical, clinical and structural resources necessary to optimise the delivery of preventative and direct care services
7. Community nursing needs to be acknowledged as pivotal for delivering population health needs and its views must be included in all analysis and decision making and in professional, management and political fora.
8. Assuming universal eligibility for all primary care services will evolve, the Commission will report within twelve months on necessary community nursing services' resourcing, in the most efficient and effective manner, to meet immediate population need, minimise unscheduled hospital admissions and allow planning for future needs.
9. In the context of this Commission, attention must be given to the development of specialist and advanced nursing roles, reflecting expanding scopes of practice and the ability to respond to emerging client need, including chronic disease management and population health.
10. To ensure consistency of service delivery, and continuity of care, it is recommended that all staffing profiles include a minimum of 23% for annual leave-CPD and other leave entitlements of staff.
11. As the delivery of services is moved to the community, it is recommended that, in the interests of quality and best practice, all such services are subject to independent review/audit with particular focus on standards and access.
12. Recognising the individual nature of community nursing, enhanced governance systems need to be developed with a focus upon peer support and shared learning.
13. The Community Practice Development Co-ordinators recommended by the Commission on Nursing should be appointed following a review of and upgrading of their job description, in line with Department of Health 2013 policy goals.
14. In line with the Nurses and Midwives Act (2011), and Requirements and Standards from the Nursing and Midwifery Board, continuous professional development should be facilitated to ensure continued competencies.
15. Missed care needs to be recorded at regular intervals to highlight care delivery challenges and to have response pathways to address these challenges. While tools suitable for workload analysis can provide information on workforce planning, they tend to record activities undertaken, rather than those missed, thus, only representing a prioritised approach (i.e. work actually done). This is particularly relevant for the adequate completion of nursing documentation.
16. There is a need, recognising and providing the significant staffing requirements to consider formally extending community nursing services to evening and weekends to meet increasing demand recognising the significant additional staffing required to provide this extended service.

Introduction

Background

Health care in Ireland has orientated to primary care since the publication of Shaping a Healthier Future in 1994 (Department of Health 1994). Within this context various subsequent health policies (Department of Health and Children 2001 a, b; 2013) have continually emphasised the focus of health being delivered in the community at a local level to potentialise quality of life using an epidemiological approach. Historically, the community nursing service with the general practitioner (GP) service has provided the cornerstone of primary health care in Ireland. However, the community nursing service has not evolved in tandem with healthcare policy (including governance in healthcare) or in line with contemporary population need. This challenge in community nursing has been highlighted in many reports which can be traced back as far as 1975 (DoH 1975). More recently, the Irish Nurses and Midwifery Organisation (INMO) (2013) undertook a survey which again articulated fundamental tensions in care delivery in the community setting. The INMO report, together with many of the previous reports, described the service delivery challenges and alluded to the prioritisation of care within scarce resources.

The issue of missed care, a recent concept within nursing literature in the acute setting, has not been articulated within the community setting, either in Ireland or elsewhere. Yet, missed care has been associated with poor client health outcomes, reduced job satisfaction, poor care quality, impaired teamwork and decreased consumer satisfaction (Kalisch 2006; Kalisch et al. 2009; Ball et al.2013). In addition, the area of health economics is becoming increasing relevant in global healthcare, yet there is a paucity of knowledge related to health economics in general in Ireland, but particularly within the literature on community health. Consequently, the Irish Nurses and Midwives Organisation funded this study to assess missed care and health economics in community nursing.

Report structure

The report is divided into four chapters. Chapter one presents the literature related to community nursing, missed care and health economics. Chapter two presents the research design while chapter three presents the findings. The report concludes with chapter four which discusses the findings, acknowledges the study limitations and provides recommendations for community nursing.

'The foundation for a strong and effective health workforce, able to respond to the 21st century priorities, requires matching effectively the supply and skills of health workers to population needs, now and in the future.'

(WHO 2015a: 7)

Chapter One: Review of the Literature

1.0 Introduction

Nursing care that is omitted or 'missed' has received increased research focus in recent years due to its relationship with client safety, client health outcomes, staffing and the 'underuse' of health services (Sochalski 2004; Kalisch et al. 2009a,b Ausserhofer et al. 2014; Jones et al. 2015). Missed care is defined as 'any aspect of required client care that is omitted (either in part or in whole) or delayed' (Kalisch et al. 2009a: 1510). Identified as a global problem, Jones et al. (2015) suggest that the extent of the problem has been obscured in the research by a variation in the terminology used to describe this phenomenon (Jones et al. 2015). However, what has been established is that when nursing staff experience pressure on the time available to them, some aspects of client care are either omitted entirely or delayed (Jones et al. 2015). In the last decade, a number of studies have explored the concept of omitted care and have sought to establish the prevalence of missed care in acute hospital settings (Kalisch and Williams 2009; Ausserhofer et al. 2014; Sochalski 2004). Missed care is also an issue within clinical governance systems, which are concerned with the quality, safety and experience clients received in care (Quality and Client Safety Directorate 2013).

The phenomenon of missed care has also been alluded to in the primary healthcare setting, although this has not received formal examination. In addition, the invisibility of the challenges inherent in the delivery of community care nursing has been obscured by the disproportionate focus on acute care within both health care and media debates (Queen's Nursing Institute 2014a) with care deficits and related public scandals being highlighted though such mediums as independent monitoring bodies' reports (Health Information and Quality Authority (HIQA)) or undercover media filming of health care practices. In Ireland, studies into staffing, workload and workforce planning in community nursing have noted the concerns of nurses with regard to the unmet care needs of their clients as a result of staffing issues (Irish Nurses and Midwives Organisation 2013; Begley et al. 2005). The challenges experienced by Irish community nursing staff have been exacerbated by the economic recession, a change in demographics and a change in population acuity in the community (Pye 2015). Other pertinent changes include the increasing complexity of healthcare and reduced hospital stays (Leng 2014). Consequently, formal methods of exploration and identification of missed care in the Irish community nursing sector are warranted.

1.1 Community nursing in Ireland[1]

Current figures in Ireland indicate that there are a total of 2,645 community nurses in the primary care division of the health service (HSE 2015a). These include a diversity of nurses, but are primarily comprised of public health nurses (PHNs) and community registered general nurses (CRGNs). Within international comparisons, the National Directors of Public Health Nursing and Shannon (2014) note that 5% of nurses work in the community as compared to 15% in England (RCN 2012) and 14.6% in community health settings in Canada (CIHI 2015).

In line with developments in health policy, there have been numerous reforms in care foci over the years. These reforms have been characterised by an increased emphasis on primary care in the delivery of public health services which has resulted in a broadening of the scope and remit of the community nurse but, it has been argued, without a corresponding increase in clarity around this new role (Markham and Carney 2008). Community nursing services, under the management of a Director of Public Health Nurse (DPHN) linked to one of the nine Community Healthcare Organisations (CHO), are geographically bound with PHNs having geographic caseloads and CRGNs may have individual caseloads or work within a team approach linked to one or more public health nursing areas[2]. Both PHNs and CRGNs are employed by the Health Service Executive (HSE) and work within

1 In this report, the term community nursing and community nurses refers to both PHNs and CRGNs

2 It is recognised that there are specialist posts which work with populations, for example, schools, traveller families, child protection and so forth.

primary health care teams and networks (National Directors of Public Health Nursing and Shannon 2014). The service is supported by the home help service and health care assistants.

Service delivery generally operates Monday to Friday on a 9-5 basis. At weekends, there is a visitation service for clients who require a visit, but calls are submitted before Friday evening and there is no access to this service for further calls beyond the Friday. In addition, the community nurse covering these calls generally covers a much larger geographical area and has no recourse to assistance beyond advice regarding clients or referral of clients to the acute hospitals or, if there is a child welfare or protection issue or other serious issue (personal safety, for example), referral to the Gardai.

In discussing community nursing, its formal origins began with the Queen's Institute of District Nursing (ceased training 1968) and the Lady Dudley Scheme (ceased 1974) (Prendergast and Sheridan 2012). Public health nursing in Ireland evolved into three distinct aspects of community nursing; midwifery, district home nursing and general public health activities and was first included on the register of the Irish Nursing Board (An Bord Altranais now Nursing and Midwifery Board of Ireland) in 1960 (Department of Health 1975; Hanafin 1998; Institute of Public Administration 1995; National Council for the Professional Development of Nursing and Midwifery 2005). The job description of PHNs in Ireland was originally derived from a 1966 Department of Health Circular which provided a very broad outline of the function of public health nursing and stated that PHNs would be available to all community members in need of midwifery care, general domiciliary nursing care and as a public health service provider for children from birth until they finish school (Department of Health 1966). From the 1970's, PHNs were supported by CRGNs in the provision of a broad range of nursing care activities. In 2000, on foot of the recommendations from the Commission on Nursing (Government of Ireland 1998), the Department of Health and Children revised the job descriptions for PHNs, senior public health nurses (now Assistant Directors of Public Health Nursing) and superintendent public health nurses (now DPHN). The community registered general nurse's role was identified as maintaining 'a high standard of nursing care, to share responsibility with the community nursing team for the management of nursing care and the client's environment and to maintain a high standard of professional and ethical responsibility' (Department of Health and Children41/2000). It is estimated that a total of 1,209 CRGNs are currently working to support the community nursing sector though are not responsible for the delivery child health and post-natal programmes [3](Department of Health 1966; Department of Health and Children 2000).

The 'generalist' role of the PHN has been identified as a strength of the public health nursing service. For example, in a review of public health nursing services in 2012 (HSE and Office of the Nursing and Midwifery Services' Director), DPHNs describe a diverse range of population and service responsibilities. A review in 1995 noted that the area based nature of the work of the public health nurse promoted a 'cradle to the grave' approach to community health care provision that targets children, families, individuals and the elderly (National Public Health Nursing Committee 1995). According to the Nursing and Midwifery Board of Ireland, there are currently 2,327 active registered PHNs in Ireland today (Nursing and Midwifery Board of Ireland 2014) with the National Directors of Public Health Nursing and Shannon (2014) reporting just 1,488 are employed by the HSE in 2013[4]. With a lifespan approach to care delivery, PHNs have unmatched access to homes and families and act as a first point of contact for people in the community making them a valuable resource for local health services (Institute of Public Administration 1995). However, the generalist role of the public health nurse can also result in a lack of role clarity and in some cases PHNs are filling gaps in services that could be better provided by other healthcare professionals (Institute of Public Administration 1995; Begley

3 It is recognised that CRGNs who are also midwives may engage in initial postnatal visits

4 This represents nurses registered as PHNs, but these nurses may work in areas other than public health nursing.

et al. 2004). The debate on generalist versus specialised model is one which continues within both policy and practice arenas in Ireland (Hanafin and O'Reilly 2015).

1.1.1 Role of the Public Health Nurse in Ireland

As indicated previously, the core role of PHNs is articulated in two Department of Health circulars (Department of Health 1966; Department of Health and Children 2000) which provide a broad outline of their roles as healthcare providers in the community. The 2000 circular also outlines the responsibilities of CRGNs as part of the community health care team. Within the Requirements and Standards for Public Health Nurse Registration Programmes (An Bord Altranais 2005), particular learning outcomes are defined related to registration as a PHN and are categorised under five domains of competencies, namely, professional/ ethical practice, holistic approaches to care and the integration of knowledge, interpersonal relationships, organisational and management of care and personal and professional development.

Within an estimated population of 4,635,400 people in Ireland (CSO 2015a), community nurses provide a variety of services. Prior to an amendment in the Nurses' Rules (2004), access to the graduate PHN programme required applicants to be registered midwives. However, on the recommendation of the Commission on Nursing (Government of Ireland 1998), the changes to the Nurses' Rules in 2004 removed this as a pre-requisite to application for the graduate PHN training programme. This revision was reflected in the removal of the provision of domiciliary midwifery care in the revised job description (Department of Health and Children 2000). The key health areas assigned to PHNs and CRGNs can be described as follows and reflect the generalist role and includes:

- at home nursing care;
- care management;
- family support;
- older people;
- health promotion;
- disadvantaged groups;
- education;
- other community health services as needed;
- primary care teams;
- administration;
- postnatal care (PHNs Only)[5];
- child health (PHNs Only); and
- child protection (PHNs Only).

(Begley et al. 2004; Department of Health and Children 2000; Department of Health 1966; NCNM 2005; National Directors of Public Health Nursing and Shannon 2014)

The demands on services of the PHN are particularly heightened in the context that Ireland has the highest birth rate and the highest proportion of 0-14 year olds (22% of the population) in the European Union (Eurostat 2015). In Ireland, the CSO (2015b) projects increases in the 0-14 ages (957,700 in 2011 to projection of 1,029,400 in 2015), which has a significant impact on the work of PHNs. Moreover, Ireland has the second lowest death rate in the European Union (Eurostat 2015) and although people over 65 years constitute 12.6% of the population, McGill (2010) estimates that by 2041, this number will have increased to 22% (1.4 million people), again illustrating the evolving demographic care demands on community nursing services in Ireland.
PHNs have a lifespan approach and are responsible for the delivery of preventative and educational health services to the population in their area while CRGNs are in place to support the community nursing team in the provision of high quality nursing care, though they do not deliver child health and post-natal programmes (Department of Health 1966; Department of Health and Children 2000). However, in practice the role of the CRGN has been described as having developed in an ad-hoc manner while PHNs have reported that they are increasingly required to take on additional roles and responsibilities beyond those described above (Irish Nurses and Midwives Organisation 2013; Begley et al. 2004). This has led to an increase in the nebulous workload for both CRGNs and PHNs. Within recent years, there has been an effort to

5 It is recognised that CRGNs who are also midwives may engage in initial postnatal visits

review the structural delivery of community nursing with some piloting of more specialised team approaches (Pye 2015; Hanafin and O'Reilly 2015). In the latter part of 2015, the Department of Health funded an evidence-based review to evaluate the potential application in Ireland of certain national and international community nursing models[6].

The role of the community nursing is also prescribed within generic legislation and policy for nursing and midwifery. Community nursing is impacted by the health service reform programme, a determined policy commitment to health and well-being and the legislative, organisational and structural objectives related to child and family care (National Directors of Public Health Nursing and Shannon 2014). In addition, professional activities are prescribed by the nursing regulatory authority. For example, all practicing nurses and midwives in Ireland must be registered with the Nursing and Midwifery Board of Ireland and practice under the Nurses and Midwives Act (2011). Within the Nursing and Midwifery Board of Ireland, there are specific policy guidelines such as the Code of Conduct and Ethics (2014), medication management (2007), recording clinical practice (2002) and the Scope of Nursing and Midwifery Practice Framework (2015) which require compliance by all nurses and midwives.

Other legislation which has a specific prominent impact on the work within community nursing is the Notification of Birth Act (1907; 1915), which related to visiting new-borns while the Child Care Act (1991) and the Children First Act (2015) mandates timely coordinated and appropriate responses to child welfare and protection concerns. In addition, the Health Act (1970) makes particular provision for home visiting related to post-natal, maternal and child care health visiting. The Best Health for Children policy (Programme for Action for Children and HSE 2005) outlines the focus and schedules of inter-disciplinary developmental examinations for children, while the Agenda for Children's Services (Office for the Minister for Children and Department of Health and Children 2007) and Better Outcomes, Brighter Futures: the National Policy Framework for Children and Young People (Department of Children and Youth Affairs 2014) identifies a blueprint for service principles for working with children and families. Other policy and guidelines are also relevant such as those contained within the national clinical programmes, the National Positive Ageing Strategy (2013) and, for example, the Safeguarding Vulnerable Persons at Risk of Abuse: Policy and Procedures (HSE 2014). In addition, the broad focus of the Irish health policy, Healthy Ireland-A Framework for Health and Wellbeing (2013-2025) (Department of Health 2013), which is discussed in the following section, is underpinned by public health principles which are fundamental for community nurses' work, in particular that of the public health nurses [7].

In relation to eligibility for community nursing services[8] , the Health Act (1970), section 60 stipulates that persons who have full eligibility (medical card holders, infants, pre-school and school going children) for services are entitled to free care at the point of delivery. It is notable that between 2003-2013, 700,000 additional medical cards were granted, which added to number of people eligible for community nursing services (National Directors of Public Health Nursing and Shannon 2014). In addition, people in receipt of long-term illness cards have some eligibility for community nursing services while all other members of the population are classed as having limited eligibility. Understandings of service eligibility are blurred by the different entitlement standards within acute settings and community settings. Another compounding factor is that the DPHN in each CHO is responsible for the allocation of work, thus, the standardisation of eligibility is not experienced nationally. This confusion has provided challenges in the delivery of community nursing services, particularly in the context of staff shortages, the economic recession, the staff moratorium, increased acuity levels in the community as well as the

6 This review is not yet published

7 While these are nationally based legislative and policy directives, each community healthcare organisation will have local policy regarding care delivery and practice responsibility.

8 The Health Act (1970) cites public health nurses but the nursing service has expanded to include CRGNs.

consequential erroneous general public's, acute care sectors' and GP's expectations of community nursing services.

Within Ireland's efforts at transformation to a universal health insurance (HSE 2012), this initiative has progressed to cover children aged 0-6 years, and older people over 70 years have a means tested eligibility to a medical card, but regardless of income can access a free General Practitioner visit card. A single tiered health system using a universal health insurance model is one which has been reiterated as a global implementation goal by the World Health Organisation (WHO 2015a, b, c, d). In Ireland, plans to further progress a total population approach to universal health insurance based on need rather than income has received some reservations in a recent review due to its potential fiscal costs to the exchequer (Wren et al. 2015). However, if the goal of having universal primary care for all citizens (Department of Health 2012) were to be pursued using a different funding model or a more limited scope of cover, this could have a significant impact on the workload of community nurses.

1.2 Community nursing and Irish healthcare policy

In recent years, health care policy in Ireland has been concerned with shifting the focus of health care services from the secondary/acute sector to the primary sector (European Obversatory on Health Systems and Policies 2009; Department of Health 2012, 2013; Department of Health and Children 2001a,b). The shift to primary care can be traced back to 1994 to Shaping a Healthier Future (Department of Health 1994). This shift in policy focus was particularly articulated in the 2001 Primary Care Strategy (Department of Health and Children a) which set out a detailed plan to create an integrated health system with primary care as the 'central focus' that would lead to better client outcomes and greater cost effectiveness in the sector (Department of Health and Children 2001a). The primary care model envisioned would benefit individuals, staff and the health system as a whole by providing improved access to services, better coordination between primary healthcare teams and improved resources and infrastructure with a corresponding reduction in the reliance on acute and specialist health services for healthcare delivery (Department of Health and Children 2001a). Once in place, the primary care model would deliver more than 90% of health and social service needs to the Irish population (Department of Health and Children 2001a; HSE 2013). The key organisational component of health care delivery in the primary sectors would be Primary Care Teams (PCTs) which would comprise a multi-discipline team of primary health care professionals based in communities across the nation (Department of Health and Children 2001a; HSE 2013). Based on population figures, it was anticipated that between 600 and 1000 primary care teams would be required to provide adequate community based health care to the Irish population. According to government figures, each team would be responsible for between 3,000 and 7,000 people depending on whether they were catering to urban or rural populations (Department of Health and Children 2001a). Each PCT was estimated to need five nurses (to include advanced nurse practitioners, clinical nurse specialists, public health nurses, midwives, mental health, practice nurses and general nurses) to work with GPs, social workers, physiotherapists etc. (Department of Health and Children 2001a). Each PCT would also have clerical and administrative support in situ. This integrated approach to healthcare provision in the community was widely welcomed by public health nursing representatives and promised to better integrate and improve primary health care services.

To achieve these improved outcomes, primary healthcare service development would coincide with enhanced funding which, between 2001 and 2011, was estimated to be in the region of €2 billion (Department of Health and Children 2001). However, with the advent of the global economic crisis and the subsequent recession in Ireland, the roll out of the strategy has been significantly undermined.

Of the 400-600 primary care teams envisioned by 2011, by the end of 2012, only 426 had been established and the focus for healthcare service reform and development had remained on the secondary sector (European Obversatory on Health Systems and Policies 2009; Oireachtas 2014).

Health reform was again prioritised in 2011 (Department of An Taoiseach 2011) with subsequent similar goals being articulated as in 2001, namely, cost effectiveness and improvements in access and quality of care (Department of Health 2012) although there was an overt focus on clinical governance in health care delivery (National Directors of Public Health Nursing and Shannon 2014). In 2013, the government launched Healthy Ireland (Department of Health 2013) which delineates health policy from 2013-2025. This policy described a framework of improved health and well-being for the Irish population, which comprises a vision statement, defined goals, underpinning ethical values, a framework for action as well as guiding principles for implementation and delivery methods. This policy recognised the distinct contribution of the PHN in operationalising its vision and recognises health as being inextricably linked to the context of people's lives in their communities. Such contexts constitute the daily interactions of community nurses who are in a pivotal position to positively enhance the determinants of health. Consequently, the community nurses' role has great potential in operationalising the policy's four goals. These goals focus on the areas of a) increasing the proportion of people who are healthy at all stages of life, b) reducing health inequalities, c) protecting the public from threats to health and well-being and d) creating an environment where every individual and sector of society can play their part in achieving a healthy Ireland (Department of Health 2013:6-7). Specifically, within the policy theme of empowering people and communities, community nurses have the ability to identify and work in partnership with vulnerable groups and populations to enhance health potential and contribute to successful policy key performance indicators and targets.

1.2.1 Health policy: Global strategy

Health 2020 (WHO 2012) is the policy framework for the WHO European regions. The aim of Health 2020 is to:

> *'…significantly improve the health and well-being of populations, reduce health inequalities, strengthen public health and ensure people-centred health systems that are universal, equitable, sustainable and of high quality.' (WHO 2012:1)*

The aim of Health 2020 is most conducive to the work of community nurses, but particularly PHNs whose focus is primarily health protection and disease prevention. In 2015, the WHO emphasised the opportunity nurses and midwives have to address health inequalities and to positively influence health outcomes throughout the life-course. Nurses and midwives are considered important in fostering client partnerships and empowering individuals, families and communities, principally in primary care settings (WHO 2015a, b, c, d). This is underpinned by identifying that nurses and midwives are cost effective and comprehensive primary care services can reduce hospitalisations and prevent negative health outcomes through, for example, identifying medicine misuse such as polypharmacy. Central to addressing population need is workforce planning and the optimising of skill mix as well as the fostering of positive work environments (WHO 2015b). These recommendations are pertinent to the focus of this study in the context of missed care, which is comprehensively discussed later in this chapter.

1.3 Challenges for public health nursing

Literature, both from Ireland and abroad, has identified numerous challenges facing the primary care sector which in turn impacts on community nursing. Increased reorientation toward a healthcare model that is driven by primary care has presented a number of challenges for primary care

teams in a number of jurisdictions (Irish Nurses and Midwives Organisation 2013; Begley et al. 2004; Bowers and Durrant 2014; National Directors of Public Health Nurisng and Shannon 2014).

In Ireland, research into and reviews of PHNs depict a service that has developed in an ad-hoc fashion with a notable lack of clarity regarding the role of public health nurses within community health services (Institute of Public Administration 1995; Begley et al. 2004; McDonald et al. 2015). This lack of clarity has emerged despite an increased emphasis on primary care in the delivery of health care services over the last number of decades. Prompted by these changes in health policy, the public health nursing service has been subject to review over the years. These reviews have revealed that a lack of clarity is an growing issue for PHNs as their scope of practice has broadened in response to health policy guidelines but the delineation of responsibility and corresponding resource requirements has not followed. The result has been a public health nursing service that is continually under strain, under-resourced and overburdened (Institute of Public Administration 1995; Begley et al. 2004; Irish Nurses and Midwives Organisation 2013; Pye 2015). The lack of matching policy to funding and service development based on population need is contrary to recommendations by the WHO (2015a, b, c, d).

A recent review of community nursing services identifies five areas which require attention. These include:

- challenges in meeting the current requirements for universal child health screening and school nursing services;
- capacity to carry out health promotion and health improvement activities with other client groups and communities;
- developments needed to take place to ensure the protection of children;
- increase in the amount and complexity of clinical nursing care required in community settings; and
- deficits in information and communications technology (ICT).

(National Directors of Public Health Nursing and 2014:23).

In order to meet the challenges identified, the National Directors of Public Health Nursing and Shannon (2014) recommend a radical reform targeting a) a structural reform of the community nursing service, b) a service reform (role expansion, skill mix, specialisation), c) a financial reform and d) an evaluative aspect which focuses on the community nurses' contribution to client outcomes. A prominent aspect of this reform is the integration of robust corporate and clinical governance structures.

1.3.1 Workforce and workload planning in nursing

Healthcare expenditure has become an increasing concern of governments (Centre for Global Development 2011; OECD 2015). Governments have sought to develop workforce plans that focus on a more integrated cost-efficient health workforce (WHO 2015a, d; WHO Global Health Force Alliance 2015) which contains methods of assessing workload to ensure optimum and appropriate staffing and skill mix are provided to meet population need. Although staffing guidance on assessment of workloads and workforce planning are predominately based on acute care, they have a degree of applicability to nursing in the community setting.

Workforce planning is essentially concerned with the implementation of a consumer approach using a modelling system based on current service to predict future care needs. Calculations are based on anticipating flow of nurses in and out of profession to predict supply versus demand. Establishment setting determines the funding requirements for a particular service, yet there is an increased impetus to ensure human resources are 'fit for purpose' in meeting population health needs within a dynamic healthcare environment (WHO 2015a, b, c, d). Typically, workforce planning identifies how many nursing posts are necessary for a particular unit while the daily planning roster focuses on matching staff to the required demand at a particular time of day/week/year based on a review of client mix (RCN 2010). Methods of workforce planning within nursing have been developed by Hurst (2002), although, again these are based in acute care or

long-term care settings. These methods are grouped in four ways (Hurst 2002). These five approaches are a) professional judgment or the Telford approach, b) nurses per occupied bed (NPOB) also known as the top-down method, c) [9]acuity-quality. This is also known as the bottom-up approach and d) timed-task/activity approaches. While such approaches are useful in acute and long term care settings, their utility in the community remains under-researched. The Canadian Health Services Research Foundation (2006) note that mandatory staff ratios do not have a robust evidence base for their application and that such mandatory standards may fail to account for client acuity, individual unit (which may be translated to caseload) characteristics and variations in inter-rater reliability. This is supported in a recent staffing review (Fields & Brett 2015), notes the lack of staff ratio guidance related to adult care in the community in terms of population or caseload limits and although some benchmarking work has been undertaken in the UK, this does not indicate if existing levels of staffing are sufficient for safe care (Fields & Brett 2015). However, there is also support of nursing ratios. Ratios of nurse per client has been shown to lead to positive outcomes, such as having adequate staffing, a reduced reliance on agency staff and staff minimums are compulsory (RCN 2010; Twigg et al. 2012; Aiken et al. 2010, 2014). The American Nurses Association (1999) recommends that nurse staffing is based on issues of client care which are a) unit related (in this context community nurse caseload), b) staff related and c) institutional/organisational related. Equally, in the United Kingdom (UK), the RCN (2010) considers workforce planning to encompass three domains, namely, workforce modelling, establishment setting and daily planning/roster.

There has been a concerted focus in the last two years on a review of safe nurse staffing in different environments within health service delivery in the UK (NHS England 2013; Queen's Institute 2014b; Drennan et al. 2015), particularly within publications from the National Institute for Health and Care Excellence (Rutter et al. 2015a, b; Fields and Brett 2015). Central to these evidence based reviews is the recognition that it is important to have the right number of staff, with the right skill mix and competency who provide appropriate care to clients in the right setting guided by organisational leadership excellence. The findings of these reviews generally focus on areas of staffing with regard to outcomes such as serious incidents, delivery of nursing care (issues such as preventing avoidable client deterioration, promoting independent living, care co-ordination), staff retention and sickness rates, safe staffing issues (vacancy rates, professional development) and reported feedback, such as satisfaction ratings (Fields and Brett 2015; Rutter et al. 2015a, b). In general, there is a dearth of comprehensive high quality evidence based publications to support staffing ratios and an economic consideration of impact is generally absent (Fields and Brett 2015; Rutter et al. 2015a,b). Moreover, the level of evidence in the community based staffing review is particularly impoverished with Field and Brett (2015) noting that of the seven questions posed on safe staffing for adult nursing care in the community, four questions did not generate any evidence which met the standards of the inclusion criteria. These four questions were a) what patient/service user/carer factors affect nursing staff requirements for adults in community settings? b) what environmental factors affect nursing staff requirements for adults in community settings? c) what staffing factors affect nursing staff requirements for adults in community settings? and d) what organisational factors affect nursing staff requirements for adults in community settings at a team or service level? Moreover, other issues identified in the studies cited in the reviews (Fields and Brett 2015; Rutter et al. 2015a,b) point to the issue study bias, in particular that of endogeneity. For instance, staffing and service outcomes are not isolated from other variables such as client acuity and dependency (Field and Brett 2015). In particular, the travel to clients' home is also an important variable in community nursing and is influenced by issues such as urban or rural location and also density of

9 Acuity denotes severity of illness and is measured in Hurst's model as the equivalent number of dependency level one in occupied beds.

traffic in urban areas. Consequently, findings may provide an underestimation of the real impact of particular factors on outcomes. Field and Brett (2015) also caution that such bias can lead to counter-intuitive results as they may suggest an increase in variables (such as registered staff) is associated with a higher degree of adverse outcomes. The conclusions of these reports are generally that there is insufficient robust evidence to support particular approaches or toolkits for safe staffing due to the lack of high quality studies to support particular hypotheses (Fields and Brett 2015; Rutter et al. 2015a,b). Consequently, in relation to community nursing, Fields and Brett (2015) suggest that there is a need for more high quality, robust studies which address the issue of endogeneity and examine issues of patient/service user/carer factors, environmental factors, particular community staffing factors and organisational factors.

