Practice Nurses' role extension and diagnostic work in long-term conditions: a qualitative meta-synthesis and interview study

Valerie Ann Tan

A thesis submitted to Keele University for the degree of Master of Philosophy

March 2021

School of Primary, Community and Social Care,

Keele University

Table of contents

Declaration

This thesis is original work produced by Valerie Tan. It has not been submitted to this University or any other institution in support of any other degree or qualification.

Abstract

Background

Role extension is common in primary care in the UK, with assessment, diagnosis and management of some conditions by role extended nurses well established. Practice nurses (PNs) are now considered fundamental to the care of patients with long-term conditions (LTCs). Healthcare policy demands that their role further extend to be inclusive of a greater level of complex care including assessment and diagnosis.

Many LTCs have objective diagnostic criteria against which an unequivocally diagnosis can be made. The diagnosis of OA, a prevalent LTC, can be more complex with poor recognition and suboptimal treatment common. OA is often comorbid with other LTCs. Given their pivotal role in LTC care, PNs may be well placed to address poor recognition of OA, facilitating treatment optimisation and potentially improving patient outcomes. However, PN views on role extension in this context are unknown.

Methods

Empirical qualitative research evidence regarding PN perspectives of role extension and diagnosis of LTCs including OA in primary care was identified and synthesised using the process of meta-synthesis. Perspectives of PNs (n=18) were explored through semi-structured interviews using a topic guide. Data was analysed thematically using the principles of constant comparison. A LTC public and patient involvement and engagement (PPIE) group were involved in several stages of the research process.

Results

The meta-synthesis identified factors that can facilitate or hinder the successful implementation of extended roles. No literature regarding PN perspectives of their role in diagnosis was identified.

Twenty-four PNs provided written consent to participate. No new themes were noted after eighteen interviews which were conducted face-to-face or via telephone. Six main themes were identified: understanding role extension; role boundaries; competent, confident and comfortable; factors that influence role extension; the impact of evolving role boundaries; and the nurse role in diagnosis.

Role extension was described as something new, context dependent and relevant to the norm for that individual. The need for clear professional boundaries was explicit, yet nursing roles remain poorly defined affecting understanding and acceptability of extended roles. Problems in creating nationally agreed definitions were evident and clarity at the practice level was deemed more realistic and achievable. Strong interprofessional relationships and integrated care was important in the context of support. Support was considered essential for role extension and provision was reliant upon the ability to recognise and work within boundaries. Whilst role extension usually requires formal training, the importance of experiential learning and need to be comfortable in a role was clear. Three main drivers for change were recognised: the system, GP and nurse. Participants had variable understanding of the term OA and misconceptions were noted.

Conclusion

NHS England talk of the need to increase the flexibility and capacity of the primary care workforce if we are to 'future proof' the NHS against the challenges to come. Role extension is seen as pivotal to this process. Whist PNs accept the need for role extension, implementation is not without its problems. This thesis identifies and discusses key facilitators and barriers to role extension in the context of the PN in primary care.

Acknowledgements

Abbreviations

- 5YFV   Five Year Forward View

- A&E   Accident and Emergency

- AF   Andrew Finney

- AMED   Allied and Complementary Medicine Database

- ANP   Advanced nurse practitioner

- ARUK   Arthritis Research United Kingdom

- ASSIA   Applied Social Sciences Index and Abstracts

- BNI   British Nursing Index

- CASP   Critical Appraisal Skills Programme

- CCG   Commissioning Care Group

- CC-G   Carolyn Chew-Graham

- CHRE   Council for Healthcare Regulatory Excellence

- CINAHL   Cumulative Index to Nursing and Allied Health literature

- CJ   Clare Jinks

- CLAHRC   Collaboration for Leadership in Applied Health Research and Care

- COPD   Chronic obstructive Pulmonary Disease

- CQIMG   Cochrane Qualitative and Implementation on Methods Group

- DHSC   Department of Health and Social Care

- DoH   Department of Health

- DNE   Diabetes nurse educator

- DSN   Diabetes specialist nurse

- EC   Elizabeth Cottrell

- ENTREQ   Enhancing transparency in reporting the synthesis of qualitative research

- EPR   Electronic Patient Record

- GP   General Practitioner
- GPwSI   General Practitioner with special interest
- HCP   Health Care Professional
- HEE   Health Education England
- HMIC   Healthcare Management Information Consortium
- HRA   Health Research Authority
- ID   Identifier
- IMD   Index of Multiple Deprivation
- JE   John Edwards
- LTC   Long-term condition
- MCP   Multispecialty Community Provider (MCP)
- MeSH   Medical Subject Headings
- MMedSci   Master of Medical Science
- MPhil   Master of Philosophy
- NDPB   Non-departmental public body
- NHS   National Health Service
- NICE   National Institute for Health and Care Excellence
- NIHR   National Institute for Health Research
- NP   Nurse Practitioner
- OA   Osteoarthritis
- PCN   Primary Care Network
- PN   Practice nurse
- PPIE   Patient and public involvement and engagement
- PRISMA   Preferred Reporting Items for Systematic Review and Meta-analyses
- QES   Qualitative evidence synthesis
- QOF   Quality and outcomes framework
- R&D   Research and development

- RCGP   Royal Society of General Practitioners

- RCT   Randomised Control Trial

- RN   Registered Nurse

- SAPC   Society for Academic Primary Care

- UK   United Kingdom

- VT   Valerie Tan

List of figures and tables

Chapter 1 – Background

1.1 Introduction

This thesis explores practice nurse (PN) perspectives of role extension and diagnostic work in long-term conditions (LTC) including osteoarthritis (OA) in primary care. This chapter will include a brief introduction to myself as the author. The background and context for this study will then be presented.

1.2   Introduction to myself as researcher

1.2.1 Clinical role and academic training

I started this Master of Philosophy (MPhil) in 2015, shortly after being awarded a National Institute for Health Research (NIHR) In-Practice Fellowship. This post afforded me protected research time whilst allowing me to continue my role as a salaried General Practitioner (GP) in a local practice.

My NIHR In-Practice Fellowship provided funding for a two-year, part-time academic post. At the end of this time, I became a GP partner and completion of my MPhil took place in my own time, when away from practice.

The results of my meta-synthesis were disseminated via an oral presentation at the Society for Academic Primary Care (SAPC) North conference, 2016, and via a poster presentation at the Royal College of General Practitioner (RCGP) conference, 2016.

1.2.2 Interest in role extension and diagnosis of osteoarthritis

I was awarded a Deanery-funded, four month extension to my GP Vocational training programme in 2011, which gave me the time to complete an innovative case-control study exploring the association between primary care coding of joint-related problems in older adults and risk factors for OA. This study formed the dissertation for a Master of Medical Science (MMedSci), for which I was awarded a distinction. The results also informed a large, multinational collaboration which focused on whether a symptom-based label applied to older adults presenting with joint pain in primary care is synonymous with an OA label in terms of disease and socio-demographic characteristics and management (Jordan et al., 2016).

My role at the Research Institute for Primary Care Sciences (now School of Primary, Community and Social Care) also involved working as part of a team on the 'ENHANCE' study, a pilot stepped-wedge trial of a PN intervention to identify pain, anxiety and/or depression in patients with LTCs, funded by the NIHR Collaboration for Leadership in Applied Health Research and Care (CLAHRC) West Midlands. My role in the ENHANCE team included evidence synthesis, development and delivery of the PN training package, planning main trial methodology and dissemination of trial results. This role afforded me the opportunity to work within a large team of researchers, gaining valuable research experience whilst highlighting the benefits of mixed methods research.

My achievements and work with the 'ENHANCE' team served to foster my interest in primary care research and the role of nurses within general practice.

1.3   The National Health Service (NHS)

1.3.1   Origins of the NHS

In 1948, the newly-elected, post-war Labour government created the National Health Service (NHS) as one of a series of reforms designed to ensure the provision of a basic level of personal and social security (Greengross, Grant & Collini, 1999). The fundamental principle of the NHS was and remains the provision of comprehensive healthcare at a uniform level to the whole population, free at the point of use, regardless of ability to pay.

The NHS was created from three existing health and social services, namely State-owned hospitals, a national network of GPs, and community and domiciliary health services. Prior to inception of the NHS, these three services were discrete and had very disparate origins and whilst this new union allowed the three main strands to be financed centrally, services continued to be managed separately creating and engendering institutional divides (Greengross, Grant & Collini, 1999). The origins of the NHS are still evident in today's much larger, more complex organisation.

1.3.2   Primary care

The Department of Health and Social Care (DHSC) (formally the Department of Health) provides overall strategic leadership in today's NHS and is responsible for the funding of health and social care in England. NHS England is an executive non-departmental public body (NDPB) of the DHSC and is responsible for the commissioning of primary care services. Resources are allocated to Commissioning Care Groups (CCGs); clinically led, statutory NHS organisations responsible for planning and commissioning of healthcare in their local area. Funding decisions are therefore devolved to clinicians facilitating the direct commissioning of services to meet to the specific needs of the local population.

NHS England's main role is to set the priorities and direction of the NHS and to improve the health and care outcomes of those living in England. For instance, NHS England was responsible for the creation of the House of Care, a framework through which it hope to improve the care of those with LTCs (NHS England, 2013a). It also devised a strategic vision for the NHS with the objective of improving the sustainability of the NHS whilst continuing to meet the needs of patients (NHS England, 2014). More recently, NHS England published the Long Term Plan, through which they aim to tackle the unmet health needs of the population (NHS England, 2019b).

The Long Term Plan was devised in recognition of the need to provide fully integrated, community-based healthcare. The creation of Primary Care Networks (PCNs) is seen as fundamental to this plan. Building on the core of primary care services, individual GP practices in a local area are entering into a PCN contract to serving natural communities of around 30,000 to 50,000 patients; small enough to continue providing personal, patient-centred care, but large enough to improve collaboration between practices and local services, thereby achieving economies of scale (NHS England, 2019b). To simplify commissioning arrangements, each PCN will have a designated single fund through which network resources will flow thereby facilitating a single set of commissioning decisions at system level. Over the next few years, CCGs will therefore become leaner, more strategic organisations.

1.3.3 General practice

Primary care services usually represent the first point contact for most people in the healthcare system. Providers of primary care services include dentists, community pharmacists and opticians. However, GPs and practice teams working within general practice are by far the largest primary care provider.

One of the characteristics of general practice is that it provides open and unlimited access to its users, dealing with all health problems regardless of patient characteristic; simultaneously managing a patient's acute and chronic health problems (Allen et al., 2011). There have been dramatic changes in the structure and organisation of general practice over the past two decades and whilst this general ethos remains, the focus of healthcare provision has shifted to meet the demands of an ageing population in whom LTCs are increasingly prevalent. As a result, primary care organisations now often vary in characteristics including team composition, cultural and working practices and overall organisational structure (Lau et al., 2016).

The roles of health care professionals (HCPs) have also evolved to meet these challenges and the primary care team now represents a multidisciplinary collaboration within which the GP no longer clearly predominates. The PN is adopting an ever more central role in the management of LTCs, such that they are now considered fundamental to the care of patients with LTCs. It is predicted that by 2029, PNs will support the management of up to 2.9 million patients with multimorbidity and 18 million with LTCs (HEE, 2015b). The remit of the PN is therefore set to further evolve, with UK healthcare policy demanding continued expansion of the role such that it encompasses a greater level of complex care including assessment, diagnosis and clinical decision making (HEE, 2015b). However, it is unclear whether proposed changes will be accepted by PNs and/or other members of the primary care team.

1.4   Role extension

1.4.1 Five Year Forward View

In October 2014, NHS England published its Five Year Forward View (5YFV) outlining a new shared vision for the future of the NHS, a future in which integrated local health systems will reduce the fragmentation of services, promote competition within organisations and foster the

desire for services to be integrated around the needs of the patient (NHS England, 2014). The 5YFV acknowledges the need for the management of LTCs to be borne from partnerships rather than a series of unconnected episodes of care, and outlines ways in which the traditional boundaries to collaborative working may be further dissolved (NHS England, 2014). Optimising the efficiency and flexibility of the primary care workforce is fundamental to this vision, with both the creation of new roles and expansion of existing roles considered essential in enabling the implementation of the new integrative models of care required to 'future proof' the NHS against challenges to come (NHS England, 2014). If these new models of care are to succeed, then we must first explore and understand how HCPs feel about these new roles and prospects for the future. In doing so we may be able to look to and plan the future as a collaborative primary care team thereby helping to avoid imposed change.

In October 2016, the King's Fund published a report re-emphasising how changing the roles of HCPs was an opportunity to make more effective use of their skills, thereby optimising care (Collins, 2016). This was echoed in the General Practice Forward View in which the need for wider members of the practice-based team to play an increasing role in delivery of care was made explicit (NHS England, 2016). As such, certain roles and responsibilities will no longer be considered specific to one discipline nor roles be mutually exclusive. Ultimately, departure from the more traditional roles and professional silos is required if we are to provide integrative and effective care in LTCs (Manski-Nankervis et al., 2014). 'Future proofing' the NHS will therefore likely require innovative, and dramatic changes in the occupational landscape.

1.4.2 The NHS Long Term Plan

In January 2019, NHS England published The NHS Long Term Plan to tackle the unmet health needs of the population (NHS England, 2019b). Building on much of the work outlined in the 5YFV, the Long Term Plan aims to improve patient care by focusing on several key areas including the implementation of new service models and moves to reduce current workforce

pressures. The plan also extends its focus from the priorities outlined in the 5YFV (cancer, mental health, diabetes, multimorbidity and healthy ageing) to include other areas such as cardiovascular and respiratory conditions. The plan acknowledges that intended improvements in workforce capacity will take time and frames many of its improvements as 10-year goals (NHS England, 2019b).

In June 2019, NHS England published an Interim NHS People Plan in which the need for new roles and significant changes and extension to existing roles were again recognised. The plan cites the development of accredited multiprofessional credentials as a means of allowing HCPs to widen their knowledge and skills, thereby facilitating a richer skills mix. NHS England also state that such accreditation will allow the skills, expertise and competencies of HCPs to be formally and explicitly recognised (NHS England, 2019a).

However, the funding available for additional investment in the workforce has yet to be announced and after delays, publication of a final workforce implementation plan is still awaited. It is predicted that the final workforce implementation plan will continue to support the provision for a range of roles within the NHS, including advanced nursing roles thereby expanding the skill mix within primary care and relieving the pressure on GPs. Further details of proposals to create inter-disciplinary credentialing programmes are also likely, helping to improve flexibility both across an individual's NHS career and between individual staff groups (NHS England, 2019b).

1.4.3 Role extension in primary care

Improving the efficiency and capacity of the primary care workforce will likely require both a narrowing in the focus of some professional roles (becoming more specialised), and an expansion in the remit of others. Expansion in scope of practice can be considered in terms of role enhancement or role extension. Enhanced roles serve to supplement the services

provided by doctors, thereby extending the range of services available to the patient. Extended roles involve the 'substitution of doctors' traditional role', thereby working across professional boundaries (Saxon, Gray & Oprescu, 2014).

Primary care in the UK is one of the foremost proponents of role extension with HCPs extending their working boundaries to include roles previously considered outside their remit (Welsh et al., 2014). Physiotherapists have adopted a more autonomous role requiring only minimal input from the GP and are more frequently occupying a front-line position (Welsh et al., 2014). The once task-orientated, supportive role of the PN has evolved into a more autonomous, patient-focused position. With a diverse range of clinical skills, the PN is a key player in the integrative, multidisciplinary primary care team and their role has extended such that they increasingly represent the first point of contact within healthcare services (Al Sayah et al., 2014, Primary Care Workforce Commission, 2015). In terms of process of care outcomes, extended PN roles have proved successful thus far with the care provided by specifically trained nurses for LTCs such as diabetes and chronic obstructive pulmonary disease (COPD) deemed at least equivalent to that provided by GPs (Laurant et al., 2005; Keleher H. et al.; 2009, Welsh et al., 2014; Martínez-González et al., 2015).

Whilst undoubtedly laudable, plans to ensure the future of the NHS are not without issue and the assumption that HCPs have the desire and ability to extend their remit is implicit to successful implementation. Historically, the medical profession had the authority to control much of the division of labour within the healthcare disciplines. Although still a hierarchical organisation, alterations in scope of practice in today's NHS seldom result from a doctor-led delegation of duties (Nancarrow, Borthwick, 2005), with role extension often representing a policy-driven answer to unmet healthcare need or workforce requirement. Whilst some changes may be implemented in collaboration with the PN, many extended LTC roles are imposed with minimal consultation or training (Walsh B. et al., 2005). Issues of accountability and responsibility are also evident and situations in which the PN role is extended purely to

encompass substituted doctors' roles may be met with resistance by both PNs and other HCPs (Lattimer et al., 1998; Walsh B. et al., 2005; Brown M.A. et al., 2006). Concerns that financial savings attributed to PN role extension may be offset by a paradoxical increase in GP workload and/or lower general PN productivity have also been raised (Laurant et al., 2005), and research on the cost effectiveness of advanced PN roles has thus far proved inconclusive (Bonsall, Cheater, 2008).

1.4.4 Role boundaries

Role extension results in HCPs working across professional boundaries and the limits of these boundaries are becoming steadily more complex and blurred. Role boundaries are fundamental to the maintenance of discrete professional identities (Welsh et al., 2014) and whilst role extension is intended to improve workforce efficiency and capacity, the extension of one professional role may be perceived as a form of boundary encroachment by another. In response to this perceived threat, a professional may seek to justify and legitimise their role, engaging in 'jurisdictional' activities to maintain control over the disputed sphere of work (Jewell, 2001; Nancarrow, Borthwick, 2005; Sanders, Harrison, 2008; Welsh et al., 2014).

Effective interprofessional relationships are essential for successful collaboration in primary care, ultimately allowing the delivery of best practice (Pullon, 2008). Evidence suggests that interprofessional relationships are particularly important for the implementation of nurses' roles (Al Sayah et al., 2014), and there are fears that role extension may damage both intra- and inter-professional relationships leading to tensions within the primary care team (Bonsall, Cheater, 2008). As discussed later in this chapter (page 12-14), disputes over professional boundaries have the potential to affect team-working and may therefore jeopardise the collaborative effort, ultimately affecting patient care.

1.5   Long-term conditions

1.5.1 Definition and impact in primary care

An LTC is a condition that cannot currently be cured but that can be controlled by medication and/or other therapies (DoH, 2010c). LTCs are recognised as important determinants of quality of life, representing leading causes of ill-health, morbidity and mortality; comprising one of the major challenges faced by governments and health care systems worldwide. In the absence of a cure, the management of LTCs is directed towards achieving optimal symptom control and preventing disease progression. Efficient self-management is crucial if both are to be realised.

Approximately 15 million people in England are currently living with an LTC, of which examples include diabetes, asthma, COPD, coronary heart disease and depression (DoH, 2012b). Multimorbidity, the coexistence of two or more LTCs in one individual, is now the norm in primary care (NHS England, 2013b). With healthcare delivery, clinical guidelines and medical research all dominated by the concept of single diseases in isolation, the management of patients with multimorbidity often proves inefficient, burdensome and poorly coordinated (Barnett et al., 2012). As a result, those with multimorbidity frequently experience poorer clinical outcomes and reduced quality of life; have longer hospital stays and represent a higher demand on healthcare resources (Goodwin et al., 2010).

There has been a steep rise in the prevalence of LTCs and multimorbidity, with age and socioeconomic deprivation proving key determinants (Figure 1) (Mercer, Watt, 2007; DoH, 2012b).

Approximately 50 per cent of people aged 50 years are currently affected; rising to 80 per cent of those aged 65 years and over (Figure 2) (Coulter, Roberts & Dixon, 2013). The burden of LTCs in the UK is such that half of all GP appointments and 70 per cent of inpatient bed days

are currently utilised by people with LTCs, absorbing 70 per cent of primary and secondary care budgets in England alone (NHS England, 2013b).
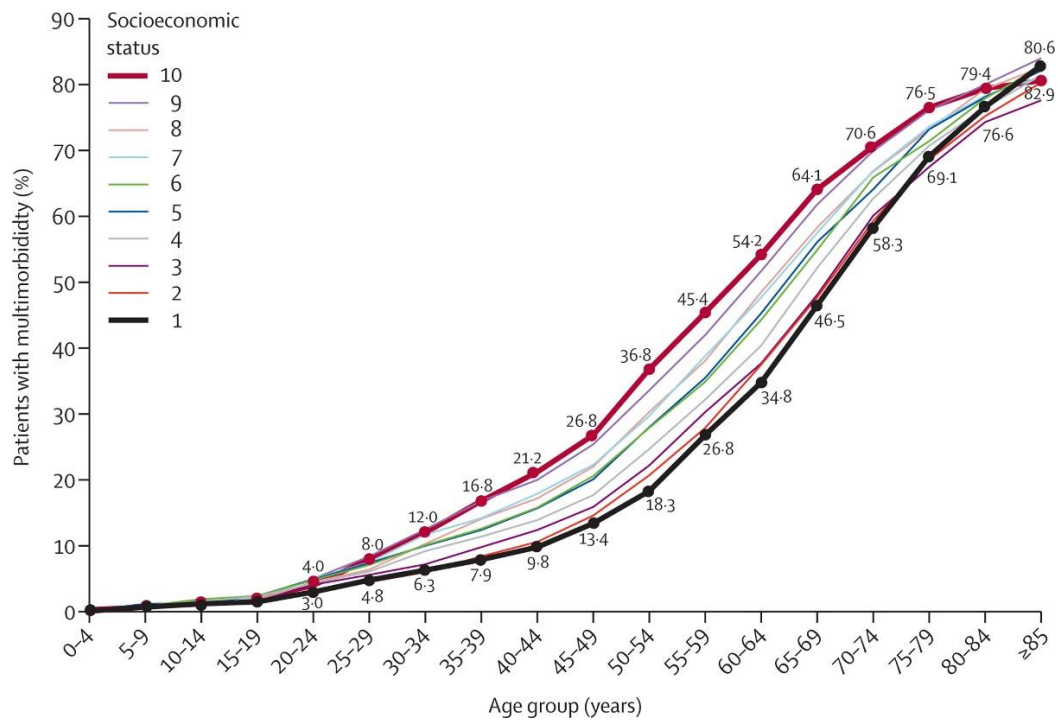
Figure 1 Prevalence of multimorbidity by age and socioeconomic status (DoH, 2012a)

As discussed, improving the management of people with LTCs has remained a key priority for the NHS for over 20 years (Goodwin et al., 2010), yet demand on healthcare resources continues to rise at an exponential rate. The need for the workforce to adapt to tackle the growing problem of LTCs and multimorbidity is therefore evident.
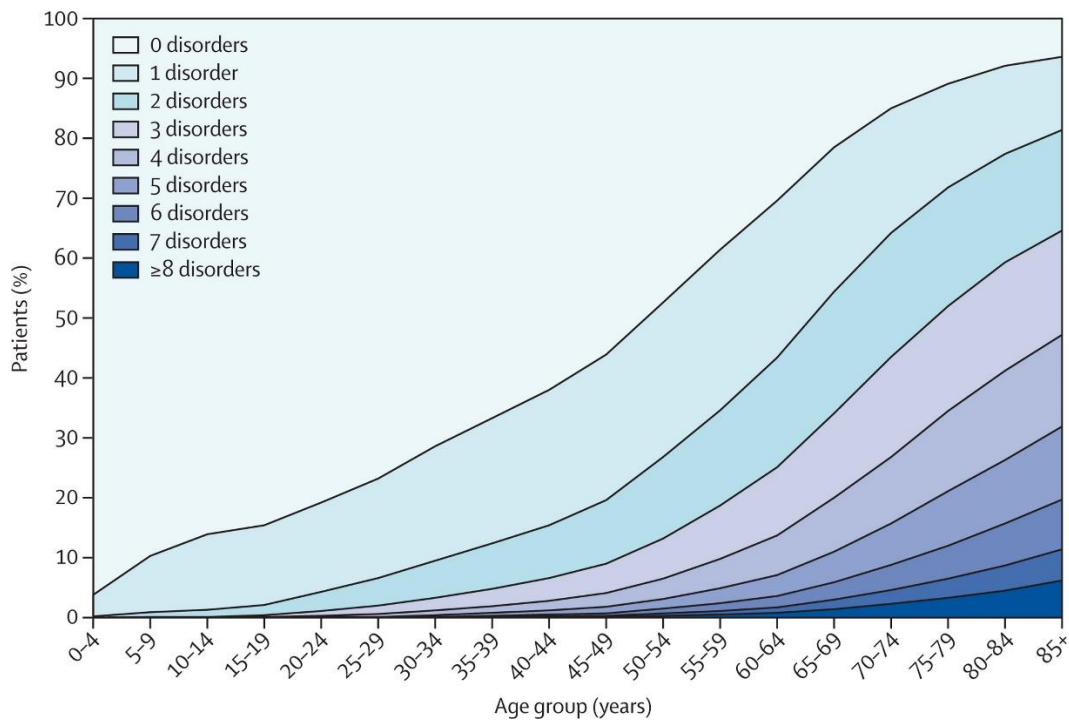
Figure 2 Number of LTCs according to age (Coulter, Roberts & Dixon, Oct 2013)

1.5.2 Collaboration and the integrated team

Collaboration is the act of working with others for a common purpose. Integrative models of care involve a team approach to which each HCP brings their distinct and complementary disciplinary training, working towards a common, patient-centred goal. An effectively functioning team can have a positive impact on both HCPs and recipients of care, enhancing healthcare delivery and clinical performance, and improving staff motivation, commitment, and tolerance of diversity (Al Sayah et al., 2014). However, team-based approaches to care are not easily implemented with factors such as multilevel communication, separate lines of control and varying primary objectives heightening the organisational complexity, serving as potential barriers to the collaborative effort (Al Sayah et al., 2014).

A key determinant of successful collaboration is a clear understanding of roles (San Martin-Rodriguez et al., 2005), defined as a shared set of expectations, values, attitudes, norms and beliefs governing one's behaviour in a particular position in society (Linton, 1945). An individual will have expectations, beliefs and norms regarding the remit of both their role and the roles of others within a team. Effective inter-disciplinary care demands that each team member anticipates, recognises and values the expertise and contribution of others within the team (McKinlay, Gray & Pullon, 2013). Recognition of one's own role and responsibilities in a team is just as crucial to effective teamwork as recognising and acknowledging those of others.

In primary care, PNs are usually employed by the practice in which they work. They are therefore directly employed by one or more GP rather than by the NHS itself. PNs perceive their relationship with the GP to be the most important and influential within the primary care team, determining their scope of practice (Merrick, Fry & Duffield, 2014), dictating changes to scope of practice (Goldman et al., 2010), and acting as a major facilitator for the their role (Al Sayah et al., 2014; Oelke, Besner & Carter, 2014). This accords with evidence that despite lessening of GP predominance within the primary care team, GPs have retained the desire to maintain hierarchical dominance over other professions, actively exerting control over the primary care team by defining the professional boundaries within which other team members practice (Welsh et al., 2014). For role extension to prove successful GPs must relinquish some of this perceived control and allow scope of practice to be defined by the needs of the collaborative team and the population they serve.

Reluctance to relinquish certain duties may relate to fears over accountability and some GPs have expressed concerns regarding the adequacy of training for extended roles, suggesting that some PNs may lack the ability and competence to perform extended duties (Bonsall, Cheater, 2008). Many extended roles are perceived as lacking clarity with responsibilities poorly defined hampering successful implementation, acceptance and interprofessional collaboration (Bailey, Jones & Way, 2006). Given that insufficient GP support, poor

communication and lack of interprofessional trust serve as barriers to changes in role (Greaves et al., 2003; Akeroyd et al., 2009; Al Sayah et al., 2014; Merrick, Fry & Duffield, 2014), the expectations, beliefs and norms of the GP regarding both their role and the role of the PN are crucial if role extension is to prove successful.

The PN will also have expectations, beliefs and norms regarding both their current role and of potential future role. There is a lack of robust evidence for and evaluation of new expanded roles (Gilburt, 2016) and despite a number of evaluations of nurse-led interventions in primary care, PN views and experience of expanded roles within primary care remain unknown (Walsh B. et al., 2005). Successful implementation of role extension will be dependent, at least in part, on what PNs deem acceptable and whether proposed change is congruent with their expectations, beliefs and norms. Role extension may not be desirable or possible for all disciplines (Nancarrow, Borthwick, 2005) and some PNs may resist change (Walsh B. et al., 2005); 'While I am diagnosing, who takes the time to hold a grieving widow's hand?'(Milligan, 2008).

The patient should also be considered integral to the primary care team thereby realising the NHS ethos of 'no decision about me without me' (DoH, 2010b). However, evidence suggests that current policy-driven models of care may preclude patient choice in provision of care (Rashid, 2010). One of the key aims of the 5YFV is to ensure that patients receive the right care, at the right time, in the right setting and from the right care provider (NHS England, 2014) yet it is not always clear who the patient considers to be the right HCP to provide care in LTC.

So, whilst considered pivotal to the future of the NHS, professionals may interpret role extension as a form of boundary encroachment, potentially serving as a barrier to collaborative working, paradoxically threatening the very relationships upon which effective patient care depends. If role extension is to be acceptable and efficacious, we must recognise the importance of professional boundaries and how an individual's values, beliefs and norms govern their response to the organisational change required for role extension.

1.6   Role extension: Diagnosis

Historically, 'medical diagnosis' has fallen within the remit of the doctor, allowing identification of disease or problem through a complex process cognisant of both pattern recognition and logical reasoning (Richardson, Wilson, 2008). Diagnosis within primary care can be difficult, seldom following a simple linear sequence (Foot, Naylor & Imison, 2010), often requiring both taught and experiential methods to refine diagnostic hypotheses. The objective of the diagnostic process is not always to reach a definitive conclusion, with recognition and response to signs and symptoms and guidance and onward referral particularly important in primary care.

In contrast, 'nursing diagnosis' traditionally refers to assessment of the human response to actual or potential health problems and life processes, with 'diagnosis' often providing justification for nursing interventions the outcomes of which the nurse is accountable (NANDA International, 2017). A nursing diagnosis forms part of the 'nursing process', a systematic approach to nursing care based on both holistic and scientific principles which fosters the delivery of compassionate and quality-based care (Toney-Butler, Thayer, 2019). Medical diagnosis details the pathology, nursing diagnosis the impact on the patient's life. Considering recent changes to the workforce and resultant blurring of professional boundaries, these definitions are no longer mutually exclusive.