1.3.2 Workforce and workload planning in community nursing

As with nursing in other settings such as acute care and long-term care, workload assessment is fundamental to nurse workforce planning in the community. Workload has been identified as a considerable challenge for community nurses (Department of Health 1975; Byrne et al. 2007; Begley et al. 2005; HSE and the Office of the Nursing and Midwifery Services Director 2012; Irish Nurses and Midwives Organisation 2013; Burke 1986; Institute of Public Administration 1995, Queen's Nursing Institute 2014a). In recent years, economic factors have exacerbated these issues and in 2009 the Health Service Executive (HSE) put in place a moratorium on hiring staff across all health services. Coupled with the expansion of the public health service, the moratorium has been identified as a significant factor in further increasing the workload of community nurses and in a consequent decrease in the quality of their work environment (Irish Nurses and Midwives Organisation 2013). Reports and studies on community nursing in Ireland have identified some of the challenges that the service is facing as a result of these social, economic and policy shifts.

Hanafin and Crowley (2005) indicate that there was an average 1:4000 population ratio in 2005, but that there was a substantial range difference from 1:500 to 1:16,500. Such inequality in ratio has also been noted in other literature (HSE and ONMSD 2012; INMO 2013). It was also noted that this ratio had risen from an average of 1:3000 in 1995 (Hanafin and Crowley 2005). However, such generic ratios can neglect social vulnerability and particular population acuity levels. Consequently, appropriate community staffing requires localised judgment which has the ability to examine the required skill mix and population ratio needed not only within the particular CHO, but to have sensitivity to each caseload qualities.

1.3.3 Workload and the role of public health nurses: Previous research

As has been outlined in earlier studies, the role of the PHN has remained broadly unchanged since 1960[10]. The community nursing service has been subject to review at intervals since its inception in the 1960's . The measure that has been most often used to assess the status of the community nursing service has been workload. In 1975, the Department of Health charged a working group with providing an overview of the public health nursing service following a series of developments over the preceding decade. In providing this overview, the working group undertook a workload survey of public health nurses. PHNs were invited to complete a questionnaire and to provide details of the time spent by them on particular tasks and duties. A total of 761 nurses were invited to participate and high response rates were achieved of between 87% and 91% for the questionnaire and the daily activities analysis forms respectively (Department of Health 1975). Overall, the survey found that there was considerable variation in the time spent on particular nursing tasks across different geographic areas and the working group suggested that the ratio of 1 PHN per 4,000 persons

10 The reports specifically name PHNs although CRGNs are acknowledged as a support role for PHNs and then in discussions on public health nursing are sometimes referenced interchangeably

should be reviewed in terms of the level of need in each area. The report further noted that there was an underutilisation of PHNs in midwifery and child health services and that this should be addressed. With regard to the important role of home visits in community health service provision, the report noted that care of the older person was a particularly heavy burden on PHNs with 68% of their home visit caseload comprising persons over the age of 65 (Department of Health 1975). Of concern were the 11,537 older people nationally who received no nursing care or insufficient nursing care as part of the findings of the survey (Department of Health 1975). The importance of the PHN service for the older old population was demonstrated by McNamara et al. (2013) who identified that one in four older people received a PHN visit in a 12-month period. In a more recent report (Murphy 2015), 6.6 % of people over the age of 50 years (n=79,173) had been in receipt of public health nursing services in the previous 12 months, with the majority of these (33%) being in the older old age group (85 years and older) and rating their health as poor (24.3%) with 38.5% experiencing challenges with activities of daily living or instrumental activities of daily living. Within service delivery, 90% reported they were satisfied with the service, while a further 7.1% identified insufficiency in service as an issue, while 1.3% identified the service as hard to access. This demonstrates that acuity levels and service demand can be high from older populations, yet, the received service is largely perceived well.

Prompted by a lack of clarity around current workload levels and the actual role of PHNs in community health services, another survey of workload was carried out in 1985 (Burke 1986). The survey collected details of work practices from 732 PHNs, recorded over a four- week period and found that, in general, the model of nursing in the community had not developed in tandem with a changing health policy. As a result, PHNs had heavy workloads which made it difficult for them to meet the healthcare needs of the communities they worked in (Burke 1986). Factors noted included an increase in acute nursing care requirements due to a corresponding increase in early discharge of clients from hospital. The report noted that ongoing monitoring of this particular situation was warranted to ensure continued quality care provision and the wellbeing of both clients and PHNs (Burke 1986). The survey also found that public health nurses were still underutilised with regard to ante-natal, post-natal and child health services and that, due to heavy workloads, their preventative health education role was neglected (Burke 1986). In all, the report recommended a review of health policy with respect to public health nursing in order to improve the situation.

Despite the recommendations from both workload surveys, a review of services in 1995 found that little had improved in community nursing and reiterated that the service had not changed in tandem with health policy (Institute of Public Administration 1995). Additional social factors such as an ageing population, increased need for addiction services and high levels of emigration, were also found to have placed a strain on services. As with the previous workload surveys, the review found that, as a result of increased demands on the public health nursing service, the preventative aspect of the service was being neglected as PHNs prioritised curative health care provision when resources were under pressure. Again, in 2004 a workload survey of PHNs in Galway found that the service was under constant pressure and that an increase in workload and in the acuity of the clients in their communities had led to the preventative and educational aspect of their role being largely neglected (Begley et al. 2004).

1.3.4 Workload and client care

Pressures on community nursing services have been identified as of increasing concern with regard to the health needs of clients'. Reviews of community nursing workload in Ireland noted the concerns among these nurses about the unmet care needs of people in the community. Unmet needs can be defined as 'the difference between healthcare services deemed necessary to address a particular health problem and the actual services received' (Wren et al. 2015, p.XI). PHNs surveyed in 1975 felt that

an increase in clerical work had resulted in the needs of infants and older people in the community being inadequately provided for (Department of Health 1975). Similarly, a workload review carried out in Galway found that community nurses were regularly filling gaps in services better provided by other healthcare practitioners with the result that the support needs of their clients were not always met (Begley et al. 2004). The Galway study utilised a revised Easley Storfjell Client Classification System (ESCPI) (Storfjell et al. 1997; Anderson and Rokosky 2001) which was renamed the Community Client Need Classification System (CCNCS) (Begley et al. 2004). The revised tool was further refined for use with all care groups and included a five point score system (Brady et al. 2008). This study included 44 PHNs, who detailed the time per client per week. CRGNs were not included in the study. The study found that 25% of PHNs time was spent on indirect care with 75% on direct care (home or clinic). While percentage time on care groups was identified, times for individual activities were not. Findings in the study pointed to the variations in time required to engage in client care and that this was dependent on the individual level of need. Moreover, it was found that PHNs engaged in non-PHN work for 8.4% of clients, mainly substituting for the social worker in for older people, disabled or adult clients (Brady et al. 2008). The authors suggest that this tool has the capacity to assist in workload evaluation, yet this has not been implemented in routine PHN practice; nor does it account for CRGNs workload.

Capturing the workload related to population health has also been examined leading to a bespoke project which was piloted in the Dublin area (ONMSD 2011; McDonald et al. 2013). This has led to an evidence-based tool- the population health information tool (PHIT), which has recently been converted to a digitalised form. The population health information tool (ONMSD 2011) is a systematic approach which can contribute to the collation of health information, quality and governance, service development and workforce planning and education and professional developments (ONMSD 2011).

A more recent report into community nursing conducted by the INMO described serious concerns around client care and client safety as a direct result of increased burden on the community nursing service with only 7% of staff surveyed feeling that there were enough staff to ensure client safety (Irish Nurses and Midwives Organisation 2013). Such findings are a particular concern within clinical governance and the delivery of safe care to individuals, families and communities.

1.4 Missed care

Within a continuum of care deficits, missed care may be conceptualised as a precursor to increasingly serious care deficits such as failure to rescue (Clarke and Aiken 2003) and never events (Fisk 2008). Care that is omitted as part of required client nursing care has been conceptualised as either 'missed care' (Kalisch and Williams 2009; Kalisch 2006), 'care left undone' (Lucero et al., 2010) or 'implicit rationing of care' (Sochalski 2004). Though operationalised differently, all three concepts seek to understand how nursing tasks are missed when pressure on resources act as a barrier to the delivery of necessary nursing care (Ausserhofer et al. 2014). In the last decade, the concept of 'missed care' has increasingly been identified as both under-researched and widespread and is associated with poor client outcomes and negative impacts on staff well-being. This section outlines the ways in which 'missed care' is conceptualised, measured and understood in nursing and how it relates to quality healthcare.

1.4.1 Conceptualisation and operationalisation

In the last decade or so, research into quality healthcare and client outcomes has increasingly focused on the concept of 'omitted' nursing care (Ausserhofer et al. 2014; Scott et al. 2011). Often situated within a quality of healthcare framework, omitted nursing care has been identified as a significant but under-researched aspect of healthcare provision and is negatively associated with poorer client outcomes and higher burn out rates among nursing

staff (Clarke and Aiken 2003, Sochalski 2004). Variations in the terminology used to describe the phenomenon of omitted nursing care have also contributed to a lack of clarity within the research about the prevalence, characteristics and impacts of omitted nursing care (Jones et al. 2015). An integrated review of the literature (Jones et al. 2015) on the subject found that three conceptualisations of omitted nursing care have been developed by three different research teams and can be classified as follows:

- Care/tasks left undone (Ausserhofer et al. 2014; Sochalski 2004);
- Implicit rationing of care (Schubert et al. 2008); and
- Missed care (Kalisch et al. 2009).

Though different terminology is employed, the three concepts characterise omitted care as a three-stage process; the problem (resource pressures or time scarcity), the process (the decision to prioritise or rationalise care) and the outcome (omitted care) (Jones et al. 2015). Overall, all three conceptualisations seek to examine the relationship between organisational factors such as staffing levels and client and staffing outcomes. More specifically they are concerned with identifying which nursing activities are omitted when pressures on resources make the delivery of all necessary care difficult if not impossible (Ausserhofer et al. 2014; Jones et al. 2015).

Care/Tasks left Undone

Care/tasks left undone was originally conceptualised and operationalised by Sochalski and Aiken et al. (2001; 2010) in order to examine the relationship between staffing and client outcomes in acute hospital settings (Sochalski and Aiken 1999; Sochalski 2004). Measures used to identify care left undone included self-report questionnaires where nurses were asked to indicate whether certain key tasks were not done during their last shift due to a lack of time (Aiken et al. 2001).

More recently, the concept of care left undone has been utilised as part of the RN4CAST project, a cross-national study of workload among hospital-based nurses in 12 countries (including Ireland) and 488 hospitals (Ausserhofer et al. 2014). The overall aim of the study was to examine innovative approaches to forecasting health workforce requirements to meet increased demand on services while ensuring better outcomes for both clients and nursing staff (Scott et al. 2011). As part of the study, the impact of organisational factors on both client and nursing staff outcomes was examined (Ausserhofer et al. 2014). Data collected included a survey completed by staff nurses on a range of areas including; their work environment, workload and their perceived quality of nursing care (Ausserhofer et al. 2014; Scott et al. 2011). With regard to workload, the RN4CAST research team measured hours worked and nursing tasks left undone. The study was founded on the hypothesis that hospitals with more favourable organisational environments would report lower instances of care left undone (Ausserhofer et al. 2014; Ball et al. 2013). These environments would be characterised by adequate staffing, positive relationships between staff as well as good levels of job satisfaction and low levels of staff burnout (Ausserhofer et al. 2014; Ball et al. 2013). Such positive work environments are considered essential for quality care and active engagement in the workforce (WHO 2014; WHO 2015a, d) particularly related to global strategies for human resources in health and strengthening nursing and midwifery capacity. Within the conceptual framework used for the RN4CAST study, 'care left undone' was identified as the 'process' of care and referred to nursing activities that were necessary but were missed due to a lack of time (Ausserhofer et al. 2014).

Implicit Rationing of Care

When nurses do not have enough time to complete all tasks as part of their client caseload they prioritise certain aspects of nursing care and ration others (Schubert et al. 2008). This has been the case in current community nursing as a prioritisation of practice has occurred (National Directors of Public Health Nursing Sub-group 2011). Community nursing areas of practice

were ranked within four priority areas with activities not directed by legislation or other mandates being in priority groups 3 and 4. This strategy demonstrates an effort to contain workload and ensure essential community nursing activities are addressed.

A study from Switzerland examined the phenomenon within acute hospital settings and sought to establish the impact of implicit rationing on client outcomes. Taking as its starting point, the assumption that the rationing of care due to time constraints would result in negative client outcomes, the researchers used a variety of scales to explore the relationship between rationed care and the work environment while self-reporting was relied on to track adverse client outcomes. Client satisfaction was also recorded as were staff, client and hospital characteristics. Using a multivariate regression model, the study found that rationing of care, staffing and work environment were explanatory factors for client outcomes however no causal relationship could be established and further research to determine causation was suggested.

Missed care

Missed care is defined as 'any aspect of required client care that is omitted (either in part or in whole or delayed' (Kalisch et al. 2009a:1510). In an early study on missed care staffing shortages, length of time to complete a nursing activity, poor use of staff resources, activities perceived as 'not as my job' (thus not done), ineffective delegation, a conditioning to work not being completed and a denial of tasks not being followed through were identified as reasons for missed care (Kalisch 2006). This concurs with findings in other studies where emotional support, education, care planning, care coordination and discharge planning were identified as most frequently missed (Kalisch et al. 2009b; Kalisch et al. 2011; Ausserhofer et al. 2014; Sochalski 2004; Jones et al. 2015). Other studies have also demonstrated the widespread prevalence of missed care (Phoenix-Bittner and Gravlin 2009; Kalisch et al. 2011a) which has been associated with poor client outcomes (Kalisch et al. 2012). For example, the high prevalence of missed care is identified in small focus group study (n=27) in Massachusetts where every participant reported similar types of missed care 'on every shift, on every day, often more than one incident per shift' (Phoenix-Bittner and Gravlin 2009:145). Further research by Kalisch et al. (2009b) employed a MISSCARE survey (n=459) in three acute care Midwestern hospitals where 44% of assessments, 73% of interventions and basic care and 71% of planning were missed while the influence of impoverished teamwork was also identified as an influencing factor (Kalisch 2009; Kalisch and Lee 2010). Kalisch et al. (2009a) notes that missed care has the potential to put large amounts of hospital clients in jeopardy. Yet, although nurses were aware of missed care, unless asked they do not generally discuss the issue and this may be due to issues of powerlessness, feeling guilty or being fearful of the consequences of acknowledging the issue (Kalisch et al. 2009b).

Even when care deficits are raised, there may be an apathetic response by management (Francis 2013) and Kelly and Jones (2013) observe that such poor care can then assume a status of normalisation. Hospitals, such as the Magnet hospitals in the United States have good staffing levels, a focus on staff empowerment and development and have been shown to have less missed care and better client outcomes (Kalisch and Lee 2012). Therefore, addressing missed care requires, in the first instance, adequate staffing, but also appropriate leadership, an excellent institutional ethos and collaborative teamwork.

1.4.2 Client and nursing outcomes in institutional settings

Missed care is a well-established concept in the nursing literature and evidence for it exists in a number of countries around the world (Kalisch et al. 2009a, b; Phoenix-Bittner and Gravlin 2009; Ausserhofer et al. 2014; Ball et al. 2013). However, missed care research is dominated by research undertaken in nursing homes, hospitals and missed out patients' appointments, for example, in relation to missed HIV appointments. Consequently,

there is a major gap in the literature in relation to missed care in community settings. Whilst there is a reasonable amount of literature that linked specific nursing tasks to impaired outcomes, no publications did so as part of a missed care study. For institutional care, some studies of client outcomes exist; however, few of these are accompanied by cost benefit calculations. For example, failure to ambulate and turn clients has been linked to new-onset delirium (Karmel et al. 2003), pneumonia (Mundy et al. 2003), increased length of stay and delayed discharge (Karmel et al. 2003; Mundy et al. 2003; Munin et al. 1998; Whitney and Parkman, 2004) increased pain and discomfort (Price and Fowlow 1993) and physical disability (Yohannes and Connolly 2003). Other studies have found relationships between staffing levels and client outcomes (Rothberg et al. 2005; Van den Heede et al. 2010). A systematic review of client outcomes and care rationing found that it was negatively related to outcomes such as client falls, nosocomial infections and low client satisfaction levels. The studies included in the review are summarised in Table 1.

Van den Heede et al. (2010:1291) note that little research has been carried out comparing 'costs of increased nurse staffing levels with benefits of reducing mortality

Table 1: Client outcomes and missed care

Outcome	Reference
Missed nursing care negatively affected client falls explaining 9.2% of variance in client falls.	(Kalisch et al.2012)
Significant associations between unmet care needs and self-reported cases of acquired nosocomial infections, client falls and clients received the wrong medication.	(Lucero et al. 2010)
Rationing associated with decrease in the odds of client reporting satisfaction and increases in the odds of nurses reporting adverse client outcomes, especially nosocomial infections and pressure ulcers.	(Schubert et al. 2008)
Nurse-reported outcomes of nosocomial infections, pressure ulcers and client satisfaction appeared particularly sensitive to rationing.	(Schubert et al. 2009)
Quality of care was significantly related with unfinished care with >40% variation in quality ratings associated with the work left undone.	(Sochalski 2004)
Clients treated in the hospital with the highest rationing level were 51% more likely to die than those in peer institutions (adjusted OR: 1.51, 95% CI: 1.34–1.70).	(Schubert et al. 2013)
Deterioration in the functional autonomy especially of older people.	(Morin and Leblanc 2005)

rates'. Tubbs-Cooley et al. (2013) also note a lack of research on the relationship between missed care and client outcomes in primary healthcare settings.

A study by Rothberg et al. (2005) in two US hospitals links higher mortality rates with lower staffing levels. It shows that staffing budgets increase as client to staff ratios decrease from 4:1 to 8:1. Rothberg et al. (2005) nevertheless speculate that cost increases are less severe where increased staffing decreases length of stay. Van den Heede et al. (2010) suggest that increasing nurse staffing levels to the level of the 75th percentile in Belgian cardiac surgery centres may save approximately 45.9 lives per year. This equates to an incremental cost-effectiveness ratio of €26,372 per 'avoided death' (2010:1291), with increased staffing offering better value for money than alternative interventions.

As indicated previously, a related concept which has received some academic attention is care rationing. When resources are not sufficient to provide necessary care, nurses are forced to ration their attention across clients by using their clinical judgement to prioritise assessments and interventions, which may increase the risk of negative client outcomes (Schubert et al. 2008). More recent research found associations between rationing and client mortality rates. Clients treated in the hospital with the highest rationing level were significantly more likely to die than those in peer institutions (Schubert et al. 2013).

Kalisch et al. (2012), in a study investigating the correlation of missed nursing care, staffing and client falls found that missed care mediates the relationship between staffing levels and client falls. The authors argued that fall rates are lessened when standard nursing care is completed. Morin and Leblanc (2005) also argued that the number of care hours cut in their study affected communication and mobility and this may have a long-term impact resulting in medium-term deterioration in functional autonomy, especially of older people.

In relation to nursing outcomes, a report by Tschannen et al. (2010) found that units with high levels of missed care had more staff with intention to leave within one year, arguing that inability to provide the care nurses viewed as needed was a reason for leaving their position. The authors conclude that by minimising missed nursing care, organisations may be able to improve satisfaction and reduce intention to leave (and subsequent turnover). A study on the costs of nursing turnover found that the highest mean direct cost was incurred through temporary replacements, whereas the highest indirect cost was decreased initial productivity of the new hire (O'Brien-Pallas et al. 2010).

1.5 Missed care in the primary healthcare setting

The phenomenon of missed care has not been examined formally in the primary healthcare setting. However, research into community nursing workload has identified concerns among community nurses that high caseload numbers and inadequate staffing result in their inability at times to deliver the quality and level of nursing care they feel their clients require (Begley et al. 2005; Irish Nurses and Midwives Organisation 2013). This section begins with a summary of research on client and nursing outcomes from missed care and community nursing generally. The main findings from the literature on client and nursing outcomes from missed care in institutional settings are also discussed. The section then concludes with a review of the MISSCARE survey.

1.5.1 Client outcomes from community nursing and missed care

Only two pieces of evidence on preventable health problems arising from missed care in community settings were found. A 1989 study in the US found that an outbreak of measles occurred amongst under-5 year olds after health care providers missed vaccination appointments due to illness (Hutchins et al. 1989), although it is unclear whether this related to community nursing as such.

One other paper explicitly considered the effect of missed care in home visits providing breastfeeding support, with reference to the

two month-long Danish health visitors' strike in 2008. During the strike, just 75 of the 375 health visitors studied kept their home visit appointments. A greater number of reports of nursing mothers' cracked nipples were submitted during the period of the strike, although fewer instances of baby calming problems or difficulties in putting the baby to sleep were reported. Overall, no significant long-term differences in breastfeeding duration were found as a result of the strike. However, mothers who were left unvisited during the strike did have shorter full breastfeeding durations than a comparable group of mothers from the control period (Kronborg et. al. 2012).

Davies et al. (2009:69) describe a lack of research in the field of community nursing outcomes, reporting a particular need for studies of community nursing with 'elderly, housebound clients'. Yet, Judd et al. (2001:371) note the difficulties implicit in evaluation of community health promotion schemes, which often employ complex, multiple strategies and involve multiple healthcare providers, stating 'little consensus has been reached about the most appropriate method of evaluating community-based programmes'. A more fruitful line of enquiry was in relation to the specific areas of missed care identified in the MISSCARE survey and the results of those searches are set out below.

1.5.2 Cost savings from community care

Due to the lack of evidence relating to the impact of missed care in community settings, it is unsurprising that there is little evidence in relation to cost implications. Nonetheless, community care is recognised as a cheaper and often more effective option than institutional care and this had led to increases in funding in a number of countries with the explicit aim of reducing costs to the system as a whole. For example, the UK's 2004 NHS Improvement Plan aimed to support clients with chronic, long- term conditions was accompanied by investments of 7.4% a year in real terms over a five year period. The introduction of payment by results schemes was expected to release finances to community care services, reducing costs to hospitals by reducing length of stay (Wilson et al. 2005). One case of primary care services being devolved to the community is seen around wound care. The economic costs of chronic wounds (including leg ulceration, diabetic foot ulcers and pressure ulcers) in the UK were estimated at £2.3-3.1 billion annually in 2012 (Dowsett et. al., 2012), with costs per client estimated at up to £10,500 in 2004 (Bennett et. al., 2004). Savings made by using negative pressure wound therapy (NPWT) devices at home during nurse visits are expected to include reductions in hospital stays. Reductions in dressings and nursing time are also expected, as are reduced instances of complications resulting in high cost emergency care such as amputations or grafts. The mean cost per day of NPWT initiated in the community is calculated as £38.50, significantly less than the cost per day of a hospital stay, estimated at £288 per day. The mean cost of an entire wound care episode is estimated at £748, in comparison to £5,760 if treated in hospital. This study, however, is based on a small sample size and therefore its implications may be limited (Dowsett et al. 2012).

Another area where community care has been promoted because of recognition of better outcomes and lower costs is with psychiatric services. Studies since the 1970s have demonstrated cost savings from providing services to people in community rather than hospital settings (Murphy and Datel, 1976; Sheppard et al. 2008; National Vision for Change Working Group 2011; Kuklinski et al. 2012). This is particularly the case where interventions have a preventative element, such as early childhood interventions (Barnett and Masse 2007; Belfield et al. 2006; Karoly et al. 2005), home visitation services to low-income mothers and their children (Johnson et al.1993, 2000), intensive foster care (Zerbe et al. 2009), and substance abuse prevention (Plotnick et al. 1998; Spoth et al. 2002). All of these have been linked with substantial cost savings to the State (Aos et al. 2004).

A final area that has some relevance to this

study is the nurse family partnership (NFP) programme, a home visiting programme for mothers. A specially trained family nurse visits the mother regularly, from the early stages of pregnancy until their child is two. The programme operates in the US and the UK and is underpinned by evidence from three randomised controlled trials from the US. NFP's economic benefits are estimated to be $85,648 per family served. This includes less tangible savings (like potential gains in work, wages and quality of life) into account along with resource cost savings (cost offsets to government, insurers, and out of pocket payments by families), or a return of 9.56 for every dollar invested in the programme (Miller 2013).

Finally, there is limited published cost data on the unit costs of community nursing compared with institutional nursing. In the UK, the Personal Social Services Research Unit's (PSSRU) *Unit Costs of Health and Social Care 2009* estimate that home care costs averaged £181 based on 10 local authority home care hours per week in 2009, and £26 per weekly visit from a community nurse (Curtis 2009). However, Pappas and Welton (2015) describe the difficulties associated with economically valuing nursing care, since levels of nursing expertise vary, while costs of nursing care are often subsumed into larger operational costs. They call for value-based economic models that recognise outcomes as well as the costs of nursing processes. Equally the nursing model of home nursing in the Netherlands has demonstrated some economic advantages, high levels of client satisfaction and a high level level of employee satisfaction (DeBloc 2011; Gray et al. 2015).

One paper describes the impact of economic incentives and disincentives on community nurses. It suggests behaviour, attitudes and motivation could be influenced by improving nurses' salaries, compensation for expenses, opportunities for promotion, benefits such as leave and subsidised education, and improving working conditions, support networks and opportunities to participate in decision making. These conclusions may have implications for recruitment and retention and also for discouraging missed care (Kingma 2003).

1.6. A health economics perspective

Haycocks (2009) describes economics as the science of scarcity and health economics has a defined focus on obtaining the maximum value for money, while balancing cost effectiveness and clinical effectiveness in healthcare service provision. Each year, millions of people across the world die from preventable diseases. Leading causes include cardiovascular disease and diabetes which are conditions that can be prevented or limited through lifestyle changes and careful management. The management of these conditions also place a huge burden on health budgets. Although the cost of care in terms of bed days for a diabetic foot ulcer was €11,972,859 and for diabetic amputations was €7,648,233 in 2008, the actual cost is estimated to be 2-3 times higher (National Diabetes Programme Clinical Strategy and Programmes Directorate 2011).

Across the world, the costs associated with complex health and social care needs, including those from preventable conditions, are expected to rise considerably in the coming years. In Ireland, there are four factors driving this which include:

- an aging population, for example an analysis from a 2011 baseline shows that the older population will rise by 62% by 2026 and more than double by 2046 to over 1.3 million. Including a particularly steep rise in the over-80s (CSO 2013);
- an increase in dependency, for example, an increase in the number of people living with long-term medical conditions and more complex health problems;
- a fall in the number of family carers available due to higher female participation in the workforce; and
- a large proportion of the over-65s live in rural areas which makes the provision of healthcare more challenging and costly (Nic Philibin et al. 2010).

Within this context, there is major pressure on health services to provide more services to

more people but without a similar relative increase in health spending. These factors make the challenge of developing effective preventive healthcare more pressing than ever. These demographic and cultural factors are increasing workloads for all staff in the health service. However, for the community nursing service, there are some additional factors which are contributing to the very high caseloads. These include the observations that:

- although low by historic standards, Ireland still has a high birth rate (OECD 2014);
- the HSE has targets for shorter hospital stays and earlier discharges of clients as a cost reduction measure (NicPhilbin et al. 2010). Specifically, the HSE has a target for early discharge of over 6,000 clients in 2015. Although this is unlikely to be reached, this places a substantial extra burden on community nurses;
- shortage of supporting services, home help, occupational therapy, physiotherapy etc. increases the caseload of PHNs. One piece of research found that less than half of PHNs in Ireland were able to refer directly to a hearing or eye specialist (Hanafin and Cowley 2003);
- nursing staff numbers have fallen year on year since 2008 with 11.4% fewer in 2013 (White et al. 2002). Qualitative evidence from our research suggests that retiring nurses are not being replaced and caseloads being distributed amongst existing team;
- rise in administrative burden on PHNs but fall in administrative staff (13.7% fewer administrators in 2013 compared with 2007); and
- a rise in the eligibility population for community nursing services (National Directors of Public Health Nursing and Shannon 2014).

The purpose of this study is to identify what implications missed care might have for wider health outcomes and what the cost implications, if any, of these might be. Therefore, there are two kinds of costs central to this study. These are:

- costs that arise from impacts on client health either through their health deteriorating or through them needing to use more costly ambulatory services; and
- costs that arise from the impacts of missed care on job satisfaction and morale, which in turn impact on the retention of skilled staff in the system.

It is possible that cases of missed care arise in four ways. This includes:

- too few nurses relative to the increasingly complexity of need within the community;
- the remit of nurses widening due to the cuts to services provided by other professionals working in the community;
- the early release of clients from hospital to free up bed space; and
- the filling of 'gaps' in services (including lack of administration staff) so PHNs are spending a considerable amount of time on admin rather than nursing duties.

Further research on staffing ratios (an indicator of the likelihood of missed care) and client care support these findings. For example, Aiken et al. (2014) find that after adjusting for client and hospital characteristics (size, teaching status, and technology), each additional client per nurse was associated with a 7% (odds ratio [OR], 1.07; 95% confidence interval [CI], 1.03-1.12) increase in the likelihood of dying within 30 days of admission and a 7% (OR, 1.07; 95% CI, 1.02-1.11) increase in the odds of failure-to-rescue. After adjusting for nurse and hospital characteristics, each additional client per nurse was associated with a 23% (OR, 1.23; 95% CI, 1.13-1.34) increase in the odds of burnout and a 15% (OR, 1.15; 95% CI, 1.07-1.25) increase in the odds of job dissatisfaction. Thus, the impact of missed care has an impact on client outcomes and on safe care delivery.

1.7 Conclusion

This chapter has presented the context of community nursing in Ireland. Community

nursing, under the remit of DPHN, is comprised of PHNs and CRGNs who have geographical caseload responsibilities within CHOs. The service evolved from the Queen's Institute of District Nurses and the Lady Dudley Scheme to a service under the management of the HSE. PHNs have had a specialist registration category with the Irish Nursing and Midwifery Board since 1960. The role of PHNs and CRGNs is guided by Department of Health memos (27/1966; 41/2000) and while PHNs have a 'cradle to grave approach', CRGNs generally work with adult populations only. The generalist role of the community nursing service has been considered both advantageous and problematic. However, it is recognised that a change is required to provide a robust community nursing service to support current and future population needs. Changes in Ireland's demographic structure, evolving legislation and policy, the increased complexity of cases, shorter hospital stays have expanded community nurses' role, but this has been in an ad hoc way, without clear boundaries and a general lack of national standardisation. This nebulous situation has been compounded by Ireland's economic recession and the fact that community nursing numbers have not grown in tandem with total population increases, particularly since the 1990s. In addition, the status of eligibility for community nursing services (i.e. medical cards) for citizens differs than that of eligibility for acute care exacerbating confusion both within and outside the community nursing profession.

The challenges in role have been shown to relate to a lack of clarity of what precisely the role encompasses (Institute of Public Administration 1995; ICHN 2007) and such challenges have inevitably been impacted by the economic recession and the staffing moratorium in Ireland. There are considerable variations in both the work undertaken (Burke 1986) and community nursing staffing ratio ranges (Hanafin and Crowley 2005) with a notable lack of development of community nursing as a discipline in tandem with evolving primary health care policy in Ireland (Institute of Public Administration 1995). This contradicts the current government impetus to have a cost efficient and effective primary healthcare system (Department of Health 2013) as well as care directions from the WHO (2015a, b, c, d). With the perspective of workforce planning, little research has been undertaken within regards to community nursing staffing as opposed to the acute sector. Moreover, many workforce planning methods are based on acute care or long term care settings and do not consider care omitted or missed care. Within various nursing workloads, nurses can rationalise care and can be forced to only attend to what is prioritised due to issues of staff shortages, a lack of leadership, ineffective delegation or may become immune to noticing missed care due to being conditioned to it as normal. What appears to be frequently missed is client education and preventive care discussions (Begley et al. 2004) but in acute care assessment, care planning and evaluation has also been demonstrated as missed care (Phoneix-Bittner and Gravlin 2009). Missed care has been linked to poor client outcomes (Kalisch et al. 2009a, b, 2011a; Aiken et al. 2014), with a strong correlation to insufficient staff numbers. Acknowledging all of these issues, a consideration of Ireland's demographics, and policy imperatives in the context of community nursing's role and missed care is merited to highlight care deficits and to contribute to role clarity and the comprehensive development of the community nursing services in Ireland.

Chapter Two: Study Design

2.0 Introduction

This chapter describes the methods used to examine the concept of missed care in the Irish community nursing sector. It outlines the chief aims and objectives of the study and details the sampling strategy, data collection methods and data collection instruments used to answer the research questions. Using a non-experimental exploratory design, the study set out to develop, pilot and validate a survey instrument for the measurement of 'missed care' in the Irish community nursing sector. Informed by the MISSCARE survey (Kalisch and Williams 2009), the instrument was developed over two phases. The first phase involved refining the instrument to capture 'missed care' in the community rather than the acute nursing sector. This required establishing the routine tasks and areas of responsibility for PHNs and CRGNs in the community. In the second phase, the survey instrument was piloted with a potential sample of 1,500 registered PHNs and CRGNs nationally. As part of the survey, data was also gathered on the average time taken by PHNs and CRGNs to complete routine tasks.

2.1 Study aim and objectives

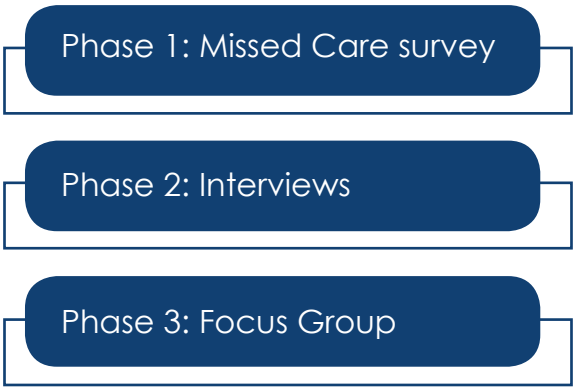
The overall aim of the study was to identify what care is being missed in the Irish community nursing sector and to examine the relationship between missed care and staff nursing levels. There were seven key objectives:

1. To establish a steering group of community nursing representatives to inform the survey development;
2. To develop a routine practice survey based on the concept of missed care (Kalisch and Williams 2009) for use within the community nursing sector;
3. Pilot survey with community nurses;
4. Validate the survey instrument;
5. Establish the context of current Irish community nursing;
6. Provide a health economics perspective on the findings from the survey;
7. Integrate the survey findings with data on workforce planning examine methods of developing appropriate staffing ratios for community nurses.

2.2 Data collection

Data were collected in three ways as detailed in Figure 1.

Figure 1: Data collection methods



2.3 Phase 1: Missed care survey

The MISSCARE survey developed by Kalisch et al. (2009a, b; 2006) has been validated for use in acute hospital settings both in the US and internationally (Kalisch et al. 2012; Kalisch et al. 2013; Kalisch and Williams 2009; Blackman et al. 2014). The survey is informed by the Missed Nursing Care Model and uses a four-point Likert scale to measure missed care and reasons for missed care. In the MISSCARE survey, levels of missed care are measured using a series of twenty two established nursing actions while three constructs governing reasons for missed care are captured using sixteen validated items (Kalisch and Williams 2009). Adapting the MISSCARE survey for the Irish community nursing sector required a review of established community nursing actions or duties as well as an examination of the factors that can impact on what nursing care is left undone. A research steering group was established comprising a representative from the Institute of Community Health Nurses (ICHN), the chair of the national directors of public health nursing group and a retired director of public health nursing. Consultation with the

steering group informed the development and design of the survey as well as the data collection strategy.

2.3.1 Survey with community nursing professionals

Following a review of the literature and in consultation with the research steering group, a total of 44 core duties and responsibilities for PHNs and CRGNs were identified while a further 20 emerged relating to the work of PHNs only (Begley et al. 2004; Department of Health and Children 2000; Department of Health 1966). To ensure consensus on all 64 items across the nine CHOs in Ireland, representatives of community nursing were invited to review the survey items and provide feedback and comment to the research team. A total of 22 community nursing professionals responded to the online questionnaire. Respondents were asked to indicate whether each of the 64 items represented the roles and responsibilities of PHNs and CRGNs in their CHOs using the following response options: 'Yes', 'No', 'Not Applicable in my CHO'. Using a consensus level of 75% of all respondents scoring a mean of 1.1 or lower[11], over 80% of respondents confirmed that the 64 items broadly represented the roles and responsibilities of PHNs and CRGNs in their area though some minor adjustments were suggested. A number of respondents (n=10) noted that additional roles and responsibilities outside of those listed in the survey were also assigned to PHNs and CRGNs in their CHOs. This is in keeping with the literature, which suggests that PHNs often find themselves taking on the roles and responsibilities of other healthcare professionals due to gaps in service provision (Begley et al. 2004; Brady et al. 2008; Irish Nurses and Midwives Organisation 2013). However, these activities varied greatly from area to area and so it was not deemed practical to include them in the main survey.

2.3.2 Design of missed care survey

Informed by Kalisch et al. (2009a, b), the community based missed care survey was divided into four sections and gathered data on respondents, levels of missed care and reasons for missed care. The final survey comprised a total of 82 questions across the four sections outlined below. In addition to the questions, respondents were also asked to quantify the specific activity in terms of average times so that this could contribute to workload evaluation. Once the survey items were finalised, a survey was designed using the survey software tool, Survey Monkey.

Section A: Demographics

This section gathered demographic information about the respondents. Questions relating to age, gender, education and years of experience were included. Data pertaining to the work environment of community nurses was also collected in this section. Respondents were asked to indicate which HSE region they worked in, what the population of their local area was and what their current active caseload was.

Section B: Missed Care (PHNs and CRGNs)

The results of the survey with healthcare professionals were reviewed by the research team and the items for inclusion were finalised. The final 64 items which measured missed care were split between two sections; Section B contained 44 items that pertained to the roles and responsibilities of both PHNs and CRGNs. These were grouped into 10 categories as detailed in table 2. Respondents were asked to identify how often that task was missed during their last working week using the scale "rarely", "occasionally", "frequently", "always" or "not applicable to my current caseload". This last response option was included to reflect the variation in the nursing tasks assigned to community nurses in a given period.

11 Yes scores were assigned a value of 1 and no scores a value of 2. A score of between 1 and 1.1 indicated a high level of agreement with the statement. Items on which 75% of respondents scored 1.1 or lower were included in the final survey.

Table 2: Nursing care categories included in missed care survey

PHNs and CRGNS	
Home Nursing Care	3 items covering injections, promotion of skin integrity and health advice/ advocacy
Care Management	6 items including assessments, liaising with other professionals and making referrals
Family Support	2 items including support for families and for carers
Older People	8 items including assessments, follow-ups, screening, management of elder abuse and at risk register
Health Promotion	7 items relating to healthy eating, exercise, well-being, immunisation as well as provision of information about specific conditions
Disadvantaged Groups	5 items relating to health promotion and advocacy work on behalf of vulnerable groups
Education	2 items including supervision of nursing students and participation in CPD
Provision of Other Community Nursing Services	5 items including nursing care and support in areas of palliative care, mental health and chronic disease management
Primary Care Teams	2 items relating to the organisation of and attendance at PCT meetings and referrals to other PCT healthcare professionals
Administration	4 items included the updating of client notes and files and report writing

Section C: Missed Care (PHN)

PHNs are responsible for nursing care relating to child health, child protection and postnatal care within the community[12]. With this in mind, a separate section was designed to capture levels of missed care across these three areas. A total of 20 items were included and respondents were again asked to indicate how often each of the items were missed during their last working week using the scale rarely", "occasionally", "frequently", "always" or "not applicable to my current caseload".

12 The researchers acknowledge that in some areas, CRGNs with midwifery qualifications carry out postnatal checks but this varies from area to area and the official documentation regarding roles and responsibilities does not reflect this; therefore it was decided to restrict responses to these questions to PHNs only.

Section D: Reasons for Missed Care

Section D included three factors that impacted on care being missed as identified by respondents in Sections C and D. Informed by Kalisch et al.(2009b) and literature relating to primary care in Ireland (Begley et al. 2005; Irish Nurses and Midwives Organisation 2013; Burke 1986), respondents were asked to indicate to what degree each of the items was a factor in care being missed during their last working week using the following rating scale; inadequate staffing levels, unanticipated rise in client volume and/or acuity/complexity and lack of secretarial/ administrative support. Respondentss were also offered an 'other' category to allow them to include additional factors that they felt impacted on care being missed.

2.3.3 Data collection for missed care survey

In order to determine prevalence of missed care within community nursing the research team used an online anonymous survey targeting both PHNs and CRGNs. Community nurses operate across nine CHO's nationally. Following consultation with the steering group it was established that although based in primary healthcare offices, community nurses are often out of the office on calls and can have limited access to email. With these factors in mind the research team worked with the Irish Nurses and Midwives Organisation (INMO) to target PHNs and CRGNs with active email addresses through the INMO members' database. This resulted in a potential sample size of 1,500. Only active PHNs and CRGNs were eligible to participate. It was also acknowledged that in some CHOs, PHNs and CRGNs have been assigned specialist roles. It was decided to exclude these PHNS and CRGNs from the survey as a large number of survey items would not be applicable to them.

In order to preserve the anonymity of respondents, the research team did not have access to the email addresses of respondents. Utilising Survey Monkey, an online link to the survey was provided to the INMO and was emailed out to all eligible respondents through their online database system. The online survey went live on the 31st July 2015 and a data collection period of three weeks was outlined however this was extended to reflect a large number of community nursing personnel who were on annual leave during this period. Requests for hardcopies of the survey were made by four primary care centres and a printed version of the survey was provided in those instances. In addition, hard copies were provided to community nurses attending a continuing professional development session in University College Dublin and to attendees at an Institute of Community Health Nursing conference in Dublin. The survey closed on the 25th September 2015 with a total of 458 responses received yielding a response rate of circa 29%.

2.3.4 Data Analysis

A total of 458 surveys responses were recorded. However on review, a significant proportion of those responses were incomplete. The level of missing data from the sample was reviewed and from the analysis it was determined that the majority of respondents had either most or all data missing or almost no missing data. With this in mind the research team decided to establish a threshold of 5% for missing data across the sample and removed all respondents from the final dataset who breeched this threshold for 'missingness'[13]. This resulted in a reduced sample size of 283 on which all data analysis was carried out. All completed surveys were analysed using Statistical Package for the Social Sciences (SPSS) V 20.

The main objectives for our analysis were to:

- determine the prevalence of missed care and establish any correlations between environmental factors and reported instances of missed care;
- determine the acceptability, construct validity and reliability (internal consistency) of all or elements of the tool; and to
- explore whether items in sections B and C could be reduced.

The data were checked for errors and cleaned. Given that the missed care data comprised Likert Scales, non-parametric statistical tests were conducted. In addition, frequency distributions were also used to explore the data collected. Pearson's Chi-Squared statistical tests were employed to identify any associations between missed care data collected in Sections B and C and categorical data collected in Section A.

2.3.5 Psychometric testing of the tool

The psychometric properties of the Missed Care survey were examined with regard to acceptability, item reduction and

13 In other words, any respondent who had left more than 5% of questions blank were removed from the dataset giving us a reduced sample size of 283. The level of data omitted by the remaining 283 cases was very low.

reliability. The number of respondents who completed the survey without omitting any items was used to determine the ease of use or acceptability of the instrument. The extent to which the Missed Care Survey could be subjected to item reduction was also explored. To this end, the analysis focused on exploratory factor analysis (EFA) to determine whether the 64 missed care items could be collapsed based on underlying unifying factors. The items were reviewed to determine suitability for EFA and principal components analysis was the extraction technique used coupled with a Varimax orthogonal rotation method. With regard to reliability, the internal consistency of Sections B, C and D were evaluated using Cronbachs Alpha.

2.4 Phase two: Interviews

In order to provide a contextual background to community nursing in Ireland, four semi-structured interviews with key stakeholders in community nursing in Ireland were undertaken. Invitations were extended to a) a representative of the Office of Nursing and Midwifery Services Director, b) a nursing representative in the Department of Health, c) a representative from the Institute of Community Health Nursing and a representative from d) the Irish Nurses and Midwifery Organisation. All agreed to be interviewed.

2.4.1 Interviews

Semi-structured interviews, with the aid of a topic guide, were undertaken. Interviews took place in the interviewees' workplaces at a time negotiated in September-October 2015. Interviews were digitally recorded and lasted between 30-45 minutes. A professional typist, who signed a confidentiality agreement, transcribed the interviews.

2.4.2 Data management and analysis

Interviews were imported into NVIVO © (version10), a computerised data management system. Data analysis were comprised of thematic data analysis. Thematic data analysis is concerned with:

> *'…identifying, analysing and reporting patterns (themes) within data. It minimally organises and describes your data set in (rich) detail. However, frequently it goes further than this, and interprets various aspects of the research topic.' (Braun and Clarke 2006:79)*

Each transcript was reviewed for content and emerging themes using Braun and Clarke's (2015) six stage approach: a) familiarisation with the data, b) coding, c) searching for themes, d) reviewing themes, e) defining and naming themes and f) writing up.

Each theme was generated in relation to the context of community nursing in Ireland and represent distinct meanings captured within the data. This resulted in 23 preliminary themes, which were subsequently reduced to three themes as presented in figure 2.

Figure 2: Final themes generated in thematic data analysis

2.5 Phase 3: Health economics evaluation

As demonstrated earlier in this report, there is a major shortage of research on a) outcomes from community nursing, b) missed care in community nursing, c) an economic analyses of missed care and d) health economics data on Irish health care, particularly within the community.

As a result, it is very difficult to infer from the evidence in relation to missed care what the costs are likely to be. Instead, qualitatively developed scenarios were developed to illuminate exemplars of where missed care might have an impact and what the costs are likely to be. An extensive review was undertaken of the evidence in relation to the areas that are identified as missed care in phase one and any reported costings that relates to it. Rather than quantify the costs of missed care, which would be an impossible task given the level of data availability, the best available evidence is summarised on the likelihood that prevention is not taking place and that it would lead to better health outcomes and cost savings.

The missed care survey undertaken in phase one suggested that missed care was widespread within the sample. These have been summarised in Table 3.

Table 3: Areas of missed care identified in phase one of the survey

Health promotion	Family visits	Non patient time
• Older people in the community • Heart disease and stroke	• Breast-feeding Support • 18-24 month infant visit • 3-4.5 year infant visit • Additional visits and support to families	• Partici-pating in CPD • Updating patient files • Maintain-ing an at-risk register of older people

There are generally four further steps to carrying out a value for money/cost impact study. These are:

1. to develop a theory of change for the areas of missed care. In practice this means mapping the impact that these had on a) client use of other services, b) client outcomes and c) the nursing profession;

2. to estimate the likely incidence of reduced outcomes, increased service use and workforce impacts from preventative activities not taking place;

3. to estimate the costs of the disbenefits from missed care; and to

4. estimate the costs of increasing the provision of nursing and other community services and compare with value of disbenefits.

However, it has not been possible to follow these steps due to data availability. Instead, the analysis presented here relies heavily on secondary literature and case study evidence to sketch out some indicative costs.

2.5.1 Data collection

Focus group members were recruited by purposive sampling where potential participants were approached to take part in the study. The focus group related to generating a health economics perspective on community nursing practice took place in a convenient venue in central Dublin. To develop some scenarios of how cost implications might arise, a focus group was conducted with five experienced community nurses: three PHNs and two CRGNs. The purpose of the session was to draw on their clinical experience to help identify what the likely impacts of missed care in these areas in Ireland today were likely to be. The first question that the nurses were asked to address was which of the areas in their opinion had the greatest clinical impact. The focus group was then guided into particular areas of relevance in health economics. Although the focus group was recorded, it was not transcribed as the health economist took copious notes and did not require transcripts. The focus group lasted one hour and forty-eight minutes.

2.6 Ethical considerations

Ethical approval for the study was obtained from the UCD Human Research Ethics Committee (HREC) in April 2015. In addition, the research team sought approval from the HSE Primary Care Research Committee (PCRC) for the survey to be conducted in HSE primary care settings. The application to the PCRC was submitted in April and a response received in late June 2015. Due to competing nursing priorities, the PCRC felt it was not currently in a position to support the roll out of the survey across HSE centres. As a result, information relating to the study was disseminated through the INMO and ICHN networks and recruitment was supported by both organisations and the research steering group.

Data protection and confidentiality considerations were also incorporated into the design of the study and were outlined in participant information documentation.
A commonly used online survey tool, Survey Monkey, was used to administer the questionnaire. In order to obtain informed consent a cover page detailing the nature of the study, the purpose of the survey and the guarantees of anonymity for potential respondents was included. As surveys were distributed anonymously and online, respondent consent was assumed if surveys were returned.

Participants in both the interviews and the focus group volunteered to participate in the study. A participant information sheet was given to each potential participant and after evidencing understanding of the study and their contribution, a member of the research team invited the participant to sign a consent form. Participants were assured of the anonymous nature of their contribution and the fact that any data was confidential and identifying features would be removed. A professional transcriber, who signed a confidentiality agreement, transcribed the interviews. Participants were assigned pseudonyms by the research team and all data was stored either in a locked filing cabinet or a password encrypted computer which only the researchers had access to.

2.7 Conclusion

This chapter has presented the process of the research design. Three methods of data collection were undertaken. Firstly, as the MISSCARE survey (Kalisch et al.2009; 2006; 2009) was developed and applicable in an acute settings, its conceptual framework was used to develop a bespoke survey instrument for Irish community nurses. This involved the guidance of a steering group and the input of community nursing staff. The survey was comprised of four sections: a demographic section, a PHN and CRGN section, a PHN only section and a 'reasons for missed care' section (PHNs and CRGNs). A total of 458 surveys were returned, but the final data number was reduced to 283, based on a high degree of item completion in individual surveys. The vast majority were completed via Survey Monkey. Survey data were analysed via SPSS V 20.

Secondly, in order to contextualise the context of community nursing in Ireland, four semi-structured interviews were undertaken with key stakeholders. After transcription, the interviews were analysed using thematic content analysis with the aid of the data management programme NVIVO © 10. Data were reduced to three ultimate themes. Finally, a focus group (n=5) was convened by the health economist assisting the project. Based on findings in the missed care survey, scenarios were explored which generated data from a health economy perspective. Data were recorded and findings were based on the discussions of the focus group members. The chapter concludes with a discussion on how ethics approval and ethical conduct was managed during the study.

Chapter Three: Findings

3.1 Introduction

This chapter is divided into three sections. Section one presents the findings from the missed care survey and reviews the psychometric properties of the missed care community based survey generated for this study. Section two presents the findings from the stakeholder interviews focused on illuminating the context of community nursing in Ireland. Finally, section three presents the findings reported in relation the health economics analysis.

3.2 Section One: Findings from missed care survey

A key aim of this study was to identify levels of missed care among practicing PHNs and CRGNs. Surveys were distributed via email using the INMO member's data base which contains over 1500 member email addresses. Throughout this section, the term 'community nurse' is used when discussing PHNs and CRGNs collectively.

3.2.1 Characteristics of respondents

Out of the 283 respondents that were included in the final analysis, a total of 209 (74%) were PHNs while 74 (26%) were CRGNs. Table 4 provides details on the age and gender of respondents. The majority (98%, n=278) were female and the remaining 2% (n=5) were male. Most respondents were aged between 35-44 (34%, 96) and 45-54 (34%, 96) with 13% (36) aged between 25 and 34 and a further 19% (55) aged 55-64.

Table 4: Age and gender of respondents

Age	Gender				Total	
	Male		Female		Total	
	N	%	N	%	N	%
25-34	1	20.0%	35	12.6%	36	13%
35-44	2	40.0%	94	33.8%	96	34%
45-54	1	20.0%	95	34.2%	96	34%
55-64	1	20.0%	54	19.4%	55	19%
Total	5	100%	278	100%	283	100

Percentages may not total 100 due to rounding

As detailed in Table 5, the overwhelming majority of respondents had achieved a primary degree or higher (90.4%, n=256). Of those, 52% (n=148) had achieved a post-graduate certificate or diploma while a further 14% (n=39) had attained a post-graduate qualification at masters' level.

Respondents were also asked to indicate

Table 5: Highest level of education attained

Education	N	%
Both upper secondary and technical or vocational	2	0.7%
Non-degree	25	8.8%
Primary degree	10	3.5%
Professional qualification (degree status)	25	8.8%
Both degree and professional qualification	34	12.0%
Post-graduate certificate or diploma	148	52.3%
Post-graduate degree (masters)	39	13.8%

Percentages may not total 100 due to rounding

how many years experience they had in community nursing. For ease of analysis the experience categories included in the survey were collapsed. Results across the three new categories are displayed in Table 6. The majority of respondents had between 6 and 15 years of experience working in community nursing (59%, n=152) while 21% (n=55) had between 16 and 20 years of experience and the remaining 19% (n=49) had up to 5 years experience.

Table 6: Years' Experience

Years Experience	N	%
Less than 1 year-5 Years Experience	49	19%
Between 6 and 15 Years Experience	152	59%
Between 16 and 20 Years Experience	55	21%

Percentages may not total 100 due to rounding

3.2.2 Working environment

Section A of the survey also gathered contextual data regarding the working environment of both PHNs and CRGNs. This included data on the number of hours they generally work per-week, their caseload numbers and the population size of the area they cover. Table 7 provides an overview of the data collected across all these items. With regard to HSE region, the sample was representative with a relatively even spread of responses across the four HSE regions. As Dublin is split between the North East and Mid-Leinster, half of all responses were captured between these two HSE areas; (50%, n=140). Hours worked was also measured using the standard working week (39hrs) as a benchmark. Most respondents worked a 39-hour week (43%, n=121) while 28% (78) indicated that they worked more than 39 hours a week. A further 29% (n=83) worked less than 39 hours a week[14] . In relation to the population of their geographic area, most respondents (36%, n=93) were working in an area with a population of between 2,500 and 4,000 people. Only 17% (n=44) respondents recorded working with a population in excess of 10,000 people. With regard to workload, this was measured with regard to community nurses' current active caseload (based on their most recent working week). From table 7, it can be observed that during their last working week, the majority of community nurses had a caseload of between 1 and 50 (46%, n=125). A further 25% (n=68) had a caseload of between 51 and 100. A total of 17 (6%) community nurses had a current caseload of over 250[15].

In addition to overall caseload, the survey also collected data on nurses' older person caseload active clinical caseload and child health caseload (Table 7). This latter category applies to PHNs only. With regard to child health, 64 (30%) of PHNs reported a caseload of between 101 and 200 while a further 62 (29%) indicated they had a current caseload of between 1 and 50. A smaller number, 36 (17%) reported a child health caseload in excess of 250. Most community nurses had a current older person caseload of between 1 and 50 (34%, n=91) and 51 and 100 (31%, n=82) while a small number of respondents indicated they had a current caseload of 250 or more (2%, n=5). In relation to clinical care, the most common active caseload was between 1-50 cases (45.8%, n=125), followed by those with 51-100 (24.9%, n=68). Only 17 (6.2%) reported having a clinical caseload of over 250 cases.

3.2.3 PHNs and CRGNs

Both PHNs and CRGNs have responsibility for community nursing in Ireland. Differences between both groups with regard to characteristics and work environment were explored and any associations between characteristics examined.

14 This could reflect those working on part-time contracts in the community.

15 Though respondents were asked to refer to their caseload 'as per their last working week' it is possible that some respondents included their total caseload figures.

Table 7: Work environment characteristics

Work Environment Characteristic	N	%
HSE Region		
HSE Dublin North East	65	23.0
HSE Dublin Mid Leinster	75	26.5
HSE South	67	23.7
HSE West	76	26.9
Hours Worked per Week		
Less than 39 Hours a Week	83	29.4
39 Hours a Week	121	42.9
More than 39 Hours a Week	78	27.7
Total Population of your Geographical Area		
2,500-4,000	93	36.2
4,001-5,500	51	19.8
5,501-7,000	32	12.5
7,001-8,500	21	8.2
8,501-10,000	16	6.2
10,000 +	44	17.1
Current Active Clinical Caseload		
1-50	125	45.8
51-100	68	24.9
101-200	51	18.7
201-250	12	4.4
250+	17	6.2
Current Active Child Health Caseload (PHNs Only)		
1-50	62	28.8
51-100	26	12.1
101-200	64	29.8
201-250	27	12.6
250+	36	16.7
Current Active Older Person Caseload		
1-50	92	34.0
51-100	82	30.6
101-200	76	28.4
201-250	14	5.2
250+	5	1.9

Percentages may not total 100 due to rounding

Characteristics

The characteristics of PHNs and CRGNs were explored to determine whether there was any significant variation between the groups with regard to age, gender and educational attainment. Table 8 illustrates the differences between the two groups on all three characteristics. With regard to age, a statistically significant difference was identified between the groups (X^2 (3) = 13.10 p <.05) with CRGNs significantly more likely to be older than PHNs with 70% (n=52) of CRGNS aged 45 or older compared with 48% (99) PHNs. There were marginal differences with regard to gender with 3% (n=2) of CRGNs being male compared with 1% (n=3) of PHNs but these differences were not significant. For the purposes of analysis, education was dichotomised into 'Degree or Above' and 'Non-Degree'. The results of the analysis indicated a significant difference between the two groups with regard to education with a greater proportion of PHNs (98%, n=205) recorded as having a degree or above compared with 69% (n=51) of CRGNS (X^2 (1) = 53.8 p <.01). With regard to experience, a higher proportion of PHNs (21%, n=40) had under 5 years' experience compared with 14% (n=9) of CRGNs though this was not statistically significant.