Diagnosis and treatment of acute illness in primary care is increasingly falling within the remit of the nurse practitioner (NP) and advanced nurse practitioner (ANP). One of earliest definitions of advanced practice nursing is inclusive of the 'deliberate diagnosis and treatment of a full range of human responses to actual or potential health problems…' (MacDonald, Herbert & Thibeault, 2006). More recently, Health Education England's (HEE) District Nursing and General Practice Nursing Service Education and Career Framework has been explicit in placing diagnostic reasoning skills, advanced assessment and the use of diagnostic support

tools within the expected capabilities of the ANP (HEE, 2015a). This Framework was published in response to the need for specific national descriptions for the different roles within primary care nursing, outlining a clear pathway for career progression and aligning the qualifications required to practice at each level (Fitzmaurice, Moger & Storey, 2015). However, whilst suggestive of diagnosis, HEE's framework falls short of explicitly placing diagnosis within the remit of the PN, describing the role as inclusive of 'physical and clinical examination skills to inform the assessment and decision-making for the ongoing management of the patient' (HEE, 2015a).

With regards to patient acceptability, the literature suggests that patients consider diagnosis of minor illness and injury to be acceptable practices for a NP to undertake within primary care (Kviz, Misener & Vinson, 1983; Parker et al., 2014) and patient satisfaction with many advanced PN roles is high (Bonsall, Cheater, 2008). Patient satisfaction with NPs at point of first contact has also been shown to be equivalent to that experienced with doctors (Horrocks, Anderson & Salisbury, 2002). However, despite these findings, we have limited insight as to which factors in the nursing consultation influence patient satisfaction (Bonsall, Cheater, 2008).

In general practice, the autonomous diagnosis of LTCs by NPs and ANPs is ever more representative of usual care. However in contrast to the assessment and diagnosis of self-limiting illness, patients consider the diagnosis of chronic or continuing conditions to be the least acceptable primary healthcare services delivered by NPs (Parker et al., 2014). Similarly, a 2010 review of the benefits and limitations of PN role expansion in the UK suggested that whilst patients believe that nurses can manage simple conditions, they have concerns about knowledge and competence in other areas in particular diagnostics and pharmacology (Rashid, 2010). Mirroring the thoughts of GPs, patients specifically cited the adequacy of PN training and competency to perform doctor-substituted roles as concerning (Rashid, 2010). Rashid acknowledged that limited literature was available and called for further research inclusive of the perspectives of PNs, patients and other HCPs. This need was reiterated in a

2011 commentary by Halcomb who explicitly called for further qualitative research allowing consideration of stakeholder preferences for new models of care (Halcomb, 2011).

1.6.1 Diagnosis of LTCs

Problem recognition, early accurate diagnosis and timely referral for prompt intervention generally result in better management of people with LTCs (Goodwin et al., 2010). The patient's experience of receiving a diagnosis is also of great importance and evidence suggests a correlation between the quality of communication at diagnosis and degree of diabetes-related distress, current well-being and self-care behaviour (Polonsky et al., 2017). The manner in which the diagnosis of type II diabetes is delivered and the content of the conversation may also have a profound and long-lasting impact on a patient's diabetes-related attitudes and behaviours, potentially affecting both short- and long-term clinical outcomes (Polonsky et al., 2010; Polonsky et al., 2017).

Provision of a clearly communicated diagnosis, a positive attitude towards the prognosis and prospect of successful management, and a specific care plan are also influential. Given their fundamental role in LTC care, the PN may be well placed to provide initial diagnosis, complying with healthcare policy expectations and reducing fragmented care in patients with LTCs. The development of an innovative PN-led approach to the diagnosis of LTCs therefore seems intuitive, allowing the PN to develop a partnership with the patient, taking an integral role in the patient's personalised care plan and promoting continuity from the very beginning of their journey of care.

1.6.2 Diagnosis of osteoarthritis (OA)

Many LTCs including diabetes and hypertension have objective, gold standard measures against which a diagnosis can be made, facilitating a protocol-driven and unequivocal decision in most instances. Indeed, the use of protocols to guide PN-delegated duties is well recognised (Allen, 1997; Welsh et al., 2014).

OA is an LTC that represents a major cause of pain, loss of function, disability and reduction in health-related quality of life. OA is the most prevalent cause of chronic pain in older adults, affecting 303 million people worldwide in 2017 (GBD 2017 Disease and Injury Incidence and Prevalence Collaborators, 2018), and is globally the fastest increasing cause of years lived with disability (Paskins et al., 2015). Given its prevalence, OA is often comorbid with other LTCs (Birtwhistle et al., 2015). Yet unlike many LTCs, the diagnosis of OA is subjective and not clear cut with the absence of a clear, singular definition resulting in varying thresholds for diagnosis. Indeed, whilst guidelines advocate making a clinical diagnosis based on patient reported symptoms alone without recourse to investigation (Altman et al., 1991; Zhang et al., 2010; NICE, 2014), many clinicians use radiographic findings to inform their diagnostic decision. Moreover, despite its impact, OA-related joint pain is seldom prioritised by either patient or clinician with symptoms frequently normalised as inevitable consequences of ageing (Tan et al., 2015). A recent observational study of OA-related primary care consultations in the UK revealed that GPs not only tend to normalise symptoms but offer explanation of OA as a diagnosis of exclusion, referring to the absence of disease as opposed to offering positive pragmatic explanations and advice (Paskins et al., 2015). Moreover, multisite joint pain is highly prevalent and a significant proportion of people presenting with single joint pain will have other joint involvement, a factor that is not always recognised (Finney et al., 2017). Poor recognition and suboptimal treatment of those often most in need is therefore not uncommon (Tan et al., 2015).

One of five Arthritis Research UK (ARUK) (now Versus Arthritis) recommendations aimed at addressing this 'puzzle' of OA is for HCPs to routinely ask and proactively consider musculoskeletal pain when discussing a person's needs (Arthritis Research UK, 2013). Given their fundamental role in the management of LTCs, PNs are well placed to enquire about the presence of comorbid OA and potentially give advice and initiate timely intervention for those patients who feel that their level of activity is limited by joint pain. However, whilst the PN's role in the management of OA is well-described (Dziedzic et al., 2014), little is known of their potential diagnostic role.

1.7   Summary

Role extension is common in primary care in the UK and PNs are now considered fundamental to the care of patients with LTCs. UK healthcare policy demands that the PN role further extends to be inclusive of a greater level of complex care including assessment and diagnosis. However, role extension results in the blurring of professional boundaries which may have unintended consequences, potentially jeopardising the collaborative effort and having a deleterious effect on patient care.

Many LTCs have objective, gold standard diagnostic criteria, facilitating protocol-driven and unequivocal diagnosis. The diagnosis of OA is subjective, and the absence of a clear, singular definition has resulted in variable thresholds for diagnosis and poor recognition and suboptimal treatment of those often most in need is therefore not uncommon. However, guidelines advocate making a clinical diagnosis of OA based on patient reported symptoms without recourse to investigation. Given their pivotal role in LTC care and recent healthcare policy directives, PNs may be well placed to improve the recognition and diagnosis of OA, yet PN views in the context of diagnostic work in LTCs are unknown.

1.8 Aims and objectives of this study

The aim of this MPhil was to investigate PN perspectives of role extension and diagnostic work in LTCs (including OA) in primary care. This will be achieved by addressing two objectives:

1) Identify and synthesise the available, empirical research evidence regarding PN perspectives of role extension and diagnosis of LTCs including OA in primary care;

2) Investigate, through qualitative semi-structured interviews, the perspectives of PNs in relation to role extension and OA diagnosis.

Objective one was addressed through a meta-synthesis of qualitative literature informed by a meta-ethnographic approach (Chapter 2). Objective two was addressed in a qualitative study (Chapters 3 and 4).

Chapter 2 – Qualitative meta-synthesis

2.1   Introduction

This chapter addresses the first objective of this thesis through the identification and synthesis of the available qualitative research regarding practice nurse (PN) perspectives of role extension and diagnosis of long-term conditions (LTCs) including osteoarthritis (OA) in primary care. The meta-synthesis is informed by a meta-ethnographic approach.

2.2   Qualitative methods

Qualitative research explores social phenomena, investigating peoples' perceptions and understanding of the world around them. Qualitative methods can therefore provide a unique insight into the day-to-day happenings in a given setting, exploring the *why* and *how* behind everyday decisions, engendering understanding of disease in the context of the patient and/or carer and allow exploration of their experiences of care. Such methods therefore allow identification of factors that influence the performance and quality of care within the context of health care systems (Walsh, Downe, 2005). In contrast, quantitative methods yield evidence regarding disease aetiology, epidemiology and clinical effectiveness of intervention, providing the theoretical underpinning for much of today's evidence-based medicine. However, successful implementation of complex human-mediated interventions is not solely dependent on evidence of effectiveness, with the attitudes, perceptions and beliefs of both those delivering the intervention (Michie et al., 2009) and those patients receiving the intervention (Mozygemba et al., 2016) highly relevant and influential. Qualitative research is therefore essential in providing a contextual lens though which interventions and evidence-based

practice can be scrutinised, thereby informing implementation of the findings from effectiveness reviews.

Healthcare policy decisions and service implementation cannot be informed by evidence of efficacy alone (Booth et al., 2016) and the Department of Health and Social Care (DHSC) in the UK demands that evidence-based decisions be considerate of both qualitative and quantitative research (DoH, 2015). The evidence directing health care practice and policy should be of high quality, comprising the best available evidence and latest research (Centre for Reviews and Dissemination, 2008). However, the results of an individual study may not be representative of other literature, with the veracity of results may be affected by bias, methodological flaws and contextual factors. It is also not uncommon for individual studies, of which there are many, to reach disparate conclusions. It is therefore unsurprising that DHSC policy is explicit in demanding that the both quantitative and qualitative evidence be robustly synthesised (DoH, 2015).

Systematic reviews are therefore a fundamental research activity, providing a robust method of identifying, integrating and summarising the results of related individual studies; the result is a more accessible, meaningful and generalisable conclusion upon which a rational decision can be made. Indeed, whilst the results from a single qualitative study may be difficult to generalise (and this is not the aim), synthesising a collective body of relevant qualitative data may provide greater insight into a topic and allow common themes and/or divergent views to emerge, thereby producing a new and integrative interpretation of findings that is more substantive than those resulting from individual studies (Finfgeld, 2003). However, unlike its quantitative counterpart, the synthesis and application of qualitative literature is subject to methodological challenges and much debate (Ring, Jepson & Ritchie, 2011; Tong et al., 2012; France et al., 2015; Booth et al., 2016).

The methods for synthesising quantitative research are well described and established, with the techniques for systematic review and meta-analysis clearly defined in the Cochrane

handbook (Higgins, Green, 2006). In contrast, the synthesis of qualitative research is less well defined with the multiplicity of theoretical underpinnings and analytic strategies hampering attempts at achieving consensus regarding one standard approach (Downe, 2008). Moreover, context is important in qualitative research, and whilst the synthesis process is intended to retain this, some paradoxically consider the outcome to be a dilution of the contextually rich and unique primary data (Downe, 2008).

The terminology used to define the process of qualitative synthesis merely serves to compound matters, being complex and inconsistently used and originating from a number of sources (Tong et al., 2012). The term 'qualitative meta-synthesis' was first used by Stern and Harris in 1985 to describe the combining of results from a range of qualitative studies (Stern, Harris, 1985). Whilst meta-synthesis is still used as an umbrella term to describe the synthesis of qualitative data, guidance published by the Cochrane Qualitative and Implementation on Methods Group (CQIMG) suggests the term qualitative evidence synthesis (QES) may be more appropriate as it sensitive to the qualitative paradigm, and does not infer direct translation of the standards and criteria applied to the synthesis of quantitative research (Booth et al., 2016). Again, consensus has yet to be reached.

Fundamental to the process of qualitative synthesis is 'finding something that is worthy of the synthesis effort' (Noblit, Hare, 1988). As highlighted in Chapter 1, the subject of this thesis is both relevant and important to the future of the NHS. Role extension is intended to increase the efficiency and capacity of the primary care workforce and is crucial to improving resilience, enabling new ways of working and promoting collaboration across providers (NHS England, 2016). However, whilst change may be a prerequisite for 'future proofing' the NHS (NHS England, 2014), such innovation could prove mere conjecture if the perceptions of those in whom a change in role is forecast are not considered.

2.3 Aim and objectives

To identify and synthesise available empirical qualitative research regarding PN perspectives of role extension and diagnosis in LTCs, including OA.

This meta-synthesis will allow the perceptions and beliefs of primary care PNs to be explored in terms of professional boundaries and role extension, providing a conceptual understanding of the potential barriers and facilitators to future role extension including diagnostic work in LTC.

2.4 Methods

Several methodological approaches to the synthesis of qualitative research have been described including meta-ethnography, thematic synthesis, critical interpretive synthesis and narrative synthesis. Whilst sharing both commonalities and key differences in approach and rationale, most methods share a core set of techniques and represent either an integrative and/or interpretive approach to synthesis (Atkins et al., 2008). Choice of method may be dependent on a number of factors, for example meta-ethnography is often used to analyse a small number of papers, whereas critical interpretive synthesis is often better suited to the analysis of larger more diverse bodies of literature (Tong et al., 2012). Meta-ethnography is also the leading method for synthesizing qualitative health research (Ring, Jepson & Ritchie, 2011) particularly for questions relevant to patient experiences of illness and care (Atkins et al., 2008).

The Enhancing transparency in reporting the synthesis of qualitative research (ENTREQ) Statement was created in recognition of the need for guidelines for the reporting of qualitative

research. The ENTREQ statement consists of 21 items grouped into five main domains, namely: introduction, methods and methodology, literature search and selection, appraisal, and synthesis of findings. The statement was used to enhance transparency and improve reporting of this synthesis (Tong et al., 2012).

2.5   Design: Meta-ethnography

Meta-ethnography was originally developed as an alternative to traditional methods of aggregative synthesis. First described in the seminal work of Noblit and Hare in 1988 (Noblit, Hare, 1988), meta-ethnography describes an inductive and interpretive method which encourages comparison and cross-interpretation between studies while preserving the context of the primary data (Ring, Jepson & Ritchie, 2011). Meta-ethnography is well suited to generating models or higher order theories of behaviour or experiences (Atkins et al., 2008) and informing implementation of services and interventions (France et al., 2015). Furthermore, application of focused ethnography has been shown to be both useful and meaningful in the primary care setting (Higginbottom, Pillay & Boadu, 2013) and its use for studying phenomenon within the sphere of nursing practice recommended and widely discussed (Cruz, Higginbottom, 2013).

Meta-ethnography describes an iterative research process consisting of seven steps that enable a researcher to identify, appraise and summarise evidence in answer to a specific research question, ultimately generating a new theory to explain the range of research findings encountered. The seven-step process will now be outlined.

2.5.1 Getting started

A pre-planned, systematic search of electronic databases was undertaken using Medline, EMBASE, Web of Science, Cumulative Index to Nursing and Allied Health literature (CINAHL), PsychInfo, Allied and Complementary Medicine Database (AMED), British Nursing Index (BNI), Healthcare Management Information Consortium (HMIC), and Applied Social Sciences Index and Abstracts (ASSIA).

Medline and EMBASE are biomedical databases and as such allow the identification of literature with a clinical focus. Web of science has an academic or scientific focus and the literature held within the HMIC database pertains to health and social care management. Interrogation of these databases should yield papers with an academic or management focus. The ASSIA database includes literature concerning health, social sciences and sociology. Likewise, the records held within PsychINFO centre on psychology and the social sciences. Inclusion of these databases was deemed essential in allowing a comprehensive search of the qualitative literature. BNI and CINAHL house literature pertaining to nursing and allied health professionals, their inclusion is therefore essential in identifying literature with a nursing focus. In comparison to other electronic databases across which the indexing of qualitative research is inconsistent, CINAHL has a wider range of detailed qualitative subject headings allowing a more thorough and robust search of the literature (Centre for Reviews and Dissemination, 2008).

AMED is an alternative medicine database designed to provide information regarding alternative treatments. Inclusion of this database was intended to identify information regarding roles outside of the purely clinical umbrella.

Search terms were selected to identify qualitative or mixed methods studies concerning beliefs and perceptions, PNs, diagnosis of LTCs and role extension. Terms, keywords and MeSH (Medical Subject Headings) headings were formulated through consideration of and in line with relevant research and adapted according to the requirements of each database where

necessary. The search strategy used for the MEDLINE database is given as an exemplar (Table 1).

Table 1 MEDLINE search terms and MeSH headings

Practice Nurse		**Diagnosis of LTC**	
nurse practitioners/	"nurse practitioner"	chronic disease/	"chronic disease"
nurse clinican/	"nurse clinician"		"chronic illness"
exp nurse/	"nurs*"		"chronic condition"
family nurse practitioners/	"family nurs*"	long-term care/	"long-term care"
family nursing/			"chronic treatment"
advanced practice nursing/	"advanced practice nurs*		"long-term treatment"
"primary care"	primary ADJ2 care	exp asthma/	
primary health care/		exp pulmonary disease, chronic obstructive/	"COAD"
exp general practice/	"general practice"		chronic obstructive ADJ2 disease
	"family practice"		"COPD"
	"general medical practice"		"emphysema"
Role extension			"chronic bronchitis"
professional practice/	"professional practice"	diabetes mellitus/ or diabetes mellitus, type 1/ or diabetes mellitus, type 2/	"diabetes"
professional competence/	"professional competence" "competence"	exp myocardial ischemia/	"ischemic heart disease" "IHD"
	"professional standard"	hypertension/	"hypertension"
	"scope of practice"	anxiety/ or exp anxiety disorder/	"depres*"
	"role extension"		"anxi*"
	"role expansion"	exp osteoarthritis	"osteoarthritis"
	"professional bound*"		"OA"
models, nursing/ or models, organizational/			"arthritis"
exp nursing education/	"nurs* education" "nurs* intervention"		
exp professional role/	"professional role"		

The search was not limited by language or date of publication and was undertaken between February and April 2016. Potentially relevant studies were also identified through a process of reference checking. Whilst the process of study selection was systematic, it was not exhaustive. This was in line with Noblit and Hare's view that including too many papers yields "trite conclusions" (Noblit, Hare, 1988).

2.5.2 Deciding what is relevant to the initial interest

Retrieved studies were exported into Refworks and duplicates removed. Initial screening of title and abstracts was completed by VT according to pre-defined inclusion and exclusion criteria (see Table 2).

Table 2 Inclusion and exclusion criteria

Inclusion criteria
 	
    •   Practice nurses
    •   Perceptions and lived experiences of role extension and/or diagnosis of LTC
    •   Primary care
    •   Qualitative literature or mixed methods
    •   Human
    •   Nurse participants ≥18 years

Exclusion criteria
 	
    •   Not practice nurses
    •   Perceptions not about role extension or diagnostic work
    •   Not long-term conditions
    •   Not qualitative or mixed methods
    •   Non-human subjects
    •   Nurse participants <18 years

Included papers reported empirical results of qualitative or mixed methods studies concerning PN perceptions and lived experiences of role extension/or diagnosis of LTCs in primary care. Exclusion criteria related to papers with a purely quantitative focus and those in which participants were healthcare professionals (HCPs) other than PNs or those working outside of primary care. Papers reporting PN perceptions and/or lived experiences of phenomena other than role extension were also excluded as were papers concerning the care of patients under 18 years of age and papers with a non-human focus. A second reviewer (CJ) checked concordance with eligibility criteria in 100 randomly selected titles and abstracts.

VT then reviewed full texts of all articles relevant to the research question. All papers were then subjected to a second review by an independent researcher (CJ, EC, AF, JE). A third reviewer (CC-G) facilitated consensus where needed.

2.5.2.1 Quality assessment

Rigour, credibility and relevance of each article were appraised according to the Critical Appraisal Skills Programme (CASP) criteria for assessing qualitative research (CASP, 2014). This tool comprises a series of questions which highlight key areas to be considered when appraising qualitative research.

However, whilst critical appraisal of quantitative research is considered fundamental to the synthesis process, preventing inclusion of poor quality evidence, the merits of appraising qualitative research are not clear and are somewhat contentious (Atkins et al., 2008, Toye et al., 2013). Indeed, consensus has yet to be reached as to which criteria to use and when they should be applied, or indeed whether qualitative research should be subject to quality appraisal at all (Mays, Pope, 2000; Atkins et al., 2008).

As described by other authors, appraising the quality of the studies is more akin to an assessment of authorship and the written word as opposed to an appraisal of the research

methods themselves (Sandelowski, Barroso, 2002; Atkins et al., 2008). Echoing the sentiments of Campbell and colleagues (Campbell et al., 2011), whilst all potentially relevant papers were subject to quality appraisal, this was not a measure of suitability for inclusion. All studies may contribute to the understanding of the phenomenon and articles were therefore not excluded based on outcome of the quality appraisal. However, appraisal outcome was considered in the context of the ideas and concepts derived from each primary study.

2.5.3 Reading the studies

VT read and re-read the included studies to become familiar with the texts and content, a process known as data emersion. This is an ongoing process rather than a discrete phase of the synthesis. The characteristics of each publication was recorded in a grid format allowing sample size, setting, methodology and context of the research to be recorded and compared.

2.5.4 Determining how the studies are related

Fundamental to the meta-ethnographic approach is the identification of key concepts within each primary study. These concepts, which form the raw data of the synthesis, can then be compared to those identified in the other studies.

Full text versions of the final eligible studies were uploaded into NVivo 10 (QSR International, Southport, UK), a software package which aids the organisation and analysis of qualitative data. NVivo allows the researcher to organise the data, creating and attributing 'nodes' to particular findings. Nodes can be used as a surrogate for emergent concepts and, as data can be coded under any number of nodes, they aide the organisation of concepts into themes. Nodes may also serve a solely descriptive purpose and must be considered as distinct from concepts, which should be developed in such a way to as explain not just describe the data.

NVivo also allows the researcher to attribute memos to specific areas of data, allowing the researcher to record ideas and theories, aiding the iterative process.

Meta-ethnography often makes use of Schutz's notion of first, second, and third-order constructs to distinguish the data collected (Schutz, 1962). First-order constructs represent the participants' beliefs or 'common sense' interpretations in their own words, and therefore represent the raw data of the primary studies. Second-order constructs represent the authors' interpretations of first-order constructs and are therefore mindful of the context in which the original data was collected. However, first and second-order constructs are not always easy to decipher (Toye et al., 2013). Moreover, first-order constructs should not be considered wholly representative of the data, often selected from the full dataset to illustrate and affirm the authors' second-order interpretations and influenced by the authors' interpretations and theoretical beliefs (Atkins et al., 2008; Toye et al., 2013) (Table 3). This is an important stage in the process of meta-ethnography as authors may differ in their interpretation of the data, with concepts generated in the context of the individual's experiences and beliefs. What is meaningful to one author may appear purely descriptive to another. Third order constructs represent the researchers' interpretation of the first and second order constructs thereby creating a new theory about a phenomenon.

Table 3 Definitions of 'constructs'

Term	Definition
First order construct	The participants' beliefs or 'common sense' interpretations in their own words (reflects the participants' understanding)
Second order construct	The authors' interpretations of the participants' understandings (first order constructs)
Third order constructs	The researcher's interpretation of the first and second order construct, creating a new theory

Three researchers (VT, CJ and AF) independently read each paper, identifying and coding their interpretation of the authors' second-order constructs line-by-line in an iterative, inductive

process. Concepts and codes were not predefined, thereby avoiding prejudice when reading the texts and realising emergent concepts. A team meeting was held (VT, CJ, AF, CC-G) to discuss concepts and challenge individual interpretations thereby ensuring the resultant interpretations were grounded in the primary data. The final set of concepts were recorded in tabular form to facilitate the next stage of the synthesis process.

2.5.5 Translating studies into one another

Once the key concepts had been agreed, VT looked for the second order interpretations embedded within each study. This stage involved re-reading each paper in order to identify the main explanation relating to the specific research question. The results were then discussed with the team (VT, CJ, AF). The purpose of discussion is to enhance the data and collaboratively reach conclusions about how the data should best be interpreted.

2.5.6 Synthesising translations

This stage is intended to make sense of the translational process, taking each concept and second order interpretation in turn with the purpose of generating a higher, third-order interpretation. The contribution of each study to each key concept was examined through a process of constant comparison, allowing similarities and differences within the concepts to be determined and deviant cases identified. Actively seeking the "deviant" or dissonant cases is important in the context of synthesis as reviewers naturally look for commonalities that confirms or aligns with their emerging theory (Booth et al., 2013). Indeed, absence of deviant cases would be unusual as qualitative questioning rarely yields completely congruous results.

Findings can be considered or synthesised in one of three ways based on their relation to one another, namely: (i) reciprocal translational analysis in which concepts within individual studies are directly comparable; (ii) refutational synthesis which allows the exploration and explanation of contradictory concepts between studies; or (iii) Lines-of-argument in which different studies provide individual pieces which together create a whole concept or theory (Noblit, Hare, 1988). The latter type of synthesis allows the translation of studies into one another, resulting in a 'whole picture' answer to the original research question. The results of this translation process were recorded (see Table 8, pages 43-45), allowing concepts and initial second-order interpretations to be viewed alongside my ultimate third-order interpretations and lines-of argument.

2.5.7 Expressing the synthesis

According to Noblit and Hare, the final stage of the meta-ethnographic process is the dissemination of the research findings in a way that is appropriate for the target audience, thereby maximising the impact of the research (Noblit, Hare, 1988).

2.6   Results

2.6.1 Included papers

The results of the systematic search are shown in Figure 3. Of 3491 potentially relevant articles, 2772 unique papers were identified with 209 full texts remaining after initial title and abstract screening. There was initial disagreement on 11 articles, with consensus regarding

inclusion achieved through group discussion. Six qualitative studies considering PN perspectives of role extension in LTCs were ultimately included in the review.
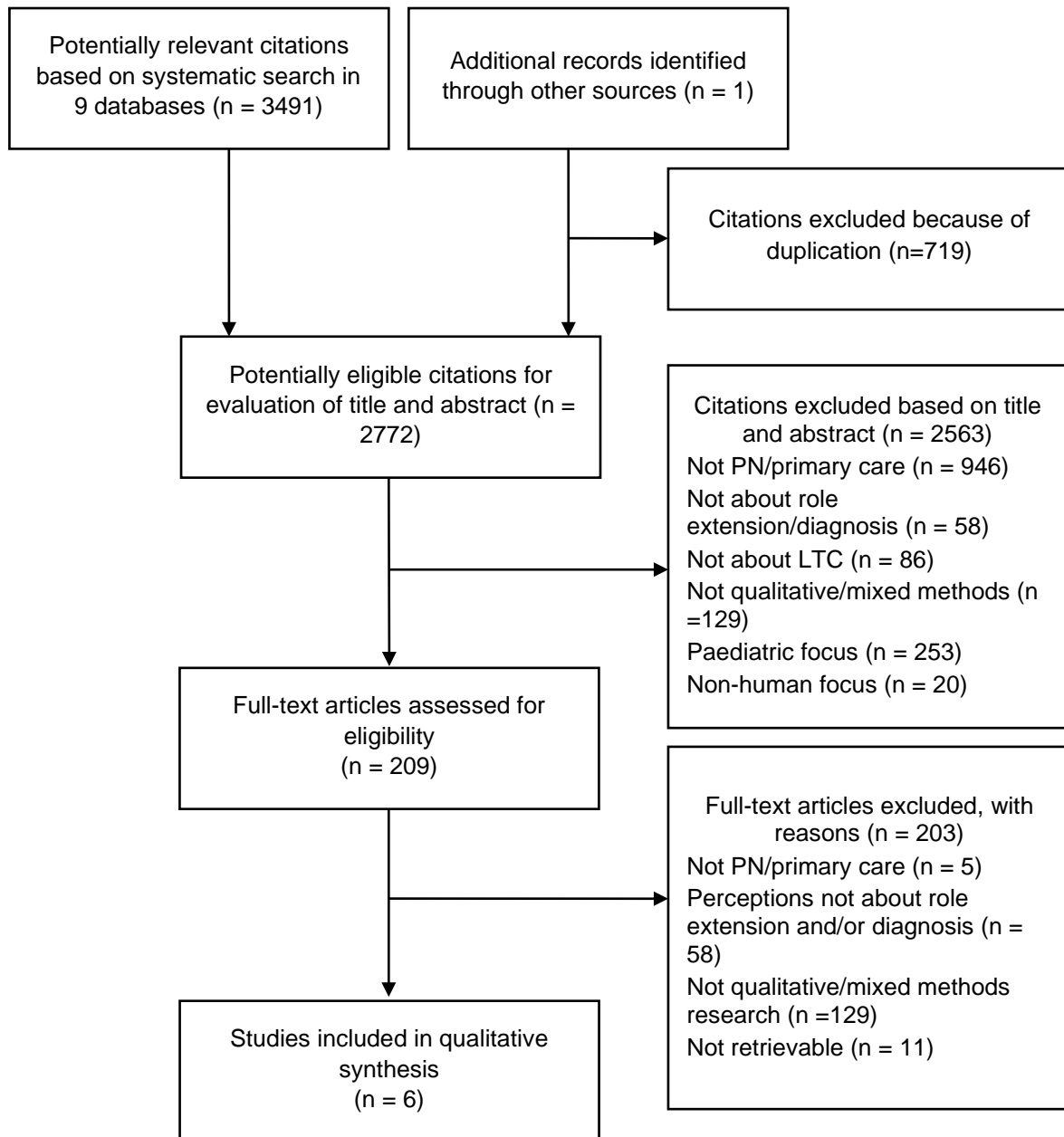
Figure 3 Results of search strategy
(Flowchart adapted from the Preferred Reporting Items for Systematic Review and Meta-analyses (PRISMA) flow diagram)

Three of the included studies were conducted in primary care in the UK, and one in each of Australia, Canada, and Germany. Three of the studies applied a thematic analysis approach to the data, two adopted a content analysis approach, and one adopted the Framework method. Three of the studies were published in the year 2014, with the remainder published in 2003, 2005 and 2006. The characteristics of each publication are given in Table 4 and summary of the CASP quality appraisal process in Table 5.

2.6.2 Themes and concepts

Eight key concepts emerged from the six papers included in the synthesis. These concepts were juxtaposed and translated across the studies allowing their relationship between studies to be assessed and phenomenon described as third order constructs. The relationships between the studies were reciprocal allowing each translated concept to be considered alongside each of the six second order constructs and a line of argument constructed. The final set of concepts were recorded in tabular form to facilitate the next stage of the synthesis process (Table 6). Similarly, the results of this translation process were recorded in tabular form (Table 7), allowing concepts and initial second-order interpretations to be recorded alongside our ultimate third-order interpretations and lines-of argument (Table 8).