Table 8: PHNs and CRGNs-Between group differences characteristics

Characteristic	PHN % (n) *	CRGN % (n)	χ^2	p
Age			13.10	<0.05**
25-34	15 (31)	7 (5)		
35-44	38 (79)	23 (17)		
45-54	32 (66)	40 (30)		
55-64	16 (33)	30 (22)		
Gender			F	0.6^{NS}
Female	99 (206)	97 (72)		
Male	1 (3)	3 (2)		
Education			53.9	<0.01*
Degree or Above	98 (205)	69 (51)		
Non-Degree	2 (4)	31 (23)		
Year of Experience			1.58	0.4^{NS}
Less than 1 Year-5 Years	21 (40)	14 (9)		
6-15 Years	58 (111)	63 (41)		
16-20 Years	21 (40)	23 (15)		

** significant at p < 0.01 ** significant at p<0.05*
NS=Not Significant F=Fishers Exact Test Used
Percentages may not total 100 due to rounding

Work Environment

Difference between PHNs and CRGNs were also explored with regard to work environment and the results are presented in Table 9. Across the two groups, there was little difference in terms of regional dispersion with each of the HSE regions well represented by both PRGNs and CRGNs. In relation to hours worked, a significant association between one's position and the number of hours worked in a given week was identified (χ^2 (2) = 20.4 p <.01). PHNs (33%, n=68) were more likely to work more than 39 hours a week than CRGNs (13%, n=10) while, conversely, CRGNs (49%, n=36) were more likely to work less than a 39 hour week

than PHNs (23%, n=47)[16] . The workload and caseload of community nurses in Ireland is still measured using total population figures. With this in mind, the research team sought to identify any variation between the two groups in this regard. A significant association between being either a PHN or a CRGN and the population of the area one worked in was found (p <.01). PHNs (41%, n=80) were significantly more likely to be working in areas with a total population of between 2,500 and 4,000 when compared with CRGNs (22%, n=13) (p <.01). Conversely, a significantly higher proportion of CRGNs (27%, 16) reported that they were working in an area with a total population in excess of 10,000 when compared with PHNs (14%, n=28) (p <.01). The analysis also looked at the active caseload numbers for both PHNs and CRGNs. Total caseload numbers and numbers associated with their older person caseload were explored across the two groups and no significant variation was found. As is illustrated in Table 9, caseload numbers were relatively evenly distributed between PHNs and CRGNs.

Table 9: PHNs and CRGNs-Between group differences work environment

Work Environment	PHN % (n) *	CRGN % (n)	χ^2	p
HSE Region			0.97	0.8 NS
HSE Dublin North East	24 (50)	20 (15)		
HSE Dublin Mid Leinster	25 (53)	30 (22)		
HSE South	24 (51)	22 (16)		
HSE West	26 (55)	28 (21)		
Hours Worked per Week			20.4	<0.01*
Less than 39 Hours a Week	23 (47)	49 (36)		
39 Hours a Week	45 (93)	38 (28)		
More than 39 Hours a Week	33 (68)	13 (10)		
Total Population of your Geographical Area			F	<0.01*
2,500-4,000	41 (80)	22 (13)		
4,001-5,500	24 (47)	7 (4)		
5,501-7,000	12 (24)	13 (8)		
7,001-8,500	6 (12)	15 (9)		
8,501-10,000	3 (6)	17 (10)		
10,000 +	14 (28)	27 (16)		
Current Active Clinical Caseload			F	0.5NS
1-50	46 (93)	45 (32)		
51-100	25 (50)	25 (18)		
101-200	18 (37)	20 (14)		
201-250	3 (7)	7 (5)		
250+	7 (15)	3 (2)		
Current Active Older Person Caseload			F	0.4NS
1-50	32 (63)	39 (28)		
51-100	30 (58)	33 (24)		
101-200	31 (60)	22 (16)		
201-250	6 (12)	3 (2)		
250+	1 (3)	3 (2)		

** Significant at p < 0.01 ** Significant at p<0.05 NS=Not Significant F=Fishers Exact Test*
Percentages may not total 100 due to rounding

16 It is worth noting that these differences could be attributable to levels of part-time contracts in the sector.

3.3. Prevalence of missed care

Missed care was captured in sections B and C of the missed care survey. Section B included nursing tasks that are the responsibility of both PHNs and CRGNs while Section C was applicable to PHNs only and focused on child health. Participants were asked to indicate how often each of the 64 tasks was 'missed' during their last working week using the following rating scale; 'Rarely Missed', 'Occasionally Missed', 'Frequently Missed' and 'Always Missed'. Roles and responsibilities that were not part of their current caseload could be marked 'Not Applicable to my Current Caseload'.

The research team took the decision to treat all the missed care variables as dichotomous for the purposes of the analysis. To this end the values for the missed care variables were recoded into 'Rarely Missed' and 'Missed', the latter being a combination of 'Occasionally Missed', 'Frequently Missed' and 'Always Missed'. As part of the process of reducing the values of the missed care variables, the option 'Not Applicable to my Current Caseload' was treated as missing for the purposes of the analysis[17]. The research team acknowledge that, as a result of collapsing the values for care that was missed from four items into two, higher instances of missed care would be recorded on each of the 44 items. Therefore, this section will only report on care that was missed in more than 50% of cases.

3.3.1 Results from Section B: Missed care reported by PHNs and CRGNs

This section comprised 10 categories containing a total of 44 questions relating to the roles and responsibilities of both PHNs and CRGNs in the community. The 10 categories are detailed in table 10:

Table 10: 10 categories in section B

•	Home Nursing Care	•	Health Promotion
•	Care Management	•	Education
•	Family Support	•	Provision of other community services
•	Older People	•	Primary Care Teams
•	Disadvantaged Groups	•	Administration

Within these 10 categories, missed care was captured across all 44 items. However, higher instances of missed care were recorded for items as presented in table 11:

Health Promotion

17 'Not applicable to my current caseload' responses will be discussed in a later section.

Table 11: Levels of missed care captured section B

•	Health Promotion	6/7 Items scored above 50% for missed care
•	Care Management	5/6 Items scored above 50% for missed care
•	Disadvantaged Groups	5/5 Items scored above 50% for missed care
•	Older People	4/8 Items scored above 50% for missed care
•	Administration	4/4 Items scored above 50% for missed care
•	Family Support	2/2 Items scored above 50% for missed care
•	Provision of Other Community Services	2/5 Items scored above 50% for missed care
•	Home Nursing Care	1/3 Item scored above 50% for missed care
•	Education	1/2 Item scored above 50% for missed care
•	Primary Care Teams (PCT)	1/2 Item scored above 50% for missed care

Missed care was most frequently recorded for items categorised as health promotion. As is illustrated in Table 12, out of seven items included in this section, six recorded levels of missed care in excess of 50% with 4 of those recorded as missing in more than 70% of cases. The two health promotion activities most frequently missed were among older people (73.5%, n=191) and in the community at large (73.5%, n=186). A further 71.8% (n=158) reported that health promotion in the area of heart disease and stroke was also missed during their last working week. Though a high level of missed care was reported regarding health promotion in schools (70%), only 50 respondents indicated that this was part of their current caseload. A total of 64.8% (n=142) indicated that health promotion in the area of COPD was missed during their last working week while 59.1% (n=140) reported that health promotion relating to diabetes was missed during the same period.

Table 12: Health promotion

Health Promotion	Missed	Rarely Missed
	% (N)	% (N)
Q20 Health Promotion Older People	73.5 (191)	26.5 (69)
Q22 Health Promotion Community	73.5 (186)	26.5 (67)
Q23 Health Promotion Heart Disease/Stroke	71.8 (158)	28.2 (62)
Q21 Health Promotion Schools	70 (35)	30 (15)
Q25 Health Promotion COPD	64.8 (142)	35.2 (77)
Q24 Health Promotion Diabetes	59.1 (140)	40.9 (97)

Care management

A total of 6 items were categorised as 'Care management' as part of the survey. The tasks related to aspects of client care management such as client assessments, linking in with other healthcare professionals and advocating for the needs of the client. As demonstrated in table 13, five out of the six items recorded high levels of missed care with nursing care following a client re-assessment reportedly missed 74% of the time during respondents' last working week (n=196) A total of 155 (55.6%) respondents reported that liaising with other healthcare professionals was missed during their last working week while a further 54.5% (n=146) indicated that advocacy work on behalf of clients was missed in that same period. Follow up assessments and initial client needs assessments were less frequently missed at 54.4% (n=147) and 51.7% (n=123) respectively.

Disadvantaged Groups

Table 13: Care management

Care Management	Missed	Rarely Missed
	% (N)	% (N)
Q6 Following Re-Assessment	74 (196)	26 (69)
Q7 Liaising with other Professionals	55.6% (155)	44.4 (124)
Q9 Client Advocacy	54.5 (146)	45.5 (122)
Q5 Follow-up Assessment	54.4 (147)	45.6 (123)
Q4 Initial Client Needs Assessment	51.7 (123)	48.3 (115)

Percentages may not total 100 due to rounding

This section referenced nursing care provided to vulnerable groups within the community. This type of nursing care could include health promotion and liaising with other services on behalf of these groups. The majority of respondents indicated that their caseloads did not include work with these groups. Of those respondents who did have disadvantaged group caseloads levels of missed care were high and exceeded the 50% threshold on all five items. The highest level of missed care was recorded with regard to the homeless population with 72.1% (n=44) of those with a homeless caseload reporting that care was missed in their last working week. Of those who reported having asylum seekers on their caseload, 67.3% (n=33) indicated that during their last working week, this care had been missed. A further 65.2% (n=58) of community nurses with a migrant caseload reported that care was missed during their last working week while a further 64% (n=65) indicated that the provision of nursing care had been missed during their last working week. Finally, with regard to the travelling community, 64.4% (n=65) of respondents reported that care relating to this particular disadvantaged group had been missed during their last working week. Respondents were also given the option of indicating whether nursing tasks pertaining to 'other' disadvantaged groups had been missed during their last working week. Out of a total of 80 community nurses who reported having other disadvantaged groups as part of their caseload, 58.8% (n=47) said that this care was missed during the same time period. Some participants provided additional details about these other groups with 7 describing support work with young families facing various challenges.

Older People

Table 14: Disadvantaged groups

Disadvantaged Groups	Missed	Rarely Missed	Total
	% (N)	% (N)	N
Q28 Disadvantaged Groups Homeless	72.1 (44)	27.9 (17)	61
Q29 Disadvantaged Groups Asylum Seekers	67.3 (33)	32.7 (16)	49
Q30 Disadvantaged Groups Migrants	65.2 (58)	34.8 (31)	89
Q27 Disadvantaged Groups Travellers	64.4 (65)	35.6 (36)	101
Q31 Disadvantaged Groups Other	58.8 (47)	41.3 (33)	80

Percentages may not total 100 due to rounding

Eight items relating to older person nursing care were grouped in this category. A total of 4 items recorded levels of missed care in excess of 50% with the highest level recorded for management of the 'at risk' register of older people (70.7%, n=164). With regard to follow up on initial assessments of older people, this was missed in 62.6% (n=169) of cases in the last working week while screening of older people (as part of clinical risk assessment) was missed in 58.6% (n=150) of case. Finally, community nurses reported that with regard to follow-ups on dementia clients care was missed in 57.1% (n=144) of cases during their last working week (Table 15).

Administration

Table 15: Older people

Older People	Missed	Rarely Missed
	% (N)	% (N)
Q14 Older People At Risk Register	70.7 (164)	29.3 (68)
Q13 Older People Follow Up	62.6 (169)	37.4 (101)
Q17 Older People Screening	58.6 (150)	41.4 (106)
Q16 Older People Follow-Up Dementia	57.1 (144)	42.9 (108)

Percentages may not total 100 due to rounding

All four items listed under the administration category recorded levels of missed care in excess of 50% (Table 16). The highest instance of missed care was identified with regard to updating client notes which 79.0% (n=222) of respondents indicated was missed as part of their caseload during their last working week. All other tasks under administration also received high scores in terms of missed care with 69% (n=281) of respondents reporting that 'other' administrative tasks were missed, 62.2% (n=176) indicating that completing client notes was missed and a further 62.0% (n=165) indicating that the completion of client notes was missed report writing was missed. Though few respondents included additional information regarding 'other' tasks that were missed, 6 indicated that these included following up with phone calls and emails.

Family support

Table 16: Administration

Administration	Missed	Rarely Missed
	% (N)	% (N)
Q43 Admin_Updating Client Notes	79.0 (222)	21.0 (59)
Q44 Admin_Other	69.4 (195)	30.6 (86)
Q42 Admin_Completing Client Notes	62.2 (176)	37.8 (107)
Q41 Admin_Report Writing	62.0 (165)	38.0 (101)

Percentages may not total 100 due to rounding

This category contained only two items but respondents recorded high levels of missed care for both (Table 17). Support to families was missed in 66.3% (n=169) of cases in the last working week while support to family carers was missed in 67.5% (n=185) of cases during the same time period.

Home nursing care

Table 17: Family support

Family Support	Missed	Rarely Missed
	% (N)	% (N)
Q10 Support to Families	66.3 (169)	33.7 (86)
Q11 Support to Carers	67.5 (185)	32.5 (89)

Percentages may not total 100 due to rounding

Community nurses provide clinical and educational nursing care in the home. Respondents were asked how often this type of care was missed during their last working week using three items. Low levels of missed care were reported for clinical nursing care that involved dressings, injections and other clinical interventions with only 15% of respondents indicating this had been missed in their last working week. Basic nursing care involving client personal care was more frequently missed but was still below the 50% threshold while educational nursing care that provided clients with guidance and advice on how to manage care was reportedly missed 51% of the time in the preceding working week (Table 18).

Community nurses are also responsible for the provision of additional nursing services

Table 18: Home nursing care

Home Nursing Care	Missed	Rarely Missed
	% (N)	% (N)
Q3 Educational Nursing	51.2 (133)	48.8 (127)

Provision of other community services

in the community such as palliative and mental health nursing care. Respondents were asked to indicate whether this type of nursing care had been missed during their last working week. Of the five areas included in this section, two recorded high levels of missed care (Table 19). Respondents indicated that 69.9% (n=151) of mental health nursing care was missed while nursing care relating to chronic disease in the community was missed in 50.6% (n=131) of cases in the preceding week.

Education

Table 19: Provision of other community services

Provision of Other Community Services	Missed	Rarely Missed
	% (N)	% (N)
Q35 Other Community Services Mental Health	69.9 (151)	30.1 (65)
Q38 Other Community Services Chronic Disease	50.6 (131)	49.4 (128)

Percentages may not total 100 due to rounding

Two items relating to supervising nursing students and participation in Continuing Professional Development (CPD) were categorised under Education in the survey. Of these, CPD was missed most frequently with respondents indicating that in their last working week it was missed 67.5% (n=162) of the time. With regard to the supervision of nursing students it is worth noting that 203 (72.8%) respondents indicated that this role was not applicable to their current caseload (Table 20).

Primary care teams (PCT)

Table 20: Education

Education	Missed	Rarely Missed
	% (N)	% (N)
Q33 Continuing Professional Development (CPD)	67.5 (162)	32.5 (78)

Percentages may not total 100 due to rounding

As part of the Primary Care Strategy (Department of Health and Children 2001) primary health care is organised around *Primary Care Teams (PCTs)*. Part of the role of the community nurse is to attend and organise PCT meetings and to refer clients on to other healthcare professionals within the PCT where appropriate. Results from the survey indicated that while referrals were not generally missed during their last working week, 56.7% (133) of PCT meetings were missed (Table 21).

Table 21: Primary care teams (PCT)

Primary Care Teams (PCT)	Missed	Rarely Missed
	% (N)	% (N)
Q39 PCT_Meetings	56.6 (133)	43.4 (102)

Percentages may not total 100 due to rounding

3.3.2 Results from section C: Missed care reported by PHNs only

This section comprised 20 items that related to the roles and responsibilities of PHNs only. These items were grouped into three categories: Postnatal care, child health and child protection.

Table 22: Levels of missed care captured: Section C

•	Child Health	2/11 Items scored above 50% for missed care
•	Child Protection	1/6 Item scored above 50% for missed care

As with Section B, each of the 20 items in Section C were treated as dichotomous variables for the purposes of the analysis. To avoid over reporting of missed care, only those items that exceeded a threshold of 50% for missed care will be discussed in detail. A total of 209 PHNs were eligible to complete this section. Low levels of missed care were reported at or above the 50% threshold set. The highest levels of missed care recorded pertained to child health and child protection.

Child health

The majority of nursing care within this category was rarely missed. However, two items scored above the 50% threshold. Developmental milestones for children are monitored by PHNs at different intervals from birth to age 4 years. Results from our missed care survey indicated that the check at between 3 and 4.5 years was missed in 52.1% (n=100) of cases in the last working week by PHNs while child health promotion was missed in 62.9% (n=122) of cases in the last working week (Table 23).

Child protection

Table 23: Child health

Child Health	Missed	Rarely Missed
	% (N)	% (N)
Q56 PHNs_Child Health Promotion	62.9 (122)	37.1 (72))
Q52 PHNs_At 3-4.5 Years Check	52.1 (100)	47.9 (92)

Percentages may not total 100 due to rounding

Responsibility for child protection among PHNs was measured using 6 separate items. Only one aspect of the child protection role of PHNs recorded missed care levels above 50% and this related to providing supports and visits to families and children as part of a child protection framework. Of the 182 PHNs who responded to this question, 51.6% (n=94) indicated that this task was missed during their last working week (Table 24).

Table 24: Child protection

Child Protection	Missed	Rarely Missed
	% (N)	% (N)
Q62 PHNs_Child Protection Additional Visits and Support	51.6 (94)	48.4 (88)

Percentages may not total 100 due to rounding

3.3.3 Not applicable to my current caseload

To account for variations in roles and responsibilities across the CHOs each item in Sections B and C provided an option for respondents to indicate that a particular task was not part of their current caseload. In Section B, 16 out of the 44 items recorded above 20% for 'Not applicable to my current caseload". Table 25 illustrates the items in question.

Table 25: Not applicable to my current caseload

Survey Item	Not Applicable to my Current Caseload	
	PHNs	CRGNs
	% (N)	% (N)
Q3 Educational Nursing	-	21.6 (16)
Q14 Older People At Risk Register	-	28.4 (21)
Q15 Managing Elder Abuse Cases	21.1 (44)	31.1 (23)
Q18 Involvement with Older Person Out of Hours Services	32.1 (67)	28.4 (21)
Q19 Liaising with Community for Older People	24.4 (51)	25.7 (19)
Q21 Health Promotion in Schools	78.9 (165)	90.5 (67)
Q23 Health Promotion for Heart Disease and Stroke	20.1 (42)	21.6 (16)
Q25 Health Promotion for COPD	23.9 (50)	-
Q27 Working with Disadvantaged Groups Travellers	58.4 (122)	74.3 (55)
Q28 Working with Disadvantaged Groups Homeless	75.6 (158)	86.5 (64)
Q29 Working with Disadvantaged Groups Asylum Seekers	78.9 (165)	93.2 (69)
Q30 Working with Disadvantaged Groups Migrants	60.8 (127)	89.2 (66)
Q31 Working with Disadvantaged Groups Other	44.0 (92)	63.5 (47)
Q32 Precepting Nursing Students	66.0 (138)	87.8 (65)
Q35 Other Community Services Mental Health	20.1 (42)	32.4 (24)
Q36 Other Community Services Disabilities	20.6 (43)	28.4 (21)
Q37 Other Community Services Children with LLC	34.4 (72)	82.4 (61)

Percentages may not total 100 due to rounding

3.3.4 Results from section D: Reasons for missed care

The final section of the missed care survey asked respondents (both PHNs and CRGNs) to indicate which of three factors listed was related to care being missed during their last working week. The three factors included:

- Inadequate staffing levels
- Unanticipated rise in client volume and/or acuity/complexity
- Lack of secretarial/administrative support.

Factors associated with missed care

All three items were identified as factors in care being missed in the last working week. For 63% of respondents (n=273), a lack of administrative support was identified as a significant factor in care being missed while 61% felt that inadequate staffing levels had a significant impact on care being missed during the last working week (n=272). An unanticipated rise in client volume and/or client acuity was a significant factor in care being missed for 60% of respondents (n=276).

Respondents were also invited to indicate whether other factors not listed had had a significant impact on care being missed. For 59% of respondents, other factors had impacted significantly on care being missed during their last working week (n=144). Some respondents (n=107) provided comments on what these other factors included and these were standardised into 13 separate areas as illustrated in Table 26.

3.3.5 Respondents characteristics and missed care levels

The items in Section B with recorded levels of missed care in excess of 50% were further analysed to identify any significant associations with respondent characteristics. A total of 31 items were analysed and the

Table 26: Other factors relating to missed care

Other Factors	N	%
Filling Gaps in Services	2	1.9
Implicit Rationing due to Caseload	3	2.8
Increased Technical Complexity of Care Provision	2	1.9
Increased Workload without Corresponding Support	36	33.6
Induction of New Staff	3	2.8
Lack of Case Management Support	1	.9
Poor Administration Infrastructure	1	.9
Poor Administration/Office Infrastructure	27	25.2
Poor Multidisciplinary Communication	4	3.7
Staffing	19	17.8
Travel	2	1.9
Understaffing	1	.9
Universal Access/Medical Cards	6	5.6
Total	107	100.0

Percentages may not total 100 due to rounding

results are summarised in Table 27. Only items where a significant association was identified are included.

Section B: PHNs and CRGNs

Missed care was reported by both PHNs and CRGNs in Section B of the Missed Care survey. Further analysis of missed care data was carried out to identify whether there were any differences in levels of missed care between PHNs and CRGNs. Significant variations between the two groups were identified on 10 out of the 31 items analysed.

Health Promotion

Of the 6 health promotion items that scored above 50% for missed care, three were more likely to be missed by PHNs compared with CRGNs (Table 27). Health promotion relating to Heart Disease and Stroke was significantly more likely to be missed by PHNs (76.1%, n=124) than by CRGNs (40.9%, 34) (X^2 (1) = 5.62 p <.05). With regard to COPD, PHNs were again significantly more likely to report this task as missed during their last working week (72.9%, 113) when compared with CRGNs (45.3%, 29) (X^2 (1) = 15.1 x2 <.01). PHNs (66.1%, n=111) were also significantly more likely to state that health promotional work relating to diabetes as missed during their last working week by comparison with CRGNs (42.0%, n=29) (X^2 (1) = 11.7 p <.01).

Care Management

Under 'Care Management' two items indicated significant differences between the two groups in terms of missed care reported (Table 27). Client advocacy was significantly more likely to be missed by PHNs (58.1%, n=118) when compared with CRGNs (43.1%, n=28) (X^2 (1) = 4.50 p <.05) while the initial client needs assessment was more likely to have been missed during the last working week by PHNs (55.7%, n=98) compared with CRGNs (40.3%, n=25) (X^2 (1) = 4.33 p <.05).

Older People

Three aspects of nursing care relating to older people had higher rates of reported missed care between the PHNs and CRGNs (Table 27). With regard to managing the older person at risk register, 76.1% (n=137) of PHNs reported this as missed during their last working week compared with 51.9% (n=27) of CRGNs. The difference between the two groups was significant indicating a strong relationship with being a PHN and this type of care being missed (X^2 (1) = 20.4 p <.01). PHNs were also significantly more likely to report screening as part of risk assessments with older people as missed (62.8%, n=123) compared with CRGNs (45.0%, n=27) (X^2 (1) = 5.96 p <.01). There was a significant and strong association between being a PHN or CRGN and reports of follow up care with dementia clients being missed with 46.2% (30) of CRGNs reporting this care as missed during their last working week compared with 61.0% (n=114) of PHNs (X^2 (1) = 4.31 p <.05).

Administration

Finally, with regard to administration tasks, PHNs again reported higher instances of this work being missed during their last working week when compared with CRGNs (Table 27). A strong positive association between PHNs and the level of missed care reported relating to the updating of client notes was also identified with 82.1% (n=170) indicated this task was missed during their last working week compared with 70.3% of CRGNs (X^2 (1) = 4.61 p <.05). When it came to completing client notes during their last working week, again PHNs were more significantly more likely to have missed this task (67.5%, n=141) compared with CRGNs (47.3%, n=35) (X^2 (1) = 9.45 p <.01). Finally, when asked about report writing, significantly more PHNs (65.8%, n=131) recorded this as missing during their last working week compared with CRGNs (50.7%, n=34) (X^2 (1) = 4.84 p <.05).

Table 27: Relationship between type of community nurse (PHN or CRGN) and levels of missed care reported

Missed Care	PHN % (n)	CRGN % (n)	X^2	P
Health Promotion			5.62	<0.05**
Q23 Health Promotion Heart Disease/Stroke				
Missed	76.1(124)	59.6 (34)		
Rarely Missed	23.9 (39)	40.4 (23)		
Q25 Health Promotion COPD			15.1	<0.01*
Missed	72.9 (113)	45.3 (29)		
Rarely Missed	27.1 (42)	54.7 (35)		
Q24 Health Promotion Diabetes			11.7	<0.01*
Missed	66.1 (111)	42.0 (29)		
Rarely Missed	33.9 (57)	58.0 (40)		
Care Management				
Q9 Client Advocacy			4.50	<0.05**
Missed	58.1 (118)	43.1 (28)		
Rarely Missed	41.9 (85)	56.9 (37)		
Q4 Initial Client Needs Assessment			4.33	<0.05**
Missed	55.7 (98)	40.3 (25)		
Rarely Missed	44.3 (78)	59.7 (37)		
Older People				
Q14 Older People At Risk Register			11.4	<0.01*
Missed	76.1 (137)	51.9 (27)		
Rarely Missed	23.9 (43)	48.1 (25)		
Q17 Older People Screening			5.96	<0.01*
Missed	62.8 (123)	45.0 (27)		
Rarely Missed	37.2 (73)	55.0 (33)		
Q16 Older People Follow-Up Dementia			4.31	<0.05**
Missed	61.0 (114)	46.2 (30)		
Rarely Missed	39.0 (73)	53.8 (35)		
Administration				
Q43 Admin_Updating Client Notes			4.61	<0.05**
Missed	82.1 (170)	70.3 (52)		
Rarely Missed	17.9 (37)	29.7 (22)		
Q42 Admin_Completing Client Notes			9.45	<0.01*
Missed	67.5 (141)	47.3 (35)		
Rarely Missed	32.5(68)	52.7 (39)		
Q41 Admin_Report Writing			4.84	<0.05**
Missed	65.8 (131)	50.7 (34)		
Rarely Missed	34.2 (68)	49.3 (33)		

- Significant at $p < 0.01$ ** Significant at $p<0.05$ NS=Not Significant
- Percentages may not total 100 due to rounding

Other Characteristics

Research conducted by Kalisch and Williams (2009) on missed care examined the relationships between contextual data and levels of missed care identified in hospital settings. As part of this study, analysis was carried out to determine whether captured respondent characteristics were related to levels of missed care recorded in the community setting.

This contextual data on respondents was gathered in Section A of the Missed Care Survey. Respondents were asked to supply basic demographic information and details of their caseloads and working hours. Correlational analysis was carried out to see whether these characteristics were related to levels of missed care captured by the survey. Table 28a provides details of the results of the analysis. For the purposes of this report, only significant associations are discussed.

Age

The age profile of respondents was found to be associated with levels of missed care recorded on three items (Table 28a). With regard to the initial client needs assessment, a significantly higher proportion of nurses aged between 25 and 34 reported this as missed during their last working week when compared with the other age groups (67.7%, n=21) (X^2 (3) = 6.65 p <.01). Significantly higher instances of missed care relating to follow-up with dementia clients was also found within the 35-44 age bracket (65.9%, n=56) compared with the 25-34 group who reported proportionately lower levels of missed care on this item (42.4%, n=14) (X^2 (3) = 7.26 p <.01). Finally, age was also found to be associated with levels of missed care recorded for health promotion relating to heart disease and stroke with a significantly higher proportion of community nurses aged between 25-34 indicating that this care had been missed during their last working week (X^2 (3) = 7.15 p <.01.). It is important to note that while age was found to be significantly associated with missed care on these three items, the association was weak at the 10% significance level.