Table 4. Characteristics of included studies

Paper	Sample/Setting	Methodology/Data Collection	Data analysis	Objective
Greaves et al. 2003	Purposive sample of 25 PNs with responsibilities for diabetes care in one locality in south west England	Semi-structured interviews	Content analysis	Explore the views of PNs in the UK about converting diabetic patients from oral hyperglycaemic agents to injected insulin within primary care
Walsh et al. 2005	19 PNs from 16 general practices within a 30-mile radius. Pragmatic RCT looking at the effectiveness of nurse-led vestibular rehabilitation in primary care in the UK	Semi-structured focus groups	Thematic analysis	Explore the perceptions of PNs involved in a trial of nurse-delivered vestibular rehabilitation on both the therapy itself and its place in relation to their general role development
Rosemann et al. 2006	Stratified sample of 20 PNs, 20 GPs and 20 patients living in Heidelberg and surrounding areas, Germany	Semi-structured interviews	Content analysis	Explore the extent to which PNs are currently involved in the treatment of patients and the possibilities of increased involvement included perceived barriers
Manski-Nankervis et al. 2014	6 physicians, 5 DNEs, 5 GPs and 5 PNs purposively sampled from 179 respondents to a survey measuring relational coordination between health professionals involved in insulin initiation in Australia	Semi-structured interviews	Framework analysis	Explore the roles and relationships between health professionals involved in the initiation of insulin for people with type II diabetes in the general practice setting.
Welsh et al. 2014	Purposive sampling of 15 GPs from a random sample of 125 selected from a larger group consenting to receive further study invitations (part of a previous research study in the UK). 7 PNs (included in the synthesis) and 6 physiotherapists were recruited through snowball sampling.	Semi-structured interviews	Thematic analysis	Explore the views of GPs, PNs and physiotherapists towards extending the role of sickness certification beyond the medical profession in primary care
Al Sayah et al. 2014	20 PNs from three PCNs in a large urban province in Canada	Focused ethnography; semi-structured interviews	Thematic analysis	Investigate PN roles and their perspectives on factors that influence teamwork within the Canadian primary care setting

PCN – Primary Care Network; PN – Practice nurse; GP – General Practitioner; DNE – Diabetes nurse educator

Table 5 Summary of CASP quality appraisal

CASP Criterion	Greaves et al (2003)	Walsh et al (2005)	Rosemann et al (2006)	Manski-Nankervis et al (2014)	Welsh et al (2014)	Al Sayah et al (2014)
Screening questions						
1. **Was there a clear statement of the aims of the research?**	✔	✔	✔	✔	✔	✔
2. **Is a qualitative methodology appropriate?**	✔	✔	✔	✔	✔	✔
Continue?	✔	✔	✔	✔	✔	✔
Detailed questions						
3. **Was the research design appropriate to address the aims of the research?**	✔	✔	✔	✔	✘	✔
4. **Was the recruitment strategy appropriate to the aims of the research?**	✔	✔	✔	✔	✔	✔
5. **Was the data collected in a way that addressed the research issue?**	✔	✔	✔	✘	✔	✔
6. **Has the relationship between researcher and participants been adequately considered?**	✘	✘	✘	✔	✔	✔
7. **Have ethical issues been taken into consideration?**	✔	✔	✔	✔	✔	✔
8. **Was the data analysis sufficiently rigorous?**	✔	-	✔	✔	✔	✔
9. **Is there a clear statement of findings?**	✔	✔	✔	✔	✔	✔
10. **How valuable is the research?**	✔	✔	✔	✔	✔	✔

✔ Yes   ✘ No   - Unclear

Table 6 Concepts and second order interpretations of role extension

Concepts	Greaves et al (2003)	Walsh et al (2005)	Rosemann et al (2006)	Manski-Nankervis et al (2014)	Welsh et al (2014)	Al Sayah et al (2014)
Benefit to patients	Role extension improves access and enhances continuity of care	Can pass knowledge onto patients	-	Patients can be seen in their own home, improving access to care	Better access improves efficiency and more time to dedicate to patients	-
Organisation and policy	Nursing role is changing due to increasing pressures and workload in primary care. PNs recognise the need to adapt and develop skills to meet challenges	Role extension is essential and there is an expectation that the PN role will evolve to meet demand. Time needs to be considered when evaluating services.	-	-	Role extension can enhance system efficiency, therefore improve patient care	Role extension initially driven by patient need and demand.
Support and teamwork	Vulnerable and isolated at times, with a lack of a clear support structure. GPs may offer limited support due to time constraints or becoming deskilled. Confidence is dependent upon support.	GP seen as essential support and back up particularly in more complex cases.	-	DNE support essential. Some feel that lack of GP knowledge may impact safety. Lack of knowledge about PN role and training may be a barrier to specialist support.	PNs used the professional hierarchy and existing GP authority to protect their responsibility for patient care and therefore justify role extension, referring to GPs as "back-up" (overlaps with 'Responsibility and accountability')	Physician support was a major facilitator for PNs' role and overall teamwork
Training, competence and confidence	Low confidence to perform extended role but improves with support, training and	Positive about involvement in chronic disease management, but do not necessarily	Education focused on administration not medical knowledge, therefore not competent	Safety concerns secondary to inadequate training and maintaining	-	-

	education. Experiential learning and mentoring seen as valuable.	possess appropriate skills.	to discuss disease or treatment. Most desired more medical education	competence. The need for adequate training and mentoring was raised.		
GP vs. PN (including relationship)	GP-PN relationship mainly viewed positively but the need for GPs to financially reward the PN's level of responsibility was noted.	Nursing skills (therapeutic) are distinct from medical skills (curative) and perceived substituted roles negatively and not 'nursing work'. Nurses better communicators.	Role of the GP is clearly different to that of the PN and that GP scepticism often impacts PN involvement in care.	Knowledge of each other's roles and professional boundaries facilitated the GP-PN relationship.	Professional hierarchy and existing GP authority used to protect their responsibility for patient care. PNs do not claim to possess the GP's technical expertise, adding value rather than replacing the GP role	The GP-PN relationship was one of the most important, facilitating the PN role. Lack of trust was primarily due to the lack of clear role description and division of labour
Responsibility and accountability	Major shift in responsibility. Concerns about accountability and Legal and insurance issues related to prescribing. Increasingly difficult to fit extra responsibilities into working hours. Follow-up complicated by part-time working.	Embraced a move towards greater responsibility but difficult to move from a caring to a facilitative role. Fears about causing harm and assessment of competence.	Expansion of roles will only work if physicians do not feel threatened by the shift of territory and responsibility.	Safety concerns secondary to inadequate time given their multiple other roles within the practice	Less experienced PNs appeared more risk-averse, reluctant to take on added responsibility and subsequent accountability.	Expansion of scope of practice was accompanied by advancement of professional role and responsibilities with PNs involved with larger and more diverse panels of patients.
Role boundaries and clarity	-	Value the therapeutic role but confused about role boundaries and assessment of	Expansion of PN role will only succeed if the physician's role boundary and	Lack of clarity and understanding about their role and training,	-	The lack of a clear role description causes lack of trust, acts as a barrier to teamwork and results

		competence to screen patients.	professional identity is not threatened.	which may lead to lack of support for their role.		in less use of nursing services.
Protocols Straightforward cases	Only confident to manage straightforward cases. Guidelines or protocols should be provided to cover procedural aspect	Can deal with straightforward cases without referring to the GP. Concerns about competence in relation to patient selection could be addressed using guidelines and protocols.	Role extension allows physicians to concentrate on more complex care.	Expansion of the PN role allows DNEs to see more complex patients	PNs can certify straight-forward cases using protocols and guidelines to inform decisions, deferring responsibility to the GP and offering "protection".	-
Second order interpretations	Role extension is beneficial to patients and PNs recognise the need to change but there are concerns about support which impacts confidence. PN's wish to deal with straightforward cases and protocols and guidelines may help.	See and embrace the need for change but fear they do not have appropriate skills and competence. Can deal with straightforward cases and protocols and guidelines may help with other aspects.	Role extension allows GPs to concentrate on more complex care but will only work if the GP's role boundaries are not threatened. The use of protocols reduces need for GP involvement, therefore freeing their time.	Role extension improves access to care and allows DNEs to focus on more complex care but there is a need for adequate training and mentoring. Knowledge about professional boundaries enhances the GP-PN relationship and lack of understanding of the role may impact support. Poor communication is a barrier to new models of care.	Role extension improves patient access, system efficiency and patient care. PNs manage straightforward cases using protocols and guidelines to inform decisions, using the GP as back-up, deferring responsibility. Professions hold deeply entrenched values underpinned by professional identities.	GP-PN relationship is the most important and GP support is a major facilitator for the PN role. Lack of trust primarily due to the lack of clear role description acting as a barrier to teamwork and less use of PN services.

PCN – Primary Care Network; PN – Practice nurse; GP – General Practitioner; DNE – Diabetes nurse educator

Table 7 Key concepts and translation across the studies

Concepts	Meaning	Number of studies	Translation across studies
Benefit to patients	How PNs feel that role extension benefits patients	Four	Role extension improves access to care and enhances efficiency and continuity of care.
Organisation and policy	The implementation and system consequences of role extension in primary care.	Four	Primary care is evolving and PNs recognise the need to adapt and develop skills to meet the challenges and address patient need.
Support and teamwork	The role of support and teamwork in role extension.	Five	Support from the GP or specialist back-up is fundamental to the success of role extension, particularly when managing complex cases but there are some concerns that GPs may not have the knowledge to offer support as they are becoming deskilled. Confidence to enact new roles is directly dependent upon support. Lack of understanding about new roles can impact support.
Training, competence and confidence	The training and input required to enact new extended roles and maintain competence and confidence.	Four	Some fear that they do not have the appropriate skills to enact extended roles and the need for further training is recognised. Adequate training and support will foster confidence and help allay safety concerns.
GP vs. PN	How the GP and extended PN roles differ and how the GP-PN relationship impacts implementation of role extension.	Six	PNs perceive their extended role as very different to the GP role and feel their role should enhance not be a substitute for GP care. The GP-PN relationship is one of the most important, facilitating the PN role, and knowledge about each other's roles and professional boundaries facilitates this GP-PN relationship.

Responsibility and accountability	Change in responsibility and accountability as a direct result of role extension	Six	Role extension results in greater responsibility and accountability and whilst some embrace this, there are concerns about safety, causing harm, risk and capacity to take on new roles within current practice and if working part-time.
Role boundaries and clarity	How clear are the extended boundaries of new roles and the consequences of lack of clarity.	Four	PNs perceive that new roles lack clear boundaries and that the lack of clarity impacts support for the role and trust and acts as a barrier to teamwork. New roles will only succeed if new role boundaries do not threaten the GP's professional identity.
Protocols/Straightforward cases	Managing straightforward cases and the role of protocols in facilitating the extended role	Five	PNs feel that they can manage straightforward cases without referring to the GP and that protocols and guidelines can help facilitate this, allowing GPs and specialist to manage more complex cases.

Table 8 Third-order interpretations

Concepts and translation	Second-order Interpretations	Third-order Interpretations
Benefit to patients Role extension improves access to care and enhances efficiency and continuity of care.	a. Role extension is beneficial to patients and PNs recognise the need to change but there are concern about support which impacts confidence. PN's wish to deal with straightforward cases and protocols and guidelines may help.	
Organisation and policy Primary care is evolving and PNs recognise the need to adapt and develop skills to meet the challenges and address patient need.	b. PNs recognise and embrace the need for change but fear they do not have appropriate skills and competence. Can deal with straightforward cases and protocols and guidelines may help with other aspects.	
Support and teamwork Support from the GP or specialist back-up is fundamental to the success of role extension, particularly when managing complex cases but there are some concerns that GPs may not have the knowledge to offer support as they are becoming deskilled. Confidence to enact new roles is directly dependent upon support. Lack of understanding about new roles can impact support.	c. Role extension allows GPs to concentrate on more complex care but will only work if the GP's role boundaries are not threatened. The use of protocols reduces need for GP involvement, therefore freeing their time.	
Training, competence and confidence Some fear that they do not have the appropriate skills to enact extended roles and the need for further training is recognised. Adequate training and support will foster confidence and help allay safety concerns.	d. Role extension improves access to care and allows DNEs to focus on more complex care but there is a need for adequate training and mentoring. Knowledge about professional boundaries enhances the GP-PN relationship and lack of understanding of the role may	e. **Recognise need and benefit –** PNs recognise the need for and benefits of role extension but have concerns about training, competence, confidence, accountability and responsibility which need to be addressed.

43

	impact support. Poor communication is a barrier to new models of care.	
Protocols/Straightforward cases PNs feel that they can manage straightforward cases without referring to the GP and that protocols and guidelines can help facilitate this, allowing GPs and specialist to manage more complex cases.		
GP vs. PN PNs perceive their extended role as very different to the GP role and feel their role should enhance not be a substitute for GP care. The GP-PN relationship is one of the most important, facilitating the PN role, and knowledge about each other's roles and professional boundaries facilitates this GP-PN relationship.	f. Role extension improves patient access, system efficiency and patient care. PNs manage straightforward cases using protocols and guidelines to inform decisions, using the GP as back-up, deferring responsibility. Professions hold deeply entrenched values underpinned by professional identities.	g. **Extended but not complex care –** Provision of adequate training is fundamental to the success of extended roles, enabling PNs to manage more straightforward cases, facilitated using protocols and guidelines, freeing GPs and specialists to manage more complex care.
Responsibility and accountability Role extension results in greater responsibility and accountability and whilst some embrace this, there are concerns about safety, causing harm, risk and capacity to take on new roles within current practice and if working part-time.	h. Interpersonal relationships and organisational climate are important to the implementation of PN's roles. The GP-PN relationship is the most important and GP support is a major facilitator for the PN role. Lack of trust primarily due to the lack of clear role description acting as a barrier to teamwork and less use of PN services.	
Role boundaries and clarity PNs perceive that new roles lack clear boundaries and that the lack of clarity impacts support for the role and trust and acts as a barrier to teamwork. New roles will only succeed if new role boundaries do not threaten the GP's professional identity.	i. Role boundaries are fundamental to the maintenance of discrete professional identities. Professions hold deeply entrenched values underpinned by professional identities.	j. **GP-PN Relationship and professional boundaries –** The success of role extension and confidence to enact new roles is directly dependent upon the support received. The GP plays a pivotal role in supporting the PN. The relationship between the GP and PN is

		important, facilitating the PN role and defining their scope of practice and knowledge about each other's role and professional boundaries enhances this relationship. However, extended roles lack clear boundaries affecting relationships and serving as a barrier to support and teamwork. PNs feel their role should enhance and not be a substitute for GP care and that new roles will not succeed if the GPs professional identify is threatened.

2.6.3 PN perceptions of role extension and diagnostic work in LTCs

Each concept and second order interpretation were considered in turn, with three third order interpretations ultimately constructed. During this process, second-order constructs are used to illustrate the concepts which provide the context upon which a line of argument is formed. Creating a line-of-argument is a process of inference in which elements of different studies or 'parts' are integrated together and a new interpretation of the 'whole' created. This line of argument therefore represents a different way of looking at the data and a new theory, which has been developed in the context of and may therefore help to explain the initial research question. The findings of this meta-synthesis will now be presented.

2.6.3.1 Recognise need and benefit

PNs recognise that their role is changing and that they would have to adapt and develop the skills required to meet the needs of their patients (Greaves et al., 2003) and enhance system efficiency (Greaves et al., 2003; Walsh B. et al., 2005; Welsh et al., 2014). Indeed, some PNs describe role extension as an essential feature of their work (Walsh B. et al., 2005) or in some instances a 'natural progression' (Welsh et al., 2014).

> *'it would seem like a natural progression of my role…I've done everything else: they've come in, I've assessed them, we've discussed what their treatment options could be, we've decided on a plan, I've prescribed and printed out the drugs. And then they say 'oh you know, I don't feel I can go back to work', I agree, and I have to say, 'oh well you will have to come back and see the Doctor'. Or I'll have to go off and find a Doctor, which is really time-wasting.* (Welsh et al., 2014)

Primary care is under increasing pressure to take on more responsibility from secondary and specialist care and whilst the expectation to embrace change was felt on both on a personal and at a peer group level, PNs felt they lacked control adopting a passive role in change as a policy-driven answer to unmet patient and service need (Greaves et al., 2003; Al Sayah et al., 2014).

'… because they've [other PNs] got other areas that are developed, I suppose they're just waiting for me to see which would be my role' (Walsh B. et al., 2005)

'Initially the role was very specific partly because of the objectives for the Primary Care Network [a network of doctors and other health providers working together to provide primary health care to patients]…' (Al Sayah et al., 2014)

There was consensus regarding the benefit of role extension to patients, with access to care and provision of continuity of care being most frequent cited (Greaves et al., 2003; Walsh B. et al., 2005; Manski-Nankervis et al., 2014; Welsh et al., 2014). PN services were perceived as more accessible than those provided by both GPs and secondary care specialists. Indeed, some felt that their new roles enhanced system efficiency and promoted continuity of care and that this legitimised extension to their role (Welsh et al., 2014).

2.6.3.2 Extended but not complex care

In 2015, Health Education England (HEE) published their vision of the future education and training needs for nurses, demanding further expansion of the PN role be inclusive of a greater level of complex care (HEE, 2015b). However, whilst PNs recognised and acknowledged the need for an increase in scope of practice, the desire to manage 'straightforward cases' thereby liberating the GP and/or specialist to manage more complex care was obvious (Greaves et al.,

2003; Walsh B. et al., 2005; Rosemann T. et al., 2006; Welsh et al., 2014; Manski-Nankervis et al., 2014). Complex care was seen to lie firmly in the remit of the GP and whilst there is an expectation that the PN role will evolve to meet demand, PNs had clear views on what constitutes nursing work, and delegated roles involving solely substituted GP tasks were perceived negatively (Walsh B. et al., 2005).

It is somewhat inevitable that expansion in scope of practice will result in a greater level of responsibility and accountability, a move that some PNs embraced (Walsh B. et al., 2005).

'Practice nursing has really, really taken off the ground, I mean I've been doing it for nine years now and it's changing all the time, it's really, it's high profile now and we are taking on a lot of extra responsibility and in the future will be even more, I imagine' (Greaves et al., 2003)

However, some greeted a perceived move towards greater responsibility with concern and apprehension and felt that this shift should be acknowledged through sufficient financial rewards (Greaves et al., 2003).

'I think we've got to recognize the level of responsibility and the GPs have got to recognize that and pay us appropriately.' (Greaves et al., 2003)

Degree of concern is likely to be depended on the individual PN and the specific task in question. Insulin conversion and dose adjustments were noted to cause particular unease and PNs raised questions about the legality of nurse-prescribing and accountability and indemnity if something went wrong (Greaves et al., 2003).

Naturally, such issued seemed more pressing to those less experienced nurses who appeared more risk-averse and reluctant to take on added responsibility and subsequent accountability (Welsh et al., 2014). Desire to manage 'straightforward' cases appears in part to be an answer to these concerns. The term 'straightforward' would imply that the condition is taking a more predictable course against which clear, objective and measurable goals can be set. The management of 'straightforward' cases therefore lends itself to the use of protocols and guidelines. Indeed, the incorporation of protocolised, guideline-driven care into the development of new roles was seen to confer safety and offer assurances regarding competence and confidence (Greaves et al., 2003; Walsh B. et al., 2005). Moreover, the development of protocols requires the input and support of experts; their use thereby permits further deference of responsibility to the GP or specialist and as such confers a sense of protection (Walsh B. et al., 2005; Welsh et al., 2014). The use of protocols and management of 'straightforward' cases should also reduce the need for direct GP involvement thereby optimising system efficiency.

'it would be very easy to do protocols you know…and if they actually fitted the criteria then you might think to go ahead anyway' (Walsh B. et al., 2005)

Role extension requires the acquisition of new skills and knowledge and PNs felt that the provision of appropriate training was fundamental to the success of this process (Greaves et al., 2003; Walsh B. et al., 2005; Rosemann T. et al., 2006).

However, whilst some were happy to undertake further training to meet the changing requirements of their role, the adequacy of training was raised as a concern (Greaves et al., 2003) having an additional deleterious effect on competence and confidence. Despite training, some PNs feared they lacked the skills and knowledge to enact new roles and/or to maintain

new skills once attained (Greaves et al., 2003; Walsh B. et al., 2005; Rosemann T. et al., 2006).

'I remember coming back and still not feeling confident enough, and I know that was what the other girls who were doing the course were saying' (Greaves et al., 2003)

The adequacy of training relates in part to the type of training provided. In some instances, the provision of formal theoretical teaching in isolation was deemed insufficient, with a need for practical, hands-on, experiential learning and mentoring clearly expressed (Greaves et al., 2003).

'I think if you had a mentor, she might well be another practice nurse that has had perhaps more experience in this task, I think they can be quite inspirational, and I have found throughout my training that's where I've often gathered confidence' (Greaves et al., 2003)

'I think we'd need to go to the diabetic centre for a couple of days, and work with the people that actually convert the patients onto insulin.' (Greaves et al., 2003)

2.6.3.3 GP-PN relationship

Good interprofessional relationships are essential for the successful implementation of extended PN roles. The GP-PN relationship is deemed the most important and influential, facilitating the PN role (Al Sayah et al., 2014) and defining their scope of practice. This relationship was felt to develop over time, facilitated by knowledge of each other's roles and role boundaries (Manski-Nankervis et al., 2014) and environments in which trust and respect

flourished resulted in better relationships, more collaboration and better coordination of care. Strong leadership was also important, fostering an environment in which interprofessional relationship thrived, enhancing role acceptance and facilitating integrative care (Al Sayah et al., 2014).

'If the physician validates that the nurse is part of the team and that the patients should trust her then that sends a huge message and facilitates my role' (Al Sayah et al., 2014)

'As my role has expanded, respect, trust and collaboration has evolved.' (Al Sayah et al., 2014)

However many PNs felt that extended roles were poorly defined with division of labour unclear and professional boundaries lacking (Walsh B. et al., 2005; Al Sayah et al., 2014; Manski-Nankervis et al., 2014). This was seen to have a detrimental effect on trust, working relationships thereby jeopardising the integrative team effort. Some PNs also felt that GPs may perceive role extension as a form of boundary encroachment and a threat to their professional identity (Rosemann T. et al., 2006), further hindering acceptance. Yet, PNs perceived their extended role as very different to that of the GP and were explicit that their new roles should enhance not be a substitute for GP care (Walsh B. et al., 2005; Welsh et al., 2014). PNs had clear views on what constitutes nursing work and the concept of a therapeutic nursing role as distinct from the medical, curative role was described (Walsh B. et al., 2005). PNs did not claim to possess the same technical expertise as a GP, and expanded roles were seen to add value to an existing set of practices rather than replacing the GP's role (Welsh et al., 2014). Despite widening their scope of practice, PNs felt that the extended roles should not encroach on the professional boundaries of the GP and perceived pressures to take on substituted roles involving delegated duties from doctors were largely unwelcome (Walsh B. et al., 2005).

'I just feel that it's very much a nursing role, I don't think that it's a doctor's role. Their skills lie in other areas and I think nurses' skills are communicating with patients and putting treatment into a form that they can work with and it makes sense to them' (Walsh B. et al., 2005)

Support was considered fundamental to the success of role extension with confidence to enact new roles directly dependent upon the support received (Greaves et al., 2003; Walsh B. et al., 2005; Rosemann T. et al., 2006; Welsh et al., 2014; Al Sayah et al., 2014). The supporting role of the GPs was seen as pivotal to the success of role extension, and whilst PNs acknowledged that they would deal with straightforward cases without onward referral, GPs were seen as 'back-up' and a resource for deciding on cases that were more complex (Walsh B. et al., 2005; Welsh et al., 2014).

'I would run it past the doctor in case there was some reason why it wasn't suitable' (Walsh B. et al., 2005)

'if you have any doubts you discuss it, if there are any worries that they may not be suitable you would discuss it with your GP' (Walsh B. et al., 2005)

Some PNs felt they had insufficient support from colleagues and described feelings of isolation and vulnerability (Greaves et al., 2003). The desire for more sources of support and supervision was clear and it was felt that a more integrative approach to care would facilitate this (Greaves et al., 2003). Mentoring was also seen as a valuable resource and a means of gaining practical advice as and when needed thereby boosting confidence particularly when new to a role.

The GP was not always considered the most appropriate resource with perceived lack of knowledge on the part of the supervising GP raised as a concern by some PNs (Greaves et al., 2003; Manski-Nankervis et al., 2014).

'They [GP] would be supportive in the emotional sense, but in the knowledge or the skill sense they wouldn't be able to offer enough support.' (Greaves et al., 2003)

'The doctor I spoke to showed quite a lot of anxiety about this…I think because they're not involved in insulin conversion all the time, maybe they're not quite as up do date as they want to be.' (Greaves et al., 2003)

It was therefore clear that whilst the GP remained the main source of support, confidence to enact some roles was dependent on improved collaboration with secondary care teams.

'What might be the best solution would be to have a specialist community-based specialist nurse, to actually just go from practice to practice, within a group of practices, to be responsible for the sort of higher level of diabetes.' (Greaves et al., 2003)

'It's important to feel that you can contact the people who are doing it all the time, because it does change' (Greaves et al., 2003)

Unfortunately, such contact appeared to be exceptional with those who had access to secondary care feeling 'lucky' to be granted such an opportunity (Manski-Nankervis et al., 2014).

2.7 Discussion

2.7.1 Summary of findings

The aim of this meta-synthesis was to explore PN perspectives of role extension and diagnosis in LTCs. Eight key concepts were identified and translated across the constituent studies ultimately resulting in the conceptual development of three third order interpretations. The resultant line of argument suggests that whilst PNs recognised the need for role extension there were concerns that must be addressed if new roles are to be successfully implemented. Concerns regarding training, competence and confidence and of accountability and responsibility were raised; partly answered by a desire to manage only straight-forward cases and/or engage in protocol-driven work. GPs were important as 'back-up' and an essential source of support. However, PNs felt that professional boundaries were unclear and that new roles lack clarity, resulting in poor recognition and lack of acceptance of these roles by other HCPs and patients.

2.7.2 Comparison with previous literature

PNs recognised role extension as a means optimising the capacity and efficiency of the primary care, improving access to services and facilitating continuity of care. Improved patient accessibility, potential for high quality care and greater career opportunities are all recognised in the literature as resulting from extended practice (Redsell, Cheater, 2008; Bonsall, Cheater, 2008).

Whilst acknowledging the need for change, PNs raised concerns regarding training, responsibility, accountability and indemnity. This accords with literature that suggest that legal liability can be unclear in team structures (Niezen, Mathijssen, 2014) and concerns regarding

accountability for shared care have been voiced by both those working in the medical and nursing domains (Schadewaldt et al., 2016; Rushforth et al., 2016).

Provision of adequate training was seen as a means of addressing some concerns and Halcomb et al suggested that PNs who lacked confidence to enact extended roles considered further training and education as essential when expanding their scope of practice (Halcomb et al., 2014). PNs also expressed a desire to limit their scope of practice to the management of 'straightforward' cases and saw the provision of guidelines and protocols as a means of facilitating this. Protocols have also been shown to legitimise the delegation or substitution of certain tasks (Niezen, Mathijssen, 2014) as they guide care based on objective measurements and provide an unequivocal pathway for the majority of 'straightforward' and usual care.

With regards the NP role, empirical evidence suggests that support from a medical practitioner is essential if the role is to evolve and that this in turn facilitates implementation of collaborative models of care (Schadewaldt et al., 2016). This accords with the findings of a 2010 integrative literature review of roles delegated from GP to nurse which concluded that whilst there was limited literature available, the need for continued support was acknowledged (Rashid, 2010). However, the ability to work autonomously and at a higher level of practice has been identified as a common factor among many extended nursing roles (Gilburt, 2016) which would imply that the extended role of the PN demands more than the provision of protocol-driven, 'straightforward' care.

Strong interprofessional relationships were considered important to the effective functioning of this team with the GP-PN relationship described as the most influential. This mirrors findings of previous research that identified both relationships and personalities as significant to the success of collaboration (Schadewaldt et al., 2016). PNs were generally positive about their relationship with the GP, which was noted to develop over time, facilitated by knowledge of each other's role and close working environment. However, interprofessional relationships were also described as a potential barrier to role extension with poor GP-PN relationships

associated with poor collaboration and a barrier to the multidisciplinary effort (McCarthy et al., 2012; Halcomb et al., 2014).

The GP was not always considered the most appropriate source of support and observations regarding inadequate training and knowledge of the GP were voiced. PNs suggested that taking on a task previously within the remit of the GP would result in the GP having reduced exposure to that task, and that the GP may therefore become inexperienced and 'deskilled' in performing that task. In line with this finding, the literature suggests that some clinicians now lack confidence in their knowledge of guidelines and ability to perform tasks such as insulin initiation (Rushforth et al., 2016). The need for access to other HCPs including those in secondary care was therefore raised.

PNs felt that their relationship with the GP was enhanced by knowledge of each other's role and role boundaries and boundary disputes can prove detrimental to interprofessional relationships (Schadewaldt et al., 2016). Changing role boundaries between primary and secondary care and between doctor and PN can result in uncertainty and unease about clinical responsibility and accountability (Rushforth et al., 2016) which resonates with the findings of this study.

PNs in this synthesis clearly felt that their new extended roles lacked clarity and that their role boundaries were unclear, a finding that has been widely discussed in the literature (Patterson, Del Mar & Najman, 2000; Redsell, Cheater, 2008; Akeroyd et al., 2009; McCarthy et al., 2012; Halcomb et al., 2014; Henderson et al., 2014; Niezen, Mathijssen, 2014; Schadewaldt et al., 2016).

Further comparisons with the literature will be made in chapter 5 and will be discussed in the context of the qualitative study.

2.7.3 Strengths and limitations

Meta-synthesis is a useful approach to the synthesis of qualitative research as it allows the extraction and consideration of data relevant to a specific research question with extrapolation of new theory and/or richer understanding than can be gleaned from the reading of single papers in isolation.

Meta-ethnography is the most common method for synthesising qualitative health-related research (Ring, Jepson & Ritchie, 2011) and was considered an appropriate methodological approach as it allowed the generation of higher order theories regarding PN perceptions and experiences (Atkins et al., 2008) and has been used to inform implementation of services and interventions (France et al., 2015). Meta-ethnography is meaningful in the primary care setting (Higginbottom, Pillay & Boadu, 2013) and its use in the study of nursing practice has been widely discussed (Cruz, Higginbottom, 2013). However, there are concerns about the quality of meta-ethnography reporting, with lack of transparency when conveying the methodology, analysis and results seen as a significant barrier to the utility of the research (France et al., 2014). The methods used in this synthesis were systematic and rigorous and reporting clearly defined and in line with the ENTREQ statement (Tong et al., 2012), thereby enhancing the utility of the findings. The need for a bespoke meta-ethnography reporting guideline is well documented and its development currently underway (France et al., 2015).

It is also acknowledged that qualitative synthesis represents an interpretation of an interpretation of an interpretation and the argument that this process results in a theory too far removed from the primary experience to reveal the truth has been raised (Toye et al., 2013). Interpretation is also dependent on the researcher themselves and their ability and willingness to be reflexive. To counter this, all second and third order interpretations have been included thereby allowing the process of conceptual development to be followed.

Six papers were included in the final synthesis. Ring, Jepson and Richie state that meta-ethnography should aim for theoretical saturation, the stage at which no new data appears,

and all concepts are well-developed, rather than comprehensive (Ring, Jepson & Ritchie, 2011). It is unlikely that this synthesis achieved theoretical saturation as no deviant cases were identified and some of the concepts could have been further explored such that no aspect of the theory remained hypothetical. Furthermore, the studies were conspicuous in their absence of data concerning PN perspective of their role in diagnosis.

Whilst failure to achieve theoretical saturation could be considered a limitation of this study, the original work of Noblit and Hare included examples of syntheses of between two and six papers, and the authors were explicit that exhaustive literature searches were not advocated as previously discussed (Noblit, Hare, 1988). This synthesis employed a thorough, systematic search and whilst it is unlikely that saturation was achieved, the methods used were rigorous and reproducible. Similarly, the search did not extend to the 'grey literature' and it is acknowledged that relevant literature may not have been identified.

As previously discussed, the merits of appraising qualitative research are not clear (Atkins et al., 2008; Toye et al., 2013) and the debate as to whether qualitative research should be subject to quality appraisal is ongoing (Mays, Pope, 2000; Atkins et al., 2008). Noblit and Hare did not advocate the use of quality appraisal (Noblit, Hare, 1988) and the vast majority of authors avoid conducting such assessment prior to qualitative data synthesis (Campbell et al., 2011). As argued by Sandelowski, Docherty and Emden, assessing and excluding papers based on the presence of minor methodological flaws may result in the exclusion of insightful studies (Sandelowski, Docherty & Emden, 1997). Campbell et al conducted an evaluation of the meta-ethnographic methodology and concluded that those studies deemed to be of 'weak' quality either do not synthesise or contribute only minimally to a synthesis without the outcome becoming unduly distorted (Campbell et al., 2011). This synthesis therefore used quality appraisal not as a measure of suitability for inclusion but to provide context in which the results could be discussed as follows.

Four of the included studies were characterised by a good description of the methodology and analysis process used (Greaves et al., 2003; Welsh et al., 2014; Al Sayah et al., 2014; Manski-Nankervis et al., 2014). Whilst deemed of value to the synthesis, the papers by Walsh et al (2005) and Rosemann et al (2006) lacked complete conceptual coherence, with some second order interpretations made without obvious grounding. However, translating the concepts across the studies demonstrated that the authors' second order interpretations were reciprocal to those made by the authors of the other four papers, and therefore relevant.

It is acknowledged that the quality of the synthesis could be further appraised by presenting the results to a PN focus group, thereby allowing the relevance of the findings to be assessed in a nursing rather than research context (Campbell et al., 2003). The results of both parts of this thesis will be discussed at an evidence-based PN group later in the year.

Three of the included papers were written between 2004 and 2006, a time that witnessed the beginning of a rapid and ongoing expansion in advanced nursing roles in the UK and other Western countries (Bonsall, Cheater, 2008). In comparison with current changes, role extension was in a stage of relative infancy during this time, potentially limiting the relevance of the data to current nursing practice. Moreover, the paper by Rosemann et al (2006) was set in Germany during a period when PNs adopted a mainly administrative role more akin to that of a modern-day Health Care Assistant as opposed to a clinical nursing role. Similarly, it was not always clear whether PN quotes related to a specific task such as insulin initiation or whether they were discussing role extension in general.

After careful consideration, these concerns were deemed task-specific, affecting the context within which the papers were written. In contrast, PNs perceptions of role extension were generalisable and not context specific. The concept of role extension and extending one's role therefore remained well-preserved throughout the synthesis. This became apparent when translating the concepts across the studies to create a line of argument. Concerns regarding training and support were evident throughout the papers and the line of argument

acknowledged the need for support and importance of interprofessional relationships. The interdependence of role extension and integrative care was also evident. The Five Year Forward View (5YFV) recognises "the need to identify the education and training needs of current workforce, equipping them with the skills and flexibilities to deliver the new models of care, including the development of transitional roles" (NHS England, 2014). Health Education England (HEE) will oversee the commissioning and expansion of new health and care roles through implementation of the Shape of Training Review for the medical profession and the Shape of Care Review for the nursing profession, which the 5YFV describes as a means of 'future proofing ' the NHS against the challenges to come (NHS England, 2014).

2.8 Conclusions

This synthesis demonstrates that meta-ethnography can be used to improve understanding of PN experiences of role extension which may help inform successful implementation of extended roles and improve healthcare service delivery. The findings offer a contribution to the literature, identifying factors that can facilitate or hinder the successful implementation of extended roles.

PNs were explicit about the need for clear professional boundaries and strong interprofessional relationships and the importance of integrated care was highlighted in the context of support. Further research may better inform healthcare service provision by eliciting the beliefs and experiences of other stakeholders.

The literature was devoid of PN perspectives concerning their role in diagnosis. Given that the future of the NHS is partly reliant on improving the efficiency and capacity of the primary care workforce, and this includes extending the role of the PN to include diagnostic work; it is of

great importance that this gap in the research be addressed. Failure to recognise and understand their perspectives may have a deleterious effect on plans to 'future-proof' the NHS.

Chapter 3 – Qualitative study: methodology and methods

This study explores practice nurse (PN) perspectives of role extension and diagnostic work in long-term conditions (LTC) including osteoarthritis (OA) in primary care. This chapter describes the chosen methodological approach, methods used and discusses why these were appropriate.

3.1   Philosophical position and methodology

The term 'qualitative research' is inclusive of a wide range of methods or ways to look at, question and study data. In its simplest form, the term 'data' means 'words' as opposed to 'numbers' which are the focus of quantitative research.

A research paradigm is "the set of common beliefs and agreements shared between scientists about how problems should be understood and addressed" (Kuhn, 1962). Research paradigms can be characterised by their ontological, epistemological and methodological perspectives (Guba, 1990). A researcher's philosophical position will therefore guide how their own research is undertaken. The nature of the research question and the characteristics of the participants themselves may also influence how data is questioned (Ritchie et al., 2014).

Some qualitative approaches are concerned with the use of language in social interactions such as discourse analysis (Potter, Wetherell, 1987) and ethnomethodology (Garfinkel, 1984), whereas others focus on the study of experience from the perspective of the individual such as phenomenology (Gallagher, 2012). Grounded theory describes a methodical collection and

analysis of data from which theories are then created (Glaser, Strauss, 1967). Many of these approaches are aligned with specific philosophical and epistemological ideals which ultimately inform the analytical process (Gale et al., 2013).

Ontology is the philosophical study of the nature of the world and what there is to know about it; 'what is the nature of existence?' (Crotty, 1998). The fundamental question here is whether there is a social reality which exists separate from and independent of the actions and beliefs of those in society (realism); or whether society is social constructed, being wholly dependent upon the perceptions and understanding of those living in that society (idealism).

Epistemology is concerned with the nature of knowledge, how we acquire knowledge and how we learn about reality. Epistemology can be considered as a way of looking at the world and how we make sense of it (Crotty, 1998).

There are a range of ontological and epistemological positions or ways to look at knowledge and the world which can guide research methodology. Positivism and interpretivism are two fundamental and antithetical epistemological philosophies which will be considered.

Positivism advocates the application of the methods of the natural sciences to the study of the social sciences (Bryman, 2016). Researchers that utilise a positivist approach believe in a single, immutable reality with research focused on the discovery of the 'truths' which can be measured and known within that reality. This philosophy assumes that the individual is shaped by society and as such is governed and constrained by law and 'social facts' including institutions, norms and values. In positivism, the purpose of research is for the researcher to decipher these laws and rules that govern human behaviour. The researcher remains detached from the participants of the research thereby remaining emotionally neutral, ensuring that the differences between reason and feeling are explicit (Edirisingha, 2012). As positivist research focuses on objectivity and evidence, it is often aligned with quantitative research methods.

In contrast, those utilising an interpretivist approach believe in multiple realities, and that individuals will experience these realities in different ways. For these researchers, knowledge of the world is based an individual's understanding and reflection of events, not solely on lived experiences (Ritchie et al., 2014). Individuals may therefore perceive an objective reality differently and knowledge is created by exploring the social world of the people being studied, focusing on their interpretation of this objective reality. Interpretivism suggests that human behaviour is not governed by law or social facts and is understanding of the subjective nature of reality. As interpretivism is concerned with understanding rather than explaining reality, it is more often associated with qualitative methods as opposed to the natural sciences. The second objective of this thesis was to investigate, through qualitative semi-structured interviews, the perspectives of PNs in relation to role extension and OA diagnosis. An interpretivist approach was therefore deemed appropriate for this research question.

3.2   Data generation – semi-structured interviews

In this study, the feelings, perceptions and lived experiences of PNs were explored through semi-structured interviews. Interviews are the most common method of data collection in qualitative research and semi-structured interviews are widely employed within the field of health research (Jamshed, 2014). Qualitative methods such as observation and focus groups can also allow in-depth enquiry and comparison between interviewees (Bryman, 2016). Focus groups allow moderated discussion of a specific topic, thereby drawing from individuals' complex personal experiences, beliefs, perceptions and attitudes. The researcher adopts a facilitative role in the focus group, remaining peripheral to proceedings. In contrast, the role of the researcher in an interview is more central and dynamic, acting as more of an 'investigator' rather than moderator (Nyumba et al., 2018). As such, the interviewing researcher is better

able to direct proceedings, eliciting the views of individual participants and allowing in-depth comparison between the interviewee (Bryman, 2016). Interviews thereby allow the researcher to "understand the world from the subjects' points of view, to unfold the meaning of peoples' experiences, to uncover their lived world" (Kvale, 1996). Interviews were therefore chosen to explore the feelings, perceptions and lived experiences of PNs.

Data saturation is used to inform the discontinuation of data collection and/or analysis and an estimate of the requisite number of interviews was required to inform an ethics application and protocol design. The concept of data saturation was first introduced by Glaser and Strauss in 1967 as part of their 'grounded theory' approach (Glaser, Strauss, 1967) and it is now widely accepted as an essential part of qualitative research allowing purposive sample sizes to be determined (Saunders et al., 2018).

However, doubts have been raised regarding the propriety of data saturation as a sole determinant of the adequacy of data collection and analysis (Charmaz, 2005). Determining qualitative sample size prior to the study can also prove problematic, especially in more interpretive models of qualitative research and it has been suggested that setting a provisional upper limit may be more preferable (Sim et al., 2018). A provisional upper limit can then be revised during the interview process.

In an effort to address uncertainties and inconsistencies in its use, Saunders et al (2018) explored the nature, purpose and uses of saturation, concluding that four different models of saturation exist, namely theoretical saturation, inductive thematic saturation, a priori thematic saturation, and data saturation. Inductive thematic saturation was used to inform this study. This model uses the development of themes and the emerging theory in the analysis process as the criterion for whether additional data collection is required; saturation is achieved when no further codes or themes can be identified which prompt new theoretical or clinical insights (Saunders et al., 2018). It was anticipated that approximately 20 interviews would be required to achieve inductive thematic saturation.

3.3   Data analysis

Data analysis has been characterised as the most complex phase of qualitative research and the need for a transparent, rigorous and systematic approach is recognised (Nowell et al., 2017). When considering how to approach data analysis it is important to give thought to the relationship between theory and research and how this might inform collection and processing of the information gathered. Deductive approaches are those in which theory guides the research; a hypothesis is generated for which evidence is gathered to prove or disprove. Inductive approaches are those where theory is the product of the research; evidence is gathered and used to generate theories and extract knowledge (Bryman, 2016). Qualitative research is most often considered an inductive process, although it has been argued that this may be an over simplification as processes are rarely examples of 'pure' induction or 'pure' deduction' (Ritchie et al., 2014).

This study was concerned with the way in which individuals interpret their social world and used semi-structured interviews to collect data about which general inferences were made and from which theories were generated. It was therefore appropriate to adopt an inductive rather than deductive approach, allowing exploration of PN perspectives and experiences of role extension in LTCs and how these have shaped their 'objective realities'.

Thematic analysis was used to analyse the data and coding was guided by the method of constant comparison (Glaser, Strauss, 1967). Constant comparison is an iterative and inductive method through which data is coded, recoded and analysed simultaneously (Charmaz, 2006). Iteration described a reflective process of repeatedly returning to the source of the data to ensure understanding. The process of going back and forth between data collection and analysis allows the researcher to identify which data is needed in order to refine their theories (Charmaz, 2006). This also allows the topic guide to be amended in line with emergent themes, thereby informing the next piece of data collection. The Framework Method

can be used to facilitate the coding process, as this provides a structured approach well suited to semi-structured interviews (Gale et al., 2013).

Constant comparison is often considered synonymous with Glaser and Strauss's grounded theory methodology (Glaser, Strauss, 1967) in which the process of constant comparison is important in developing a theory that is grounded in the data (Boeije, 2002). However, constant comparison is not a process exclusive to nor should it be confused with grounded theory. Strauss and Corbin defined a method as "a set of procedures and techniques for gathering and analyzing data"; methodology was defined as "a way of thinking about and studying social reality," (Strauss, Corbin, 1998). Constant comparison as a method does not itself constitute a grounded theory design; how the method is applied and whether the process if deductive or inductive will determine the methodology used to support it (Fram, 2013). Moreover, the process of constant comparison alone does not ensure the grounding of data (O'Connor, Netting & Thomas, 2008).

Thematic analysis is a method of analysing qualitative data to identifying patterns or themes within the data. Thematic analysis is a method rather than a methodology and as such, it is not tied to any specific epistemological or theoretical perspective (Maguire, Delahunt, 2017), thereby providing a highly flexible approach to analysis that can be modified according to the needs of many studies (Braun, Clarke, 2006). As the process of thematic analysis does not rely upon the researcher having detailed theoretical and technological knowledge, the method represents an accessible and viable approach to data analysis, often suited to those with minimal qualitative experience. However, there is a difference of opinion as to whether thematic analysis is a process to be used, or a method in its own right (Nowell et al., 2017). Moreover, whilst rigorous thematic analysis can produce trustworthy and insightful findings (Braun, Clarke, 2006), there's lack of consensus as to how best to rigorously apply the method (Nowell et al., 2017).

Of the many different approaches to thematic analysis, Braun and Clarke's six-step process (Braun, Clarke, 2006) is one of the most influential, offering a clear and workable framework

for doing the analysis (Maguire, Delahunt, 2017). Data was analysed using the process of constant comparison and the six-stage approach to thematic analysis outlined in Figure 4.

1. Familiarise yourself with the data
2. Create initial codes
3. Look for themes
4. Review themes
5. Define and name themes
6. Write-up of the themes

Figure 4 Summary of Braun and Clarke Step-by-Step Guide
to Thematic Analysis (Braun, Clarke, 2006)

3.4 Methods

This section will outline the methods used for this study. This will include detailing the application for ethical approval, recruitment process, creation of the topic guide, the interview process and data analysis.

3.4.1 Patient and public involvement and engagement (PPIE)

The National Institute for Health Research (NIHR) defines patient and public involvement and engagement (PPIE) in research as "research being carried out '*with*' or '*by*' patients, carers and members of the public, rather than *'to', 'about'* or *'for'* them" (NIHR, 2019). Patients have individual experiences of healthcare, and research can benefit from both their insight and their perceptions and understanding of their specific condition, ensuring that research remains relevant to the patient. Likewise, patients' carers and family members can share their experiences and often bring a different perspective than the patient. The NIHR also value

general public involvement in research, allowing research to benefit from the views of those in a given population (NIHR, 2019).

Public awareness of research and its impact is paramount and the NIHR define public engagement as "where information and knowledge about research is provided and disseminated" (NIHR, 2019). The active involvement of patients and the public in research is now considered good research practice, and it is acknowledged that high quality PPIE can inform all stages of the research process, improving the design and relevance of research, ultimately resulting in clearer outcomes (Blackburn et al., 2018). Such is the importance of PPIE that many research funding bodies now consider its inclusion as an explicit requirement (Blackburn et al., 2018).

This study was supported by the PPIE team at Keele University, which has over a decade of experience involving PPIE in health research (Jinks et al., 2016; Troya et al., 2019). Members of Keele University, Research Institute's Research User Group (RUG) were invited to participate in this study. Members of this group have been involved in over 70 different research and implementation projects looking at a vast range of conditions, treatments and interventions (Keele University, 2018). The group includes patients with LTCs including OA. Some participants were actively seeking healthcare at the time; others had prior experiences of being treated for their condition. The group contributed to the development of the study protocol and topic guide for the interviews. Members of the group also volunteered to be interviewed, which allowed me to gain experience in the skill of qualitative interviewing and 'test' the initial topic guide.

The short form of the Guidance for Reporting Involvement of Patients and the Public 2 (GRIPP2-SF) checklist was used to report the involvement of PPIE in my study (Appendix One). The two GRIPP2 checklists are the first evidence-based, consensus informed guidelines for the reporting of PPIE in research, which help to improve the quality, consistency, and transparency of the reporting process (Staniszewska et al., 2017).

3.4.2 Quality assessment

As discussed in Chapter 2 (pages 29-30), there is considerable debate within the research community about how best to judge the quality of qualitative research or indeed whether qualitative research should be subject to quality appraisal at all (Mays, Pope, 2000; Rolfe, 2006; Atkins et al., 2008). Unlike quantitative research which employs well recognised and validated statistical methods to assess the validity, reliability and generalisability of research findings, qualitative research has been criticised for being subject to researcher bias, and lacking scientific rigour and transparency (Noble, Smith, 2015). However, whilst the emotions and beliefs of the researcher and participants may be seen to bias and confound the results or quantitative research, they are considered essential to qualitative research, enriching and contextualising findings.

The creation of a single, generic method of assessing qualitative research relies on the assumption that the term 'qualitative research' represents a single, unified research paradigm. However, qualitative research comprises a diverse range of methods and methodologies that whilst sharing some ontological and epistemological characteristics, are actually very different in design and not comparable.

Given such diversity, some authors have sought to design quality assessment tools specific to a given qualitative method. The 'Consolidated criteria for Reporting Qualitative research' (COREQ) checklist is a list of criteria which aids the explicit reporting of important aspects a study including methods, findings, analysis and interpretations thereby ensuring data collected through interviews and focus groups are trustworthy (Tong, Sainsbury & Craig, 2007). Other methodological strategies to ensure trustworthiness of the research include data triangulation, respondent validation, engaging with other researchers to limit research bias, and ongoing critical reflection of methods (Noble, Smith, 2015).

Research bias in the study was reduced through regular, ongoing engagement between VT and the supervisory team (AF, CJ, C-CG). Reflection and reflexivity were used at all stages,

and VT was mindful of how her personality and roles as a researcher and GP could influence the data collected. Finally, the COREQ checklist (Appendix Two) was completed to ensure explicit and comprehensive reporting of important aspects of the study (Tong, Sainsbury & Craig, 2007).

3.4.3 Ethical approval

Ethical approval was obtained through an Ethical Review Panel (ERP2290), Keele University, and the Health Research Authority granted approval to conduct the research in NHS settings (IRAS REF: 201959). Ethics and IRAS approval documents can be found in Appendix Three. Participation by PNs was considered voluntary and participants permitted to withdraw at any time with confidentiality maintained and protected. All data were anonymised such that individual practices, nurses, and data extracts were not identifiable.

3.4.4 Topic guide

The interview topic guide was initially informed by results of the meta-synthesis and a review of notes from a Community of Practice (CoP) conducted as part of the ENHANCE study (Healey et al., 2015). The ENHANCE study aimed to develop and test the feasibility and acceptability of an enhanced PN-led LTC review, integrating the identification, assessment and supportive management of joint pain, anxiety and/or depression into a patients routine LTC review (Jinks et al., 2015). The study team used a CoP consisting of patient and PN advisory groups and three stakeholder workshops to help develop the proposed intervention.

Information regarding PN's perceptions of their role in the assessment and management of OA and LTC care gathered as a result of this CoP were used to inform the first version of the interview topic guide. This guide was subsequently refined in collaboration with the study's PPIE group. Members of the PPIE group were invited to take part in semi-structured interviews

to both ensure inclusion of subjects relevant and important to the patient and to allow me to gain experience in conducting qualitative interviews.

As discussed earlier in this chapter, the process of constant comparison was used and the topic guide further refined during data collection and analysis, in line with emergent themes. Please see Appendix Four for two examples of the topic guide.

3.4.5 Sampling and recruitment

Purposive sampling is a method frequently used in qualitative research to allow the identification and selection of specific cases related to the subject of interest (Palinkas et al., 2015). Purposive sampling was used in this study to identify PNs from general practices of varying demographics and size, thereby enabling a range of beliefs and experiences from PNs to be explored. The initial sampling frame comprised all general practices within the NIHR Clinical Research Network (CRN) West Midlands region. This list was stratified by practice size and by indices of deprivation. A sample of practices from high and low levels of deprivation, and of varying size were initially selected and PNs invited to participate. This was important as prevalence of LTCs and multimorbidity increase in line with socioeconomic deprivation (DoH, 2012b) and those people suffering from multimorbidity frequently experience poorer clinical outcomes, reduced quality of life and represent a higher demand on healthcare resources (Goodwin et al., 2010). The experiences and views of those nurses working in areas of higher socioeconomic deprivation may therefore differ from those working in more affluent areas.

All contact information was obtained from Clinical Commissioning Group (CCG) practice lists which are freely available within the public domain. Practices that had participated in either of two previous studies in which PN participation was pivotal were excluded. As previously discussed, the ENHANCE study aimed to develop and test the feasibility and acceptability of an enhanced PN-led LTC review which included the identification, assessment and supportive

management of joint pain (Healey et al., 2015). Similarly, the primary aim of the MOSAICs study was to determine the clinical and cost effectiveness of a model OA consultation (MOAC), implementing the core recommendations from the NICE OA guidelines in primary care (Dziedzic, Healey & Main, 2013). GPs and PNs received training to enable them to deliver the MOAC consultation. Practices involved in either the ENHANCE or MOSIAC studies were therefore excluded as their PNs may have a greater understanding of OA and how it is diagnosed than those PNs not involved in the studies. As discussed, information from the CoP undertaken to help design the intervention used in the ENHANCE trial was used for my initial topic guide.

A study pack was sent to eligible PNs via post. Each pack contained a letter of invitation (Appendix Five), an information sheet outlining the study and details of participant involvement (Appendix Six), a consent form (Appendix Seven), a participation reply slip (Appendix Eight), and a prepaid return envelope. Completed reply slips and consent forms were received via post and VT arranged interviews for those PNs who expressed an interest in participation.

Those PNs from whom a response had not been received within two weeks were sent an invitation reminder (Appendix Nine). VT also attempted to contact non-responders by phone. A further telephone call was made one-two weeks later to check receipt of the reminder. No subsequent attempts to contact non-respondents were made. The technique of snowball sampling (Goodman, 1961), in which existing study participants invite other potential participants from among their acquaintances, was used to supplement recruitment.

Twenty-four PNs provided written consent to participate. The demographic data of the practices in which the PNs worked were reviewed as part of purposive sampling to ensure that PNs working in all levels of deprivation were invited.

3.4.6 Semi-structured interviews

Data for this study were collected using semi-structured interviews. All interviews were conducted by VT and information continued to be gathered until data saturation was reached (Saunders et al., 2018). Interviews were conducted either by telephone or face-to-face, at the Research Institute for Primary Care and Health Sciences (now School of Primary, Community and Social Care) at Keele University or at the participant's place of work, according to PN convenience and preference. Consent to participate in this study and for audio-recording were obtained prior in advance of the day of the interview and verbally reaffirmed directly before the interview took place.

All interviews were digitally audio-recorded with written consent and transcribed verbatim using an approved transcription provider.

3.4.7 Data analysis

Data were analysed using thematically using the principles of constant comparison (Charmaz, 2006). The first three transcripts were coded and discussed with two supervisors (CJ and CC-G) and key themes agreed through consensus. Subsequent transcripts were coded, and themes reviewed and refined as part of an iterative process. The data were summarised and tabulated to include initial thoughts and reflections on each theme, an example of which is given in Appendix Ten.

Once all data had been coded and themes generated, the data set was revisited and compared to the themes to ensure that they were true representations of the data. Finally, the themes were defined, named, and the results written up.

This chapter has detailed the chosen methodological approach and discussed why this approach was appropriate. Application for ethical approval, the recruitment process, creation of the topic guide, the interview process and data analysis have also been outlined.

Chapter 4 – Results of Interview Study

This chapter responds to the second objective of this thesis, presenting the results of analysis of the semi-structured interviews which explored practice nurse (PN) perspectives of role extension and diagnosis in long-term conditions (LTCs) including osteoarthritis (OA). Section 4.1 will outline the sample and include a table of participant characteristics. The results will then be presented using six key themes: understanding role extension; role boundaries; competent, confident and comfortable; factors that influence role extension; the impact of evolving role boundaries; and the nurse role in diagnosis. A summary of the findings will be presented in section 4.8.

4.1   Sample characteristics

Eighteen PNs were interviewed. Seven interviews were conducted face-to-face and eleven via telephone, according to PN convenience and preference. All interviews were semi-structured.

The mean duration of interviews was 28 minutes and 6 seconds (range 22:06 – 36:48) and total accumulated interview time was 8 hours and 48 minutes.

Table 9 outlines the characteristics of the participants in terms of their experience and whether the interview was conducted face-to-face or via telephone. All participants were female.

Table 9 Nurse Characteristics

Unique ID	Role	Years as a Registered Nurse	Experience in General Practice	Specialist Areas of Interest	Interview type	Practice IMD Decile
IN_76	PN	18 years	8 weeks	Contraception and Sexual Health Services	Telephone	6
IN_87	ANP	35 years	35 years	None	Telephone	1
IN_111	NP	27 years	10 years NP – 6 years	Gynaecology Acute care	Telephone	1
IN_114	PN	6 years	3years	None	Telephone	1
IN_121	PN	40 years	13 years	None	Telephone	9
IN_135	NP	'Many years'	'many years' NP – 7 years	Cardiothoracic, A&E, and Rheumatology Lead nurse for diabetes	Telephone	6
IN_151	NP	11 years	6 years NP – 1 month	A&E	Telephone	4
IN_155	NP	14 years	14 years	None	Telephone	9
IN_175	PN	34 years	16 years	Staff nurse and Sister at a private hospital	Telephone	8
IN_188	NP	48 years	38 years	Midwife for 10yrs LTCs, acute care, minor injuries	Telephone	1
IN_191	PN	13 years	6 months	Acute Respiratory and Rehabilitation District nursing background	Telephone	1
IN_13	NP	17 years	17 years	Clinical Nurse Lead, QOF, independent prescriber	Face-to-face	6
IN_32	ANP	25 years	25 years	All LTCs	Face-to-face	7
IN_77	NP	10 years	7 years NP – 2 years	Adult nursing Community nursing experience	Face-to-face	4
IN_82	NP	29 years	29 years	Midwife before training as a PN	Face-to-face	10
IN_83	NP	32 years	32 years NP – 14 years	None	Face-to-face	10
IN_125	PN	16 years	2.5 years	Cardiology and Intensive Care	Face-to-face	6

IN_139	PN	42 years	18 years	None		Face-to-face	6

ID – Identifier; PN – Practice Nurse; NP – Nurse Practitioner; ANP – Advanced Nurse Practitioner; A&E – Accident and Emergency; QOF – Quality and Outcomes Framework; LTC – Long-term Condition; IMD – Index of Multiple Deprivation

4.2 Understanding role extension

4.2.1 The general practice nurse

Three levels of general practice nursing were identified by participants, namely the PN, the nurse practitioner (NP) and the advanced nurse practitioner (ANP). However, most participants referred to themselves as a PN regardless of level of advancement. Participants recognised that the role of the general practice nurse had undergone significant changes over the last two decades and ongoing evolution of nursing roles was acknowledged as inevitable.

"I've done some bloods this morning… but that is the role of the healthcare support worker here whereas when I look back in 1986 it was like the role of the doctor… the extension from there to what we do now it would have been mind blowing wouldn't it in 1986 to think that you would have a nurse sitting in a doctor's surgery seeing all the minor illnesses" (IN_83).

"I can see that the healthcare supporter workers role is evolving you know the healthcare support worker is becoming, taking the place of the practice nurse role" (IN_87)

Most participants agreed that the role of the general practice nurse demands a wide range of skills. However, the extent of an individual's remit and the degree to which their duties were

explicitly defined was dependent on level of advancement. Participants associated the role of the less advanced PN with a specific set of tasks and/or defined sets of patients with already diagnosed, stable chronic conditions, or an explicit and specific health need such as cervical screening and immunisations.

"a practice nurse is really dealing with a, a already diagnosed condition so they might be monitoring that, that or existing condition, there's been a diagnosis made… (IN_111)

"I find the, the erm, Practice Nurse was doing the general duties – cervical smears, baby immunisations – that type of thing; whereas now, I'm more focusing on minor injuries or minor problems – chest infections – that type of thing as the Nurse Practitioner role." (IN_77)

In contrast, the role of the ANP was compared to that of a doctor seeing patients with a vast array of unpredictable problems for which diagnosis may be required in some instances; the need to be a "Jack of all trades" was cited by participants in more advanced nursing roles. Other examples of the participant's description of their scope of practice are given in Appendix Eleven.

"Where a nurse practitioner's more likely to be dealing with the diagnostic end of things. You're seeing the patient who has an undiagnosed condition and you are in, in effect you are obviously making a diagnosis in whatever that might be… it could be any condition that is coming in really." (IN_111)

Whilst the breadth of knowledge and skills associated with the advanced PN role was mostly seen in a positive light, one participant cited this as a disadvantage specific to the general practice nurse.

"I still think I'm a bit of a jack of all trades really, which is not great but I suppose that's how it is at the moment… Well they always say a master of none then don't they… I suppose in GP land you are aren't you a little bit as nurses." (IN_125)

Three general practice nursing levels were recognised. The more extended and advanced a role, the less defined the remit. The remit of the ANP included patients with unpredictable problems and the ANP role was believed comparable to that of a doctor. However, as discussed in section 4.3.1 (pages 82-87), nurses were explicit in their need for the nursing role to be distinct from that of the doctor.

4.2.2 What is role extension?

'Role extension' was described as something new and outside of the norm for a given role. Participants suggested that extending a role required the development and attainment of new skills and/or knowledge, resulting in additional responsibility. There was a difference in opinion as to what the norm was for a PN. Some participants considered the norm to be the usual duties and competencies of the individual PN. Others considered the norm to be the basic job description of a PN, with role extension representing any task over and above this remit. These definitions are not mutually exclusive, and both suggest that there is a definable point from which a role can be extended or to which specific tasks can be added.

"…whatever your basic level of expectation is in your role as per your job description when you first start that's your baseline and then a role extension to me would be… taking on an additional role to what was from your base line…"(IN_13)

"Well that's when you're taking on extra skills and, er, things that you do in your day-to-day job that your initial training doesn't cover or qualify you for but obviously for me is taking on the minor ailments and injuries was role extension, and moving from being a practice nurse to a nurse practitioner." (IN_188)

Participants identified specific examples of extended roles including independent prescribing and the NP role. However, some participants found it difficult to define the role of the NP and/or separate it from that of the PN. Whilst participants agreed that transition between the two roles required attainment of new knowledge and/or skills and experience, the exact changes required to become an NP and the boundaries separating the roles were unclear. Rather than an explicit transition with a clearly defined beginning and end, participants felt that the process of becoming an NP involved a combination of natural extension and acquisition of tacit knowledge, and the explicit gaining of additional qualifications.