Education

For the analysis, education was reduced from a five-item variable to a three item variable; Non-Degree, Degree and Post-Graduate Qualification (Table 28a). The level of education respondents had achieved was found to be significantly associated with levels of missed care recorded on one item only; report writing (X^2 (2) = 8.18 p <.05). The results of the analysis indicated that community nurses who did not a hold degree level qualification were less likely to report this task as missed during their last working week (34.8%, n=8) compared with 67.2% (n=43) of community nurses with a third level qualification.

Missed Care	Missed % (n)	Rarely Missed % (n)	X^2	P
Age				
Q4 Initial Client Needs Assessment			6.65	<0.1***
25-34	67.7 (21)	32.3 (10)		
35-44	56.0 (47)	44.0 (37)		
45-54	42.5 (34)	57.5 (46)		
55-64	48.8 (21)	51.2 (22)		
Q16 Older People Follow-Up Dementia			7.26	<0.1***
25-34	42.4 (14)	57.6 (19)		
35-44	65.9 (56)	34.1 (29)		
45-54	51.2 (43)	48.8 (41)		
55-64	62.0 (31)	38.0 (19)		
Q23 Health Promotion Heart Disease/Stroke			7.15	<0.1***
25-34	81.5 (22)	18.5 (5)		
35-44	79.2 (61)	20.8 (16)		
45-54	61.6 (45)	38.4 (28)		
55-64	69.8 (30)	30.2 (13)		
Education				
Q41 Admin_Report Writing			8.18	<0.05**
Non-Degree	34.8 (8)	65.2 (15)		
Degree	67.2 (43)	32.8 (21)		
Post Graduate Qualification	63.7 (114)	36.3 (65)		

Hours Worked

How many hours respondents worked was found to be related to levels of missed care recorded on one item: educational nursing (Table 28b). This relates to guidance and instruction given to clients on how to manage their conditions. From the analysis, respondents working less than 39 hours a week were more likely to report this task as missed during their last working week (63.5%, n=47) when compared with those working more than 39 hours (47.2%, n=34) or those working a standard 39 hour week (45.1%, n=51). The association between hours worked and how often this task was missed was significant at the 5% level (X^2 (2) = 6.60 p <.05).

Years of Experience

The number of years experience indicated by a respondent was found to be associated with levels of missed care recorded for nine items in Section B. However, the association ranged from strong to weak (Table 28b). In this section we will report on five of the nine items where a strong association was identified at the 5% significance level. Overall the analysis found that respondents with the most experience recorded the least amount of missed care across these five items. The first of these related to initial client needs assessments, with only 34.9% (n=15) of those with more than 16 years experience reporting that this task was missed during their last working week compared with 67.5% (n=27) of those with less than 5 years experience (X^2 (2) = 8.91 p <.05). Nursing care relating to the travelling population was also more likely to be missed by respondents with less than 5 years experience (73.7%, n=14) compared with those with 16 years or more (38.9%, 7) (X^2 (2) = 6.50 p <.05). As was noted above, high levels of missed care were recorded for administration task relating to the updating of client notes. Further analysis revealed a strong association between years worked and the levels reported for this item (X^2 (2) = 6.29 p <.05). Again, respondents with more than 16 years experience (67.3%, n=37) recorded fewer instances of missed care on this item when compared with those with less than 5 years experience (79.6%, n=39). A strong association between years worked and other types of administrative tasks being missed was also identified with levels of missed care decreasing as years of experience increased (X^2 (2) = 6.03 p <.05). The analysis found that 56.4% (n=31) of respondents with more than 16 years experience reported this type of administrative work as missed compared with 75.5% (n=37) of respondents with less than 5 years experience. Finally,

with regard to other community nursing tasks in the area of chronic disease, years of experience was again found to have a significant positive association with levels of missed care recorded (X^2 (2) = 6.03 p <.05). Those with more experience were less likely to record this task as missed with 36.2% (n=17) of respondents with more than 16 years experience indicating this care was missed during their last working week compared with 56.5% (n=26) of those with less than 5 years experience.

HSE Region

Regional differences with regard to missed care levels recorded were also explored (Table 28b). Only two items indicated a relationship between the region a respondent worked in and the level of missed care recorded; 'Older People at Risk Register' and 'Admin. Other'. Only one of those items, (Older People at Risk Register) demonstrated a strong association between where a respondent worked and how much missed care was recorded (X^2 (3) = 9.02 p <.05). Both HSE Dublin North East and HSE

Table 28b: Association between respondent characteristics and levels of missed care reported

Missed Care	Missed % (n)	Rarely Missed % (n)	X^2	p
Hours Worked				
Q3 Educational Nursing			6.60	<0.05**
Less than 39 Hours	63.5(47)	36.5 (27)		
39 Hours	45.1 (51)	54.9 (62)		
More than 39 Hours	47.2 (34)	52.8 (38)		
Years Experience				
Q4 Initial Client Needs Assessment			8.91	<0.05**
Less than 1 Year-5 Years	67.5 (27)	32.5 (13)		
6-15 Years	52.6 (70)	47.4 (63)		
16-20 Years	34.9 (15)	65.1 (28)		
Q6 Following Re-Assessment			5.13	<0.1***
Less than 1 Year-5 Years	84.4 (38)	15.6 (7)		
6-15 Years	76.1 (108)	23.9 (34)		
16-20 Years	64.7 (33)	35.3 (18)		
Q7 Liaising with other Professionals			5.51	<0.1***
Less than 1 Year-5 Years	59.6 (28)	40.4 (19)		
6-15 Years	59.6 (90)	40.4 (61)		
16-20 Years	41.8 (23)	58.2 (32)		
Q27 Disadvantaged Groups Travellers				
			6.50	<0.05**
Less than 1 Year-5 Years	73.7 (14)	26.3 (5)		
6-15 Years	69.8 (37)	30.2 (16)		
16-20 Years	38.9 (7)	61.1 (11)		
Q43 Admin_Updating Client Notes				
			6.29	<0.05**
Less than 1 Year-5 Years	79.6 (39)	20.4 (10)		
6-15 Years	83.3 (125)	16.7 (25)		
16-20 Years	67.3 (37)	32.7 (18)		

Q42 Admin_Completing Client Notes			4.81	<0.1***
Less than 1 Year-5 Years	71.4 (35)	28.6 (14)		
6-15 Years	63.2 (96)	36.8 (56)		
16-20 Years	50.9 (28)	49.1 (27)		
Q44 Admin_Other			6.03	<0.05**
Less than 1 Year-5 Years	75.5 (37)	24.5 (12)		
6-15 Years	72.7 (109)	27.3 (41)		
16-20 Years	56.4 (31)	43.6 (24)		
Q38 Other Community Services Chronic Disease			6.03	<0.05**
Less than 1 Year-5 Years	56.5 (26)	43.5 (20)		
6-15 Years	56.1 (78)	43.9 (61)		
16-20 Years	36.2 (17)	63.8 (30)		
Q22 Health Promotion Community			5.58	<0.1***
Less than 1 Year-5 Years	82.2 (37)	17.8 (8)		
6-15 Years	76.1 (105)	23.9 (33)		
16-20 Years	61.4 (27)	38.6 (17)		
HSE Region				
Q14 Older People At Risk Register			9.02	0.05**
HSE Dublin North East	76.9 (40)	23.1 (12)		
HSE Dublin Mid-Leinster	55.7 (34)	44.3 (27)		
HSE South	76.8 (43)	23.2 (13)		
HSE West	74.6 (47)	25.4 (16)		
Q44 Admin_Other			6.34	<0.1***
HSE Dublin North East	72.3 (47)	27.7 (18)		
HSE Dublin Mid-Leinster	70.3 (52)	29.7 (22)		
HSE South	57.6 (38)	42.4 (28)		
HSE West	76.3 (58)	23.7 (18)		

* Significant at p < 0.01 ** Significant at p<0.05 *** Significant at p< 0.1 NS=Not Significant

South recorded higher levels of missed care on this item at 76.9% (n=40) and 76.8% (n=43) respectively. By comparison, respondents from Dublin Mid Leinster were least likely to report this care as missed (55.7%, n=34) while 74.6% (n=47) of those from HSE West indicated this was missed during their last working week.

3.3.6 Section C: PHNs and missed care

In this section, associations were explored between certain characteristics of PHNs and the levels of missed care reported in relation to child health and child protection. As outlined above, three of the twenty items included in Section C scored above the 50% threshold for missed care as recorded by PHNs. Associations between those items and PHN characteristics were explored to determine whether they were a potential factor in prevalence of missed care across the three nursing tasks. Only associations that were statistically significant are reported.

Age

With regard to child health promotion, a significant association was identified between respondents' age and whether this nursing task was missed during their last working week (X^2 (3) = 8.16 p <.05). Those PHNs aged 35-44 (44.3%, n=54) were

proportionately more likely to report child health promotion as missed compared with other age groups such as those aged 25-34 (12.3%, n=15) and those aged 55-64 (16.4%, n=20). No other significant associations were identified between age and other elements of missed care in Section C.

Hours worked

Missed care regarding child health promotion was also found to be correlated with how many hours PHNs worked during their last working week. Those who worked less than 39 hours a week recorded less missed care in terms of child health promotion compared with those who worked a 39-hour week; 14.1% (n=10) and 45.1%, (n=55) respectively. This association was statistically significant (X^2 (2) = 6.20 p <.05)[18].

HSE region

Child health checks at 3-4.5 years of age were found to have significant regional differences with regard to reported levels of missed care (X^2 (3) = 31.5 p <.001). According to our analysis, PHNs from both Dublin HSE regions (62%, 67) were more likely to record this check as missed than those from South (14%, n=14) or West 19%, n=19). No other associations between HSE region and care missed in Section C were identified.

3.3.7 Summary

Though our sample was small (n=283), the results from our survey are indicative of a high prevalence of missed care within the Irish community nursing sector. Out of a total of 13 categories of nursing care all but one, (post-natal care) recorded at least one item of missed care at above the 50% threshold. With regard to nursing, rates of missed care in excess of 50% were recorded on 31 out of 44 items and are applicable to both PHNs' and CRGNs' experiences. Missed care rates for PHNs and child health were lower with only 3 out 20 items recording rates in excess of 50%. The types of care being missed are interesting to note. The highest level of missed care was recorded for nursing activities relating to health promotion, a key component of the role of the community nurse and an important aspect of the preventative aspect of community nursing in general and primary care in particular (Burke 1986; Hanafin 1998; Department of Health and Children 2001). Nursing care relating to the management of client care also recorded high rates of missed care and related to aspects of the community nurses work with clients that involved needs assessments and client advocacy.

Community nurses are charged with working with disadvantaged members of the community (Department of Health and Children 2000). This includes advocacy and health promotion work with members of the travelling community, migrants, asylum seekers and the homeless. For community nurses in the study sample, a large number indicated that work with these groups did not form part of their current caseload. It was not clear whether there were specialist community nurses assigned to working with these groups in their areas or whether community nurses simply did not have members of these groups in their local area. However, for those that did report responsibility for these groups, a high proportion of care was recorded missed from the preceding working week. A staggering 72% of respondents reported that nursing care with regard to their homeless population caseload was missed during their last working week while 67.3% indicated that nursing care pertaining to asylum seekers was missed during the same period. These levels are very high and, given the smaller number of community nurses indicating a responsibility toward these client groups, suggest a need for clarification with regard to these populations. The important role of the community nurse in the care of the older person within the community has been identified in the literature. Survey findings indicated that, in the preceding working week, 70.7% of respondents reported that their work regarding the maintaining of the 'at risk register' for older people was missed while a further 62.6% indicated that follow up visits with older people were missed during that same time period. Finally, administration work was identified as both

18 It is worth noting that respondents who indicated that they worked less than 39 hours a week may be working part-time and this should be taken into consideration when interpreting these results.

missed and as a significant factor in nursing care being missed.

Differences between PHNs and CRGNs in terms of care being missed were also explored and analysis revealed that for the most part, PHNs were significantly more likely to miss care than CRGNs. Further associations were also examined and the analysis revealed that those community nurses with more experience recorded the least amount of missed care in their preceding working week.

3.4 Quantifying activities of community nurses

In an attempt to quantify activities of community nurses, respondents were asked to identify an average time that each activity took. The response rate each item in sections B and C of the survey was mixed as can be seen in appendix 1. It also appears that there were different interpretations of what constituted time per activity. Some community nurses included all activities for a particular case. For example, the assessment, writing related referrals, contacting other team members regarding the case, doing a repeat call to the client. Others appear to have broken this down to discrete activities, such as time for administration, single visits and return visits. Travel time may also be a factor in assessment of time required for activities and this could vary in rural and urban caseloads. As a crude instrument, this could be used to examine care delivered and relate to timeframes, but also give insight to the additional time required for aspects of missed care.

3.5 Psychometric evaluation of the missed care survey

An important aim of this research was to determine whether a survey tool could be developed that would adequately capture levels of missed care within the Irish community nursing setting. Similar instruments have been developed, piloted and validated for use within the acute hospital setting (Kalisch and Williams 2009; Ball et al. 2013; Ausserhofer et al. 2014). This study sought to develop, refine and validate a survey tool that would effectively measure levels of missed care in the community using a self-reporting questionnaire format based on the established roles and responsibilities of both PHNS and CRGNs across the nine CHOs in Ireland.
The psychometric evaluation of the survey instrument explored the acceptability of the tool as well as its reliability, validity and the potential for future further development.

Acceptability

Acceptability of the tool was informed by Kalisch et al.'s work (2009a,b) and was evaluated in terms of how easy the survey was for respondents to complete. This was judged based on how the level of omission on each item or missing data that was returned. A review of the survey responses revealed that there was a high level of missing data indicating a low level of acceptability for the tool among respondents. Only 43% of respondents had no missing data indicating a low level of acceptability or ease of use for the survey tool. From the analysis it appeared that respondents generally either had a great deal (almost all) of data missing or very little data missing. With this in mind it was considered prudent to use a threshold of 5%, with all respondents with more than 5% of data missing removed from the analysis. This resulted in a sample size of 283, which was then used for all subsequent analysis.

Exploratory Factor Analysis: Survey Refinement

Section B

The missed care survey contained a total of 64 items measuring missed care in community nursing. Section B contained 44 items applicable to the work of both PHNs and CRGNs while Section C related to the work of PHNs only. As part of the refinement of the survey tool, the 64 items were subject to Exploratory Factor Analysis (EFA) to determine whether the items could be reduced. EFA is often used in the development of questionnaires to determine whether a large number of variables can be reduced to a smaller

number of 'factors'. Prior to carrying out the EFA, the data were examined for suitability and though the sample size was small (n=283) it has been noted in the literature that EFA can be carried out on sample sizes of 150 cases or more (Tabachnick and Fidell 2001). As section C did not apply to CRGNs, the decision was made to carry out EFA on the two nursing groups separately. In this way, the research team would be able to see which items cluster together on certain factors for each group which would inform the development of any future missed care instrument. In other words, the results of the EFA might be able to suggest that two separate instruments would better capture missed care among PHNs and CRGNs rather than one single instrument administered to both groups.

To this end, the data file was split between PHNs and CRGNs and a test of suitability conducted on both Sections B and C.

Section B: Exploratory Factor Analysis

Initially, the correlation matrix for Section B indicated a problem with the data in that two particular questions were highly or perfectly correlated with each other. In consultation with our statistical team, the decision was made to remove Q31 from the analysis. This resolved the problem with the correlation matrix, which revealed that for both groups there were a number of coefficients of 0.3 and above. In addition, the Kaiser Myer Olkin (KMO) value was .772 for PHNs and .320 for CRGNs. The recommended value is .6 with a low KMO indicating that there is no underlying construct or factor on which the survey items cluster. While the Bartlett's Test of Sphericity was statistically significant for both groups (p=<.00) given the low KMO for the CRGN group (.320) the EFA was carried out on the PHN group only. The low KMO could be as a result of the smaller sample of CRGNs included in the analysis (n=74).
EFA was carried out on all 44 items in Section B in relation to PHN responses only. Principal Component Analysis identified 12 components with Eigen values above 1. This means that cumulatively, these 12 components explained 65% of the variance indicating that the 44 items could potentially be reduced to 12 categories. However, an inspection of the screed plot indicated a clear break after the 4th component. Using Catell's (Pallant 2007) screed test, these 4 components were subject to further analysis to determine what factor they were measuring. A total of 12 items loaded onto the first component explaining almost 20% of the variance in the sample. However, on inspection of the 12 items, no meaningful unifying category could be applied to this group of variables. In other words, though the analysis found the items to be correlated with a single component or factor, on inspection the items themselves were not related to each other in any way other than as 'common tasks' for PHNs. This was also the case for the other 3 components. Further examination indicated that the loadings were being confounded by the 'not applicable to my current caseload' response category. The components or categories being identified by the analysis were either 'common tasks' or 'not applicable' tasks rather than being related to specific types of missed care. In other words, the main relationship between the items in Section B as detected by the EFA was whether they were part of a PHNs weekly caseload or not. The research team felt that the specificity of the questions in Section B had contributed to the high level of 'not applicable' responses. Future refinement of the tool could benefit from the removal of items that had a high level of 'Not Applicable Responses' or collapsing questions under each of the 10 categories into a smaller number of more generalised questions; for example, the 7 items in health promotion could be reduced to just one item examining missed care with regard to health promotion in general.

Section C: PHNs

The 20 items contained in Section C were also subject to EFA. Initially, all items were reviewed to ensure they were suitable for EFA. The KMO measure of sampling adequacy was .978 and Bartlett's Test of Sphericity was significant indicating the items were suitable for EFA. Again, Principal Component Analysis was used and revealed only one component onto which all 20

items loaded and which explained almost all of the variation within the sample (97%). As with Section B, no meaningful category for all 20 items could be determined suggesting again that the EFA results were being confounded by the 'Not Applicable to my Current Caseload" option. The EFA indicated that the 20 items in Section C were measuring either tasks that were common to PHNs or were not. As there was a low level of 'Not Applicable' responses in Section C, this suggests that all the items in Section C reflected the core common tasks of PHNs in our sample. Unlike in Section B, the 20 items included in Section C appear to adequately capture the roles and responsibilities of PHNs and therefore there would be no advantage in reducing these items to more generalisable categories.

Reliability: Internal Consistency

The degree to which the missed care survey items could be said to be measuring the same construct was examined. In other words, in Sections B, C and D we can say that the items in each section are highly correlated. They are related to each other. The use of Cronbach's alpha coefficient is traditionally used in statistical analysis to determine whether items on a scale are measuring the same thing (Pallant 2007). The Likert items in each of the three sections were treated as scale items and evaluated using a Cronbach's score from 0-1 with 0 indicating that the items are not related to one another and a 1 indicating that the items are measuring the same thing. All three sections obtained an alpha score above the recommended 0.7. Section C obtained a perfect alpha score of 1.0. While indicating a high level of internal consistency across the 20 items relating to the work of PHNs, a perfect alpha score is unusual and suggests that either there is a high level of unmissed care, which is supported by the prevalence findings or it could also be attributable to response fatigue whereby respondents simply ticked the first box for each response. Section B which related to both PHNs and CRGNs and contained 44 items, obtained an alpha score of 0.87, again indicating a high level of internal consistency. Finally, Section D obtained a respectable alpha score of 0.75 which indicates that the four items included in that section were related to each other.

3.5.1 Summary

Psychometric analysis of the survey tool indicated a number of important points for future research. Due to the low level of acceptability determined by the rate of omitted responses, a refinement of the tool would be advisable in any future review of missed care within the community setting. Attempts to refine the tool further using factor analysis revealed that the items in the survey were broadly clustering around two 'factors'; 'common tasks' or 'not applicable to my current caseload'. Consultation with our statistical team suggested that a reduction in the number of questions in each of the categories could potentially address this in any subsequent administration of the survey with community nurses. This was not the case with Section C of the survey which applied to PHNs only and a reduction in the items in this section would not be advantageous in future roll outs of the survey.

3.6 Section Two: Findings-context of community nursing in Ireland

Four semi structured interviews were undertaken with key stakeholders in community nursing who represented nursing in the Department of Health, the Institute of Community Health Nursing, a representative from the Office of Nursing and Midwifery Services Director and a representative from the Irish Nurses and Midwifery Organisation. Following input into NVIVO© version 10, 23 preliminary themes were reduced to three themes using thematic content analysis (Braun and Clarke 2014). These themes were: a) Lack of national leadership for discipline development, b) Role challenges and c) Need for reform.

3.6.1 Lack of national leadership for discipline development

All four interviewees spoke of how community nursing had not benefitted from strategic development of the discipline. This was considered to have a stunting impact on community nursing's potential as highlighted

by participant A and C:

'…there hasn't been any leadership around public health nursing nationally to this date. So I suppose that in a way puts a context to the development of public health nursing services nationally because there hasn't been any national lead, national focus.' (Participant A)

'Well I think it is very difficult for the front line staff who are delivering service to clients in their home and they are so focused in delivering that care in as safe a way as they can that I think they deserve better, they deserve clear direction and support.' (Participant C)

This lack of leadership was extended to the need to comprehensively future proof community nursing in terms of staffing, which, to date, was considered ad hoc and precarious depending on fragile fiscal capacity:

'Of late there has been no method to the recruitment of public health nursing [sic], it has been purely based on what funding is available' (Participant D)

It was acknowledged that some efforts were being made to progress the discipline, but these were impromptu, dependent on the specific individuals as well as the conditions of meeting agendas from management:

'So with a few pockets of people pushing nice innovative little projects like in inner city or in some of the rural areas, but that is only because they have been given a little bit of leeway and that is really on top of them meeting whatever it is the demand at the time from the management perspective' (Participant A)

Some consideration was observed in that the Directors of Public Health Nursing had experienced a different type of training which may not have emphasised the importance of leadership for community nursing as suggested by participant B:

'But I have to say they [DPHN] have come from the apprentice model' (Participant B)

Leadership, within an interdisciplinary agenda, was also considered absent as various disciplines worked in silos, which was considered by participant C as less than optimum:

'But when I came away from the front line I didn't see any primary care team, like the heads of disciplines don't seem to collaborate at all. That was a big shock for me actually coming from the ground into managerial now, there is very little collaboration beyond the front line that I can see.' (Participant C).

Any attempts to focus community nursing practice were also considered to be confused by multiple lines of authority within revised clinical programmes in the HSE as well as being sidelined in these structures:

'In the meantime public health nurses are still out there rather rudderless would be the way I would describe it. They are getting direction from the social care division, from health and wellbeing division and from the division that they are actually employed by, primary care. So they have three demands placed upon them, social care dealing with home help supervision, home help assessment, anything to do with elder care.'(Participant D)

'And I also think too probably public health nursing, and primary care I would say more so than public health nursing, suffered in that they weren't part of the clinical programmes, the integrated care programmes. They didn't get an individual programme. They were seen to be part of everybody else's programme in that everything had to integrate with primary care but it never got its own focus so it didn't get a dedicated staff, project lead. There was plenty of

scope to do it, I would say, but it didn't happen and that was a big omission I think.' (Participant A)

Thus, the lack of national leadership is considered multi-dimensional. As a discipline, community nursing lacked defined and strategic direction. Although it was acknowledged that some pockets of professional advancement had occurred, this was very much dependent on individual facilitative circumstances within particular CHOs. Other contributing factors included a lack of leadership focus within the historical apprenticeship model or public health nursing education and the impact of how clinical programmes were structurally arranged within the HSE, which fragmented lines of authority and developmental scope for community nurses.

3.6.2. Role challenges

One of the identified challenges was the lack of standardised role. The community nursing service was considered to have to respond to whatever faced them in the community:

'We are a jack of all trades and master of none I think previously and I think there is a real need to change that.' (Participant C)

'So I think there is a challenge in that for public health nurses…for us to understand their [community nurses] role when their role is so varied but I think we do need to do that.' (Participant A)

The role uncertainty was exacerbated due to cases becoming more complex as healthcare practices advanced and concurrent additional skills and competencies were required for clients in the community:

'I think complex cases coming out from hospital where there is very demanding clients that are wanting certain things, that seems to be the one that I am just noticing coming in from the ground and ringing us up, how will I manage this, how will I do that?' (Participant C)

The diversity was considered unsustainable in the context of modern health and social care challenges. Community nursing was faced with the dilemma of accepting change, demonstrating leadership or fading away as a discipline according to participant B:

'Well if they [community nurses] don't want to lose it [role in community] they have to step up to the mark. I don't think you can be doing that anymore with the population, with the complexities of peoples, not just co morbidities or conditions but the complexities of families that you have to deal with, I don't think you can be doing child welfare and disability and elderly and oncology all in the one breath.'(Participant B)

Participant C suggested a review of roles should encompass nurses who focus on particular population groups, rather than a generalist approach to care delivery:

'…putting a proposal forward to make some changes that we would have nurses specifically for child health welfare protection and then we would have community nurses geared towards older adults, or adults in the community, and then maybe cohorts like dementia and growing areas that we really need to hone in on' (Participant C)

Despite this, role change could be problematic and, despite pragmatic challenges, there was some support in retaining a generalist role:

'I would say that one of the significant challenges for the service has been the generalist role and I think that hasn't been tackled and needs to be tackled. And it is a very difficult not to tackle because people are much embedded in the principle of the generalist role and the benefits of it and the family nurse approach.' (Participant A)

'They [community nurses] like the model of community, they like the model of based in the community, which if you look around the world that is the model that actually works best because you get to know your client group and you get to know all sections of the client group, not just one section.' (Participant D)

'I think the generalist part of it, I think there is a place for the generalist, there definitely is.' (Participant B)

Role problems were also considered complicated by the increasing diversity in community nurses beyond those employed in the community nursing services:

'There is a challenge of course practice nurses aren't employed directly by the HSE… they are employed through the GPs, and everybody is under different job descriptions in terms of conditions. And that hasn't been helpful, more than likely, I am not a practice nurse but I can imagine being a practice nurse in that environment, it must be very difficult if everybody is working towards a different job description and their scope and the variety of services they deliver are different in every area.' (Participant A)

Role challenges were also observed in the context of the CRGN, with the ad hoc introduction of CRGNs into community nursing being a problem as there was no planning in terms of skill mix or career pathways:

'However during all of that time when the public health nurse numbers were reduced, community general nurses were required to come into the community to do certain care duties. No training, no plan, no workforce plan, it was just very ad hoc and community general nurses were brought into the community having never worked in the community before, having maybe been out of nursing for a considerable number of years and basically they were available to work a few hours every morning'. (Participant D)

The role of community nurses was also greatly impacted by staff shortages where practice had to be rationalised, with a particular casualty of such rationalisation being health promotion:

'But that [being unable to complete full practice scope] has happened simply because of the lack of resources, lack of replacement of staff and the directors had very little choice in what they could do because they were under pressure not to contribute to the delayed discharges within the hospital, to facilitate delivery of acute clinical care for a client who had acute needs. So in order to do that they had to prioritise their service in that direction. '(Participant A)

'There is lots of great thing some areas are doing like trying to get bunches of parents in to get a talk about weaning and things like that. We haven't got to that because we just can't do it. So the health promotion is really gone. Task and bringing everybody into clinics as much as you can and leaving aside other things that we probably should be doing, the more interesting things for staff. I know one of the staff was really disappointed that the breastfeeding group was going because she said that is the only bit of health promotion I do in the week. But that is what is happening unfortunately.' (Participant C)

A contributor to the rationalisation of services was the general downturn in the economic environment in Ireland. As staff retired, went on leave (sick/maternity/leave of absence/ holiday), it was difficult to get replacements, leading to staff cross covering for each other. Such cross cover meant a prioritising of workload and contributed to the rationalisation of care:

'So in terms of the service itself public health nursing in the last five to ten years, particularly since the recession and the imposing of the moratorium it has caused significant difficulties for the service in terms of staff

replacement.' (Participant A)

However, even within rationalisation of practice, community nurses were trying to complete the required work beyond the contracted weekly. This was particularly noted in relation to trying to compensate for a lack of administrative/clerical support:

> *'…a lot of our staff are coming in at 8:00 and then seeing children at home after 5:00 so they are going over the hours as it is. (Participant C)*

> *'…but they need clerical support to do their job…but they just don't have the energy or they are exhausted doing paperwork to follow through on it [innovative practice]. (Participant B)*

Rationalisation could also mean that non-task work was devalued even though such input could have an important impact on client's psychological health:

> *'And it is about valuing that work. What is the value of sitting down and maybe having a cup of tea with somebody [client] at that particular time? It might be better than sending them to the GP for a course of Prozac for six weeks. And how do you value that and how do you get others to value that? Do I need to get a tool, do I need to measure that? But that is the value.' (Participant B)*

Equally, the nature of community nursing meant that quantifying time for visits was not always appropriate, as the client's needs change and transcend beyond such reductionalism:

> *'I just think there is an awful lot, there are times…where you would go into a house and it could take you 5 minutes or it could take you 50 minutes and that is right it should take you 50 minutes if it takes you 50 minutes.' (Participant B)*

Role challenges were also observed in the context of a perceived power differential between the PHN and CRGN:

> *'…and it came from the Commission [Commission on Nursing report] when it said that PHNs were allowed to have RGNs as supports to the team. But I think somewhere along the line they took that to be the handmaiden of the PHN and I wouldn't be happy with that at all.' (Participant B)*

Public health nursing was considered to have a major health promotion focus (although as noted this was under substantial pressure), but CRGNs were less able to advance their careers in community:

> *'So we now have two problems, we have public health nursing which in theory is a qualification which deals with all the preventative care and tries to keep a population healthy, as well as dealing with care plans and acute illnesses in the community. You then have community general nurses who have developed a great level of expertise in certain areas, particularly wound care, but there is no career pathway for them.' (Participant D)*

This section has demonstrated how uncertain the role of both PHNs and CRGNs is, which was linked to a lack of leadership. While a generalist caseload approach is the framework for service delivery, this was considered ill-defined with some participants arguing for a more population based approach, particularly in the context of increasing case complexity. While the generalist approach was considered difficult to change, one participant argued that it did have some advantages. Participants also recognised the lack of career development for CRGNs and noted that the historical introduction of CRGNs to community was not founded on a distinct professional development for these nurses. Thus, there was the potential for a power differential between CRGNs and PHNs.