"I think the, the fundamental difference is obviously erm, down to, you know, qualifications and experience" (IN_155)

"I think if you asked the practice nurse here, our differences between nurse practitioning and practice nursing, yes, we diagnose and they don't, but really, the, the borders are getting more and more, sort of grey." (IN_135)

Most participants therefore felt role extension was context-dependent, with definition relevant to the norm for that individual; any task considered to be the norm for that nurse was not an

extended role. This implies that a discrete change in remit will only be considered an extension to a role for a finite amount of time, until it becomes the norm for that individual.

"I don't think of anything to be an extension because I've been doing this role for so long so I did my prescribing at the end of my degree in 2004 so I've been prescribing now for 12 years so that doesn't feel like a role extension it's my role isn't it."(IN_83)

"I think it all depends on the individual because what could be an advanced skill for one person might not be for another." (IN_155)

Role extension was described as something new, or an addition to a role. It is context dependent with definition relevant to the norm for that individual and a change in remit will only be considered as an extension for a finite amount of time, until it also becomes the norm. The more a role is extended, the less defined and predictable a nurse's scope of practice becomes.

4.3   Role Boundaries

4.3.1 "Nurses are not Doctors"

As described in section 4.2.1 (pages 78-80) some nurses likened the ANP role to that of a GP. Indeed, some participants perceived advanced nurses as replacements for GPs, with role extension representing a response to the recruitment and retention crisis in general practice.

"all this advancement in nursing because there is a shortage of doctors so they're hoping to fill the gap really."(IN_82).

"…there won't be as many doctors so somebody's going to have to take that up aren't they?" (IN_125)

Whilst participants agreed that advanced nursing roles may represent a potential solution to ease some of the workforce pressures, they were clear that nurses should not be used as substitutes for doctors. Indeed, most participants were explicit in stating that they were nurses and that they did identify with the doctor role.

"Because I'm not a doctor and I don't want to be a doctor… If I'd have wanted to be and take that responsibility, I'd have gone that way. But I wanted to be a nurse." (IN_82)

"we are not doctors, we don't want to be doctors and often patients will say to me, are you going to be a doctor and I'll be like, no I've spent this how many years training to do the role that I do I've spent as many years doing training as it would have taken me to be a doctor but I don't want to be a doctor, I'm a nurse, ultimately I'm a nurse" (IN_13)

Despite a clear desire for nurses to maintain their own distinct professional identity, most participants acknowledged that the professional boundaries between advanced nurses and GPs were becoming increasingly blurred and that advanced nursing roles were slowly evolving into doctor-type roles.

"So we're, we're looking at sort of advanced nurses really. Almost junior doctor type thing" (IN_82)

"I mean the Advanced Nurse Practitioner is almost like a doctor" (IN_76)

However, some clear differences between the remit of the advanced nurse and that of the GP were acknowledged. Participants felt that GPs had greater knowledge than nurses and the role of a doctor was associated with greater responsibility. One participant described a GP's knowledge as 'medical', and implied that this knowledge was inherently different to that of a nurse.

"…obviously I'm not a doctor and I know I'm, and I can't do the full set of skills that they do, that they have." (IN_111)

"... because our patients are so awfully complex, some of them – it helps to have a GP, with his medical knowledge, to step in and review" (IN_135).

Participants also perceived the nurse-patient relationship to be different to the GP-patient relationship and believed that there was a difference in the quality of the care provided. Some felt that nurses were more in tune with patients and better able to look at the whole picture rather than just the presenting complaint. Some participants suggested that nurses were more able to offer holistic care, being more receptive to and having better insight into the emotional needs of the patient.

"You're looking at the whole person and you're looking at their eye contact and you look, you say 'are you sure you're alright?' And you can often pick up different things with them. And I don't think the doctors are really good at that 'cos they're more focused on what they've come in with." (IN_82)

"… often it's extra things because we see the whole person, you know, because we know them well in general practice, we know the impact that whatever their illness is having on their family… And we get a really good relationship with our patients and often that's a different kind of, er, relationship with nurses than it is with doctors and I'm not saying that's wrong I think it's just different." (IN_13)

Participants believed that there were clear differences in the remit of the nurse and doctor. The management of patients with complex care needs was perceived as lying firmly in the remit of the GP, as meeting the needs of these patients was believed to be beyond the abilities or competencies of the nurse. A patient is considered to require complex care if they suffer from multiple chronic conditions (multimorbidity), have mental health problems, drug interactions and social vulnerability, which can result in overuse, underuse or misuse of healthcare services (Bujold et al., 2017).

"in my practice they are dealing with the more complex cases and let's face it, the people are getting evermore complex… They've got, you know, ever-extending comorbidities and polypharmacy there… I find them more complicated… So I feel that they're good at dealing with the more complex things" (IN_111)

"I always say that the GPs maybe their roles are more complex um conditions and I certainly haven't had a doctor's level of training in my background, you know I haven't got all those skills or the knowledge um to do with certain things." (IN_87)

However, participants felt that they still had an important role to play in complex care. Some described their involvement as an assessment prior to GP review allowing the nurse to request investigations and gather information to inform further input by the GP. Managing preparatory

work was also considered important as it devolved work to the nurse thereby reducing GP workload.

"…when they do see the doctor the following week or you know if it's blood tests say the doctor's got all that information there and then with their greater knowledge than me knows exactly what to do with the patient then" (IN_188)

"…they've got nurse practitioners that can see… well they class it as some of the easy stuff but it's not easy it's just time consuming isn't it, it doesn't need to be seen by a doctor."(IN_83)

Many of the participants explicitly stated that they did not manage patients with mental health problems, and clearly stated that this was not a nursing role. One nurse specifically stated that she had no desire to manage mental health and that the decision to exclude mental health patients from her remit was made in conjunction with the practice.

"we don't tend to see people with, erm, depression or, sort of, psychiatric needs" (IN_135)

"…we don't do mental health… no it's not something I want to do we've discussed this as a practice" (IN_83)

Participants identified a few other specific patient groups who were excluded from the nursing remit. One independent nurse prescriber described how she was not permitted to see pregnant women due to perceived inherent complexities with prescribing. Similarly, patients with chest pain were considered outside of her remit as it was felt that these patients would need to be

seen by the GP and/or admitting to hospital. The nurse agreed with these constraints stating that both patient groups should remain within the remit of the GP.

"… pregnant ladies is because of – well, if they need medication then, you know, there's such a small – erm, your formulary is small erm, and at the end of the day, we're not doctors; we are nurses with extended skills erm, and chest pain – well, I suppose at the time, we did admit to the hospital erm, so you'd have to call on the doctor anyway and then you're taking up two clinicians' time, you know." (IN_32)

In summary, participants recognised a blurring of role boundaries between the ANP and GP but there was an explicit desire for the nursing role to be kept distinct to that of the doctor. The role of the GP was associated with greater responsibility and the GP was seen to have a greater breadth of knowledge than nurses and better able to manage specific patient groups such as those with complex care needs. Other patient groups were also identifying as lying outside of the nursing remit including patients with mental health problems. Participants believed that the quality of care provided by nurses was different to that provided by a GP, with nurses offering more holistic, patient-centred care, as opposed to the more focused and problem-centred care delivered by the GP. The conflict between these two perceptions will be considered later in this thesis (pages 137-138).

4.3.2 Clarity of Role Boundaries

As discussed, participants believed that the more the PN role is extended, the less defined and predictable that nurse's scope of practice becomes. A blurring of the boundaries between different nursing roles was therefore described.

"I don't think there is much clarity at the moment. Well, I think, you know, there's nurse practitioners, there's general practice nurses, practice nurse or, you know, advanced nurse practitioner who don't know what's what, and nobody's got a real job description as such." (IN_144)

There was consensus amongst participants that more clarity is needed to help define nursing roles and that this could be achieved through provision of a nationally defined set of qualifications and skills required to attain each level or grade of nursing. It was felt that specific and defined role descriptions would ensure that extended roles were explicit and clear and that this would facilitate timely access to the most appropriate nurse for a given healthcare need. Participants also believed that this may help prevent the unwarranted use of advanced nursing titles.

"I think from a national point of view it's been in the journals for a long time about needing to identify a set of qualifications that a nurse practitioner or an advanced nurse practitioner needs to have in order to do the role, er, so that's something that needs clarifying." (IN_188)

"you get some nurses who call themselves advanced nurse practitioners but they've got not no other qualifications than I've got. It's a real myriad I think at the moment, nobody really knows you know you can be a nurse prescriber and call yourself an advanced nurse practitioner but you're not really." (IN_121)

However, despite the theoretical benefits of nationally defined roles, participants recognised that a nurse's remit can be extended in a myriad of different ways and that capturing all possible combinations of role extension in a workable set of definitions would be difficult and

likely unfeasible. Moreover, when a role evolves through the acquisition of tacit knowledge as opposed to attainment of a specific qualification or skill, the issue of role clarity becomes more complex. Participants therefore recognised the tension between the desire for nationally agreed definitions and reality at practice level.

"oh you're just a practice nurse well I would say no I'm not just a practice nurse I'm a role extended practice nurse… I'm called the practice nurse and a nurse who's just come out of uni and done a six-month practice nurse course it is called the practice nurse" (IN_121)

"I think within a given workplace there probably is clarity because the nurse practitioner will say to the receptionist that yes by all means book those groups of patients in with me. So I think at the individual workplace there should be clarity but from a national overview point of view I don't think there is." (IN_188)

In the absence of nationally agreed definitions, some participants described the development of an understanding at the practice level, with team members aware of the abilities and specific remit of each clinician. This level of understanding helped facilitate appropriate access to care and most participants recognised the role of receptionists as gatekeepers, recognising boundaries and booking patients with the correct nurse according to scope of practice.

"Clarity is quite good because the receptionist has got it down to a T because they do tell them that we deal with minor illnesses and ailments such as, and normally what will happen on a phone call they say such as coughs, colds, sore throats, urine infections and before they carry on somebody on the other end will say oh yeah – yeah I'll see her then yeah that's fine yeah…" (IN_83)

In contrast, one participant felt that receptionists made assumptions about their role, booking patients inappropriately based on her advanced nursing status. This again demonstrates that the more advanced the role, the less predictable the nurse scope of practice.

"I think because my role's extended, the reception staff probably feel, 'Well, [IV] can sort that out'. '[IV] can do that because she does that diabetes'. (IN_77)

In addition to detailing what a nurse can do, clearly defined role boundaries were considered important in specifically detailing what a nurse cannot do, thereby ensuring that a nurse is not tasked with things outside of their competencies or abilities, conferring safety. Participants felt that this helped to address unrealistic expectations, be they of the health care professional (HCP), receptionist or patient. Explicit role boundaries would therefore help empower a nurse to say no to tasks that lie outside of their role.

"Because it clarifies what I can and can't do, to me." (IN_82)

"Well [sighs] clarity equals safety doesn't it?... if another healthcare professional doesn't know what my role entails, they might ask something of me that I'm not competent to do." (IN_111)

Most participants recognised that the variation in nursing roles between practices could cause confusion for patients. Patient perception of the nursing role was considered important and patient expectations were seen as a barrier to acceptance of extended roles. Participants described a need for patient education to help address these expectations, thereby improving patient acceptance of differing roles and facilitating better patient access to the most appropriate HCP.

"I think they're still learning about the extension of the nurse's role. They don't realise what nurses can do because the nurses – the, the role of the nurse has changed dramatically over the last five years really." (IN_32)

"Patients will say, well I don't want to go and see the nurse because I need prescription so I think there needs to be quite a lot of education in the public that some nurses can prescribe but they need to be called something different so we don't confuse people." (IN_121)

Participants also described how provision of a clear set of role boundaries would facilitate appropriate financial recognition for the role performed and promote provision of equitable pay. Some nurses described inequitable salaries with financial reward related to a nurse's negotiation skills or GP opinion rather than actual role or responsibilities.

"I wish there was a rather clearer role on what the difference is, and, erm, probably really, to do with the pay scale and all things like that, that we all have an equal pay. I think we should be treated equally, really, rather than GPs treating us as if we can just be paid whatever they think." (IN_144)

"so in one respect you're taking on this really advanced role potentially but it's down to the nurse's negotiation skills as to whether they actually are financially rewarded for the role that they do" (IN_13)

The impact of poor role clarity outside of the general practice environment was also recognised. A lack of recognition of the general PN role was described and there was a perception that some HCPs were not appreciative of the spectrum of the skills required to fulfil

the role. One nurse felt that lack of understanding of the role resulted in inappropriate delegation of duties from those working both within and outside of primary care.

"I think, erm, I think a lot of people think it's a cushy job and it's not." (IN_144)

"I think we all need to know what everybody's role is and to my way of thinking, everybody says 'No', right?. District Nurses – 'Not my problem. You do it'. Midwives – 'Not my problem. You do it'. Doctors – 'Not my problem. You do it'. Hospital – 'Not our problem. You do it'. Where do we say when we're not doing it?" (IN_139)

Participants also described how lack of recognition had resulted in resistance from secondary care, with some staff refusing to accept referrals from a PN despite ownership and responsibility of the patient and their care. The implications of such prejudice and resultant barriers were recognised, with lack of collaboration having a direct impact on patient care and service delivery.

"I think one of my biggest things; sometimes the resistance I get from external agencies. So erm, obviously in the role that I'm developing at the moment, if I find a patient that I need to refer on to the hospital... I quite often reach erm, a bit of a stalemate that they don't want to accept my referral because it's down to commissioning and they – it's, it's difficult. You know, I've tried to point out that, you know, I'm in an advanced role; you know, it's my patient. I've seen the patient. It's all of my assessment" (IN_155)

In summary, participants agreed that clearly defined role boundaries would help foster understanding of the different nursing roles. Role definitions were considered at a national, practice and individual level. Participants recognised the problems inherent in creating Nationally agreed definitions. Clarity at the practice level was deemed more realistic and achievable, helping patients to access appropriate care. Participants recognised that defining what a nurse cannot do was as important as defining what they can do at all levels, fostering safety and ensuring nurses work within the boundaries of a given scope of practice.

4.4 Competent, confident and comfortable

4.4.1 Support and 'Back-up'

As previously highlighted, participants understood the importance of recognising their own professional boundaries and were clear in their endeavour to work within their individual scope of practice and specific areas of expertise.

Participants used the terms 'competence' and 'confidence' when describing roles they would be happy to undertake and that their scope of practice could only change if they felt competent and/or confidence to perform the extended role. The expression 'comfortable with' was also used, implying that one would need to acquire competence and develop confidence to become comfortable in a new role.

> *"if there's anything on the day that you're not quite sure about, you would go and ask the Duty Doctor. There's something there about knowing your own boundaries, isn't there? (IN_32)*

"But I think it's knowing where you're comfortable." (IN_82)

Participants acknowledged that working within boundaries involves recognising limitations and seeking help when needed. The need for support was therefore intrinsically linked to the concept of being comfortable, with advice sought for matters falling outside of the nurse's comfort zone. All participants were explicit about the need for ongoing support for extended roles. Even when not immediately required, knowledge that support was readily available helped to prevent feelings of isolation. As such, even advanced nursing roles are not truly autonomous with nurses requiring support when managing something outside of their professional boundary.

"I wouldn't do anything I wasn't comfortable with… I will ask if I'm not happy, you know." (IN_175)

"it's just knowing that I'm not on my own really" (IN_125)

Participants perceived the GP as the main source of support in primary care and nurses described seeking advice for a myriad of reasons. Some stated that they sought advice of the GP if a patient's condition was not stable or well controlled. This is consistent with the perception that complex care lies within the remit of the GP.

"… you just need to be aware of your limitations as this patient's no longer controlled, I don't know what to do with them, I need to go and ask somebody" (IN_13)

"if it was something that I didn't feel comfortable with and they weren't stable I would get a GP review" (IN_188)

Participants saw the provision of support as protective, allowing them to relinquish responsibility when needed. The security engendered by GP support also fostered an environment for learning, allowing the participants to test theories and make diagnoses within relative safety. Whilst this allowed the nurse to be risk averse at times, it was recognised that this would likely lessen with continued support and experience. Indeed, the need for support would also lessen with time as extended roles become the norm for the nurse.

> "for me it's knowing when I need to see a doc, you know, ask a doctor or this is okay really. Erm, I probably err on the side of caution really at the minute but that's how it is" (IN_125)

> "I like the fact that I have got a doctor. 'Cos sometimes I get it wrong and sometimes we just need that second opinion" (IN_82)

Participants identified other sources of support within primary care. One nurse stated that she seldom sought help from the GPs, rather seeking advice from her peers. This was intrinsically linked to the provision of nurse-led care within her practice and the perception that GPs had become too 'deskilled' in some areas to be able to offer the correct advice.

> "I'm fortunate that because we're big (there's 11 nurses altogether in our practice) so I'm lucky that erm, you know, there's always people where you can go and discuss what you've heard, what you've read erm... how it fits in with our model of care and – which is basically nurse-led… we've deskilled our doctors" (IN_139)

Participants perceived deskilling to be a direct result of the blurring of professional boundaries and substitution of roles doctors' roles. One participant expressed concerns that GPs may

continue to offer advice in some areas despite concerns regarding competency, possibly resulting in the wrong advice being given.

"if they have a problem with diabetes they send me a task, if they have a patient who's got problems with blood pressure, they will send [PN1] a task. You know, so they never had to deal with any of it. So, they weren't used to prescribing the medication for hypertension or diabetes, they weren't familiar with the new drugs coming in. So, I think, from that point of view, it has – that could be a question mark really for the GPs really" (IN_135)

"We've deskilled them... and if they do give advice, they give the wrong advice" (IN_139)

One nurse stated that when faced with a clinical scenario beyond her understanding, she would refer to a team outside of the practice rather than consulting GP colleagues. This implies that the nurse believed her knowledge to be at least equivalent to that of the GP and that seeking clinical advice would not be beneficial.

"I think I would probably get the spirometry repeated in three months' time and then if the patient, if it's still no clearer again I might refer on to tier three respiratory nurses and see what they make of it" (IN_188)

Two of the nurses stated that they had good relationships with the members of the Diabetic Specialist Nurse (DSN) team in secondary care, providing an invaluable source of advice and guidance. However, the participants recognised that this level of support was not universal, resulting directly from the relationships that had developed over time.

"I know the Diabetic Team in Tier 3 and 4 and they know me. So, I can always pick up the phone and ring and get advice, but if you were saying is that normal for the whole of Stoke and Staffordshire, I wouldn't know because it's not something that's set up." (IN_135)

"the Diabetic Specialist Nurses have come to our meetings and then we've got to know them and built a rapport and, and I think that's the way to do it. I can't think of a better way." (IN_32)

Contrary to this, some participants discussed difficulties in accessing support outside of primary care with one stating that the same DSNs were particularly difficult to contact.

"I think that as far as general practice goes it's very difficult to get hold of diabetic specialist nurses, er, you know and to pass care on and backwards and forwards" (IN_13)

Participants acknowledged that the phenomenon of deskilling was not unique to GPs, and several advanced nurses recognised the struggle to maintain competence in some of the basic practice nursing skills.

"… you've got to back to the basics; the foundation building blocks… I think it's a skill nurses are losing... because we're becoming so technical." (IN_139)

"So yeah, I do get deskilled and I, about some things and I make sure that I get the odd smear booked in so that I don't lose that, erm, ability" (IN_111)

Nurses were clear regarding the need for ongoing support to enact extended roles cited the need to feel comfortable to do so. Support was in the main provided by the GP although other sources of support were identified both from within and outside of general practice. Participants discussed deskilling as a direct consequence of role extension and recognised this phenomenon in both the GP and the advanced nurse.

4.4.2 Do course, become expert?

As discussed, participants felt that a role could extend through the acquisition of tacit knowledge, and/or the explicit gaining of additional qualifications. However, role extension is leading to greater responsibilities and more autonomous working and participants recognised that the methods used to attain new skills and acquire knowledge have adapted over time to reflect these changes, with formal training being of increasing importance.

"about ten years ago you used to be able to go to the local family planning clinic where they fit the coils and shadow whoever it was doing it and then they would watch you doing some , you know, the usual way of learning a new skill." (IN_188)

In keeping with this, most participants agreed that role extension usually required formal training and the acquisition of new knowledge or attainment of a new skill. This implies that training is a prerequisite for most role extension. Indeed, courses and training were considered essential to extending one's role in most circumstances.

"I went on and did more training in lots of different, lots of different areas and erm... picked up the skills that I needed" (IN_155)

"I worked on a gynaecology ward 11 years, didn't know how to do a smear. Never been trained to do one…" (IN_111)

However, proof of competence alone was not deemed sufficient to comfortably enact an extended role. Indeed, participants acknowledged that confidence to enact a role could only be gained through experience; doing a course does not make you an expert. Participants recognised mentoring and observation as means of cementing formal learning through the provision of supervised experience.

"so they'd have the initial training and then the – I would hope they would then shadow the nurses already working – er, running those clinics and can learn the skills as well. It's not just the – you know, not just the knowledge – the background knowledge" (IN_32)

"obviously that's erm, come with training and erm, working with a lot of other people to try and build on those skills." (IN_155)

Despite expressing this opinion, one participant stated that she managed the diabetic patients in her practice without having specific training in diabetes or proof of competency, rather using basic practice nurse training and self-directed learning to inform practice. Whilst this nurse felt that she would probably manage patients differently were she to receive formal training, she stated that she was able to recognise her limitations and seek help when needed, an opinion expressed by all participants.

"I've done a lot of reading, I go to meetings if there are any and when it's convenient for me to do so but I've done a lot of reading so it's that mainly… No I haven't got any formal training for the diabetes" (IN_188)

"… obviously you build on that knowledge and experience each patient that you see but you know you might, when you start off you don't know the question you'll go and ask somebody and then you build on that over the another time so you definitely need, the longer time you've had doing it the more skilled I think you are at doing it" (IN_188)

Participants recognised the provision of ongoing support as essential to the feasibility and success of role extension. Support was reliant upon the ability to recognise and work within boundaries, allowing the nurse to seek help when faced with tasks that they did not feel comfortable to perform. Participants used the term comfortable to describe roles they were happy to undertake, recognising that competence alone was not sufficient. Whilst formal training and official qualification were therefore important, they were not considered adequate to engender comfort in a role. Experiential learning enabled a new often taught skill to become comfortable and the norm.

4.5   Factors that influence role extension

4.5.1 Service delivery

Participants believed that a nurse's scope of practice could be governed by many factors and there was consensus that the needs of the patient and practice were the most influential with improving patient access and optimising service delivery often key.

"the way things are evolving because it's a matter of better access, to get on the day appointments, so that's why the nurse practitioner role is becoming more prevalent" (IN_87)

Practice size and the number of clinical staff delivering care were also considered important. Nurses working within larger practices described developing their skills in one or two specific areas, whereas the needs of the smaller practice often demanded that a nurse maintain a more generalised remit.

"in our role you do need to be sort of very varied at everything, I'm not saying you have to be a specialist at everything but you need to be able to work to a certain level in all areas and that makes you a very grounded practice nurse then and you can offer that service to all your patients and in small practices that's definitely the only way you can work. Big practices like say one nurse will do all the diabetes, one nurse will do the asthma." (IN_13)

As noted, participants felt that role extension and increased specialisation could result in the loss of general practice nursing skills. However, it was also recognised that not all nurses wished to extend their roles beyond their fundamental practice nursing skills, and it was felt that just because someone can extend their role, does not mean they should. This was perceived as important in ensuring that delivery of basic nursing care was adequately maintained.

"… we're so specialised, sometimes it can be difficult dabbling into other peoples' area." (IN_135)

"I still think there's a role for those nurses who… don't want to actually take on those levels of responsibility… and I don't think there should be a presumption that all nurses should do that because otherwise we get in the same situation as everywhere else in the NHS where that grounded nursing skill has gone. You know if we all sit there looking at the medicines where's the person looking at the foot checks you know." (IN_13)

However, some participants suggested that role extension could be enforced with some nurses pressurised into taking on new roles to meet the needs and expectations of the practice. Similarly, a feeling of being pigeonholed was described with future role extension dependent on previous areas of specialisation.

"I'm due for my appraisal soon, actually, and they have already mentioned I should have, erm – perhaps think about prescribing." (IN_114)

"I started taking an interest in things like coronary heart disease erm, then moved on to asthma and then it was very much a case of as the need arose… So it was very much trying to slot into the team and plug a gap where there was a gap in knowledge – trying to pick up skills in other areas" (IN_155)

Participants saw system delivery and patient access as major drivers for change. Some nurses felt that they were able to maintain an element of control over their future role, whereas others felt that whilst change was justified, it was often imposed to meet the needs of the practice. It was recognised that some nurses had no desire to extend their role, and this was considered important in allowing continued delivery of fundamental practice nursing.

4.5.2 The employing GP

The GP was perceived to have significant influence over a nurse's scope of practice, maintaining a level of control over their remit in several ways from overseeing day-to-day tasks to sanctioning training and career progression.

Participants described a delegation of duties, with the GP dictating workload by sending patients to the nurse for specific management or to complete a given task. In some instances, the GP was seen to grant a certain level of autonomy over a nurse's workload, allowing them to organise clinics and manage a given patient population. Participants felt that continued autonomy was reliant on the ability to show results and justify decisions.

"often doctors will send them (patients) to me to mess around with it." (IN_83)

"our lead GP for diabetes, but he is pretty flexible, so, er, if I want to – like, when I set up those clinics, as long as I can justify what I'm doing and he can see that the resources are going into the right places and he can see results, then he's happy with that process to go ahead." (IN_135)

Some participants described the GP as actively maintaining control over given spheres of work, sometimes appearing reluctant to relinquish responsibility over specific tasks. For instance, despite managing the patient through their entire primary care journey, nurses were not permitted to refer into secondary care. Similarly, whilst some nurses were permitted to instigate referrals, they were still subject to sanctioning by the GP. One participant stated that she was not permitted to enter diagnostic Readcodes into a patient's Electronic Patient Record (EPR) despite being qualified to do so.

"where I am at the moment I do a lot of my own referrals so I feel maybe that's a role extension, I often liaise with the doctors and say either maybe not face to face but by you

103

know via that tasks, you know, review my notes from today, are you happy for referral to

do X, Y or Z and mostly they will say oh yeah, yeah go ahead" (IN_87)

"…they're not very keen on me doing that, I couldn't actually code it on the computer…

I think they want to hang on to, because they know I'm qualified to do it and that but I

don't know" (IN_121)

Participants felt unsure whether the desire to maintain control was due to lack of trust and/or a demonstration of power and authority. However, the relationship between the nurse and GP was seen as an important facilitator for role extension with trust being particularly important. Nurses perceived trust to be directly related to the nurse's ability to perform a given task; proof of qualification and adequate experience therefore helped establish trust and facilitate role extension.

"I don't know whether the trust's not there I'm not sure or whether it's just the power, I

really am not sure. I think maybe some doctors don't trust the nurses have got the skills

to do it either… I think they'd need to maybe know that we've had some training, er, you

know that that's part of our training that we are skilled to do that." (IN_121)

The desire to maintain control over scope of practice was not perceived to be exclusive to the GP and nurses were explicit in their ownership of some tasks and skills, describing duties such as travel vaccines, LTC management and wound care as inherent to the nursing role. One participant described the need to protect her role from encroachment by healthcare support workers (HCSW), maintaining control over certain tasks by claiming ownership over some tasks.

"I think it's a bit of role protection you know as – as I'm sure as nurses we've done the same with health care at times and said that's a nursing job." (IN_13)

Participants recognised that not all GPs were in favour of role extension. Older generation GPs were considered more likely to resist role extension, associating the nursing role with clear, fixed boundaries. A general lack of desire or willingness to acknowledge the need for change was also apparent.

"I wouldn't want to stereotype but just for example like your older generation GP practice where you've got GPs of all the same sort of era potentially, I know it doesn't cross over but, who want nurses to be kept as nurses might not want that role extension they see it that's their job to do this, that and the other." (IN_13)

"One of the doctors here, very, very lovely and supportive and but I, is quite happy for a nurse to be a nurse if that makes sense?" (IN_125)

Some participants believed that GPs may be hesitant to train nurses due to a fear that they may leave once they have completed the training. It was felt that training could make them more desirable to other employers and provide more employment opportunities. Similarly, the financial viability of training the older nurse was considered a barrier to role extension.

"I suppose from their point of view it's more training for us isn't it and it's more money and it's an investment and I suppose they might think, 'Well what if they do the training and then they don't, then they leave?'" (IN_125)

"perhaps they've worried in the past, 'Well I'm not putting money into that because they'll be retiring in a, as a lot of practice nurses are'." (IN_125)

In addition to GP control over training, participants described a general lack of available training opportunities and there was a sense of frustration that certain training opportunities were not available. Several nurses specifically highlighted the inability to request x-rays as problematic and frustrating. Whilst the system demands that nurses increasingly see patients who may require an x-ray, there was a general lack of understanding as to why they were not permitted to make such requests.

"getting the practical training is next to impossible which is why for me it never came to fruition" (IN_188)

"we can't action x-rays, we can't ask for x-rays, that's still not part of our, well…" (IN_83)

As discussed in section 4.3.2 (pages 87-93), participants felt that role changes and increased responsibility were not always acknowledged financially by the GP as the employer. Lack of financial recognition was described as a potential barrier to role extension with some nurses actively resisting change due to potential lack of financially recompense.

"I think some nurses maybe adverse to it because of the pay, er, in general practice as I'm sure you know, you know the GP can pay us what we like, we're not sort of on a Whitley scale or whatever and, er, whereas in the hospital you're on more of a structured pay scale and I think that might hold some nurses back within primary care" (IN_121)

"I think sometimes it's not acknowledged - erm, from what I can gather that it isn't always acknowledged in – erm, so pay and things like that; so it's almost expected but your, your pay isn't changed... I think, I think they, they, they do it because they want to do it." (IN_76)

GPs were seen to facilitate and create barriers to role extension. The nurse-GP relationship and trust were seen as important factors. Some GPs wished to retain control over certain spheres of work causing them to resist nurse progression at times including refusal to sanction training. Extended roles were not always recognised financially.

4.5.3 The employed nurse

Participants recognised that role extension could be influenced by the individual nurse and their desire to progress. Several of the nurses who were nearing retirement either did not want to extend their role or felt that it was not an efficient use of resources. This mirrored the perception that some GPs are reluctant to train PNs at the end of their career due to lack of financial viability.

"I'm one year off retirement so there's no way I'm doing additional training." (IN_83)

"I'm comfortable where I am. I'm comfortable and like, I just feel my age is against me anyway. If I was younger, maybe. But I think, you know, coming up to retirement you don't really want…I can't see the point of doing further training." (IN_82)

Interestingly, some of the younger nurses perceived advancing age to be a barrier to role extension with the demands of the role considered too great for the older nurse. However, whilst younger age may be a facilitator for role extension, it was felt that patients may find advanced roles less acceptable when filled by a younger nurse due to apparent relative inexperience.

"it's the level that nurses are working at now I can't envisage working at 67 at the pace and the level that I'm doing now… it's quite a scary thought really because the fast pace, the decision making, the autonomous working" (IN_13)

"...if you look at somebody say of 25 as a nurse you think 'well, they haven't got much experience' have they" (IN_82).

Nurses identified three main drivers for change: the system, the GP and the nurse (Figure 5). The needs of the system and practice were considered the most influential drivers for role extension. GPs influence scope of practice in many ways and could either facilitate or impede role extension. Nurses felt they maintained a degree of control over their progression at times but agreed that role extension could be enforced. It was felt that role extension should not be considered inevitable and participants recognised the importance of some nurses continuing to practice fundamental nursing skills.
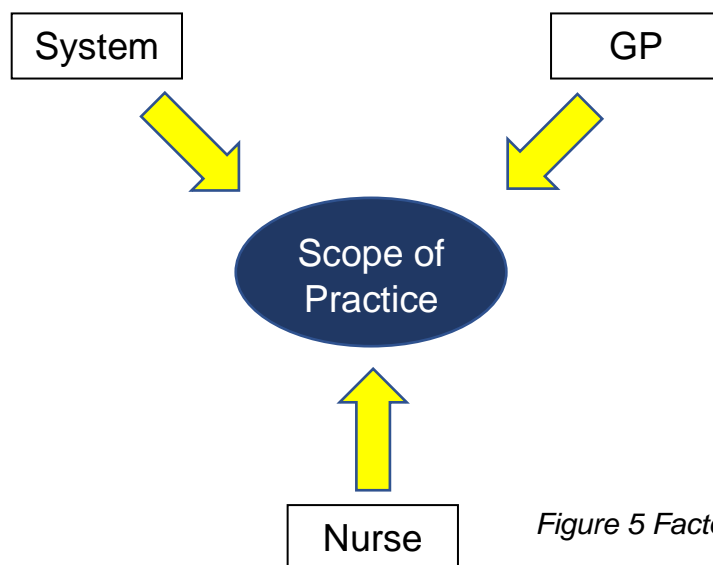
Figure 5 Factors influencing role extension

4.6 Impact of Evolving Role Boundaries

4.6.1 Managing People with Long-Term Conditions

Most participants believed that role extension had resulted in improved patient access to care. Nurses described this in terms of reducing the need to see the doctor and/or need for multiple appointments. Some agreed that role extension had improved continuity of care for those with LTCs and multimorbidity, allowing an enhanced review of all conditions in one appointment. This was seen to both reduce treatment burden and improve the efficiency and capacity of the team.

"it is good from the patient's point of view, you know, we can try and get it all done at one appointment." (IN_155)

"So patients don't have to see several people all the time and just see that one person… seamless care, so that the patient would just see that one, that one practitioner rather than have to be seen by one and then getting referred to another and then another and someone else." (IN_114)

However, the effect of role extension on delivery of care was not always as expected or desired with some of the participants describing the provision of fragmented rather than integrated care. As discussed earlier in this chapter, this problem appeared to affect larger practices, in which nurses tended to be more specialised.

"the problem arises when we've got Practice Nurses that have specialised in areas; so rather than being what, what I hope we're aiming for as a General Practice Nurse who's got basic knowledge and basic training in asthma, COPD, CHD – you know, across the

109

board… So then there wouldn't be that erm, disparity when you, when you make an appointment for a patient – 'Oh well, that nurse doesn't do asthma' so they can't go in for that review. I think that's where the big problem lies" (IN_32)

"I don't do spirometry because we, sort of – we're a team of five nurse practitioners, so I'm part of a team that does diabetes, hypertension, CHD, heart failure and AF, so we do that side of things. And then we've got another team that deals with, er, COPD and asthma." (IN_135)

Participants recognised the importance of continuity of care and empathised with patients' frustrations when problems could not be managed in a single appointment.

"… some patients will get frustrated when I say to them I'm sorry you've got to see the doctor, I can't change your inhaler or I can't do this, they get frustrated with another appointment, more time… patients are like the rest of the world we're so, they're so busy you know one stop shop almost, they want to come once and be sorted, they don't want to come and have a bit here and a bit there." (IN_121)

"I'm very aware at the moment we'll say, 'Ooh, you know, your bloods aren't very good. You'll have to see the doctor', and they could say, 'Well I've just come to this appointment and now you're just, all you're doing is sending me to somebody else'." (IN_125)

However, managing everything in one appointment was not always seen as beneficial. Whilst one nurse acknowledged that patients may prefer single rather than multiple appointments, she considered consultations with a single focus to be more beneficial.

"Because a lot of the time they want everything sorted out in one appointment and you cannot do that, you just can't do that, you've got to focus on, try and focus on you're seeing me today for your diabetes" (IN_83)

Another participant reported that combined disease reviews in her practice had resulted reduced patient compliance. The practice had consequently chosen to revert to single appointments. This participant believed that patients found single disease reviews more beneficial as there was often too much information to absorb in one consultation; single appointments increased rather than decreased treatment burden. Likewise, another nurse stated that whilst they mainly offered combined review appointments, they recognised that some patients found this daunting and that separate appointments should be made available if desired.

"we split our reviews, 'cause what we found when we did them combined, is they were coming in for their diabetes review and CHD review and their COPD review. It was just too much information and we felt compliance dropped off by them having so much information in one review. So, we found that it was more beneficial for the patient to come in at separate times." (IN_135)

"If, if the patient was up for that, we'd do all those reviews in that one annual chronic disease review… so some patients, it's too much information… we've got to remember, there's patients' choice in all this as well." (IN_32)

Participants believed that role extension improved patient access and continuity of care, streamlining the patient journey. However, participants recognised the pros and cons inherent in both single and combined LTC review appointments; patient choice is paramount.

4.7 The Nurse Role in Diagnosis

Many advanced nurses are now able to diagnose and several of the participants described diagnosis as part of their remit. As with other extended roles, participants believed that formal training, experiential learning and provision of support were essential in allowing nurses to diagnose. The need to be comfortable was again considered essential.

"I think if they're getting the right training and experience… and ongoing support as well, I think it can be a positive thing" (IN_151)

"…so I think it certainly becomes easier with experience… some of the experienced practice nurses will because they know their bread and butter" (IN_13)

Participants described variation in the amount and type of diagnoses made by nurses, and it was recognised that diagnosis is not always an objective process, requiring more than an interpretation of numbers and results. Some advanced nurses described very autonomous working, diagnosing, investigating and treating the patient with minimal support. Others considered it reasonable for less advanced nurses to make objective, protocol-driven diagnoses as these were perceived as 'black and white' and not open to interpretation.

"undiagnosed minor ailments or medical problems. So I would assess them… and then I would make a diagnosis and I would prescribe the appropriate medication, if, if it was required and if they needed any investigation" (IN_32)

"… for some long-term conditions I think it's quite reasonable to work to a diagnosis with regards to things like diabetes… It's like your hypertension isn't it you should be able to diagnose hypertension you know if you've had so many readings above the recommended guidelines and you've had all the lifestyle intervention and everything done, the numbers are the numbers they're either hypertensive or they're not." (IN_13)

Nurse involvement in the diagnostic process is variable, and often dependent upon the nurse's level of advancement. Autonomous diagnosis is now an intrinsic part of many advanced nurse roles. Less advanced nurses make more objective, unambiguous diagnoses.

4.7.1 Making a diagnosis 'informally'

Participants believed that less advanced PNs often make an informal diagnosis which they discuss with the patient in a non-specific way. Whilst there was consensus about the phenomenon of informal diagnosis, the extent of nurse involvement in the formal diagnostic process appeared to vary. Some participants only sought advice of the GP to sanction a diagnosis and/or sign a prescription, whereas others were explicit in stating that PNs do not formally diagnose.

"For example, they may have a fungal rash, can I just show you a rash I've got and the practice nurse knows exactly what the problem is, will quite often generate a prescription, go to the GP and say this person's come in and they've got whatever can you sign this please. So I think they are diagnosing unofficially." (IN_188)

"we don't normally diagnose as practice nurses. We can think it's something, but then we'll go to the doctor and say, 'We think this,' and then … Sometimes he'll say, 'Yeah, I agree,' and then that becomes a diagnosis, but we don't normally diagnose." (IN_144)

One participant felt that the ability to diagnose distinguished her role from that of the other PN working within her practice.

"our differences between nurse practitioning and practice nursing, yes, we diagnose and they don't" (IN_135)

Some participants likened diagnosis to the attribution of a label and whilst they may have made an informal diagnosis, they did not consider 'labelling' to fall within the boundaries of the PN role. This corresponds with the view that official coding of a diagnosis in a patient's EPR falls outside of the PN remit, as discussed in section 4.5.2 (pages 103-107).

"often the practice nurses can sort of diagnose but then they will get someone else to say, you know, well it looks like she's got COPD can you just confirm it for me… confidence in making that diagnosis and being the one to say yes, you're labelling the patient, perhaps that's from the doctor" (IN_87)

"…you can diagnose diabetes off the guidelines but how many nurses would actually write type 2 diabetes on a patient's record and code it as such, they're more like to send a task note to the GP" (IN_13)

Some participants described their role as a data gatherer and felt able to inform patients about results, as this was seen as different to offering a formal diagnosis. However, other participants were unsure whether explaining results to patients was akin to diagnosis or whether this merely led to a more formal diagnosis.

"You pick it up when they come in… you know the thirst, the weight loss, the tiredness er, and even thyroid… I'll say, 'Look, I've done the bloods. I hope you don't mind because I do feel that there might be something going on there'. I suppose, in a way, I have diagnosed, haven't I, really? But I do always say what I've done." (IN_175)

"patients will ring me and say I've had this letter and it says moderate dyskaryosis or whatever so then you'll - you'll discuss that whole, that with them as well so I don't know whether that's really diagnosing or that's just explaining results but it can go on to a diagnosis" (IN_121)

Participants felt that all nurses make diagnoses. Less advanced nurses were perceived to make informal diagnoses. The extent and manner to which nurses act upon informal diagnoses was variable.

4.7.2 Making a diagnosis of a long-term condition

Participants agreed that given the correct training, experience and support, PNs should be able to make some formal diagnoses. Given their role in LTC management, one participant felt that PNs may be ideally placed to diagnose conditions such as asthma and diabetes, possibly better placed than the GP.

"I think it depends what training and experience they've got really… a lot of them are quite ideally placed to look at things like diabetes and asthma and, and things because they're dealing with it far more than, you know, some of the doctors and that." (IN_155)

However, participants were unsure about the potential scope of formal diagnosis by PNs and what the limits of this role should be. Some believed that even with the provision of appropriate training and frameworks, PNs lacked the ability and skills required to make more subjective diagnoses such as osteoarthritis (OA). Participants also questioned the need for PNs to diagnose conditions such as OA.

"I don't – well, I don't really – well, they would probably be able to diagnose some things with kids, a rash and things, but I don't think, I don't think they've got the skills to diagnose… I can't see they would diagnose OA. I wouldn't do it meself" (IN_135)

" suppose but why would they, why would they need to? … I suppose if they, if the, if the protocol, you know, if it was in place for them to do so but I don't know why." (IN_125)

As opposed to making a formal diagnosis, some participants suggested that PNs should be able to recognise conditions such as OA and signpost appropriately, again alluding to the concept of informal diagnosis.

"I should think they should be able to, you know, pick the skills up to be able to look for it and point people in the right direction." (IN_155)

"… not diagnosing it I don't think but being able to spot it" (IN_111)

Whilst some participants felt that PNs may be well placed to diagnose LTCs, there were concerns about both their ability and the need to do so. It was felt that PNs should be able to make an informal diagnosis of conditions such as OA and signpost appropriately.

4.7.3 Understanding osteoarthritis

Participants were asked what they understood by the term OA. Some nurses gave a reasonable description and acknowledged the impact it can have on a patient's life. Age was recognised as an important aetiological factor by some, and it was evident that many of the participants considered OA to be an inevitable consequence of ageing.

"means a degeneration in the bones, er, causing pain, er, often, er, disability in many patients, something that affects patients daily, can flare up even, er, worse on some occasions than others but certainly life affecting" (IN_13)

"So are, so has most of the, the population isn't it because it's an ageing thing… it's something that most elderly people will have. Er, some people are very cri, it's very debilitating isn't it for some people. They can be very crippled with it can't they." (IN_125)

When describing OA, some participants used terminology such as 'wear and tear' and 'bone-on-bone'. There was also a tendency to equate OA with significant pain and distress.

"using lay persons language, I would say it's wear and tear of the joints, gets worse with age and causes pain and can cause increasing problems with mobility." (IN_188)

"It means pain that's uncontrollable with any analgesia… you don't get any pain relief with medication because it's bone on bone..." (IN_139)

Despite their involvement in the management of LTCs, many of the nurses felt that they had little interaction with patients with OA, stating that they were seldom involved in their care.

"Erm, you get stiffness and pain and, erm, I've not really come across it much." (IN_191)

"it isn't something I see a great deal" (IN_111)

In contrast, one nurse admitted that patients often mention OA during LTC reviews. This participant reported that she offered information and signposted to the GP for further treatment and physiotherapy if required.

"Sometimes if you're giving them a diabetic review and they mention it, you know, I'll give them a booklet and, you know – they always mention things like that, so… to be honest I, it's just normally the booklet I give them, but I say to them that if they are suffering or are still in pain or perhaps they need some physio then I would ask them to see the doctor." (IN_114)

One nurse had recently attended a course about OA and gave a good description of the condition. She also discussed the move away from the use of the term 'wear and tear' and correctly stated that x-rays should not be used for diagnosis.

"I've been on the recent osteoarthritis course… It's wear and repair not wear and tear… it's the whole joint not just the bone. It's the whole joint, cartilage, the synovial fluid, the bones… not just the bones" (IN_87)

As the interviews progressed, it became clear that some participants were not sure what OA was and several confused OA with osteoporosis (OP), giving a description more akin to the latter condition.

"it's thinning of the bones." (IN_191)

"Oh, what is arthritis? It's a, it's a bone condition, like calcium lack, lack of calcium."
(IN_135)

Similarly, some nurses described the use of steroids by respiratory patients as a risk factor, therefore alluding to OP rather than OA. Some also described their main interaction with patients with OA as occurring during review of respiratory disease, or conversely, that they did not manage OA patients due to their lack of involvement in respiratory care.

"I really don't manage them, it's something that we erm, touch upon, obviously, the respiratory patients if they're on long-term or high dose you know steroids yes, but that is more GP that they'd see for that" (IN_151)

"No, because that's the COPD and the asthma ladies that does them" (IN_135)

Confusion between OA and OP was again evident when discussing diagnosis with the use of scans described by some participants. Despite giving a reasonable definition of OA, one nurse described the use of a Dexa scan in the diagnostic process.

"obviously, scans if they come in – scan results or if they, they say, 'Oh, I've got go for a scan' then, you know, you think, 'Oh, I'll have a little look at that', you know or, or they've,

they've creaky bones and they – it's the things they say, you know... or we've noticed somebody who's erm, breaking their limbs often than they should do." (IN_175)

"I think it could be objectively diagnosed off dexa scans so I think that if it's an area that they have good underpinning knowledge in then, yes" (IN_13)

Confusion about the nature of OA was also evident, with some participants believing it to be an inflammatory arthritis.

"So they've got early morning stiffness, lasting longer than 20 minutes erm, then they need to come in obviously and get bloods done and get their ESR and those sort of..." (IN_32)

"I don't know if I'd know the difference between them all because there's so many different forms of, erm, arthritis, and I don't know if you've got your inflamed fingers… I don't know about osteoarthritis but isn't it where you've got so many joints that have got similar joint pain" (IN_191)

Whilst exploring potential barriers to PN involvement in the management of OA, one nurse perceived the use of methotrexate as a treatment to preclude PN involvement. Similarly, another participant discussed gold in the context of managing OA, despite this being a treatment used for inflammatory arthritis.

"as in the Methotrexate? Is that what you're thinking?" (IN_77)

"I've got a lady who's on a B12 who actually goes to the Haywood and has the gold injections" (IN_175)

Participants had variable understanding of the term OA and most associated the condition with significant pain and distress. Many participants believed that they had little interaction with patients with OA and described little involvement in their care. Some participants confused the condition OA with OP and others believed OA to be an inflammatory arthritis.

Figure 6 Mind Map - Linking the Themes

122
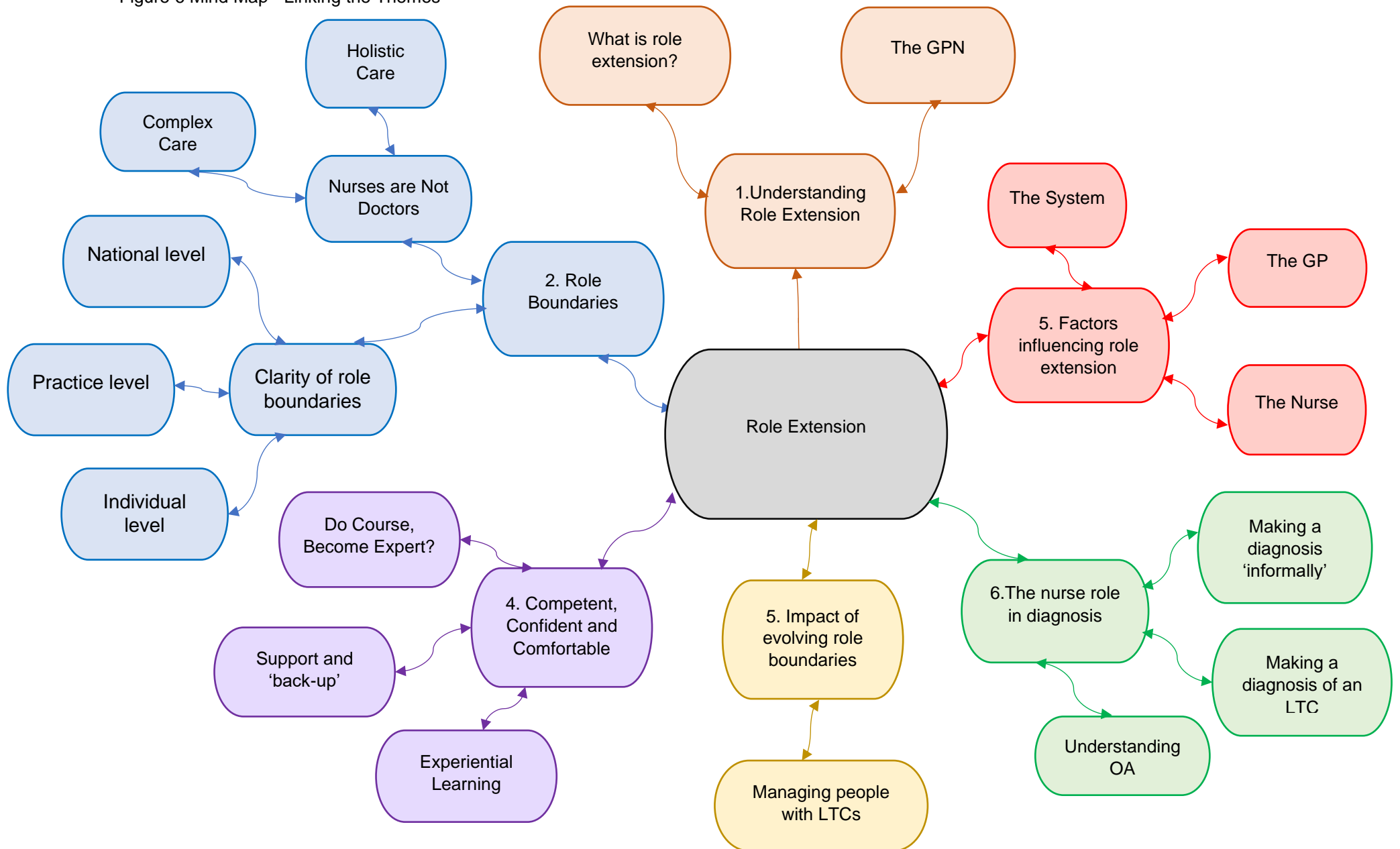
4.8 Summary

Eighteen PNs of varying experience were interviewed. Figure 6 outlines the six key themes identified, their subthemes and how they are related.

A summary of the findings and how they relate to the results of the meta-synthesis will be presented in the next chapter.

Chapter 5 – Discussion

5.1 Introduction

This chapter will review of the aims and objectives of this thesis before summarising the findings. The results of both the meta-synthesis and qualitative study will be reviewed and compared both with each other and with existing literature. The impact of PPIE on the qualitative study will be reviewed, and discussed alongside the implications for clinical practice, policy and research. The strengths and weakness of both parts of this thesis will then be considered.

As discussed in Chapter 1, role extension is common in primary care and UK healthcare policy demands that the PN role further extends to be inclusive of a greater level of complex care, including assessment and diagnosis. However, role extension results in the blurring of professional boundaries which may have unintended consequences including damaging relationships within the primary care team.

Results of both the meta-synthesis and qualitative study suggested that whilst PNs recognised the need for and value of role extension, there were concerns that must be addressed if new roles are to be successfully implemented. There were fears that healthcare policy expectations would result in the PN taking on ever more substituted doctor duties and concerns regarding training, competence, accountability and responsibility were clear. PNs are explicit in the need for support to help enact new roles with the GP being the most frequent source of 'back-up'. However, role boundaries are becoming increasingly blurred and PNs felt that new roles lacked clarity resulting in poor recognition and lack of acceptance of these roles by other HCPs and patients.

PNs are considered fundamental to the care of patients with LTCs and healthcare policy dictates that their remit expand to include additional complex care including assessment and

diagnosis. Given their pivotal role in LTC care, PNs may be well placed to improve the recognition and diagnosis of OA yet results of the meta-synthesis confirmed that PN views in the context of diagnostic work in LTCs are unknown. This study therefore addresses an important gap in the research literature, reaffirming some perceptions regarding role extension and proving unique insight into PN perspectives of their future role in the diagnosis of LTCs including OA.

The aim of this MPhil was to investigate PN perspectives of role extension and diagnostic work in LTCs (including OA) in primary care.

The two study objectives were:

1) Identify and synthesise the available, empirical research evidence regarding PN perspectives of role extension and diagnosis of LTCs including OA in primary care;

2) Investigate, through qualitative semi-structured interviews, the perspectives of PNs in relation to role extension and OA diagnosis.

Objective one was addressed through a meta-synthesis of qualitative literature informed by a meta-ethnographic approach (Chapter 2). Objective two was addressed in a qualitative study (Chapters 3 and 4).

5.2 Summary of Findings

The two studies report the perspectives of PNs about role extension and diagnostic work in LTCs. Participants were at varying levels of role advancement with some describing quite extensive role changes.

Participants in the qualitative study recognised the need for and benefits of role extension. This aligns with results of the meta-synthesis in which PNs believed that improvements in access and continuity of care legitimised the need for role extension.

Participants perceived role extension as something new, or an addition to a role. A role could be extended at any point in a nurse's career and was therefore seen as context-dependent with the definition independent of baseline skills or remit. A role was only considered extended until the nurse had become accustomed to or familiar with the new task; until it became the norm for that individual. This implies that rather than representing a clearly defined step-wise process or definable event, role extension represents a 'sliding scale' or spectrum of changes to a role, starting with the newly qualified PN and extending up to the highly experienced ANP who is able to work autonomously and independently in most situations (Figure 7Figure 7).
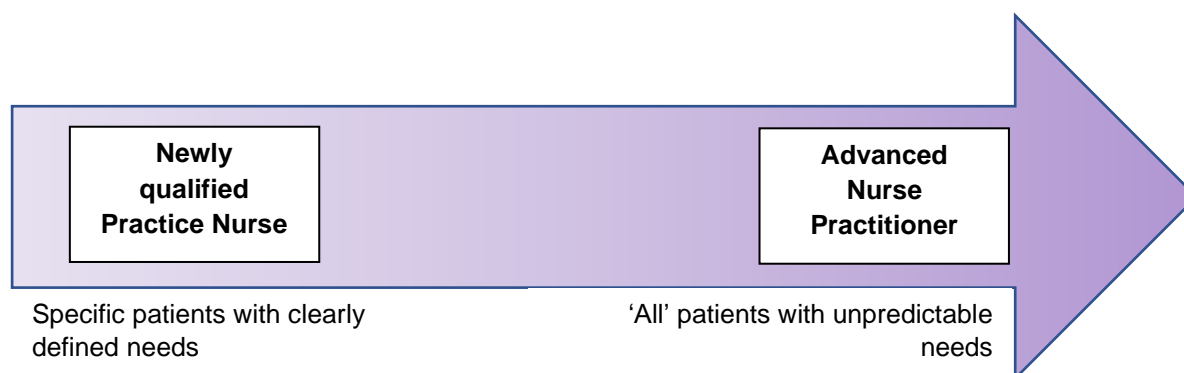

Figure 7 Spectrum of Role Extension

The role of the newly qualified PN was associated with the delivery of basic tasks to specific sets of people with known diagnoses for a specific and explicit reason, such as the routine management of LTCs. With increasing role advancement, the nurse's patient population

becomes less defined and the presenting problem less predictable, therefore demanding that the nurse have a broader knowledge base and greater understanding of the conditions that they encounter. It was also evident that the more advanced you become, the less fundamental practice nursing you do. So, whilst the title of PN is adopted at qualification, a newly qualified nurse will not possess the knowledge and skills of a PN with several years' experience and the two may have very different scopes of practice.

PNs in the meta-synthesis believed that extended roles lack clear boundaries affecting relationships and serving as a barrier to support and teamwork. There was consensus amongst participants in the qualitative study regarding the desire and need for greater clarity of role boundaries, explicitly defining what a nurse can and cannot do therefore facilitating appropriate access to care and ensuring nurses are only asked to work within a given scope of practice. However, by definition, general practice nursing roles are broad in nature and it was accepted that the creation of a nationally recognised, specific job description for each level of nursing may not be feasible. The tension between the desire for nationally agreed definitions and reality at practice level were therefore recognised; clarity at the practice and individual level were considered realistic and had been achieved by some.

Participants felt that blurring of professional boundaries was not specific to the nursing fraternity and participants acknowledged that successive extension of the PN role had resulted in a blurring of the boundaries between advanced nurses and GPs. Despite a clear desire for nurses to maintain their own distinct professional identity, many felt that advanced nursing roles had slowly evolved into doctor-type roles and that the need to specifically see a GP has reduced. This sentiment was echoed in the meta-synthesis in which nurses were again explicit that they were not doctors. Whilst it was felt that role extension could add value to an existing set of practices, nurses felt that their role should not replace nor substitute the role of the GP; nurses in both studies were in favour of enhanced not extended roles.

Clear differences between the role of the ANP and GP were recognised. The relationship shared between nurses and patients was perceived as different to that between GPs and

patients, and participants felt that they were more receptive to the emotional needs of the patient and therefore better able to provide holistic and patient-centred care. The role of the GP was associated with greater responsibility, and GPs were perceived, by nurses, to have a greater breadth of 'medical knowledge' than nurses. PNs in both studies therefore considered GPs as more able to manage certain patient groups such as those requiring complex care. Indeed, despite describing their role as holistic and inclusive, nurses were clear that some patients did not fall within their remit, including those with mental health problems and complex care needs. Moreover, regardless of level of advancement, there was consensus amongst participants that managing mental health was not a nursing role. For some, this appeared to be a joint decision within the practice, for others it appeared to be a self-imposed limitation. Given that mental health problems are frequently comorbid with LTCs, and that this association can lead to poorer clinical outcomes and lower quality of life (Naylor et al., 2012), such limitations preclude the delivery of truly holistic care.

Participants still felt that they had a role to play in the care of patients with complex needs, but autonomous and unsupervised management of these patients was not desired nor deemed appropriate. Results of the meta-synthesis accord with these views, with PNs expressing a desire to manage 'straightforward' patients, in which care is directed towards clear, objective, measurable goals. This remit bears striking similarities to the scope of practice associated with the newly qualified PN described by participants. This reinforces the view that regardless of role advancement and blurring of boundaries, nurses identify with the PN rather than GP role and have a clear desire to keep the roles separate.

PNs in both studies believed that role extension usually required additional training and acquisition of new skills and a qualification as explicit proof of competence, emphasising an individual's professional capabilities and scope of practice in the absence of clear role definitions. However, participants felt that proof of competence was not enough to safely enact a role, and experiential learning was deemed essential in allowing a nurse to become comfortable performing a new task. These sentiments were also evidence in the meta-

synthesis in which the need to be confident and not merely competent were expressed. The idea that one needs to be comfortable to enact a role is consistent with the concept that a role is only considered extended for a finite amount of time. Once a role is extended, usually through formal training, a nurse will undergo a period of experiential learning during which they will cement the knowledge learnt. At this point, the new task will become the norm for that nurse, and therefore no longer considered an extended role.

Participants described how the PN role naturally extends with increasing experience. Experiential learning is an important way to disseminate knowledge and skills between colleagues and peers. PNs in the meta-synthesis also eluded to the importance of experiential learning and how the nursing role was seen to progress naturally over time. The development of skills solely through experiential learning also accords with the idea that there is a sliding scale of role extension, and whilst there may be a stepwise advancement in role with formal training, nursing roles naturally become more advanced with time.

However, in contrast to formal qualification, it is difficult to prove competence when a skill is learnt through experience and acquisition of tacit knowledge alone. This method of learning also requires the individual to have conscious incompetence, ensuring that they only practice within their capabilities. Those who have unconscious incompetence may mistakenly believe they have the skills and ability to enact a role and work outside of their competencies. So, whilst the importance of experiential learning is undoubted, in an era of continued evolution of roles and increasing blurring of professional boundaries, the need to offer proof of competence is likely to become more crucial if not obligatory.

The ability to recognise and work within boundaries was also deemed important for the GP-PN relationship, with trust intrinsically linked to the belief that a PN would seek support and advice when necessary. The meta-synthesis revealed the importance of the GP-PN relationship as a facilitator for role extension and how unclear professional boundaries could jeopardise this relationship leading to isolation and vulnerability. Participants shared the same sentiments, describing provision of support by the GP as essential for both the implementation

of role extension and the continued success of extended roles, allowing nurses to seek advice and defer responsibility to the GP when needed.

Whilst PNs in both studies recognised the GP as the main source of support, other sources were identified both from within and outside of general practice. The need to seek advice from elsewhere was in part derived from a perceived deskilling of GPs; GPs were no longer competent, confident or comfortable to carry out tasks they now seldom performed. Participants perceived the phenomenon of deskilling to be a direct result of role extension. Results of the meta-synthesis also described deskilling as a consequence of role extension with some nurses reportedly hesitant so seek advice and support from GPs due to concerns regarding competence and knowledge. This implies that some nurses feel that their level of knowledge is at least equivalent to that of the GP, and that seeking advice would be futile. However, this goes against the belief that the knowledge held by nurses was in some way different to the 'medical' knowledge of the GP. There may, therefore, be inherent dangers in this assumption and way of working as it excludes the expertise of the GP and may result in inappropriate referrals and or involvement of secondary care services.