3.6.3 Need for reform

There was a consensus within the participants that reform of community nursing services was required. One area of reform was in

terms of standardising practice as this could be significantly different depending on geographical area:

> *'…it is only when nurses get together that they talk and say who has got what and what... and there is that perception with community nurses, that they are kept in the dark and told nothing, that they don't know what their colleagues have around the country. It is only when they get to a study day that they find out somebody has got something or they know something that they don't know'. (Participant C)*

However, it was also recognised that general health service delivery differences could impact on how community nurses could co-ordinate care:

> *'And even a different way of looking at something is if you lived in the urban area of a town, when I was practicing, when you lived in the urban area of the town the local ambulance came to get you or the local ambulance or bus came to get you to take you to the day centre. But if you lived out in the heart of nowhere you had no transport.' (Participant B)*

There was also some concern in relation to the current restructuring of community care with a determined argument that clinical governance needs to be enmeshed in disciplinary lines of authority and governance:

> *'They [Department of Health] are talking about nurses…not having directors of nursing in the community, that assistant directors would be reporting to other managers, which might have its own issues I guess… because I suppose the bottom line for us is clinical governance is the most important thing for us and to have that structure there where we can report to a nursing supervisor is vitally important. That is probably the biggest proposal change.' (Participant C)*

Echoing the points made in the section on role challenges, it was observed that reform of community nursing needs to be based within a consideration of what model of nursing best suits the population and structural service delivery needs as well as increases in care complexity:

> *'You see if you were looking at models of nursing and midwifery out there you might have, I don't know, but you might have a model that was looking at under 18 year olds, you might have a model that is looking at 18 to 65 and one that is 65 plus. I don't know what the models are going to shape. But the under 18 year olds might be that person who will be engaged with TUSLA [Child and Family Agency]. But they will also be engaged with health promotion in the schools, they will be schools nurses, they will be involved in the immunisation system. It will be the whole package. It will not be 0 to 18 straight up, it might be 0 to 6 first and it might be 0 to 12, but it would be doing the obesity bit, the public health obesity piece or the public health...' (Participant B)*

> *'I think the time has come, first of all because there is a growing older adult population, I suppose the model that we are working under is a 1960s model cradle to the grave, I suppose people died a lot younger and there was a lot less complexity and all of that.' (Participant C)*

Such reform needed to develop the role and education pathways of CRGNs and that this should be initially piloted and budgeted accordingly:

> *'You are going to have to grow your population of nurses who are already working there as RGNs, who are resident there [Dublin], who are not moving anywhere, just give them more capacity but also do a conversion course, which we did for the CNSs when the CNSs came on line in 1999 after the Commission [on Nursing, 1998]. There is no reason*

why we can't do something similar to community general nurses. Start off in Dublin, have a look at it and say, right you are a specialist in elder care, you are a specialist in wound care and remunerate them accordingly.' (Participant D)

Similarly, reform needed to take account of realistic population demands and have a workforce modeling approach to ensure sustainable workloads:

'The caseloads are impossible, the girls [community nurses] on the ground are saying that it is impossible to manage a caseload with 200 families and maybe 150 older adults, it is unsustainable.' (Participant C)

'But as I said earlier the numbers are not based on any workforce plan, they are purely based on how much money do we have available and what some managers somewhere thinks they can afford as opposed to assigning a science to it.' (Participant D)

Workforce modeling also needed to realistically consider current practice of student public health nursing contracts, where students might obtain educational sponsorship from an urban area, but may live an unsustainable distance away. After completing the Graduate Diploma in Public Health Nursing, complying with the contract conditions to remain in a specific urban area could impact on stress levels of the newly qualified PHN:

'… it is very frustrating because what happens is the students sign to say they are going to stay here for a while, whatever length of time, but what we see here is occupational health have said, so and so is stressed with the travelling so they have to go [leave the area].' (Participant D)

Only one participant stated that technology was developed in the CHO and that standardised communication is being used by staff:

'We are pretty good here, everybody has their desktop and now we have Smart phones for everybody as well so they are getting their emails, they have group emails. We are pretty ahead I think compared to some areas IT wise, which is great. They have all got their Smart phones now as well so they can see their emails, so IT we are ok. We are just trying to get the staff to when they hit their desk in the morning, please check your emails every day.' (Participant A)

However, the availability and application of technology was not seen to in every area. In comparing the previous excerpt to the one below, the diversity is notable:

'Technology, if they could get them all a bloody PC that is functional and working and get some system where it is linked well into the Dublin hospitals… around the country and all the rest so when somebody is discharged, it is not from the neighbour on the street that is telling them.' (Participant B)

One participant noted the impact the Health Information and Quality Authority (HIQA) had on the acute and long term care sector and that such external review is likely to extend to the provision of community levels services. Consequently, reform and standardisation of care delivery in the community would be inevitable, albeit this would amount to a considerable effort:

'And we have to work towards working towards a quality assured service because as you know we have to face that HIQA will be part of our future and that their expectations will be quite high and I don't expect that initially we are going to meet their standard in terms of national practice standards. So we have quite a gap to be made up.' (Participant A)

One issue that was discussed by the participants was the dilemma of medical card clients as opposed to populations without a medical card. Care delivery was

considered disparate within different CHOs:

> *'Well that really is a policy decision and it [visits to non-medical cared clients] really is outside the scope of public health nursing, and public health nursing has struggled because we haven't had the national direction in relation to it. We know that the policy in relation to primary care is universal healthcare delivery but unfortunately the services weren't resourced to support that principle so it left individual directors with very difficult decision making and no written guidance in relation to it.' (Participant A)*

Although participant A identified this as a policy decision, participants B and C suggested a more localised decision making approach to who receives care, again emphasising the indecisive standard in terms of guidance in this regard. In particular, participant B reflects on the ethical imperative to provide appropriate care to prevent client deterioration:

> *'Yes but that is local politics. That is what that is, local politics. And you will see that a lot in the rural area where the nurse is very friendly with the family down the road but it happens to be the politician's wife or whatever and maybe doing dressings every day on this person who should be going into a GP every day.' (Participant B)*

> *'I think most nurses just do it because I know that we have had issues with somebody came in…they were at risk of a pressure sore…they were recommended to go and get [to purchase this themselves] a repose cushion and this is where you get it or whatever. A different nurse went in the following day, saw the red sacrum and straight away got 'repose' and brought it and put it in. And the two nurses at a meeting were saying... You know what I mean, issues like that. (Participant C)*

The issue of community nursing service entitlement to care was considered ill-defined. Although, efforts had been made to indicate community nurses were engaging in case for clients who were not eligible for their services, this had not been followed through with quantifying the prevalence and assessing its' impact on those who were legislatively entitled to community nursing services:

> *'…they [Health Service Executive] have a survey that shows that public health nurses are providing care to non-medical card clients and we asked them how many? And they don't have stats to cover that. So they are surveying and they are saying, 'are you providing care to non GMS clients?' And the answer might be yes. But they don't ask the next question, how many? It might be one client or it might be two clients. And they also don't ask, 'and what are you not doing for medical card clients that you should be doing in order to allow you to give care to non-medical card clients?' So I find their research flawed and I have said that to them.' (Participant D)*

Yet, this is an issue which has, to date, eluded the public's knowledge as opposed to other areas of public entitlement to care services:

> *'And I think that is missed in the media discussions as well, they talk about access to medical card and drugs and doctors and that but they forget that it is the access to the PHN as well.' (Participant B)*

Reform was also located in the provision of services beyond the traditional 9-5, Monday to Friday:

> *'...it just goes to show that the service was set up in the 1960s and nobody has really looked at it since really critically in terms of what we are delivering and why we are delivering it. But in a way what I am going to say now really links in with my previous point, rather address the issue of the service being Monday to Friday and making changes to make it a seven*

day service.'(Participant A)

One participant suggested that enabling a wider service availability timeframe could also be attractive for younger staff's lifestyles:

> *'And by the same token some of these girls that are coming out into practice as public health nurses, a lot of them now because of the move in midwifery are young women, so they actually want flexible hours and they are willing to go that extra bit and do the evening shifts.' (Participant B)*

It was also noted that the current system posed difficulties for staff covering weekend calls as there was no community nursing management to consult with and report to if serious issues arose. This resulted in having to refer to acute care or the Gardaí (in child protection cases, for example). Participant C also noted that having extended service hours would suit working mothers:

> *'Yes… [refer a serious issue] into the hospital or the Guards if there is another issue. But for working mothers as well… So I think if we want to be a modern service I think we have to expand the hours.' (Participant C)*

Thus, reform in community nursing services was articulated in relation to many specific areas. A general concern was in relation to standardisation of service delivery and meeting current and future population demand. This also encompassed an acknowledgement of the increasing complexity of such population care demands and the need to consider the expansion of service delivery availability to evenings and weekends. A review of the alternative potential models of community nursing care was considered generally appropriate; yet, it would need to acknowledge the variability of community nursing calls in that a straightforward call could turn into a more complicated call depending on the community nurse's assessment of the client at that point in time.

Furthermore, there was uncertainty about the current restructuring within Irish health services and how community nursing lines of accountability and professional governance might be impacted. Furthermore, there was concern regarding clarity of service entitlement as this varied across the country and could impact services available.

In conclusion to this section, although the number of interviews was limited, the participants did represent key areas of policy and practice within Irish community nursing. Moreover, all participants highlighted particular thematic issues and challenges within current practice, which provide important contextual understandings for this study.

3.7 Section Three: A health economics perspective

This section summarises the evidence in relation to costs and outcomes. It goes through each of the areas of missed care and discusses a) need in the community, b) the potential costs from the problem not being treated, c) the evidence for nursing or home visiting to prevent or treat the problem and d) the gaps in the evidence. Participants described the generalist approach as being hugely challenging and 'having too many fingers in the pot'. Practice was seen as 'fire-fighting', with some participants reporting their practice areas having a priority ranking system for work, while others did not recognise this system. One participant described 'huge caseloads' where the generalist approach was very challenging and community nurses were not best placed in some cases due to the client's need for specialist care. In addition, understandings of the community nursing roles were seen to be blurred as one participant reported that 'they'd [clients] ring you if there was a rat in the yard.'

A prominent area which aggravated the ability to complete practice was the lack of administrative support to undertake things like locating files for appointments, photocopying and assisting with putting reports together. One example was given by a participant who assessed a client for a particular mattress due to pressure area vulnerability. The participant stated that she

was asked by PHN management to phone around and get quotes for this appliance, which took a week to source due to pressures of other work demands. This could have been undertaken by an administration person who could have done this in a shorter time and have reduced the intervening decline of this client's deteriorating skin condition.

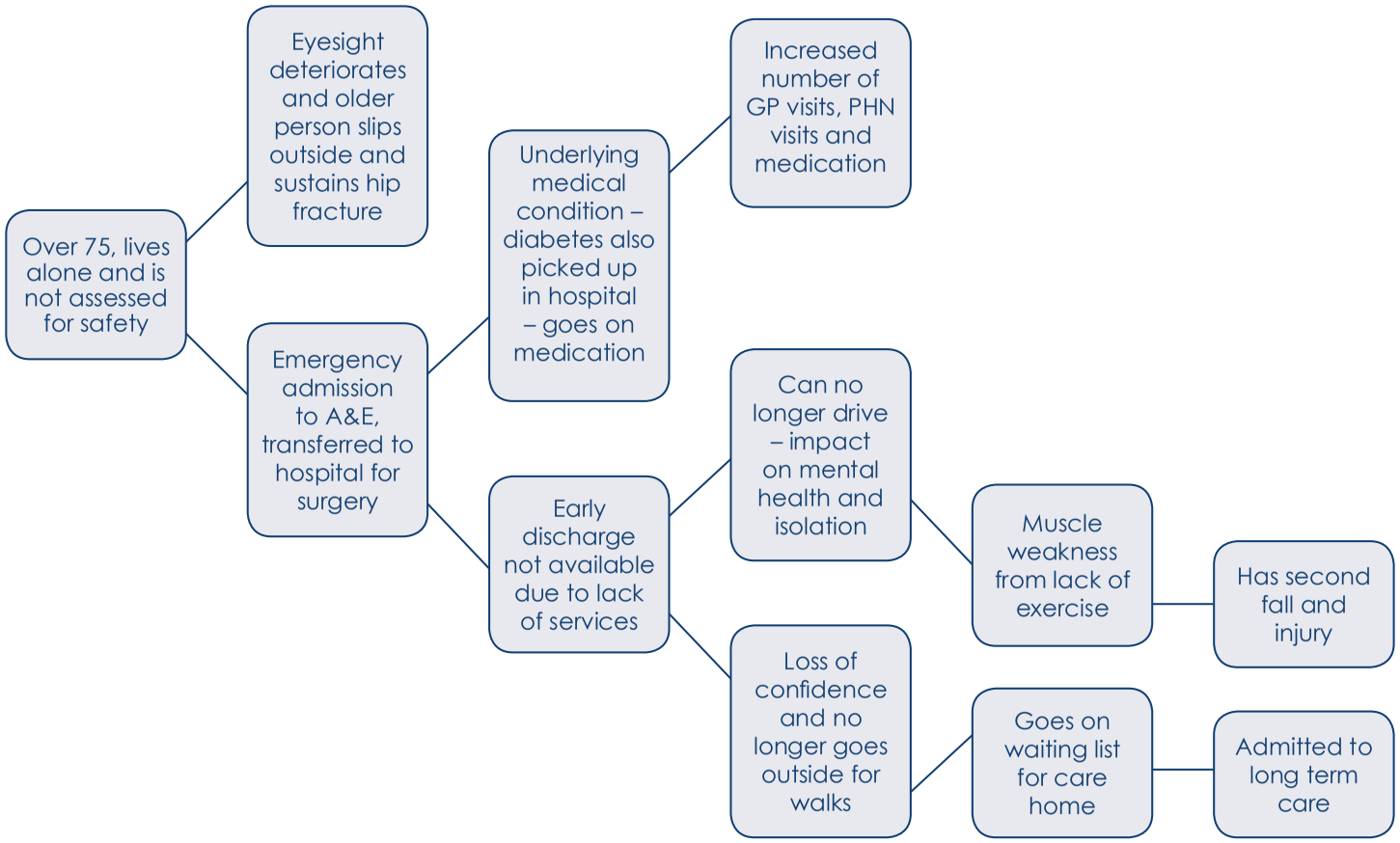
3.7.1. Older people

The research participants told us that in the past they carried out surveillance of all over-65s in the community to identify potential health and safety risks but that this was not something they could do any more due to staff shortages. As well as falls, the nurses identified preventative work with older people relating to other chronic conditions such as:

- diabetes;
- cellulitis;
- deep vein thrombosis;
- chronic obstructive airways disease,
- pressure sores; and
- psychological impacts.

Participants believed that all of these conditions were likely to be more costly to treat if this work was not carried out to a high standard. This was aggravated by a lack of comprehensive collaboration, particularly with GPs and also with regard to communication from and with acute care services. One example that the focus group participants recommended practice focuses on was the prevention of falls through home visiting and surveillance of those at risk. To that end, the focus group helped us develop a 'worst case' scenario of how costs might arise if this care is missed (see figure 3)

The diagram shows how a simple common condition like the deterioration of eyesight could lead to a fall and hip fracture. The impact on the client's confidence leads to less exercise and an increased risk of a second fall. The participants stated that hip fractures in the over-75s were particularly damaging and in a large number of cases led to the client no longer being able to remain in their own home. Alongside



Costs of A&E admission (183 CAG, 2008)

Costs of hip surgery €5043) (EU mean Stargardt, 2008)

Costs of hospital stay for 2 weeks (€12,250 CAG, 2008)

Discharge Care – PHN, outpatient, GP visits plus medication

Costs of care home €778 per week (Nursing homes Ireland 2006)

One year mean cost of hip fracture 18,527 (Gheorgiu and Unguru 2009)

economic costs, there are of course personal costs to the clients.

3.7.2 Breastfeeding

A second area that the participants were keen to stress as being of great importance but routinely missed was breastfeeding support. One research participant told us that she had trained as a lactation specialist because this was an area of particular area of interest for her but that she had not had the opportunity to use her skills. Participants described only putting effort into those women who were themselves making progress because they knew they did not have the resources to support those that were doing least well. In these cases, they were more likely to use their time to ensure women were comfortable bottle-feeding.

3.7.3 Other health promotion

Health promotion generally and particularly in relation to cardiovascular advice and promotion was another area of missed care identified in the Irish survey of community nursing.

3.7.4 Child development and child protection

PHNs in Ireland are generalist practitioners with a wide range of roles. One responsibility that is of critical importance but that is sometimes missed is that of child protection. Research suggests that PHNs child protection role is becoming more difficult to define and practice safely (Kent et al. 2011). This also emerged from the qualitative evidence gathered during this study. Participants expressed concern with the variability of practice in relation to follow-ups of family visits and a lack of clarity about what defined good child protection. One issue related to this was the general lack of clinical supervision for caseloads so care may be missed.

The increased number of child health caseloads meant that home visiting was reduced in favour of bringing children to the clinic for time efficiency. However, this translated to a limited assessment of family and home circumstances and this could lead to being unable to identify neglect. Participants also indicated that issues could also arise in missed appointments in the rural areas as families may not turn up.

The missed care survey found that the 18-24month visit and the over 3 and a half year visit were the one most commonly missed. Participants told us that activities missed at this appointment were:

- screening for developmental delay;
- screening for behavioural problems; and
- screening for hearing, speech and sight problems

Participants stated that if the 18-24 month or subsequent visit did not take place, for some children, a language problem might not be picked up until the child attended school, with potential impacts on school-readiness.

3.7.5 Workforce issues

A final area where economic implications are likely to arise is impacts on the workforce. Participants noted that the role of PHNs in Ireland are very 'generalist' unlike the UK where three groups (district nurses, health visitors and midwives) divide work on older people and hospital discharge, new mothers and children. However, the lack of standardisation in community nursing practice across the country was very notable in a group amongst just 5 nurses. Moreover participants stated that nurses with specialisms don't have time to practice them. Participants reported that routine community nursing was also considered to be hampered by a lack of communication from other professions, hospitals, GPs, other professionals. In addition, comprehensive co-ordination and delivery of care was also hampered by a lack of services to refer in to when needs were identified. In relation to workforce composition, the research participants also stated that a lot of older more experienced nurses were leaving and that a lot of less experienced nurses were taking up management roles.

3.8 Conclusion

This chapter presented the findings within the study. The findings drew upon three methods of data collection and each method allowed varied insights into the context of community nursing in Ireland. The survey enabled a review of what care was missed within the period of a typical week. The semi-structured interviews generated a consideration of the community nursing service in contemporary Ireland and the issues which provided practical challenges in service delivery. Finally, the focus group used the data from the missed care survey to develop a health economist perspective for community nursing. In using these three data collection approaches, a more comprehensive picture of missed care, its reasons and its consequences emerged from the data sources.

Chapter Four: Discussion and conclusion

4.0 Introduction

Community nursing in Ireland is generally comprised of PHNs and CRGNs, although it is acknowledged that nursing care in the community is also delivered by both practice nurses and particular specialisms in nursing who may have input in terms of delivering nursing care in the home environment (palliative care nurses, community based mental health nurses). This study only focuses on PHNs and CRGNs and is the first study globally to consider the concept of missed care in the community setting. Missed care (Kalisch and Williams 2009; Kalisch 2006), which has also been studied under the related concepts of 'care left undone' (Lucero et al. 2010) or 'implicit rationing of care' (Sochalski 2004), is a relatively new lens within which to consider the environment of nurses' work. Missed care describes care that should be routinely undertaken but is either omitted or simply not completed (Kalisch et al. 2011), due to issues such as staff shortage, a lack of effective organisation of care or a lack of appropriate leadership (Kalisch and Williams 2009; Kalisch 2006). Missed care may also be a precursor to other more serious care deficits such as failure to rescue (Clarke and Aiken 2003) and never events (Fisk 2008).

The overall aim of the study was to identify what care is being missed in the Irish community nursing sector and to examine the relationship between missed care and staff nursing levels. Three methods of data collection were used in the study. Using the concept of missed care from studies in the acute setting (Kalisch and Williams 2009; Kalisch 2006; Kalisch et al. 2011), a missed care survey was developed. This involved a review of the extant relevant literature on community nursing in Ireland as well as the convening of a steering group and a panel of community nursing survey item reviewers to develop a tool which was relevant to the current practice of geographically based community nurses. The final survey was comprised of a total of 82 questions which were divided into sections A, B, C, and D related to community nurses' work. The tool was administered through Survey Monkey with some hard copies distributed on request. All participants (PHNs and CRGNs) completed sections A, B and D, with PHNs only also completing C. Although the research team received a total of 458 responses (29%), this figure was reduced to 283 using a threshold of survey item 'missingness' of 5% or more.

Data collection also involved semi-structured interviews and a focus group. Semi structured interviews were undertaken with key stakeholders to elicit the context of community nursing in Ireland and situate the findings in relation to the missed care study. The focus group was convened to consider how current community nursing practice, particularly related to missed care, could be considered within a health economy perspective. This focus group was comprised of both CRGNs and PHNs and the discussion was generated using the emergent findings from the community nursing missed care survey.

4.1 Irish community nursing

Highlighting challenges in community nursing has been problematic as crisis in acute care settings are more recognised and discussed in both the nursing profession and within public forums, such as the media. This has led to the Queen's Nursing Institute (2014a) advocating for a rebalancing of health debates to address this disproportionality. However, in Ireland, similar to other health care systems, such debates can be greatly influenced by the findings of independent monitoring bodies, such as the Health Information and Quality Authority (Ireland), who make public concerns about standards in acute and residential care. In this regard, there is an absence of national strategic objective oversight for community based health care systems delivery and governance, thus, issues such as missed care, client safety and other general care standards remain formally and independently unexamined in the primary care setting. For example, the lack of uniformity in care is highlighted in this study; findings in all methods of data collection demonstrated the nationally unstandardised nature of community nursing roles in Ireland, despite being acknowledged as a vital

link between primary and secondary care (Mason and Clarke 2001;NCNM 2005). The CHOs appear to work in silos both within community nursing (PHNs and CRGNs) and intra-disciplinary based community nurses (palliative care nurses, practice nurses, community mental health nurses) as well as in the context of interdisciplinary leadership. The lack of national standardisation of care and impoverished development of the profession was identified within the semi-structured interviews and the focus group and although it was observed that some progress had been made in individual CHOs, this was in an ad hoc way. Such lack of standardisation can lead to inequity in health care delivery and this is a particular feature of the uncertainty surrounding eligibility for care. Although the government's goal of universal health care needs further consideration (Wren et al. 2015), alternative models of funding may progress the plan for a single tiered health service, particularly as such healthcare change constitutes a recommendation from the World Health Organisation (WHO 2014; 2015a, b, c and d) and the United Nation's Committee on Economic, Social and Cultural Rights (2015). The subsequent impact on community nursing would be substantial in terms of increased workload and would need to be accounted for in the context of workload.

In a recent review, the National Directors for Public Health Nursing and Shannon (2014) recognised that governance and performance indicators are lacking in community nursing. This gives more strength to the argument for formal systems of care monitoring to ensure service quality and standardisation. Such a monitoring body needs to be independent from the organisations that provide services and consideration should be given that HIQA assumes responsibility for this governance role. Moreover, the WHO (2015a,c) and the Irish Law Reform Commission (2011) specifically identify regulation in community care as an enabling mechanism for population health.

In 2005, the National Council on the Professional Development of Nursing and Midwifery noted the challenges within PHN management (DPHNs and ADPHNs) in the context of being ill equipped to engage in areas such caseload analysis, leadership, research, service planning and evaluation, while the DPHNs noted they had not been involved in change processes in healthcare as a result of policy reorientation. This mirrors the findings in this study and highlights an important issue related to the general invisibility or lack of recognition of community nursing in health conversations of policy makers, other statutory services and within primary care groups in general. All data sources reflected the archaic nature of community nursing structures which have not developed in line with primary health care policy or population need. Consequently, it unsurprising that community nursing remains in a state of crisis, as out dated structures attempt to accommodate evolving policy directives. Yet, the WHO (2015a and b) recognise such challenges and advocate for strategic planning and implementation of priority action areas such as scaling up and transforming education, workforce planning and optimising skill mix, ensuring positive work environments and the promotion of evidence-based practice and innovation (WHO 2015b,d).

A distinct part of the PHN role lies in population health promotion and disease prevention (Commission on Nursing 1998; Department of Health Social Services and Public Safety, & Department of Health and Children 2005; NCNM 2005; An Bord Altranais 2005; ICHN 2007), as well as counteracting health and social inequality (Hanafin et al. 2002), yet this is an area which is most missed as reported in all data sources in this study. This is in opposition to the focus of Ireland's health policy, Healthy Ireland (Department of Health 2013), and national clinical programmes such as those for primary care, older people and diabetes (HSE nd). Ironically, in such primary care based policies, there is an emphasis on health protection and health promotion, yet community nursing practice reflects a distinct inability to fully articulate such objectives due to a rationalisation of care. In this context, PHNs and CRGNs are unable to operationalise their community level professional skills, which are sacrificed for other prioritised activities.

Another area which is underdeveloped within the community nursing infrastructure is the area of technology. While one of the interview participants indicated that her area had developed this, other participants highlighted deficits. Technology, particularly eHealth, has the potential to improve care effectiveness and efficiency as well as inter-disciplinary and intra-disciplinary communications (Hussey and Roger 2014). In particular, technology can foster improvements towards a service delivery framework (WHO 2015a,b) and has the potential to reduce administrative time, which was highlighted as a dominant issue in all data sources in this study.

The role of the CRGN is particularly nebulous with Scott et al. (2006) identifying a lack of consensus on what constitutes practice standards. For example, CRGNs could be caseload managers or could work under a PHN's caseload (NCNM 2005; ICHN 2007). Introduced in the 1970s, the role was recognised by the Commission on Nursing (1998) and a formal job description articulated in 2000 (Department of Health and Children 2000). However, distinct career progression and education as well as role development has not occurred although the Institute of Community Health Nursing (2007) had recommended that CRGNs have an educational programme of orientation.

The generalist nature of community nursing impacted on the absence of distinct boundaries and it appears that whatever case is referred legitimately constitutes the caseload, regardless of complexity. Without particular boundaries, the limitations around scope of practice (NMBI 2015) become blurred which could lead to potential dilemmas for community nurses. Increases in population and shortages of staff through the impact of the staff moratorium, cross covering leave, a lack of comprehensive administrative support and having to prioritise work was considered as placing community nursing under considerable strain. This absence of boundaries has been demonstrated in studies (Institute of Public Administration 1995; Begley et al. 2004; Markham and Carney 2008). In addition, the expertise in professional 'knowing' was identified as important in the context of promoting client health beyond the nursing task. For example, a home visit may take longer if the community nurse's expertise identifies additional care needs such as the client's low mood, health deterioration or an abuse situation (Phelan 2010; 2014; Phelan and Davis 2015). Compounding the challenges within planned workload is the open referral process to the community nursing service (NCNM 2005), particularly in the context that community nursing has no formal method of a waiting list of clients nor is there the capacity, that is available (although problematic) in acute services (such as ward closures or coming off call), to contain the volume of clients. This tacit extension of community nursing caseloads is particularly noticeable when the 700,000 additional medical cards were issued between 2003-2013 (Directors of Public Health Nursing and Shannon 2014) translating to increased eligibility for services within community nurses' caseloads. Within the Celtic tiger era, community nurses could find housing estates or apartments being built in their areas, which significantly impacted on caseloads. As the economy improves, such growth in caseloads may again pose a challenge to meet population need.