Participants in the qualitative study recognised that the phenomenon of deskilling was not unique to GPs, with role extension often resulting in a nurse having a more specialised rather than generalised remit. As discussed, the more advanced the nursing role, the less basic PN skills are performed; how much of the generalised, fundamental nursing skills an individual retains was reported to be linked to the size of the practice in which they work with nurses in smaller practices maintaining a more generalised role and those in larger practices often developing a more specialised remit. Service delivery was identified as the main driver for role extension with both the results of my meta-synthesis and participants highlighting the needs of the patient and improve access to care as imperative. However, there was disagreement amongst participants as to whether more specialised nursing roles resulted in fragmented care, and some nurses stated that they were no longer able to manage multimorbidity, focusing

solely on their specialised disease area. The development of such niche, specialised roles may fail to recognise the importance and impact of multimorbidity, increasing treatment burden for patients and their families/carers and resulting in poorer clinical outcomes. Interestingly, whilst the unmet need of the patient was considered an important determinant of change, the patient themselves was perceived to have little impact on role extension.

Participants believed that the act of becoming more specialised could directly influence a nurse's career path; a nurse will continue to 'specialise' in one direction. This was not always desirable, and some nurses felt that they were 'stuck' with a particular remit, having little autonomy over change. Indeed, some participants described role extension as obligatory and that change could be enforced by the practice and/or GP. Similarly, PNs in the meta-synthesis described lacking control, adopting a passive stance to changes in role. However, participants in the qualitative study were clear that role extension should not be considered inevitable and that not all nurses wish to extend their role. This was considered important in allowing some nurses to continue practicing basic nursing skills. Conversely, participants also felt that there was a limit to role extension and whilst the PN role demands a breadth of experience, skills and knowledge, the role cannot be wholly extended ad infinitum. However, the role of the PN today is vastly different to that of 20 years ago. If natural progression of the nursing role continues, the HCA of today will likely become the PN of tomorrow. Therefore, deskilling may be a predictable and acceptable result of role extension and not of detriment to the workforce; a skill lost by one individual is usually acquired by another.

As discussed, participants considered the GP to be a major facilitator for role extension with trust being of vital importance. However, result of both parts of this thesis indicated that the GP often maintains control over role extension, sanctioning change and governing a nurse's scope of practice. As such, the GP was sometimes seen to veto or prohibit role extension, often as a means of maintaining control over a given sphere of work. This was often seen as jurisdictional behaviour, with nurses believing GPs to be threatened by encroachment of their professional boundaries by advanced nurses.

The role of diagnostician is one that now lies with the remit of both the GP and more advanced PN, and participants felt that the diagnostic role of the advanced nurse was now well established. Variation in the type of diagnoses made by nurses was recognised, from highly autonomous diagnoses to objective, protocol-driven diagnoses. The phenomenon of informal diagnosis by less role advanced PNs was also described including the ways in which this can lead to a more formal diagnosis. Results of the meta-synthesis revealed a paucity of evidence concerning PN perspectives of their role in diagnosis, justification the need for the qualitative study.

The use of protocols and guidelines was described in both parts of this study. Results of the synthesis suggested that protocolised, guideline-driven care confers safety and permits deference of responsibility to the GP. Use of protocols therefore reduced the need for GP input, potentially improving efficiency of healthcare delivery. Participants believed that the use of protocols could facilitate diagnosis by PNs which could help realise aspirations for the primary care workforce as outlined in current healthcare policy. Indeed, most participants felt that given the right training, experience and support, PNs should be able to make some formal, objective diagnoses. However, there was a difference of opinion as to whether the less experienced PN should be able to make more subjective diagnoses including of conditions such OA, although all believed that they should be able to make an informal diagnosis and signpost appropriately.

Some PNs believed that providing a patient with results was akin to diagnosing. However, the diagnostic process usually includes discussion of the condition, treatment and implications; diagnosis is not merely the attribution of a label. This necessitates that the PN have a certain level of knowledge regarding the condition they are diagnosing. If PNs in less advanced roles are to widen their scope of practice to include more diagnoses, they will require adequate training and guidance; they will become a role extended PN.

The importance of training became evident during the interviews, as it became apparent that participants had variable understanding of the term OA and few understood how it was diagnosed and/or managed. Indeed, despite high prevalence, most participants believed that

they had little interaction with patients with OA and stated that they were seldom involved in their care. It is acknowledged however, that patients usually present with symptoms rather than diagnoses, and it is likely that nurses are involved in the care of patients with joint pain, but without the diagnosis of OA being explicit or openly discussed.

Several nurses confused OA with OP and others mistakenly believed OA to be an inflammatory arthritis. The impact of these misconceptions is likely to depend upon the nurse's level of role extension. The remit of the less role advanced PN may not demand an understanding of these conditions, However, the role of the more autonomous, diagnosing ANP would likely necessitate that the nurse be able to identify and differentiate between these conditions. Results of the meta-synthesis revealed no literature regarding PN diagnosis of OA.

Given these misconceptions, it is unsurprising that many participants questioned the need for PNs to diagnose OA. Such misunderstanding would clearly need to be addressed were PNs to become more involved in the diagnosis and management of patients with OA.

5.3   Comparison with previous literature

This study was the first to explore PN perspectives on role extension and diagnostic work in LTCs in primary care, including OA. The findings of both the meta-synthesis and qualitative studies will now be compared to previous literature reporting PN perspectives of role extension, general diagnostic work and OA diagnosis.

5.4.1 What is role extension?

PNs in both the meta-synthesis and qualitative study recognised role extension as a means improving the capacity and efficiency of the primary care workforce, thereby improving access

to services and facilitating better continuity of care. Improved patient accessibility, potential for high quality care and greater career opportunities are all recognised as results of extended practice (Redsell, Cheater, 2008; Bonsall, Cheater, 2008).

Participants described role extension as something new, or an addition to a role. However, a role was only considered extended until the nurse had become accustomed to or familiar with the new task. PNs in both studies perceived role extension as inherent to the nursing role, occurring naturally over time. As described by Carmel and Baker-McClearn, nursing roles are fluid and contextual, evolving to meet the needs of the system, patient, and nurse (Carmel, Baker-McClearn, 2012). This accords with the findings of a study by Welsh et al in which nurses also described role extension as a natural progression (Welsh et al., 2014) and with the theory of this study that role extension is not merely a series of specific events, rather an implicit progression along a sliding scale.

5.4.2 The importance of clarity

PNs in both studies clearly felt that extended roles lacked clarity and that role boundaries were unclear, resulting in poor recognition and acceptance by both HCPs and patients alike. This accords with a study looking at the perceptions of the role in an urban practice in Canada in which the role of the RN was found to be both poorly contextualized and poorly defined with role boundaries often blurred across professions (Akeroyd et al., 2009). Indeed, confusion regarding the scope, functions and expectations of extended nursing roles has been widely discussed (Patterson, Del Mar & Najman, 2000; Bonsall, Cheater, 2008; Redsell, Cheater, 2008; McCarthy et al., 2012; Halcomb et al., 2014; Henderson et al., 2014; Niezen, Mathijssen, 2014; Schadewaldt et al., 2016).

As noted in the qualitative study, whilst the merits of clearly defined role boundaries were not disputed, the multiplicity of advance nursing roles and the myriad of ways in which a role can

advance make the creation of a nationally recognised, specific job description for each level of nursing less feasible.

The last decade has seen several attempts to define nursing roles. In 2010, the DoH described key benchmarks which had to be achieved to reach advanced nursing status (DoH, 2010a). Two years later, the RCN published a more specific set of criteria which included the need for the advanced nurse to be able to provide complete episodes of care (RCN, 2012). Further to this, in 2018 the RCN published a document outlining the domains and competencies for advanced level nursing the UK (RCN, 2018). The RCN recognised the difficulties inherent in defining specific nursing roles, and chose to consider advanced practice as a level of practice rather than a type of practice or role (RCN, 2018). Similarly, Health Education England (HEE) have offered a definition of advanced clinical practice which demands autonomous working in the context of uncertainty and risk and that those operating at this advanced level are accountable for decisions made (HEE, 2017). Whilst defining what is required to achieve a level of advancement rather than a specific advanced role has its merits, it still does not reflect the heterogeneity of existing nursing roles and both the RCN and HEE have described subjective requirements rather than objective, verifiable goals. This also has implications for training as discussed later in this chapter.

Moreover, whilst national regulation may allow the minimum criteria required for safe and competent practice to be explicitly defined (Carney, 2016), it does not provide clarity for patients trying to navigate the healthcare system or for colleagues trying to understand roles. It has been acknowledged that poorly defined roles directly impact the quality of care and delivery of healthcare services (Brault et al., 2014). Similarly, Akeroyd and colleagues recognised role ambiguity as a barrier to collaborative care, findings consistent with both elements of this study and other literature (Bailey, Jones & Way, 2006; Akeroyd et al., 2009).

However, in the absence of national agreed definitions, many participants described the development of clarity and understanding at the practice level. Clarifying professional boundaries among members of a primary care has been shown to facilitate the integration of

new roles, and foster interprofessional collaboration (Brault et al., 2014). This is consistent with the findings of the meta-synthesis. Understanding at this level may mitigate the impact that inadequate national definitions have on patient care.

5.4.3 Nurses and not Doctors

Blurring of boundaries was not exclusive to the nursing profession and despite a clear desire to maintain their own distinct professional identity, nurses described a blurring of the ANP and GP boundaries such that the advanced nursing role was evolving into a doctor-type role. However, clear differences between the role of the ANP and GP were recognised, and participants explicitly described a distinction between the therapeutic nursing role and curative medical role of the GP. Moreover, PNs in both the meta-synthesis and qualitative studies were clear that new roles should enhance and add value to an existing set of practices rather than substitute the work of the GP.

-09However, in their 2010 report on managing extended practice, the Council for Healthcare Regulatory Excellence (CHRE) described extended practice as those circumstances when a registered health professional undertakes clinical tasks or roles usually associated with another profession (CHRE, 2010). This accords with the definition of role extension as a 'substitution of doctors' traditional roles' (Saxon, Gray & Oprescu, 2014). Whilst both definitions imply a blurring of professional boundaries, they are at odds with the PN's desire to take on enhanced rather than extended, substituted roles and PNs in both parts of this studies were clear that nurses are not doctors.

The fear that progression of advanced PN roles may diminish the 'essence' of nursing is not new (Bonsall, Cheater, 2008), and the literature describes medical opposition to expansion of nursing roles into tasks previously considered to lie within the doctor's domain (Redsell, Cheater, 2008; Henderson et al., 2014; Niezen, Mathijssen, 2014). Indeed, the need to move away from terms that imply nurse/doctor substitution and which serve to define nursing in

relation to a doctor's work has been noted (Redsell, Cheater, 2008). Moreover, roles that supplement rather than substitute medical care are more acceptable as professional boundaries remain intact and transfer of medical responsibility away from the doctor is not required (Niezen, Mathijssen, 2014).

Participants associated the role of the GP with greater responsibility than associated with nursing roles and the GP's 'medical' knowledge meant that they were better able to manage patients with complex care needs. PNs in both studies expressed a desire to limit their scope of practice to the management of 'straightforward' cases and saw the provision of guidelines and protocols as a means of facilitating this. Previous literature suggests that GPs share this view, advocating role extension only when under supervision and with the provision of clear protocols, or if it facilitates the streamlining of more straightforward cases that do not require GP input (Welsh et al., 2014). Protocols encourage the delivery of standardised evidence-based care and were perceived as a means of transferring responsibility. Protocols have also been shown to legitimise the delegation or substitution of certain tasks (Niezen, Mathijssen, 2014) as they guide care based on objective measurements and provide an unequivocal pathway for the majority of straightforward and usual care. There is also evidence that the use of nurse-managed protocols may improve the management of patients with LTCs such as diabetes, hypertension, and chronic heart failure, thereby improving health outcomes (Shaw et al., 2014).

Participants perceived the nurse-patient relationship as different to the GP-patient relationship, and nurses felt that they offered more holistic and patient-centred care. The RCN are clear that it is the responsibility of all nurses to promote good mental health and to support those who have a mental illness (RCN, 2020). Yet there was consensus amongst participants in my study that nursing roles should not be inclusive of mental health, and some described agreement within their practice team that such patients did not fall within the nursing remit. Similarly, a study looking at nurses' attitudes towards people with mental illness in primary care found that whilst most expressed sympathy and a willingness to help patients, younger

nurses or those without additional mental health training feared some patients therefore precluding them from their care (Ihalainen-Tamlander et al., 2016). One review found that the higher a nurse's level of education, the more likely they were to have a positive attitude towards mental illness (de Jacq, Norful & Larson, 2016). The provision of adequate training may therefore allow nurses to feel more empowered to approach patients with mental illness, thereby potentially addressing a gap in care. However, it is noteworthy that a Cochrane review of the impact of nurses working as substitutes for primary care doctors which looked at 'primary healthcare services that provide first contact and ongoing care for patients with all types of health problems', excluded mental health problems (Laurant et al., 2018). This may imply that the belief that mental health is somehow different and not part of the general practice nursing role may be endemic and addressing these preconceived ideas may require a systemwide approach.

However, Laurant's 2018 review yielded some interesting results. Firstly, for some acute and chronic conditions, trained nurses probably provide equal or possibly better quality of care than GPs. Moreover, suitable trained nurses may also achieve equal or better health outcomes for patients and achieve higher levels of patient satisfaction. These findings correspond with earlier literature discussed on page 16 ((Kviz, Misener & Vinson, 1983; Horrocks, Anderson & Salisbury, 2002; Bonsall, Cheater, 2008; Parker et al., 2014). However, in comparison to a GP, care delivered by nurses is associated with both a longer consultation time and higher frequency of attended return visits (Laurant et al., 2018). So, whilst nurse may provide care which is equivalent, if not better than doctors for some conditions, the cost of care and financial viability are not clear. The authors were also unable to ascertain which level of nursing education was associated with the best outcomes for substituted roles (Laurant et al., 2018).

5.4.4 Training and experiential learning

There was consensus that provision of adequate training and acquisition of a qualification was fundamental to the success of role extension, which accords with the findings or previous research (Halcomb et al., 2014). A report published by The King's Fund found lack of appropriate training for boundary spanning roles to be common, resulting in staff being underprepared to enact new roles (Gilburt, 2016). This is consistent with findings of the meta-synthesis in which PNs questioned the adequacy of training for extended roes and expressed fears that they would lack the skills and knowledge to enact new roles and/or to maintain new skills once attained.

A lack of agreement regarding the level of training required for specific roles and inconsistency in the qualifications required to fulfil advanced nursing roles such as Nurse Practitioner (NP) was evident and has been raised in past literature (Laurant et al., 2005). This inconsistency is apparent in some of the subjective wording used to differentiate nursing roles as discussed. The District Nursing and General Practice Education and Career Framework was created by HEE to help support standardisation of training needs, setting out comparators and expectations for each level of nursing in terms of both skills and educational requirements (HEE, 2015a). This framework also makes use of subjective terminology describing the ANP role as demanding "highly specialised knowledge in general practice nursing" and for the nurse to be "at the forefront of developments in their field" (HEE, 2015a). Whilst the framework recognises that the ANP role may differ between organisations, it does not suggest how in the absence of explicit proof of qualification, achievement of more subjective criteria can be demonstrated. Participants in this qualitative study voiced concerns regarding the ability to provide explicit proof of skills acquired experientially and through the acquisition of tacit knowledge.

Similarly, the interim People Plan which outlines the more immediate actions that are required to deliver the NHS Long term Plan speaks of the need to develop new models of advanced

clinical practice which will allow staff to working safely and effectively at the 'top of their licence' (NHS England, 2019a). However, the use of subjective language may again be problematic and whilst NHS England's intentions may be laudable, it is not clear what 'top of their licence' means nor how it can be achieved. Publication of the full People Plan is still awaited.

PNs in both studies were clear about the role of experiential learning in cementing knowledge and the importance of being comfortable in a new role was noted. Review of the literature also revealed the importance of experiential learning, which has been shown to help improve the learning experience and cement knowledge when applied to the acquisition of clinical skills by nurses (Hill, 2017)

5.4.5 Support and 'back-up'

PNs in both studies considered interprofessional relationships as fundamental to both the provision of integrated care and success of extended roles, and knowledge of each other's role and role boundaries was seen to enhance the PN-GP relationship. This is consistent with the findings of other authors which have shown that role boundaries are fundamental to the maintenance of a discrete professional identity and that an individual will hold beliefs, norms and expectations (internalised role expectation) both about their role and the role of others within a team (Nancarrow, Borthwick, 2005; Schadewaldt et al., 2016). Furthermore, success of a team is dependent on each team member having a clear understanding of these roles and role boundaries and disputes about boundaries and roles can prove detrimental to interprofessional relationships (Schadewaldt et al., 2016). Results of the meta-synthesis revealed that an individual may view the expansion of another's professional boundary as an encroachment on their own and a threat to their professional identity. Role extension may therefore result in a team member engaging in 'jurisdictional' work in an effort to protect and maintain control over the threatened sphere of work (Sanders, Harrison, 2008; Welsh et al., 2014). Indeed, Barton (2006) found that the blurring of professional boundaries required for

successful addition of NPs into the primary care environment demanded that roles and scope of practice be renegotiated with GPs (Barton, 2006). Similarly, changing role boundaries between primary and secondary care and between doctor and PN can result in uncertainty and unease about clinical responsibility and accountability (Rushforth et al., 2016) which resonates with the findings of both studies. It is however recognised that whilst historically the medical profession has had jurisdiction to control division of labour within health disciplines, physician-dictated alterations in scope of practice are becoming less frequent (Nancarrow, Borthwick, 2005).

The development and maintenance of trust between the GP and nurse was considered fundamental to the success of role extension, and trust was in part reliant upon the GP-held belief that the nurse would seek support when necessary. Role ambiguity and insufficient trust have previously been highlighted as barriers to collaborative care, (Bailey, Jones & Way, 2006; Akeroyd et al., 2009), and PNs in both studies described how unclear professional boundaries and lack of trust could jeopardise the GP-PN relationship leading to isolation and vulnerability.

PNs described the need for adequate support as crucial, with confidence to enact new roles directly dependent upon the support received. The need for support was echoed in the literature, allowing extended roles to evolve and succeed, and facilitating the implementation of collaborative models of care (Rashid, 2010; Schadewaldt et al., 2016). The degree of support required appeared to correlate with level of experience; the more autonomous the nurse, the less support was required. This accords with results of the meta-synthesis which revealed that the relatively inexperienced nurse may be reluctant to take on added responsibility and subsequent accountability in fear of lack of adequate support.

PNs in both studies felt that the GP was not always the most appropriate source of support and observations regarding inadequate training and knowledge of the GP were voiced. PNs considered having access to the right source of support as crucial to enacting some extended roles and that in their capacity as a generalist, GPs may not have the knowledge or expertise

required to offer this level of support. The phenomenon of deskilling as a direct consequence of role extension was also evident in both meta-synthesis and qualitative study. Rushforth et al (2016) suggest that with regards diabetes management, some clinicians lack confidence in their knowledge of guidelines and ability to perform tasks such as insulin initiation. In this instance, the PN undertaking routine management of diabetes may be best served gaining support from a diabetes specialist nurse (DSN) rather than a GP colleague.

The need for access to other HCPs including those in secondary care was therefore raised and, in both studies, PNs felt that the integrative team approach would enable access to a larger support network. The GP Forward View describes the provision of integrated primary and community services including access to relevant specialists as essential to sustaining, renewing and strengthening GP practices, and details the Multispecialty Community Provider (MCP) model as their vision of the future of primary care (NHS England, 2016).

A 2016 report by the King's Fund described some extended roles as being designed to support the delivery of integrated care through models such as the MCP, enabling provision of holistic and continuous care that spans across organisational boundaries (Gilburt, 2016). Moreover, current recommendations regarding nurse involvement in the management of chronic inflammatory arthritis suggest that given their abilities and aptitude for coordinated care, nurses may be able to facilitate improved access to the multidisciplinary team (van Eijk-Hustings et al., 2012). So whilst PNs consider integrated care to be essential to the success of extended roles, extended roles are essential to the success of integrated care.

PNs in both the meta-synthesis and qualitative study identified service delivery as the main driver for role extension with nursing roles usually evolving to meet the unmet needs of the practice and population. Healthcare policy has long seen role extension as a means of increasing the efficiency and capacity of the primary care workforce, and the Long Term Plan describes the expansion of multi-professional credentialing as a means of enabling clinicians to shift or expand their scope of practice to other areas more easily (NHS England, 2019b).

However, participants in the qualitative study had differing opinions as to whether the creating of more specialised nursing roles had inadvertently resulted in fragmented care and the need for patients to attend multiple appointments; the phenomenon of deskilling is not exclusive to GPs.

Prevailing models of professionalism assume that existing professions have a desire to expand their boundaries, however this is neither true nor possible for all disciplines (Nancarrow, Borthwick, 2005) and it was clear from both studies that role extension should not be considered inevitable. Not all nurses wished to extend their role, and this was considered important in allowing some nurses to continue practicing basic nursing skills. Indeed, Rolfe (2014) suggested that whilst role extensions and the development of the ANP role was designed in part to help address the shortfall of junior doctors, this initiative failed to recognise the resultant projected shortfall of nurses, a gap that would likely be filled by healthcare assistants. Development of the ANP role was therefore at the expense of the PN role (Rolfe, 2014) with a resultant reduction in the workforce able or willing to enact the fundamental duties of a PN. In an effort to increase the capacity and efficiency of the primary care workforce we may therefore be inadvertently creating new professional silos. The recent creation of the nursing associate role which acts as a bridge between an HCA and registered nurse (NHS England, 2019a) may be been in recognition of the need to continue delivering the fundamental nursing skills lost by role extended nurses. This role was not discussed during the interviews as it was only developed within the last year.

5.4.6 Diagnosis by nurses

In the UK, diagnosis by nurses in more advanced roles is well established. However, a study looking at the integration of NPs into the primary healthcare team in Canada suggest that their scope of practiced is restricted such that they are not permitted to make primary diagnoses (Brault et al., 2014). In the United States, disclosure of a diagnosis is generally considered the

role of the doctor, yet nurses often find that they are active participants in the process both intentionally and inadvertently (Newman, 2016). Similarly, participants in the qualitative study described the phenomenon of informal diagnosis by PNs in less advanced roles, with the relaying of results believed to be akin to diagnosis by some. Indeed, Gleason et al (2017) argue that nurses have always been involved in the diagnostic process. However, the view that diagnosis lies solely with the doctor remains pervasive in some healthcare systems.

The act of making a medical diagnosis is a complex process cognisant of both pattern recognition and logical reasoning (Richardson, Wilson, 2008); is not merely the attribution of a label and diagnosis has been defined as a process which results in both a label and name of a health problem (Considine, 2017). Key stages in the process include clinical reasoning and communication. Diagnosis within primary care can be difficult, seldom following a simple linear sequence (Foot, Naylor & Imison, 2010), often requiring both taught and experiential methods to refine diagnostic hypotheses. The objective of the diagnostic process is not always to reach a definitive conclusion, with the recognition and response to signs and symptoms and onward guidance particularly important in primary care. If PNs are to widen their scope to include diagnosis, they will require adequate training and guidance; they will become a role extended PN. Indeed, appropriate training to help empower nurses in their involvement in the diagnostic process has been deemed essential (Newman, 2016).

As outlined in the meta-synthesis, PN perspectives of diagnosis in LTCs were seldom considered in the literature. Most participants in the qualitative study felt that whilst PNs should be able to use objective diagnostic criteria to make protocol-driven diagnoses in some instances, the formulation of more subjective diagnoses such as OA was not appropriate. However, the National Institute for Health and Care Excellence (NICE) recommend making a clinical diagnosis of OA in people aged 45 years and over based on the presence of two, patient-reported symptoms alone, without recourse to investigation (NICE, 2014). Given their role in 'informal' diagnosis, PNs could make a diagnosis of OA by enquiring about the presence of activity-related joint pain with either no morning joint-related stiffness or stiffness lasting less

144

than thirty minutes, thereby facilitating timely recognition, and appropriate signposting, treatment and advice.

As previously highlighted, OA is a highly prevalent musculoskeletal disorder that can result in debilitating pain and significant distress. Moreover, OA is frequently found comorbid with other LTCs, with one study revealing that 67% of patients with OA had at least one other comorbidity (Birtwhistle et al., 2015). Yet despite its prevalence, participants felt that they seldom encountered patients with OA, and some questioned the need for PNs to diagnose the condition. Nurses are not alone in their lack of recognition of OA as OA-related joint pain is seldom prioritised by either patient or clinician, and symptoms are frequently normalised as an inevitable consequence of ageing (Tan et al., 2015). GPs also tend to discuss OA as an absence of disease, which precludes the offering of pragmatic explanations and advice (Paskins et al., 2015).

It is therefore unsurprising that OA is poorly recognised with suboptimal treatment common (Tan et al., 2015). Such misunderstanding would clearly need to be addressed if PNs were to become more involved in the diagnosis and management of patients with OA. However, this would help facilitate opportunistic PN-led diagnosis, allowing treatment to be initiated earlier therefore streamlining and improving the efficiency of patient care and potentially reducing pressure on the primary care workforce.

5.4 Strengths and limitations

This thesis used both a meta-synthesis and qualitative interview study to explore the perceptions of PNs. As discussed in section 2.7.3 (pages 57-60), meta-synthesis allows the extraction and consideration of data relevant to a specific research question with extrapolation of new theory and/or richer understanding than can be gleaned from the reading of single

papers in isolation. The meta-synthesis therefore set the scene for the qualitative study, allowing the appraisal of available literature and giving insight into PN perceptions of role extension. Results were used to inform the topic guide thereby ensuring that topics relevant to PNs were raised in the interviews.

Conducting a meta-synthesis also provided data against which the results of qualitative study could be compared. As demonstrated, results of the meta-synthesis corroborate the findings of the qualitative study.

The strengths and limitations of the meta-synthesis have been considered in section 2.7.3 (pages 57-60). The following will consider the strengths and limitations of the qualitative study with mention of the meta-synthesis where appropriate.

The Index of Multiple Deprivation (IMD) 2015 is the official measure of relative deprivation attributed to small areas in England (Oxford Consultants for Social Inclusion, 2015). People in the most deprived areas have a 60 per cent higher prevalence of LTCs than those in least deprived areas and 30 per cent more severity of disease (DoH, 2012b). Participants in the qualitative study were purposively selected across the range of deciles from one (most deprived areas) to ten (least deprived areas). This ensured the collection of data from nurses working in differing areas of deprivation, with variable levels of exposure to LTCs and multimorbidity. The purpose of this was to explore whether the perceptions of PNs' were governed by their relative exposure to LTCs and multimorbidity. The results of both studies revealed no such relationship.

Efforts were made to purposively select participants with various levels of nursing experience and differing professional backgrounds, thereby allowing opinions and perspectives to be considered in the context of level of advancement and experience. However, the absence of clearly defined nursing roles was evident when collating participant demographic data and there was lack of consistency in the titles used. It was therefore difficult to decipher a

participant's level of advancement solely from the title given. Moreover, some participants appeared to use the title of NP and ANP interchangeably.

PNs working in practices involved in either the ENHANCE (Healey et al., 2015) or MOSIAC (Dziedzic et al., 2018) studies were excluded as their level of knowledge regarding OA and how it is diagnosed would be expected to be greater than those PNs not involved in the studies. However, one participant had previously worked at a practice involved in the ENHANCE trial and had received training related to OA and diagnosis. This appeared to give them a better understanding of OA and influenced their belief that PNs should be able to diagnose OA.

The process of constant comparison was used to analyse the data and the topic guide was refined during data collection and analysis. This was important as it allowed exploration of emergent themes and was particularly important in facilitating collection of data reflecting PN's misconceptions around OA.

Eleven of the eighteen interviews were conducted via the telephone. Telephone interviews have been shown to yield rich, high quality narrative data (Drabble et al., 2016). Indeed, concerns that telephone consultations may restrict rapport development, preclude assessment of visual cues and lead to data loss or distortion have not been founded (Novick, 2008). Interviews conducted via the telephone were also more feasible and practical for the nurses, many of whom had busy working schedules.

Data saturation was achieved indicating that further interviews would not yield new data or offer greater insight (Saunders et al., 2018). Other aspects of the methods employed that enhanced the trustworthiness of data analysis included regular discussion of the interview data with supervisors and multiple coding of early interview transcripts.

With regards the meta-synthesis, from those titles initially screened, one hundred were randomly selected and independently checked against the given inclusion and exclusion criteria, thus demonstrating validity of the process. As with the qualitative study, data from the meta-synthesis were regularly discussed.

Both studies were supported by the PPIE team at Keele University, which has over a decade of experience involving PPIE in health research (Jinks et al., 2016; Troya et al., 2019). The involvement of high quality PPIE has been shown to improve the design and relevance of research, ultimately resulting in clearer outcomes (Blackburn et al., 2018). The PPIE group contributed to the development of the study protocol and topic guide for the interviews. They provided valuable insight into the lives of people living with LTC and multimorbidity and how their experiences of care had influenced their journey. Members of the group also agreed to be interviewed before the study interviews took place. This allowed VT to experience the art of qualitative interviewing and appreciate that the skills and techniques required are very different to those used in the GP consultation.

All participants were female. Gender norms can influence behaviours, actions and interactions and how people perceive themselves and each other (Tannenbaum, Greaves & Graham, 2016). The data collected may therefore not be representative or generalisable of the whole nursing fraternity. It is also accepted that perceptions do not always equate to what is done in practice, with the accuracy of self-reported behaviours subject to a range of cognitive and motivational biases (Latkin et al., 2016), including the desire to give the 'right' answer. VT's occupation as a female GP was disclosed prior to interview. This may have influenced some of the narratives, particularly when discussion relationships and GP control over scope over practice. However, telephone interviews have been shown to afford a degree of anonymity to the participant therefore enabling the collection of potentially sensitive data (Welsh et al., 2012) which may have mitigated this to a degree during telephone interviews. Moreover, VT's experience as a GP allowed an appreciation of the environment in which the nurses work and provided an excellent insight into the complexities of primary care and the challenges the workforce face, including an understanding of the secondary care barriers described. VT was therefore able to contextualise the results and visualise how facilitators of role extension may be encouraged whilst addressing the barriers identified. However, the desire for participants

to give the 'right' answer may have been amplified by the interviewer's profession as a GP and a perception that there was a correct, evidence-based clinical answer.

5.5   Implications for clinical practice

This thesis highlights potential barriers and facilitators to the implementation of role extension in primary care. The findings may therefore be used to inform healthcare policy and clinical practice, thereby facilitating successful implementation of new extended roles.