The generalist approach also impacts on the limited ability to provide specialist care to all clients as the diversity of client population and care needs renders this an impossible competency (NCNM 2005). However, a counter-argument for this could focus on the community nurse being the key worker who holds and manages the case and has the capacity to undertake initial assessment, refer to relevant multi-disciplinary specialisms as need requires, co-ordinate and evaluate cases (ICHN 2007). Currently, as reported by the focus group, there is a lack of referral options for community nurses following client assessment due to a lack of required services available. Inevitably, this practically translates to the community nurse attempting to manage care where more intensive specialism is required.

Within the missed care study, there were 16 questions within which respondents indicated that this was 'not part of my

practice'. This supports the diversity of roles within individual caseloads. The highest area of 'not part of my caseload' was within the area of disadvantaged groups where between 44%-78.9% of respondents identified that specific groups (travellers, homeless people, asylum seekers, migrants and other disadvantaged groups) were not within their remit while for CRGNs, this ranged between 63.5%-93.2%. A second notable high finding was within school health with 78.9% (PHN) and 90.5% (CRGN) identifying this was not in their caseload. This finding may be due to the availability of specialised community nursing services or other health services to these client groups.

As a result of issues such as a lack of leadership, a structure which does not match either population or policy need and a lack of standardised roles which allow career progression, reform is urgently required. Reform may support calls to have a distinct population / specialism / division based approach rather than a generic whole population caseload (Pye 2015; Hanafin and O'Reilly 2015).Such proposals again echo previous reports in the context of the recommendation for reorganisation of community nursing services (NCNM 2005; ICHN 2007). The forthcoming review of community nursing models commissioned by the Department of Health in 2015 may identify appropriate direction for structural reform and service delivery, but reform also needs to contextualise change within a) the context of health policy, including a possible change to universal health care b) within the greater Irish nursing profession, c) interdisciplinary location, d) career progression pathways, c) population need at a local level, d) a functional integrated, intra-disciplinary and inter-disciplinary team, e) appropriate resources (technology, administration, practice development), f) defined role boundaries for community nursing staff, g) ensuring education matches the needs of new structures and f) ensuring appropriate referral pathways and services are available from community nursing to other agencies. Such reform should also be cognisant of a possible need to change nurse registration standards.

Workforce issues

Economic issues and fiscal limitations impact on the workforce. The WHO (2015a and b) have emphasised the imperative nature of a motivated, sustainable and competent workforce within positive work environments. Changing population needs, demographic changes, legislative and policy advances as well as health care advances demand a transformation of roles to adapt to the goals of contemporary Ireland while also accommodating for future need (WHO 2015b).

The overall consensus in the literature is that nurse turnover is costly as well as detrimental to nurse and client outcomes (Hayes et al. 2006). Previous researchers have attempted to determine financial costs of replacing individual nurses. Estimations range from $10,000 to $60,000 per nurse, depending on the nurse specialty (Hayes et al.2006 citing Jones 1990). Hayes et al. (2006) cited estimates (from The Advisory Board Company, 2000) of $42,000 to replace a medical-surgical nurse and $64,000 for a specialty nurse. These figures included the cost of recruitment, orientation, precepting and lost productivity; the latter claimed to be nearly 80% of the total turnover costs. Waldman et al. (2004) also estimate that the total cost for a newly hired nurse averaged $15,825 and the cost of reduced productivity ranged from $5,245 to $16,102 (Waldman et al. 2004).

Missed care has been found in hospital settings to impact on morale, jobs satisfaction and retention of nursing staff with implications for productivity, retention, sickness and absenteeism and recruitment costs (Clarke 2004; Tschannen et al. 2010). The absence rate for PHNs in 2015 was on average 4.8%, but in one area was as high as 6.7% which is higher than the HSE target of 3.5% (HSE 2015b). Data from the UK's Labour Force Survey suggests average absenteeism is 3% (Office for National Statistics 2015).

In hospital settings, missed care has been associated with intention to leave after one year (Tschannen et al. 2010). The

authors argue that inability to provide the care nurses viewed as needed was a reason for leaving their position. Levels of missed care have also been found to predict job satisfaction (Tschannen et al. 2010). There are a number of important (and potentially costly) correlates of job satisfaction. A piece of research amongst Irish PHNs found low levels of job satisfaction (Curtis and Glacken 2014). Amongst the contributing factors were workload, pay, lack of client time and administrative work. Other studies of inadequate staffing levels and work overload have been found to be negatively associated with nurse well-being. Job satisfaction is negatively linked to high turnover amongst nurses (Irvine and Evans 1995). High turnover in turn affects the morale of nurses and the productivity of those who remain to provide care while new staff members are hired and orientated (Cavanagh and Coffin 1992; Hayes et al. 2006 citing Sofer 1995). Factors such as stress resulting from staffing shortages, leadership style, supervisory relations, advancement opportunities and inflexible administrative policies were also found to be significantly related to turnover (Yin and Yang 2002).

4.2 The missed care survey

Quantifying times

The aim of quantifying the average time spent on the individual activities of the community nursing respondents (in order to develop a method of workforce planning) was hindered by the variation of respondents' responses within each question. This resulted in being unable to comprehensively consider a workforce planning template based on Hurst's (2002) time activity model. Findings are located in appendix 1 and offer a crude indicator of time per activity. Brady et al. (2008) study did consider time, but this was in relation to care groups, rather than specific activities which constitute the daily practice in community nursing. Further work needs to be undertaken in this regard to refine both actual and missed care in terms of workforce planning. The challenge of generating safe staffing levels in the community (Fields and Brett 2015) and elsewhere (Rutter et al. 2015a, b) has been noted and requires further high quality research studies to ensure a robust evidence base. The need for a concerted and sustained effort to develop a strategic workforce planning tool for community nursing has been noted by the Queen's Nursing Institute (2014b), who recommend this tool is based on data collected over a period of a year or more.

Demographics

This study had respondents from both PHNs (74%) and CRGNs (26%) which approximately reflected the proportionality of practice numbers within community nursing in Ireland. There was relatively even spread of respondents across the HSE areas in Ireland. Of the total number of final surveys in study, (n=283), only 2% were completed by males (n=5), with 2 of these being CRGNs. As CRGNs do not have separate register with the Nursing and Midwifery Board of Ireland, it is impossible to break down the total representative gender divide working in the community, however, within the Nursing and Midwifery Board of Ireland's 2014 register statistics, there are 3,384 registered PHNs (active and inactive) with only 10 being male. This occupational gender difference is also found in the register as a whole with only 7,436 males being registered with the Board from a total figure of 94,604 (active and inactive) (NMBI 2015). Most respondents were between 35-54 years (68%, n=192) with 19 % aged 55-64 years. However, there was a significant difference in age with CRGNs being older on average than PHNs. This may also have impacted on the academic attainment of CRGNs as degree level registered general nurse training only commenced in Ireland in 2004.

As most participants were PHNs, it is unsurprising that the level of post-graduate education is high. A total of 66.1% (n=187) participants had a graduate qualification. This reflects the fact that the qualification of public health nursing is a graduate programme which initially was a graduate certificate, then a higher diploma with a final move to a graduate diploma in 2007. Most respondents in the study had over five years' experience. While most respondents worked a 39-hour week (43%), it is notable that 28%

(n=78) indicated that they work more than the contracted 39 hour week. This suggests that additional personal time is used to make up for work not completed. This is supported within the data from the focus group. However, the use of overtime is contrary to client quality and also contributes to nurses' fatigue, decreased job satisfaction and problems with recruitment and retention (American Nurses' Association nd, Egan et al. 2003). Although, there is scant information specifically related to community nursing, a recent study in the UK (Unison 2014) which included nurses in community, indicated that of 53% of nurses who completed the snapshot survey (n=2,845) had worked overtime on a specific day, with 19% stating this amounted to over 60 minutes. Thus, the problem of working beyond contract hours appears to be ubiquitous within the nursing profession, yet continues to be formally unaddressed. In addition, 49% of the CRGN workforce worked less than 39 hours reflecting a higher proportion of part-time workers as opposed to PHN full time positions.

From a caseload point of view, most respondents reported a caseload of between 2,500-4,000 (36.2%, n=93), however, the remaining 63.8% had caseloads of 4,001-10,000+ giving a higher average caseload than reported in Hanafin and Crowley's (2005) study. This would reflect the increasing total population in Ireland (CSO 2015b) and the fact that community nurse staffing has not been linked to population increase. However, CRGNs were more likely to report caseloads of over 10,000+ which reflects their cross covering between PHN areas. In analysing total caseload numbers and older person caseload, no significant difference was noted. It should be noted that PHNs also have child health caseloads but CRGNs tended to work lesser hours, which somewhat evens the workload distribution.

In addition, the acuity of the population has increased, with greater co-morbidity, more complex care management, reduced hospital stays and changing demographics (Leng 2014; Pye 2015). Further aggravating factors for community nurses have included structural reorganisations of the Irish health system, the economic recession in general and the staff moratorium in particular. Within the caseload, survey respondents were asked to identify current active cases. This demonstrated that most community nurses had 1-50 active clinical caseloads (45.8%, n=125), but some described having a huge volume of active cases of over 201 (10.6%, n=27). Within specific care, older person caseloads of 1-200 was most common for 249 respondents (93%) while PHNs reported the common child health caseload of between 101-200 (29.8, n=64), although 36 (16.7%) identified a caseload of 250+. This reflects the diversity of community nursing as noted in previous Irish studies (Begley et al. 2004, Brady et al. 2008, INMO 2013).

4.2.1 Nursing domains

For the purposes of this survey, the work of community nurses was divided into care areas with PHNs completing both section B and C while CRGNs completed B only. This reflected the scope of practice within each of the community nursing groups. All domains in both sections demonstrated a level of missed care.

In section B, there were 10 areas focused on: Home nursing care, care management, family support, older people, disadvantaged groups, health promotion, education, provision of other community services, primary care teams and administration. As the generalist role of community nursing is so diverse, this section discusses findings with a health economic approach within selected areas.

Health Promotion

As discussed earlier in this chapter, health promotion is an important aspect of community nursing and of Irish health policy (2001a and b; 2013). An epidemiological approach translates to examining the health issues within a population and addressing this in terms of prevention and early amelioration. Hypertension, chronic back pain and high cholesterol have been identified as the most common health conditions in Ireland (CSO 2011) with diseases of the heart and arteries, malignant cancers, lung disease, accidents

and suicides being lead causes of death in Ireland (CSO 2015c). Other areas of concern in Ireland relate to substance misuse (Steering Group on Substance Misuse 2012) obesity (Institute of Public Health 2015), diabetes (National Diabetes Programme Clinical Strategy and Programmes' Directorate 2011) and smoking cessation (Department of Health 2013). Given the high cost of, for example, diabetes with lower limb ulcers and amputations, community nurses can have a significant impact on reducing such costs through screening, education and advice (National Diabetes Programme Clinical Strategy and Programmes' Directorate 2011). A health promotion and disease prevention approach is well-recognised in all of these areas, yet the potential of community nurses is not achieved and these have rated as being missed at a community level (73.5%,), heart disease and stroke (71.8%,), congestive obstructive airways diseases (64.8) and diabetes (59.1%). In comparing health promotion being missed within both groups, PHNs were significantly more likely to have missed care related to health promotion focusing on heart disease and stroke, COPD and diabetes than CRGNs.

In relation to the cost benefits of prevention, a US study on asthma finds that over the years 2002-2007, the incremental direct cost of asthma was $3,259 (2009 dollars) per person per year. This is similar to a UK cost, one paper has estimated treatment costs for severe cases is £2912–£4217 per person per year. Ireland has the fourth highest rate of asthma in the world and hospitalisations from asthma are the highest in the world (Kabir et al. 2011). It is therefore plausible to argue that boosting breastfeeding rates through more home visits would help reduce the incidence of asthma with significant social and economic benefits.

There is very good evidence that lifestyle changes can bring about changes in the risk of cardiovascular disease (CVD) even in clients where the disease is advanced (Lichtenstein et al. 2006; Ornish et al. 1990). In spite of recent improvements, Ireland is still above average for CVD in Europe. It is also estimated that 30% of people suffer from hypertension, heart disease or stroke (Balanda et al. 2010) and this is a significant contributor to causes of death (CSO 2015c). In the UK it is estimated that CVD costs the UK economy £19 billion a year. Of the total cost of CVD to the UK, around 46% is due to direct health care costs, 34% to productivity losses, and 20% to the informal care of people with CVD (Bhatnagar et al. 2015). Overall Cononary Heart Disease (CHD) is estimated to cost the UK economy over £6.7 billion a year. Of the total cost of CHD to the UK, approximately 27% is due to direct health care costs, 47% to productivity losses, and 26% to the informal care of people with CHD (Bhatnagar et al. 2015). About 7.4% of the health budget in the UK is spent on CVD, CHD and stroke. A similar cost in an Irish context (where rates of heart disease are similar) would be €984 million.

There is some evidence that advice and support from nurses on smoking cessation can have an impact on smoking rates. A meta-analysis of studies held at the Cochrane library found that, although the evidence was stronger for hospital settings, advice and encouragement by nurses at health checks or in prevention activities may have an impact (Rice et al. 2013). Research has found similar evidence for lifestyle benefits from healthy lifestyle promotion amongst adults with risk of CHD (Steptoe et al. 1999). A meta-analysis of interventions to promote physical activity, including interventions by community nurses has found professional advice and guidance with continued support can encourage people to be more physically active in the short to mid-term (Foster et al. 2005). However, later research suggests that the use of health promotion techniques at relatively low risk of cardiovascular disease is not particularly effective in terms of reducing the risk of clinical events. The costs of such interventions are high and it seems likely that these resources and techniques may be better used in people at high risk of cardiovascular disease where evidence of effectiveness is much stronger (Ebrahim et al. 2011). Nurse led clinics to reduce CVD have also been found to be cost effective in the UK. For an intervention that cost €195 per client (1998-9 prices), there were 28 fewer deaths. The incremental cost per life

year saved was £1236 and that per quality adjusted life years (QALY) was £1097 (Raftery et al. 2005).

Related potential cost savings from lifestyle changes have also been found in relation to obesity. A study on the hospital costs of obesity in Ireland found that based on 2001 figures for cost per in-client bed day, the annual hospital cost was calculated to be €4.4 million in 1997, increasing to €13.3 million in 2004. At a 20% variable hospital cost, the cost ranges from €0.9 million in 1997 to €2.7 million in 2004; a 200% increase (Vellinga et al. 2008). A systematic review of costs of obesity worldwide estimates that it accounts for between 0.7% and 2.8% of a country's total healthcare expenditures. Furthermore, obese individuals were found to have medical costs that were approximately 30% greater than their normal weight peers (Withrow and Alter 2011). The annual economic cost of obesity in Ireland is about €2.7 billion, based on an estimated 2000 premature deaths annually attributable to obesity (HSE 2005). Thus, the potential for community nurses to address the challenge of obesity is clear and focuses on creating space for health promotion and working in partnership with individuals, families, communities and schools to address this issue.

Care management

Part of the role of community nurses is care management of clients (NCNMPD 2005). This domain demonstrated a high level of care being missed resulting in fragmentation of care for clients. An important aspect of care delivery is assessment and advocacy. Yet all forms of assessment were recorded as being missed: initial assessment (51.7%, n=123), follow up assessment (54.4, n=147), and care management following re-assessment (74%, n=196). A needs led assessment framework is important to establish an individual client's bespoke care management plan and to contemporaneously re-evaluate the plan's status. However, in this study, care management results point to the lack of care continuity and possible deterioration of the client's status or a waste of resources which have or no longer progress care objectives. Care management for community nurses is also linked to accessing and collaborating with multi-disciplines, yet this was missed 55.6% (n=155) of the time, while advocacy, an important aspect of community nurses' work was also impacted (54.5%, n=146), particularly for within the PHN respondents. Yet, according to the Nursing and Midwifery Board of Ireland's Code of Professional Conduct and Ethics (2014), this is an expected standard of nurses' conduct. In being unable to engage in advocacy, community nurses are not empowered to attain standards inherent and expected in the profession. In the context of providing comprehensive care management within the community, research has demonstrated that nurse led care has the potential to identify unmet need, reduce hospital re-admissions, decreases fiscal costs on health budget while increasing both clinical outcomes and service satisfaction for the client (Joo and Huber 2013; Chuanmei You et al. 2012).

Disadvantaged groups and other care groups

A prominent focus for community nurses, particularly PHNs, is to work within a system of vertical equity (Hannifin et al. 2002; ICHN 2007). This means being able to identify marginalised populations and deliver care to compensate and accommodate to the needs of the group and counteract health inequalities. In this study, such groups were identified as homeless people, asylum seekers, migrants, travellers and others. The majority of respondents indicated that their caseload did not include such groups, however, of those who did have those groups, there was significant gaps in their ability to provide services. In relation to homeless people, of the 61 community nurses who included this as part of their work, 72.1% (n=44) indicated that care was missed. This is an important area in contemporary Ireland. Focus Ireland (2015) report supporting 11,500 people in 2014, and note that 450 families became homeless (including 1000 children) in the same year while the Simon Community (2015) reported assisting over 7000 people who were homeless or at risk of being homeless. These figures are not

absolute as some homeless people may not access help or may source assistance from other organisations or communities, such as the Father Peter McVerry Trust or the Legion of Mary (Morning Star Hostel). The potential of community nurses to provide care and assist with this very vulnerable population is clear when examining extant data on homelessness and health in Ireland. Reports indicate that homeless people have a higher experience of physical and mental challenges as well as substance abuse and smoking prevalence (Keogh et al. 2015; Keane 2012). Thus, while the care demand is high in terms of positive health promotion opportunities and addressing need, this group does is frequently missed in terms of care provision.

There is a blurring of the term refugee, asylum seeker and migrant. According to the UN, refuges are people fleeing from conflict, asylum seekers are people who are awaiting a government decision on their status as a refugee (i.e. is it valid?) and a migrant is a person who chooses to move for work, education or to reunite with family (UNHCR 2015). This blurring is evident in recent newspaper articles which discuss Ireland's commitment to accept 4,000 refugees in the Ireland Refugee Protection Programme (Department of Justice (DOJ) 2015) yet the term refugee and migrant interchangeably used (Lynch et al. 2015). In relation to asylum seekers, only 49 respondents indicated that this population was within their caseload, yet care was missed in 67.3% (n=33) of responses. Asylum seekers are refugees who leave their home country and seek protection under the 1951 Geneva Convention due to persecution due to race, religion, nationality, particular social group affiliation or political opinion (Irish Refugee Council nd). Asylum seekers live in direct provision accommodation centres around Ireland and are entitled to a weekly allowance of just €19.10 per adult and €9.60 per child which must cover all costs apart from accommodation and meals. Such direct provision type accommodation has been criticised due to adverse effects on mental health, child welfare and family life (United Nations Economic and Social Council (ECOSOC) 2015). Within the context of global events, the Irish Refugee Council (2015) state that there are a higher volume of refugees seeking asylum in Ireland. For example, in November 2015, new applications to the Office of the Refugee Commission (ORC) (2015) numbered 291, with a total of 3,059 in the period January to the end of November (ORC 2015). This compares to 153 in November 2010, which had a total of 1,796 in the period January to the end of November 2010 (ORC 2010). Taking this increase in the context of the government's commitment within the Irish Refugee Protection Programme (DoJ 2015), this area is one which should be addressed within a public health agenda as this population is particularly vulnerable in relation to health and social care needs (Nwachukwu et al. 2009; Boyle et al. 2008; ECOSOC 2015) and yet, currently community nurses are unable to potentialise their contribution to asylum seekers' health and well-being.

In relation to traveller health, missed care was identified by 65 (64.4%) respondents from a total of 101 community nurses who identified this as part of their caseload. In the 2011 census, 0.6% (29, n=573) of the population were identified as being travellers. Travellers experience an inequality in health particularly in terms of mortality and morbidity (School of Public Health, Physiotherapy and Population Science 2010; CSO 2011). The average number of children is also higher in traveller women with 27% having 5 or more children as compared to just 2.6% of Irish women overall (CSO 2011). Moreover, travellers' attendance at hospital is lower than the general population and is impacted by discrimination and a lack of trust in healthcare professionals (Pavee Point Traveller and Roma Centre 2013). Community nurses are in a key position to address the health inequalities of travellers and to build up sustainable relationships (Fitzpatrick et al. 1997). For example, asthma in the traveller population is higher than that in the general population (Brady and Keogh 2014). In 2014, Brady and Keogh undertook an asthma education pilot project in partnership with Pavee Point Traveller and Roma Centre and the Asthma Society of Ireland to train traveller community health workers in a culturally acceptable way. Such

initiatives could be continued by community nurses working with traveller representative groups to potentialise health equality and empower travellers.

The respondents were also asked about 'other' disadvantaged groups. A total of 80 community nurses indicated that such groups constituted their caseload, with 58.8% (n=47) indicating that care was missed. In relation to 'other community services', people with mental health challenges constituted a high level of missed care (69.9%, n=151) while those who had chronic care needs were identified as also having missed care (50.6%, n=131). As chronic illness is identified as rising in the Irish population and requires specific care management (Department of Health 2013) and localised support of people with mental health is essential (Expert Group on Mental Health Policy 2006), the volume of missed care in both groups is in opposition to policy.

All of the population groups in this section require a vertical approach to their specific needs to counteract health inequalities and potentialise health (Hanafin et al. 2002). The inability to give these groups appropriate care in Ireland is an issue of particular concern and leads to increasing marginalisation and disparity in health inequalities (ECOSOC 2015; Mathews 2016). Being unable to meet the need has an impact on health and social care potential of all clients and such neglect may lead to further marginalisation.

Older People

Like global population estimates, both the number and total population of older people are estimated to rise in Ireland (CSO 2011). This is due to a myriad of reasons such as improvements in life expectancy, better health care, better social provision and better housing. Most older people live at home (94%) (CSO 2011) which is their overwhelming choice of domicile (Ruddle at al. 2007). There will be a significant increase in the number of those aged 70 and over living alone by 2021, with a doubling of the 2002 figures for both males and females (Shiely and Kelleher 2004). The policy priority is to keep people as independent as possible in their own homes (WHO 2015b). Many older people live independent lives and only 18% receive some form of ongoing formal care at home (O'Neill and O'Keefe 2003). In a 2000 survey, 15% had been visited by a PHN and 5% by other home-based services (O'Neill and O'Keeffe, 2003). In a more recent study of PHNs and older people, 6.6 % of people over the age of 50 years (n=79,173) were in receipt of care.

Older person care is complex with many older people having co-morbidities which may impact on a reduced functional ability (Stenholm et al. 2015; Murphy 2015). In this study, although the eight items in this domain were missed, four scored above the 50% threshold. These were health promotion with older people (73.5%, n=191), visiting older people at risk (70.7, n=164), up care with older people (62.6, n=169), health and social care screening of older people (58.6, n=150) and follow up of older people with dementia (57.1, n=144). There was a significant difference between PHNs and CRGNs as 76.1% (n=137) of PHNs missed care related to at risk older people as compared to 51.9% (n=27) of CRGNs. PHNs also demonstrated higher rates of missed care related to screening as part of a risk assessment and follow up care with older people with dementia.

The National Positive Ageing Strategy (Department of Health 2013) seeks to promote positive ageing and the guidance document from the Nursing and Midwifery Board of Ireland (2009:3) points to 'the importance of nurses to focus on the older person's needs pervades every part of the health care system', yet, the deficit in community nurses care delivery means important aspects of health management, protection and promotion is being missed. For example, in relation to abuse of older people, this is more common in older people with health challenges with a 2.2% prevalence in the general population (excluding people with capacity challenges) (Naughton et al. 2010). Moreover, older people have reduced social networks and do not have the same mandatory connections to society (for example, a child must attend school),

so the ability of the community nurse to visit is imperative as risk can be assessed. In addition, the rate of abuse rises significantly in people with dementia with a UK study demonstrating a 52% prevalence in the community setting (Cooper 2009). With older people with dementia living in the community support visits are fundamental to both the prevention and early identification of abuse.

In relation to hip fractures, a common issue for older people, the National Office of Clinical Audit (NOCA 2015) identified 2664 hip fracture cases from data from 14 hospitals in Ireland in 2014. Most cases were in the older old age group and females represented 73% of total cases. Of the 2664 reports, 80% of cases were admitted from home (NOCA 2015). There is research suggesting the importance of health promotion to prevent hip fractures. From a psychological point of view, one study found that of 466 clients who survived their hip fracture, 10.7% were admitted for another fracture within a short space of time (Wiktorowicz et al. 2001). A survey of women aged 75 years and over found that 80% said they would rather be dead than experience the loss of independence and quality of life that results from a hip fracture that leads to admission to a long-term care facility (Wiktorowicz et al. 2001).

In fiscal terms, the cost estimates of a hip fracture vary quite widely. A study in Canada found the total cost of a hip fracture was €18,257, which is less than our estimate which builds up the cost from estimates from Irish data. A study in the UK found that each emergency admission from a fall costs an average of £1000 (Gheorghiu and Unguru 2009). Another study found that the economic cost of falls is likely greater than policy makers appreciate (Davis et al. 2010). Davis et al. (2010) used international data to calculate the mean cost of falls and converted them into dollars. The estimates ranged from US $3,476-to US $10,749 per injurious fall and US $26,483 per fall requiring hospitalisation. They argue that the wide variation reflects the fact that there is no consensus on the methodology used for costing falls (Davis et al. 2010).

A simple calculation can give us an estimate from potential savings from reductions in missed care. If we assume that 30% of people over 65 will fall each year (Gillespie 2009) and that 10% of those result in some type of fracture (Gillespie 2009), we can estimate that there are 16,000 fractures from falls in Ireland each year (NISRA, n.d.). If we use the lower Canadian figure for the total cost of fractures figure this puts the cost of fractures from falls at 300 million dollars.

If less missed care could reduce the incidence of falls to the same level as that found in the hospital nursing literature (9.2%), this would create savings of 27 million euros. However, this calculation assumes that there is a relationship between better surveillance, more home visiting and fewer falls. According the literature however, home visiting is not consistently associated with differences in mortality, numbers of falls or independent living, whilst some programmes may be effective, it is certainly not the case that they all are (Mayo-Wilson et al. 2014). A number of trials that investigated the effects of home visits show positive results, but others do not. The outcomes can depend on differences in characteristics of the intervention programme, but also on the selection of the target population (Marek and Baker 2006). For example, a controlled study by Newbury (2001) found a significant improvement in self-rated health, geriatric depression score (GDS 15), and number of falls (Newbury 2001). Stuck (2002) has also found that home visitation programs appear to be effective, provided the interventions are based on multidimensional geriatric assessment and include multiple follow-up home visits and target persons at lower risk for death. Positive relationships were also found in research by Elkan et al. (2001). In a meta-analysis published in the Lancet, Beswick et al. (2008) identified 89 trials including 97,984 people. Interventions reduced the risk of not living at home and reduced nursing-home admissions, risk of hospital admissions and falls. Markle-Reid and Gafni (2013) found that nurse-led health promotion and disease prevention (HPDP) interventions for frail older home care clients provide greater improvements compared with usual home care. Such approaches

are highly acceptable to this population and can be implemented using existing home care resources. Their study found that nurse-led HPDP interventions should include multiple home visits, multidimensional screening and assessment, multi-component evidence-based HPDP strategies, intensive case management, inter-professional collaboration, providers with geriatric training and experience, referral to and coordination of community services, and theory use. Another randomised controlled trial found that chronically ill older adults who were offered a community-based nurse intervention had a 25% lower risk of death as compared to control group individuals with usual care (Coburn et al. 2012).

Another related area that has a reasonable amount of evidence to support it is home-based exercise programmes, which are sometimes delivered by trained district nurses. Robertson et al. (2001) found that falls in New Zealand were reduced by 46%. The evidence is particularly good for exercise that includes balance and strength training (Carlson et al. 2006). A systematic review which included 54 randomised controlled trials confirms that exercise as a single intervention can prevent falls (Davis et al. 2009; Sherrington et al. 2011). Other interventions with some evidence to support them are providing Vitamin D supplements, adjustment of medication, home adjustments and anti-slip shoes (Carlson et al. 2006). All of these can be carried out as part of a nurse screening programme.

Although there are advantages to home visiting with older people, a number of studies, including meta analyses, have found no impact (Elkan et al. 2001; van Haastregt et al. 2000). Bouman et al. (2008) looked at seven trials of intensive home visiting from different countries but found no impact and Mayo-Wilson et al's. (2014) systematic analyses of multimodal preventive care home visit programmes found no consistent effects on mortality and other outcomes, although some studies found that these programmes significantly reduced or delayed nursing home admissions in older individuals. Krogsboll et al. (2012) meta-analysis of trials of systematic health checks for general adult populations concluded that these interventions did not have favourable effects on mortality. The findings would suggest that health visiting alone is not effective unless it is part of more complex multidisciplinary programme. This was the conclusion reached by a review lodged with the Campbell Collaboration from 2003, which found considerable evidence for such programmes, although the effect is not large (Gillespie et al. 2003).

On balance, the evidence would suggest that there are potential benefits from targeted home visiting by nurses, which link in with multidisciplinary preventative programmes. The Home Care and Community Care Ireland (HCCI) suggest that about a third of people who avail of Fair Deal could be encouraged to stay at home if better supports were available. There is a case for evaluating programmes like the home care package to identify whether cost savings are being made by diverting people from long-term care and whether there is a case for extending the home care package programme and supporting nurses to better monitor the older population and provide assessments of need.

Administration

There were four items in the administration section of this survey and all four demonstrated missed care over 60%. These were updating client records (79.0, n=222), other administration work (69.4%, n=195), completing client notes (62.2%, n=176) and report writing (62%, n= 165). Comparing PHNs and CRGNs, PHNs had the highest level of administrative work missed in terms of updating notes (82.1%) although the CRGN figure was also high (70.3%). PHNs also reported higher levels of missed care in relation to the completion of client notes (67.5%) and report writing (65.8%).

The lack of administrative support is an issue which emerged in all data sources. As registered practitioners, nurses are mandated to recognise that 'effective and consistent documentation is an integral part of their practice and a reflection of the standard of an individual's

professional practice. They support the ethical management of the documentation and communication of care' (Nursing and Midwifery Board of Ireland 2014: online). Moreover, the standard specifies this should be in a timely fashion, which does not appear to be achieved by many of the respondents in this study. In addition, the 'Document on recording clinical practice' (ABA 2002) specifically details that recording is not only a professional obligation but also a legal responsibility. Omitting the updating care plans has also been noted in other studies (Ball et al. 2013; Kalisch et al. 2011).

Community nurses in this study appear to struggle to complete important aspects of their role related to documentation. This may be due to a prioritisation of actual home and clinic visits at the expense of keeping contemporaneous records. Issues may be apparent in the context of catching up on such deficits and trying to recall specific details for an individual client. Thus, specifics of care may be omitted in documentation which is not contemporaneous with practice. In addition, not recording nursing interactions may be interpreted that the care did not occur and good record keeping can protect both nurses and employers and assist in defending against cases of negligence (Bird 2012).

In the semi-structured interviews, one participant detailed that community nurses in an area familiar to her had technology to help community nursing staff deliver care, however, other participants noted this advancement was not uniform across the country with one participant in the focus group noting staff only got HSE mobile phones in 2014. The availability of basic technology can assist in reducing the administrative burden and electronic records may avoid duplication and help with the organisation of work as well as intra-disciplinary and inter-disciplinary communication (Hussey and Roger 2014). The lack of comprehensive technology in the community has been observed with calls to standardise information and communication technology for all community nurses (National Directors of Public Health Nursing and Shannon 2014).

Family support

Supporting families is an important context of community nursing (Phelan 2014; Phelan and Davis 2015). Support to families includes both practical support such as negotiating services, referrals, additional calls and practical advice, while simply being able to talk through issues was one important support area identified both in the focus group and the semi-structured interviews. Supporting families is important in a myriad of contexts such as end of life care, bereavement, parenting support and carer support. Such an approach is congruent with an ecological approach (Bronfenbrenner 1979) to health, which recognises the interdependence of human beings with their environment. Without such support, families can struggle (Weber et al. 2015; Ashton et al. 2014; Johnson 2015) and a lack of caregiver support can lead to premature admission to nursing homes for older people, while a lack of support for parents can lead to challenges such as premature abandonment of breast feeding or child abuse and neglect (Kobayashi et al. 2015; Danawi et al 2016).

Home nursing care

Three items comprised this domain. It is unsurprising that clinical nursing such as dressing and injections had relatively low levels of missed care (15%) as these tend to be prioritised. This is supported through the commentaries in the focus group. Within, health promotion and general family support, there was a rationalisation of visits to clients to provide guidance and advice on how to manage care (51.2%, n=133), therefore, priority was given to tasks.

Education

Part 10 of the Nurses and Midwifes Act (2011:68) requires that the HSE:

> *'…in co-operation with the nursing and midwifery training bodies and after consultation with An tÚdarás, to undertake appropriate nursing and midwifery workforce planning for the purpose of meeting specialist nursing*

and midwifery staffing and training needs of the public health service on an ongoing basis.'

Although public health nursing is considered 'generalist', it is arguable that practice requires a diversity of specialist qualifications and CRGNs are considered to require specialist education (ICHN 2007). Adapting to community nursing has been shown to be a process of transition (Phelan 2002) and as such requires a reorientation in perspective and practice.

It is notable that continuous professional development (CPD) was missed by 67.5% of respondents (n=162), however, this may have been interpreted as formal CPD education days and the survey only related to the preceding week of practice. However, CPD can also be informal where an individual reflects on his/her needs and actions plans to respond to these needs. Part 11 of the Nurses and Midwives Act (2011) requires nurses and midwives to maintain professional competence on a continuous basis and to be able to demonstrate this if required by the Nursing and Midwifery Board of Ireland. The need for particular aspects of education for community nurses has been noted as well as a call for practice development co-ordinators to be available for all community nursing staff (National Directors of Public Health Nursing and Shannon 2014). Thus, ensuring CPD requirements are met is fundamental to continuing practice requirements and population need.

Primary care teams

The final domain in section B relates to primary care teams (PCT). 133 (56.6%) respondents indicated that they missed PCT meetings. This may be influenced by a number of issues. The DPHN in a study by the National Council for the Professional Development of Nursing and Midwifery (2005) noted that they did not feel part of the initial primary care team establishment, thus, the status of community nurses' participation in such meetings and ability to attend may be minimised. It is likely that the pressure of workload again leads to a prioritisation of what can be done and what meetings can be absented. Perceptions of primary health care teams by general practitioners raise important points (ICGP 2011) where the essential team members are identified as the GP and the practice nurse. In a review document (ICGP 2011), PHNs and CRGNs are only noted once and that is within the appendix as an example of successful primary health team teams, not as central team members. Yet, success in primary health care teams depends on team participation (Goldberg et al. 2013) and safe care has been linked to teamwork (Kalisch and Lee 2010). Certainly, community nurses would consider themselves as central to primary care teams, yet their invisibility or limited recognition is notable in policy documents (Department of Health 2012, 2013; TUSLA 2013).

Child health and child protection

Section C only related to the work of PHNs. There were 20 items which were divided into child health and child protection. Within child health only 2 out of 11 items scored above the 50% threshold, while one out of six scored above 50% in child protection. The PHN contribution to child health in Ireland is guided by Best Health for Children (Programme for Action for Children and HSE 2005) which provides guidelines and timelines on when children should receive developmental examinations by various multi-disciplines. For PHNs, these visits commence from the point of the notification of the child's birth and the development of the child is under the PHN's and other nominated health professionals' remit until school going age. For PHNs, such examinations focus on both the development of the child but also the context of the child's life, such as a family assessment (Phelan 2014). In terms of child health promotion, 62.9% (n=122) identified that they missed child health promotion. This is important as child health promotion allows children's lives to be potentialised and focuses on areas such as breastfeeding support, safety, child development advice, weaning, and advice on sibling rivalry, temper tantrums and so forth (Phelan 2014). There is a lack of research on outcomes for families from the work of PHNs in an Irish

context. One study has found a positive significant association between support from PHNs and mothers' confidence in infant care practices (Leahy Warren 2005). Wider research on home visiting by nurses in the US has found some very positive results but this was following a specific programme model with very small caseloads (Olds et al. 2007; 2004). These programmes were also found to be cost effective (Miller 2013) with Karoly et al. (2005) indicating a long term benefit cost ratio of $6.20 saving for every $1 spent, while Miller (2013) indicates that there is a $9.56 return per dollar. A meta-analysis of more general home visiting concluded that home visiting did seem to help families with young children, but the extent to which this help is worth the cost of creating and implementing programs has yet to be determined. A strong caveat here is that the outcomes depend on the type, duration and frequency of the visiting. Nonetheless, it does show that home visiting is potentially beneficial for families (Karoly et al. 2005). In Ireland, the impact of the Community Mother's Programme (Johnson et al 1997, 2000) has demonstrated the multi-faceted positive impact of nurse led community programmes for first time mothers in disadvantaged areas.

There is evidence that early intervention is effective for conditions like autism (McConachie and Diggle 2007; Smith et al. 2000) and developmental delay (Anderson et al. 2003) and that it is also cost beneficial (Jacobson et al. 1998). Early intervention of hearing loss (Calderon and Naidu 1999; Moeller 2000) has also been found to be effective.

A meta-analysis has found that speech and language therapy is effective in most but not all areas (Law et al. 2004). However, it is not clear whether early detection improves outcomes for pre-schoolers who present with problems (Glogowska et al. 2000). Trials of interventions demonstrate improvement in some outcome measures (Buschmann et al. 2008) but conclusions and generalisability are limited (Nelson et al. 2006).

To take one example: breastfeeding. Irish rates of breastfeeding are amongst the lowest in Europe with less than half of Irish mothers breastfeeding at hospital discharge (Nolan and Layte, 2014). The factors influencing women's decisions to begin and carry on breastfeeding are many and varied. The strongest predictors are age, education, marital status and income. However, evidence also exists for the effectiveness of support for breastfeeding (Cattaneo et al. 2010; Gill et al. 2007; O'Connor et al. 2003; Porteous et al. 2000) including meta analyses held at the Cochrane Library (Britton et al. 2007; Renfrew et al. 2012) and a study by the UK's National Institute for Health and Clinical Excellence (Dyson et al. 2005). A recent Irish study on breastfeeding duration found a positive independent influence of having more than two PHN visits on breast feeding (Leahy-Warren et al. 2014). New mothers are only entitled to one discharge visit by a PHN and follow-up visits are discretionary before three months. Research suggests that these are often squeezed out due to budgetary pressures or are scheduled at the clinic (Mulcahy et al. 2012), a finding that was supported by this research. The health benefits of breastfeeding are widely acknowledged. Studies are of varying quality and many are criticised for exaggerating the benefits. However, an international systematic review, the Breastfeeding and Maternal and Infant Health Outcomes in Developed Countries, (Slusser 2007) found a number of health benefits. These include:

- 23 % lower incidence of middle ear infection in children;
- in families with a history of one type of exzema, breastfeeding for at least 3 months was found to have a 42 % reduction;
- infants who were breastfeeding had a 64% reduction in the risk of non-specific gastroenteritis compared with infants who were not breastfeeding;
- there is a 72 % reduction in the risk of hospitalisation due to lower respiratory tract diseases in infants less than 1 year of age who were exclusively breastfed for 4 months or more; and
- breastfeeding for at least 3 months was associated with a 27 % reduction in the risk of asthma for those without a family history of asthma and a 40 % reduction for those with a family history of asthma.

Thus, the impact of PHNs in terms of health promotion can be significant on the health of the child, quality of family life and healthcare costs. This reinforces the importance of child health promotion and the imperative nature of ensuring key messages are translated into conversations with families which have tangible positive health outcomes.

The second domain in child health that is missed over the threshold of 50% is the 3-4.5 year developmental check with 53.5% (n=100) of respondents indicating this was missed. At this point many children have availed of the Early Childhood Care and Education Scheme which allows free childcare and education to children between 3 years and 2 months to four years and seven months. It may be surmised that children are attending the preschool care and if there were no identified developmental delays up to this age, this developmental check is given a low priority. Similarly, the focus group highlighted that the 18-24 developmental check for children could be omitted due to prioritisation and there may be developmental delays which are not consequently picked up. Taking the fact that both these developmental visits as prescribed by Best Health for Children (Programme for Action for Children and HSE 2005) have the potential of being reprioritised, a child may not receive a PHN visit after the 7-9 month visit.

Child protection

Out of the six items in the child protection domain, only one scored over the 50% threshold. This was the additional visits and support which were missed related to child protection cases. PHNs in Ireland are mandated under legislation (Child Care Act 1991; Children First Act 2015) to respond to child protection issues. PHNs are a very important professional in child protection as they operate in primary, secondary and tertiary roles (Gough 1993). The primary role is of prevention of harm to the child; the secondary role means that when a challenge to the health or welfare of the child is identified, additional input is given to the family (additional visits, referral to parenting classes etc.) and if the threshold of significant harm is breeched, a referral is made to the child welfare and protection service, TUSLA. Tertiary care is where the PHN works with other professionals to address identified deficits in the care provision for that child or children (Phelan and Davis 2015). However, although there is uncertainty regarding the extent of input in tertiary care (Hanafin 1998; Wilson 2015), the respondents in this study recognised that additional visits which should have been undertaken were not (51.6%, n=94). In the context of the Children First Act (2015), a person who is a provider of a relevant service (which includes PHNs) is required to produce a risk assessment and child safeguarding statement which must include how risk is to be managed. The statement includes:

> *'…specifying the service being provided and the principles and procedures to be observed to ensure as far as practicable, that a child, while availing of the service, is safe from harm'(Child First Act, 2015, Part 2: Section 11b)*

The Child and Family Agency is also authorised by the Act to ask mandated persons:

> *…whom it reasonably believes may be in a position to assist the Agency for those purposes, to give to the Agency such information and assistance as it may reasonably require and is, in the opinion of the Agency, necessary and proportionate in all of the circumstances of the case. (Children First Act, 2015, Part 3: Section16 (1))*

These stipulations may raise issues in the context that care that PHNs recognise should be done in child protection (additional visiting) is not being done. Under the Children First Act (2015), questions may be asked why services identified necessary for the child are missed, particularly if it is shown that these visits would have impacted positively on the life world of the child. TUSLA (nd) states that 'Service providers will focus on improving outcomes for children and families and will track progress and results' while promoting a 'Meitheal Model' of

meeting the child's needs through a 'team around the child concept (TUSLA 2013:2). These recent legislative and policy changes will have an impact on missed care (as further prioritisation is demanded to fulfill legislative demands) and also on possible additional expectations placed in the PHN service.

4.3 Reasons for missed care

Drawing on the literature (Kalisch 2006; Kalisch et al. 2009; Kalisch and Lee 2010), three reasons for missed care were presented and the respondents were asked consider if these could explain the missed care in their practice. While Kalisch (2006) found that the major influence on missed care in a study in acute care was inadequate staffing, this study found a lack of administrative support (63%) as the highest contributor to missed care, which was supported in the focus group commentaries. This lack of support for non-nursing duties is also echoed in a study by Brady et al. (2008), who found that 90% of nurses undertook activities such as general administration and managing supplies. This reason did not feature within other studies on missed care (Kalisch's 2006), however, acute care has a much better administrative infrastructure at unit level and within the hospital system itself. The respondents were also invited to augment reasons for missed care in a qualitative way, and 28 respondents stated poor administration/ office infrastructure were factors. However, the lack of administrative support translates to the fact that there is less time to engage with clients and to develop care plans which incorporate appropriate visiting schedules and conduct documentation as required by the NMBI (2014). Similar to Kalisch (2006), this study observes that the impact missed care domains identified does not have immediate consequences, yet, a continued inability to complete these activities can have subsequent negative impacts on clients with regard to quality of care, care outcomes and safety (Phoneix-Bittner and Gravlin 2009; Ball et al. 2013; Kalisch et al. 2011) and indeed on the nurse herself in terms of job satisfaction and intention to leave (Clarke 2004; Tschannen et al. 2010; Kalisch 2011; Kalisch et al. 2012) as well as professional accountability (INMB 2014).

Similar to other studies (Kalisch 2006; Kalisch et al. 2009; Kalisch and Lee 2010), staffing was a prominent factor in missed care with 61% identifying this as contributing to missed care. Furthermore, 36 respondents pointed to an increased workload without corresponding support, 20 further emphasised staffing or understaffing while 2 respondents pointed to filling in gaps in services. This concurs with an INMO (2013) study where the 47% of respondents indicated that they often covered for colleagues' absences. Other studies have highlighted inadequate staffing and its relationship to poor patient outcomes (Kalisch 2006; Kalisch et al. 2011; Kalisch and Tschannen 2012; Kalisch and Lee 2012; Ball et al. 2013; Aiken et al. 2014; Scott 2013), yet these studies are hospital based. Even within the staffing ratio most commonly reported in this study (1:2,500-4,000), care is being missed suggesting ratios need to be smaller. In this regard, the ratio suggested by the Family Development Nurse (WHO 2000) of 1:1500 appears to more appropriate, although it is acknowledged that ratios in community are currently undertermined and require additional evidence based research (Queen's Institute of Nursing 2014b; Fields and Brett 2015). The simple and crude application of a lower ratio is pointless in the absence of addressing the other issues which are within community nursing, such as population need, role, linkages with other nurse colleagues, linkages within the primary health care teams and relationships with acute services (Field and Brett 2015). What is suggested by the Queen's Institute of Nursing (2014b) is that community nurse staffing is based on both a strategic workforce planning tool and a localised operational scheduling tool which would work together to produce a responsive workforce planning framework. This is compatible with the specialism of public health needs which needs to be operationalised to its potential at individual, family and community levels to overcome a focus on prioritisation of particular aspects of community nursing. This reductionalist approach has become normalised in most community practice areas leading to a deskilling of, in particular, PHNs and a mismatch of educational and

policy focus with practice. This is opposed to priorities in the WHO (2015a, b and c) which particularly emphasises skill optimisation for the improvement of population level health.

4.4 Conclusion

This study is the first study to focus on the concept of missed nursing care in the community setting. Drawing on Irish literature related to community nursing in Ireland, it is notable that issues, such as workload, role challenges and the need to reform community nursing's model of care raised in this study have been recognised for many years (Department of Health 1975; Byrne et al. 2007; Begley et al. 2005; NCNM 2005; ICHN 2007; HSE and the Office of the Nursing and Midwifery Services Director 2012; Irish Nurses and Midwives Organisation 2013; Burke 1986; Institute of Public Administration 1995; National Directors of Public Health Nursing and 2014). Yet, there has been a absence of political will to address these changes, reflecting the relative invisibility of communuty nurses within both policy and primary healthcare discourses. In additon, as the Queen's Institute of Nursing (2014a) note, the invisibility of challenges in communty nursing have been eclipsed by a disproportionate focus within media and public consciousness on acute care issues. Paradoxically, the WHO (2015a,b,c) strongly reinforce the need to develop nursing and midwifery within primary care to improve population health and well being and address health inequalities.

Within a shifting Irish demographic and changes in policy and care delivery, there is an urgent need to reform the community nursing service and this reform is required through a number of levels such as roles, governance and structure (National Directors of Public Health Nursing and Shannon 2014). This study has demonstrated that missed care is a significant phenomenon in Irish community nursing and is experienced uniformly across the country. In order to meet legislative, professional and policy requirements, reform needs to be comprehensive. Although previous studies on community nursing have detailed what community nurses do (Begley et al 2004; Brady et al. 2008), the concept of missed care has not been focused on in community settings despite that fact that in acute care it has a significant iinfluence on care provision. In acute care settings, missed care has been shown to impact negatively on client outcomes, safety, quality of care, job satisfaction and staff retention, thus is an important concept to acknowledge and record as well as integrating into health care governance systems. As such communty nursing requires a system of independent governance, such as the acute and residential care services have under HIQA and which is publiccly transparent and accountable. In this way, standardisation of services and quality of services can be assessed, compared and audited. Moreover, there is a dearth of research on either health outcomes or health economics in an Irish context. Consequently, there is an urgent need for more evidenced-based approaches to meet cost efficiency and effectiveness and the development of community nurse sensitive outcomes. Although, there is a challenge in conducting preventative research and evidencing it, due to issues such as time and the potential of confounding variables, this does not mean it is ineffective.

4.5 Limitations of the study

There are a number of limitations noted. This study only represents a proportion of community nurses in Ireland, although the respondents were fairly evenly distributed across Ireland and the survey was supported by similar findings generated through the semi-structured interviews and the focus groups. In addition, the sample recruitment was through the Irish Nurses and Midwifery Organisation and the Institute of Community Health Nurses. Although a snowball effect was encouraged (INMO members alerting non-members to the study), it was not possible to use other methods of respondent recruitment as the study did not obtain approval from the PCRC. Thus, generalisability of findings may be limited.

The limitations in the psychometric analysis of the tool have been presented in chapter four. For example, some questions would

require further refinement for clarity. There were particular issues in relation to efforts at workforce planning estimates as timed task was interpreted differently leading to a wide variation in responses. In addition, although the timeframe for undertaking the on line survey was tested before the survey went live on Survey Monkey, the number of incompletions may indicate that the survey was too long and respondents abandoned. Thus, using a 5% 'missingness' threshold, the number of surveys reduced from 458 to 283 for statistical analysis.

4.6 Recommendations

1. In the context of the long-standing policy of developing primary care, it is recommended that a Commission be established, to report within one year, to determine the roles that nursing/midwifery will play as a central component of any developed primary care system

2. This Commission should examine structures, governance, skill mix, career advancement pathways for PHNs and the possible role of all nurses and midwives in the community. All further reform needs to be underpinned by evidence based healthcare imperatives, which are appropriately resourced and which are in line with policy objectives and legislative requirements.

3. It is recommended that, as an absolute priority, integrated care, in terms of acute and primary services, must be developed, audited and nursing should be central to this process.

4. It is further recommended that immediate attention be given to developing greatly improved communication pathways, between hospital and community based nurses and midwives, to ensure the optimum care is provided to all patients/clients.

5. As part of this Commission, an immediate needs assessment should be carried out for resources, such as administrative support and technology needs, to maximise the potential and presence of nurses/midwives in the community.

6. It is recommended that, in order to fully utilise the community nursing service, it be provided with the physical, clinical and structural resources necessary to optimise the delivery of preventative and direct care services

7. Community nursing needs to be acknowledged as pivotal for delivering population health needs and its views must be included in all analysis and decision making and in professional, management and political fora.

8. Assuming universal eligibility for all primary care services will evolve, the Commission will report within twelve months on necessary community nursing services' resourcing, in the most efficient and effective manner, to meet immediate population need, minimise unscheduled hospital admissions and allow planning for future needs.

9. In the context of this Commission, attention must be given to the development of specialist and advanced nursing roles, reflecting expanding scopes of practice and the ability to respond to emerging client need, including chronic disease management and population health.

10. To ensure consistency of service delivery, and continuity of care, it is recommended that all staffing profiles include a minimum of 23% for annual leave-CPD and other leave entitlements of staff.

11. As the delivery of services is moved to the community, it is recommended that, in the interests of quality and best practice, all such services are subject to independent review/audit with particular focus on standards and access.

12. Recognising the individual nature of community nursing, enhanced governance systems need to be

developed with a focus upon peer support and shared learning.

13. The Community Practice Development Co-ordinators recommended by the Commission on Nursing should be appointed following a review of and upgrading of their job description, in line with Department of Health 2013 policy goals.

14. In line with the Nurses and Midwives Act (2011), and Requirements and Standards from the Nursing and Midwifery Board, continuous professional development should be facilitated to ensure continued competencies.

15. Missed care needs to be recorded at regular intervals to highlight care delivery challenges and to have response pathways to address these challenges. While tools suitable for workload analysis can provide information on workforce planning, they tend to record activities undertaken, rather than those missed, thus, only representing a prioritised approach (i.e. work actually done). This is particularly relevant for the adequate completion of nursing documentation.

16. There is a need, recognising and providing the significant staffing requirements to consider formally extending community nursing services to evening and weekends to meet increasing demand recognising the significant additional staffing required to provide this extended service.

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Appendix 1

APPENDIX 1: Time allocations for each activity within the missed care survey								
Column1	Question	N	Missing	Mean	Median	Mode	Std. Deviation	Range
	Q9_AVGTIMEREC	111	172	4.2	4	5	0.952	6
	Q1_AVGTIMEREC	156	127	5.39	5	6	2.154	9
	Q10_AVGTIMEREC	95	188	3.96	4	4	0.862	5
	Q11_AVGTIMEREC	118	165	4.08	4	5	1.042	5
	Q12_AVGTIMEREC	124	159	4.66	5	5	0.685	4
	Q13_AVGTIMEREC	107	176	4.07	4	4	0.988	6
	Q14_AVGTIMEREC	47	236	3.28	4	4	1.44	4
	Q15_AVGTIMEREC	48	235	4.25	4	4	0.838	5
	Q16_AVGTIMEREC	83	200	4.13	4	4	0.96	5
	Q17_AVGTIMEREC	92	191	4.01	4	5	1.104	5
	Q18_AVGTIMEREC	62	221	3.81	4	3	1.697	7
	Q19_AVGTIMEREC	53	230	3.53	4	4	1.049	4
	Q2_AVGTIMEREC	138	145	4.39	4	5	1.287	8
	Q20_AVGTIMEREC	72	211	3.69	4	4	1.134	5
	Q21_AVGTIMEREC	3	280	4	4	3a	1	2
	Q22_AVGTIMEREC	71	212	4.13	4	4	1.383	9
	Q23_AVGTIMEREC	40	243	3.55	4	3	1.131	4
	Q24_AVGTIMEREC	60	223	3.37	3	3	1.39	5
	Q27_AVGTIMEREC	20	263	4	4	4	1.686	7
	Q25_AVGTIMEREC	41	242	3.29	3	3	1.23	4
	Q26_AVGTIMEREC	97	186	4.1	4	4	0.895	5
	Q28_AVGTIMEREC	7	276	4	4	4	0.816	2
	Q29_AVGTIMEREC	6	277	4.67	5	5	1.033	3
	Q3_AVGTIMEREC	126	157	4.55	5	5	1.742	8
	Q30_AVGTIMEREC	16	267	4.56	4.5	5	1.153	5
	Q32_AVGTIMEREC	11	272	5.82	5	5	2.04	7
	Q31_AVGTIMEREC	7	276	4.43	5	5	1.134	3
	Q33_AVGTIMEREC	27	256	5.41	5	5	1.248	6
	Q34_AVGTIMEREC	92	191	4.66	5	5	0.881	7
	Q35_AVGTIMEREC	55	228	4.04	4	4	0.666	2
	Q36_AVGTIMEREC	51	232	4.27	4	5	0.723	2
	Q37_AVGTIMEREC	35	248	4.34	4	5	0.684	2
	Q38_AVGTIMEREC	77	206	4.23	4	4	1.025	5
	Q39_AVGTIMEREC	61	222	4.28	4	5	0.799	4
	Q4_AVGTIMEREC	129	154	4.91	5	5	0.775	5
	Q40_AVGTIMEREC	89	194	4.24	4	5	1	6
	Q41_AVGTIMEREC	89	194	4.83	5	5	0.869	5
	Q42_AVGTIMEREC	107	176	5.15	5	5	0.93	7
	Q43_AVGTIMEREC	89	194	4.51	5	5	1.078	6
	Q44_AVGTIMEREC	105	178	4.94	5	5	0.928	5

APPENDIX 1: Time allocations for each activity within the missed care survey								
Column1	Question	N	Missing	Mean	Median	Mode	Std. Deviation	Range
	Q45_AVGTIMEREC	110	173	4.89	5	5	0.495	4
	Q46_AVGTIMEREC	99	184	4.21	4	5	1.023	5
	Q47_AVGTIMEREC	93	190	4.27	4	5	0.886	5
	Q48_AVGTIMEREC	86	197	4.63	5	5	0.768	4
	Q49_AVGTIMEREC	95	188	4.2	4	5	0.941	4
	Q5_AVGTIMEREC	142	141	4.32	4	5	1.056	6
	Q50_AVGTIMEREC	89	194	4.09	4	5	0.949	4
	Q51_AVGTIMEREC	87	196	3.99	4	5	0.934	3
	Q52_AVGTIMEREC	77	206	3.87	4	5	1.03	4
	Q53_AVGTIMEREC	4	279	4.75	5	5	0.5	1
	Q54_AVGTIMEREC	4	279	4.75	5	5	0.5	1
	Q55_AVGTIMEREC	6	277	3.83	4.5	5	1.602	4
	Q56_AVGTIMEREC	55	228	3.98	4	5	1.394	7
	Q57_AVGTIMEREC	69	214	3.12	3	4	1.44	6
	Q58_AVGTIMEREC	3	280	3.67	3	3	1.155	2
	Q59_AVGTIMEREC	42	241	3.98	4	4	0.95	4
	Q6_AVGTIMEREC	113	170	4.13	4	5	1.031	5
	Q60_AVGTIMEREC	30	253	4.1	4	4a	0.803	2
	Q61_AVGTIMEREC	32	251	3.78	4	4	1.07	4
	Q62_AVGTIMEREC	33	250	4	4	5	0.935	3
	Q63_AVGTIMEREC	27	256	4.52	5	5	0.849	4
	Q64_AVGTIMEREC	3	280	5	5	5	0	0
	Q7_AVGTIMEREC	142	141	4.37	5	5	1.319	6
	Q8_AVGTIMEREC	142	141	4.26	5	5	1.207	5

Time equivalents

Using the mode values	Time
1	< 15minutes
2	<20 minutes
3	<30 minutes
4	< 1hour
5	< 5 hours
6	< 10 hours
7	< 15 hours
8	< 20 hours
9	<25 hours
10	< 30 hours

Irish **Nurses** and **Midwives** Organisation

Working Together