Firstly, both studies identified a clear need and desire for nursing roles to be explicitly defined. Clear role boundaries were considered of great importance to the nurse as an individual, explicitly outlining what they can and cannot do as part of their role. They were also deemed important for the development of relationships with patients, employers and colleagues alike. However, it is acknowledged that in the context of the multiplicity of nursing roles and responsibilities, the creation of nationally agreed and relevant definitions may not be possible. This challenge is evident in attempts to define nursing roles over the last decade, with the use of subjective terms such as "highly specialised knowledge in general practice nursing" and "at the forefront of developments in their field" (HEE, 2015a) being of little help to those in clinical practice. Participants in this study revealed that clarity at a practice and individual level is not only feasible but achievable, providing a defined scope of practice which can be understood by patients and colleagues alike.

With continued extension of nursing roles, the focus may need to change from attempts to apply definitions to existing often disparate roles to the creation of new roles with new specific and clearly defined boundaries; specific titles may need to be created on a national level to reflect a nurse's level of advancement and possibly their area of specialisation. Such titles are already evident in some areas of secondary care including breast cancer specialist nurse and

heart failure specialist nurse and have been used to distinguish between doctors of different specialities for many years.

Secondly, adequate training is essential for most extended roles and the creation of specific, formal training programmes may help facilitate the creation of nationally defined role boundaries. HEE already stipulate that an ANP must hold a Master's degree in a nursing related subject (HEE, 2015a). Similarly, the definition of advanced clinical practice is inclusive of an appropriate Master's degree (HEE, 2017). Many participants cited the Warwick Diabetes Course as their chosen method for enhancing their knowledge of diabetes and a Physical Assessment Course was used to gain and improve clinical examination skills. The provision of nationally agreed, approved and regulated training programmes through which roles could be extended may aid the creation of clear and consistent scopes of practice for nursing roles. Moreover, if the focus of efforts does shift to the creation of new nursing roles, each role could be associated with a specific programme of training and list of achievements which must be attained to undertake that role.

Support was considered essential to the successful implementation and continuation of extended roles. Each specific training programme would be inclusive of dedicated mentoring and provision of appropriate support mechanisms would be clear thereby facilitating implementation of new roles.

Thirdly, expansion of the primary care workforce is not solely dependent on changes to the nursing profession, and the NHS Long Term Plan discusses the need for roles such as that of the social prescriber, physician's associate, front-line physiotherapist, and pharmacists to become well established within primary care (NHS England, 2019b). The professional boundaries of many of these new roles will undoubtably overlap with existing professions including nursing roles. Whilst the scope of this thesis did not extend to consideration of these other roles, it is acknowledged that careful consideration of issues raised is essential if these roles are to be integrated and accepted into and by the current workforce.

5.6 Recommendations for research

Whilst this thesis focused solely on the perceptions of the PN, the effects of role extension will be felt by all members of the collaborative team. Moreover, role extension is not exclusive to the nursing profession. Future research must involve a wider range of stakeholders if the process of role extension is to be better understood and change is to be optimally supported. This should include consideration of the views of GPs upon whom nurses often rely to provide support and 'back up' for extended roles. The patient should also be considered as an intrinsic member of the primary care team thereby realising the NHS ethos of 'no decision about me without me' (DoH, 2010b). It is therefore important that the views and experiences of patients are considered paramount in informing recommendations to facilitate implementation and acceptance of role extension in primary care.

Results of the meta-synthesis revealed a paucity of literature regarding PN perspective of diagnosis in LTCs. PNs are considered fundamental to the care of patients with LTCs and healthcare policy dictates that their remit expand to include additional complex care including assessment and diagnosis. Research on clinician and patient views of PN diagnostic work is also lacking and acceptability unknown. Future research should therefore try to capture the perceptions of nurses, patients and professional colleagues, to help facilitate acceptance of diagnosis in LTCs by PNs.

Results of the qualitative study revealed some common misconceptions about OA amongst PNs. Future research should explore the origins of these beliefs so that these misconceptions may be challenged thereby promoting improvements in recognition and treatment of OA in primary care. Similarly, both studies suggest the belief that mental health is somehow different is still pervasive in primary care. Further qualitative enquires would allow us to better understand and challenge this perception and yield data that could potentially inform a campaign to help tackle these misconceptions.

Chapter 6 – Reflections

In this chapter I will outline my reflections on completing this MPhil. This will include discussions on how I have developed over the last four years, both as a researcher and a GP. I will also consider how the research journey has affected me personally.

The concept of reflexivity will also be discussed including how my personality and role as a researcher and GP influenced the research question, methods used, and the narratives and data collected.

6.1   Research journey

I became affiliated with the Research Institute (now School of Primary, Community and Social Care) at Keele University in 2013, when I was awarded an extension to my GP vocational training to allow the completion of my Master of Medical Science (MMedSci). I was subsequently awarded a National Institute for Health Research (NIHR) In-Practice Fellowship and started working towards my Master of Philosophy (MPhil) in September 2015.

My MMedsci dissertation comprised original and innovative research regarding the association between primary care coding of joint-related problems in older adults and risk factors for osteoarthritis (OA). Cross-sectional and longitudinal analyses revealed that female gender and increasing age were associated with an increase likelihood of OA diagnosis at presentation and over time.

I was also a member of the team working on the ENHANCE trial, a pilot stepped-wedge randomised control trial (RCT) testing the feasibility and acceptability of integrating case-finding for OA, and anxiety and depression within an 'enhanced' practice nurse (PN)-led, long-term condition (LTC) review (Healey et al., 2015). I contributed to the trial in several ways,

including involvement in the evidence syntheses, development and delivery of the PN training package and planning of the main trial methodology.

Both completion of my MMedSci and involvement in ENHANCE served to foster my interest in OA and multimorbidity and I chose to embark on a qualitative study to look at why OA was such a 'puzzle' and why PNs were reluctant to be involved in the care of those with OA. This was my first real experience of qualitative work and I found the learning curve to be rather steep at times.

I am a GP Partner, married with two children aged 12 and eight. My home and personal life are extremely busy but very fulfilling and I feel very fortunate to have been afforded the opportunity to work in research. I have always been able to manage my time, prioritising tasks with efficiency, gaining maximum productivity, whilst still having fun. However, I encountered a few significant personal and professional challenges during my journey, which I will reflect upon.

6.2   Personal and professional development

Prior to commencing my studies, my work in research had a purely quantitative focus. Qualitative methods and the process of meta-synthesis were therefore very new and somewhat alien to me and completion of my MPhil demanded that I acquire multiple new skills.

I feel that I have learnt a great deal about qualitative approaches to research, much of which has been positive. I will now reflect upon my development as a researcher, and some of the challenges that I have encountered and how I would change things if I had the opportunity.

6.2.1 Work-life balance

My working life changed quite considerably while completing my MPhil. In 2015, when embarking on my journey, I was a salaried GP with a portfolio career including research and working as a GP with Special Interest (GPwSI) in Accident and Emergency (A&E). However, I was working more than full time hours which was not sustainable and so I chose to leave A&E to focus on academia and my career as a GP.

In July 2017, I was offered the opportunity to become a GP partner in a local practice. This was a difficult decision for many reasons, not least as I was unsure whether the toils of becoming a new GP Partner were compatible with completion of my MPhil. However, in September 2017, I left the Research institute, became a GP Partner and GP trainer, and chose to complete my MPhil in my own time, with the ongoing support of my supervisors.

In January 2018, my family and I moved to a new house and our children started a new school. Unfortunately, my son was subjected to both physical and emotional bullying at this school, and we had to move both our children to a different school after just one term. This experience affected the entire family, and I found this experience very difficult as a mother, as my son became very withdrawn and I felt unable to protect him. Helping our son and adapting to becoming a GP Partner became my priorities and my MPhil was put on the 'back-burner' for several months.

I subsequently took a six month Leave of Absence from my studies in September 2019 and returned to my studies in January 2020. I have absolutely no doubt that this was the right decision and I now feel that I have retained a good balance between my personal and work life. However, I am ever mindful of the need to recognise limitations, and how taking on too much in one sphere of my life can have a deleterious effect on others.

Over the last few weeks, my entire focus has been on the coronavirus pandemic and Covid-19. This situation is evolving daily, and I believe it will change the lives of millions of people worldwide.

6.2.2 Research training

I was fortunate to attend several formal research training programmes during the course of my MPhil. I initially attended an Introduction to Qualitative Methods course which gave me an insight into the theories, methodologies and methods of data analysis associated with qualitative research. This gave me an appreciation of how and why qualitative methods are used and was essential in enabling me to plan my study.

My relative inexperience in qualitative methods necessitated additional training and I attended courses covering the rapid critical appraisal of qualitative research, analysis of qualitative data, and the use of NVivo. However, whilst these courses were essential in introducing me to qualitative research, I found that much of my learning was experiential and self-directed and as such was contextual and more relevant.

6.2.3 Completing my MPhil

I found several aspects of my MPhil challenging. Firstly, it has taken me four and a half years to complete this thesis. This presented challenges in terms of ensuring literature was up-to-date and amending my thesis in line with new evidence and policies where necessary. Whilst essential, taking a break from my thesis was also difficult as on returning, I was no longer familiar with my data and felt I that I had taken a step backwards in terms of progress.

This is undoubtably the longest piece of writing I have completed, and I had fears that I would not be able to stay within the allowed word limit. This was due in part to areas of repetition that occurred as a consequence of no longer being familiar with my work after my Leave of Absence. However, whilst frustrating, I was able to refocus and revisit my chapters and am happy with the overall outcome.

6.3 Reflexivity

As a GP, I have always used reflection as a method of learning from my experiences. However, as a novice qualitative researcher, the concept of reflexivity and process of being reflexive was new to me. Fortunately, reflexivity can only be truly understood through the experience of doing it (Dodgson, 2019) and most researchers develop the ability to be reflexive whilst conducting research (Mitchell et al., 2018). I therefore endeavoured to be mindful of how my personality and role as a researcher and GP influenced all stages of the research process.

The quality of qualitative research is intrinsically linked to the concept of trustworthiness (Williams, Morrow, 2009), and reflexivity has been adjudged the gold standard method of determining trustworthiness of qualitative literature (Teh, Lek, 2018)

Reflexivity recognises that we are part of the social world that we study, and our interactions within our social realities will influence our research. Reflexivity is an ongoing process that enables researchers to acknowledge how their research has changed them and how these changes will in turn affect their research (Palaganas et al., 2017). It was therefore important for me to be cognisant of how my personality and role as a GP and researcher could affect my research and convey these influences to readers (Dodgson, 2019).

As discussed in Chapter 5 (pages 148-149), my profession as a GP is likely to have influenced some of the narratives. Evidence shows that healthcare professionals (HCPs) behave according to established norms and tribal characteristics and will interact with other HCPs in hierarchical and stereotypical ways and often function in discipline-specific groupings (Braithwaite et al., 2016). The desire for the nursing role to be distinct to the role of the GP was clear in my study and many participants remarked on hierarchy and GP control over their role. I was mindful that participants may have been reticent about disclosing some of their beliefs and tried to alleviate some of this by clarifying that I was interviewing in my capacity of researcher and not as a GP (Quinney, Dwyer & Chapman, 2016).

I found that some participants became defensive when discussing clinical themes, as if I was testing their clinical knowledge rather than exploring their perceptions (Coar, Sim, 2006). This made it difficult to encourage the narrative as some of the participants appeared hostile to further discussion. This was interesting as whilst I was not looking for a correct answer, many of the participants were unsure what OA was and how it was treated. I initially found this difficult to manage, as I was unsure whether I should 'correct' misconceptions as they did not fit with my topic guide which was reliant on the fact that the participants understood what OA was. Reflexivity is not intended to be an individual pursuit, and high-quality qualitative research demands that the process be a collaborative effort within the research team, and communicated throughout the research process (Barrett, Kajamaa & Johnston, 2020). After reflexive dialogue with my supervisors, I altered my topic guide to encourage a narrative not reliant on the participant's knowledge or understanding. Benefits of reflexivity as a collective process include allowing multiple viewpoints to be considered and preconceptions challenged, and improved or enhanced "conceptual thinking," (Mitchell et al., 2018). I therefore endeavoured to engage in regularly meetings with my three supervisors during completion of my MPhil.

Initially, the experience of qualitative interviewing was very alien to me. The skills required for the GP consultation are very different, and different techniques are used to elicit information from the participant/patient. Moreover, unlike the qualitative interview, the GP consultation usually has a set goal and specific outcome and is somewhat limited by time constraints. Whilst silence is a very useful tool for the GP, I found it very difficult to 'keep quiet' during the nurse interviews and all too often found myself agreeing with the participant and using encouraging terms such as 'yes' and 'I know' usually accompanied by a nod of the head. Whilst I learnt to temper the urge to agree as the interviews progressed, this positive reinforcement may have influenced the participants responses, particularly in the earlier interviews. I also believe that the impact of this need to assent could have been more significant had I not engaged in 'mock' qualitative interviews with members of my PPIE group. I feel that observing a more

experienced qualitative interviewer before my interviews would have allowed me to become more acquainted with the skills required and may have encouraged me to 'keep schtum' when appropriate.

During my reflexive meetings, it also became apparent that I did not encourage participants to expand on comments made and did not explore interesting comments fully. However, I felt that my technique certainly improved over time.

I chose to keep a reflexive journal which including field notes taken immediately after each interview and the thoughts and reasoning behind changes to concepts and themes. Whilst I found this useful, I think the field notes were too brief and I didn't document how each interview affected my perceptions and understanding of the data. With hindsight, I also think it would have been useful to clearly document reflexivity throughout my research project, thereby allowing me to instantly capture and contextualise my thoughts and feelings as opposed to this feeling like a more retrospective process.

6.4   Research process

I will now reflect on some specific aspects of the research process and how these elements affected me.

6.4.1 Research and Development

One of the first parts of the research process was gaining ethical approval. I found this process relatively easy to navigate and the Ethics Panel commended my use of clear language.

I somewhat naively assumed that the process of applying for Research and Development (R&D) approval from the Health Research Authority (HRA) would be just as straightforward.

However, submission of my research proposal coincided with widespread changes to the application process and the proposal was only the second from within the Research Institute to be submitted through the new system. My application was submitted in June 2016 and approval granted in November 2016. I found this frustrating as recruitment was significantly delayed for reasons that were beyond my control and I had only eleven months left of my two-year NIHR In-Practice Fellowship to complete my work.

6.4.2 PPIE involvement

This MPhil afforded me my first opportunity to work directly with a Patient and Public Involvement and Engagement (PPIE) group. I was aware of PPIE involvement in the ENHANCE trial and how this helped inform the study design but had not fully appreciate the positive impact that patient involvement could have and how it increased the relevance of research.

My PPIE group provided valuable insight into the lives of people living with LTCs and multimorbidity and allowed me to share their experiences of care and how these influenced their journey. It also allowed me to contextualise my work and appreciate how and why research was important.

My PPIE group comprised patients with LTCs including OA. Whilst my involvement with the PPIE group was in the context of a researcher, it was interesting to see how some of the members reacted to me as a GP. On several occasions, both positive and negative recollections about previous experiences with GPs were directed towards me and comments were made about how I could learn from these experiences. I also felt as if some members were testing my knowledge of their condition. I took these interactions in a positive light as they spoke of how the individuals had experience their condition in a social context, and indeed provided insights into how to be more mindful of the patient and not just the disease. I truly

believe that PPIE involvement enhanced my study and helped to keep it relevant to the patient who should be at the centre of care.

6.4.3 Meta-synthesis

As a member of the ENHANCE trial team, I contributed to a large evidence synthesis, collating and synthesising literature regarding case-finding and treatment of OA, and anxiety and depression in primary care. This gave me a good grounding in the techniques used to search, critique and appraise literature. However, I found the creation of search terms, keywords and MeSH headings and need to adapt them according to the requirements of each of the nine included databases quite arduous and time consuming. I was also a little concerned about the sheer volume of papers initially identified and worried that my methods of initial screening would not be adequate or thorough, and that important papers would be missed. This fear was heightened when only six relevant papers were identified and included in the synthesis. However, whilst the process of study selection had not been exhaustive, it had been systematic, and I was reassured by Noblit and Hare's view that including too many papers yields "trite conclusions" (Noblit, Hare, 1988).

6.4.4 Topic guide development

My topic guide was initially informed by the results of my meta-synthesis and information from the ENHANCE study and was subsequently refined in collaboration with the PPIE group. I was also able to use my clinical and professional experience as a GP to propose areas that may be of interest.

My topic guide was developed in an iterative manner, as part of the process of constant comparison of the data (Charmaz, 2006). The most fascinating part of this process was

changing the guide to reflect some of the participants misconceptions regarding OA and how to capture the data required without directly addressing these misconceptions.

6.4.5 Recruitment to qualitative study

The process of recruitment was quite laborious and a little disheartening at times. It certainly put into context the few times I had taken a cursory look at an invitation to participate in research before nonchalantly discarding it; this will not happen again.

The use of purposive sampling was important in allowing me to invite nurses working in different areas of deprivation and with varying levels of advancement (Palinkas et al., 2015). I also employed the technique of snowball sampling, although not intentionally as one of the nurses invited her colleague to participate (Goodman, 1961). However, this backfired somewhat as the nurse in question did not engage and looked at her watch repeatedly during the interview.

The process of recruitment has given me an appreciation of the difficulties faced by researchers, and how important it is be mindful of these problems when considering research at a practice and personal level. Whilst it is true that as a GP I often feel like a hamster on a very large wheel, the medicine we practice is evidenced-based and the product of research and I feel that my time as a researcher has made this abundantly clear.

6.4.6 Data analysis

I had initially intended to NVivo Version 10 to help manage the process of constant comparison and thematic analysis. I had used this during my meta-synthesis to good effect. I had also intended to use the Framework Method to facilitate the coding process, as this provides a structured approach well suited to semi-structured interviews (Gale et al., 2013). However, I

found the software cumbersome and data too difficult to interpret using NVivo. I therefore devised a method of summarising and tabulating the data including initial thoughts and reflections on each theme, an example of which is given in Appendix Nine. Whilst I am sure that this is not the first time such a method has been used, I certainly found it more user-friendly.

6.4.7 The research team

I was fortunate to work with a very experienced team of supervisors who were able to guide me through the research process. Two of my supervisors had an extensive background in qualitative research, experience which I found invaluable as a novice in this field. My other supervisor had a nursing and PhD background and was able to offer the benefit of insight from both a nursing and research perspective.

I engaged in reflexive dialogue with my research team during the research process, ensuring that my work was trustworthy and of optimal quality (Mitchell et al., 2018, Barrett, Kajamaa & Johnston, 2020).

6.4   Final thoughts

Completion of my MPhil has been a rewarding experience both professionally and personally. I have gained valuable experience and insight into qualitative research and am able to appreciate its role and value both in mixed method studies and as an individual research technique. I am also better able to appreciate the blood, sweat and tears that go into organising and conducting research; the magnitude of which I think escapes many clinicians. I have

undoubtably encountered challenges and frustrations along the way, but all-in-all this has been an informative and fulfilling adventure.

Whilst completion of my MPhil will complete this journey as a researcher, I hope that this will only be temporary, and feel that my love of research and passion to learn will see me pursue further involvement in research in the future.

References

Akeroyd, J., Oandasan, I., Alsaffar, A., Whitehead, C. & Lingard, L. 2009, "Perceptions of the role of the registered nurse in an urban interprofessional academic family practice setting", Nurs Leadersh (Tor Ont), vol. 22, no. 2, pp. 73-84.

Al Sayah, F., Szafran, O., Robertson, S., Bell, N.R. & Williams, B. 2014, "Nursing perspectives on factors influencing interdisciplinary teamwork in the Canadian primary care setting.", Journal of Clinical Nursing, vol. 23, no. 19-20, pp. 2968-2979.

Allen, D. 1997, "The nursing-medical boundary: a negotiated order? ", Sociol Health Illn, vol. 19, pp. 498-520.

Allen, J., Gay, B., Crebolder, H., Heyrman, j., Svab, I. & Ram, P. 2011, The European Definition of General Practice/Family Medicine. Short version. WONCA.

Altman, R., Alarcón, G., Appelrouth, D., Bloch, D., Borenstein, D., Brandt, K., Brown, C., Cooke, T.D., Daniel, W., Feldman, D. & et al 1991, "The American College of Rheumatology criteria for the classification and reporting of osteoarthritis of the hip.", Arthritis and Rheumatism, vol. 34, no. 5.

Arthritis Research UK 2013, Osteoarthritis in General Practice. Data and Perspectives.

Atkins, S., Lewin, S., Smith, H., Engel, M., Fretheim, A. & Volmink, J. 2008, "Conducting a meta-ethnography of qualitative literature: lessons learnt", BMC Med Res Methodol., vol. 16, no. 8, pp. 21.

Bailey, P., Jones, L. & Way, D. 2006, "Family physician/nurse practitioner: stories of collaboration.", J Adv Nurs, vol. 53, no. 4, pp. 381-391.

Barnett, K., Mercer, S.W., Norbury, M., Watt, G., Wyke, S. & Guthrie, B. 2012, "Epidemiology of multimorbidity and implications for health care, research, and medical education: a cross-sectional study.", Lancet, vol. 380, no. 9836, pp. 37-43.

Barrett, A., Kajamaa, A. & Johnston, J. 2020, " How to… be reflexive when conducting qualitative research.", Clin Teach., vol. 17, no. 1, pp. 9-12.

Barton, T.D. 2006, "Clinical mentoring of nurse practitioners: The doctors' experience", Br J Nurs, vol. 15, no. 15, pp. 820-824.

Birtwhistle, R., Morkem, R., Peat, G., Williamson, T., Green, M.E. & Khan, S. 2015, "Prevalence and management of osteoarthritis in primary care: an epidemiologic cohort study from the Canadian Primary Care Sentinel Surveillance Network.", CMAJ Open, vol. 3, no. 3, pp. E270.

Blackburn, S., McLachlan, S., Jowett, S. & et al 2018, "The extent, quality and impact of patient and public involvement in primary care research: a mixed methods study. ", Res Involv Engagem, vol. 24, no. 4.

Boeije, H. 2002, "A Purposeful Approach to the Constant Comparative Method in the Analysis of Qualitative Interviews.", Quality and Quantity, vol. 36, pp. 391-409.

Bonsall, K. & Cheater, F. 2008, "What is the impact of advanced primary care nursing roles on patients, nurses and their colleagues? A literature review", Int J Nurs Stud, vol. 45, no. 7, pp. 1090-1102.

Booth, A., Carroll, C., Ilott, I., Low, L.L. & Cooper, K. 2013, "Desperately seeking dissonance: identifying the disconfirming case in qualitative evidence synthesis.", Qual Health Res, vol. 23, no. 1, pp. 126-141.

Booth, A., Noyes, J., Flemming, K. & et al 2016, Guidance on choosing qualitative evidence synthesis methods for use in health technology assessments of complex interventions.

Braithwaite, J., Clay-Williams, R., Vecellio, E., Marks, D., Hooper, T., Westbrook, M., Westbrook, J., Blakely, B. & Ludlow, K. 2016, " The basis of clinical tribalism, hierarchy and stereotyping: a laboratory-controlled teamwork experiment ", BMJ Open, [Online], vol. 6, no. e012467, pp. 06.02.2020. Available from: https://bmjopen.bmj.com/content/6/7/e012467.

Brault, I., Kilpatrick, K., D'Amour, D., Contandiopolous, D., Chouinard, V., Dubois, C.A., Perroux, M. & Beaulieu, M.D. 2014, "Role Clarification Processes for Better Integration of Nurse Practitioners into Primary healthcare Teams: A Multiple-Case Study", Nurs Res Pract, [Online], , pp. 04.02.20. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4322308/.

Braun, V. & Clarke, V. 2006, "Using thematic analysis in psychology.", Qualitative Research in Psychology, vol. 3, pp. 77-101.

Brown M.A., Draye M.A., Zimmer P.A., Magyary D., Woods S.L., Whitney J., Acker M., Schroeder C., Motzer S. & Katz, J.R. 2006, "Developing a practice doctorate in nursing: University of Washington perspectives and experience.", Nursing outlook, vol. 54, no. 3, pp. 130.e1-130.e13.

Bryman, A. 2016, Social Research Methods, 5th edn, Oxford University Press, Oxford.

Bujold, M., Pluye, P., Légaré, F. & et al 2017, "Decisional needs assessment of patients with complex care needs in primary care: a participatory systematic mixed studies review protocol ", BMJ Open, vol. 7:e016400. doi: 10.1136/bmjopen-2017-016400.

Campbell, R., Pound, P., Morgan, M., Daker-White, G., Britten, N., Pill, R. & et al 2011, "Evaluating metaethnography: systematic analysis and synthesis of qualitative research", Health Technol Assess, vol. 15, no. 43.

Campbell, R., Pound, P., Pope, C., Britten, N., Pill, R., Morgan, M. & Donovan, J. 2003, "Evaluating meta-ethnography: a synthesis of qualitative research on lay experiences of diabetes and diabetes care.", Soc Sci Med, vol. 56, no. 4, pp. 671-684.

Carmel, S. & Baker-McClearn, D. 2012, "Expert nurses and the division of labour in hospitals.", Health (London), vol. 16, no. 3, pp. 282-297.

Carney, M. 2016, "Regulation of advanced nurse practice: its existence and regulatory dimensions from an international perspective", J Nurs Manag, vol. 24, no. 1, pp. 105-114.

CASP 2014, Qualitative Checklist. Available: http://www.casp-uk.net/#!checklists/cb36 [2015, 16th November].

Centre for Reviews and Dissemination 2008, Systematic Reviews. CRD's guidance for undertaking reviews in healthcare., University of York: Centre for Reviews and Dissemination.

Charmaz, K. 2006, Constructing Grounded Theory A Practical Guide Through Qualitative Analysis, 1st edn, Sage Publications Ltd, London.

Charmaz, K. 2005, "Grounded theory in the 21st century: applications for advancing social justice studies" in The Sage Handbook of Qualitative Research, eds. N. Denzin K. & Y. Lincoln S., 3rd edn, SAGE, Thousand Oaks, CA, pp. 507-535.

CHRE 2010, Managing extended practice Is there a place for 'distributed regulation'?.

Coar, L. & Sim, J. 2006, "Interviewing one's peers: methodological issues in a study of health professionals.", Scand J Prim Health Care, vol. 24, no. 4, pp. 251-256.

Collins, B. 2016, The King's Fund. New care models: Emerging innovations in governance and organisational form.

Considine, J. 2017, "Nurses, diagnosis and diagnostic error.", Diagnosis (Berl), vol. 4, no. 4, pp. 197-199.

Coulter, A., Roberts, S. & Dixon, A. 2013, The King's Fund: Delivering better serivces for people with long term conditions: Building the house of care.

Crotty, M. (ed) 1998, The Foundations of Social Research: Meaning and Perspective in the Research Process. London: Sage, SAGE, London.

Cruz, E.V. & Higginbottom, G. 2013, "The use of focused ethnography in nursing research.", Nurse Researcher, vol. 20, pp. 36.

de Jacq, K., Norful, A.A. & Larson, E. 2016, "The Variability of Nursing Attitudes Toward Mental Illness: An Integrative Review.", Arch Psychiatr Nurs, vol. 30, no. 6, pp. 788-796.

Dodgson, J.E. 2019, "Reflexivity in Qualitative Research. Journal of Human Lactation, 35(2), 220–222.", Journal of Human Lactation, vol. 35, no. 2, pp. 220-222.

DoH 2015, Research and innovation in health and social care. Available: https://www.gov.uk/government/policies/research-and-innovation-in-health-and-social-care [2016, October 10th].

DoH 2012a, Long Term Conditions Compendium of Information, Third edn, Department of Health, Leeds.

DoH 2012b, Long-term conditions compendium of information: 3rd edition.

DoH 2010a, Advanced level nursing: A position statement.

DoH 2010b, Equity and Excellence: Liberating the NHS.

DoH 2010c, Improving the health and well-being of people with long term conditions.

Downe, S. 2008, "Meta-synthesis: a guide to knitting smoke", .

Drabble, L., Trocki, K.F., Salcedo, B., Walker, P.C. & Korcha, R.A. 2016, "Conducting qualitative interviews by telephone: Lessons learned from a study of alcohol use among sexual minority and heterosexual women", Qual Soc Work., vol. 15, no. 1, pp. 118-133.

Dziedzic, K.S., Healey, E.L. & Main, C.J. 2013, "Implementing the NICE osteoarthritis guidelines in primary care: A role for practice nurses", Musculoskeletal Care, vol. 11, no. 1, pp. 1.

Dziedzic, K.S., Healey, E.L., Porcheret, M., Afolabi, E.K., Lewis, M., Morden, A., Jinks, C., McHugh, G.A., Ryan, S., Finney, A., Main, C., Edwards, J.J., Paskins, Z., Pushpa-Rajah, A. & Hay, E.M. 2018, "Implementing core NICE guidelines for osteoarthritis in primary care with a model consultation (MOSAICS): a cluster randomised controlled trial.", Osteoarthritis and Cartilage, vol. 26, no. 1, pp. 43-53.

Dziedzic, K.S., Healey, E.L., Porcheret, M., Ong, B.N., Main, C.J. & Jordan, K.P. 2014, "Implementing the NICE osteoarthritis guidelines: a mixed methods study and cluster randomised trial of a model osteoarthritis consultation in primary care - the Management of OsteoArthritis In Consultations (MOSAICS) study protocol. Implementation Science : IS. 2014;9:95. ", Implement Sci, vol. 9, pp. 95.

Edirisingha, P. 2012, Interpretivism and Positivism (Ontological and Epistemological Perspectives).Available: https://prabash78.wordpress.com/2012/03/14/interpretivism-and-postivism-ontological-and-epistemological-perspectives/ [2019, 12/12].

Finfgeld, D.L. 2003, "Metasynthesis: the state of the art – so far", Qual Health Res, vol. 13, no. 7, pp. 893-904.

Finney, A., Dziedzic, K.S., Lewis, M. & Healey, E. 2017, "Multisite peripheral joint pain: a cross-sectional study of prevalence and impact on general health, quality of life, pain intensity and consultation behaviour.", BMC Musculoskelet Disord, vol. 18, no. 1, pp. 535.

Fitzmaurice, D.A., Moger, A. & Storey, K. 2015, "General practice nursing: revisited and reinvigorated. ", Br J Gen Pract, vol. 65, no. 639, pp. 505.

Foot, C., Naylor, C. & Imison, C. 2010, The King's Fund: The quality of GP diagnosis and referral.

Fram, S.M. 2013, "The Constant Comparative Analysis Method Outside of Grounded Theory", The Qualitative Report, vol. 18, no. 1.

France, E.F., Ring, N., Noyes, J., Maxwell, M., Jepson, R., Duncan, E., Turley, R., Jones, D. & Uny, I. 2015, "Protocol-developing meta-ethnography reporting guidelines (eMERGe)", BMC Med Res Methodol., vol. 15, pp. 103.

France, E.F., Ring, N., Thomas, R., Noyes, J., Maxwell, M. & Jepson, R. 2014, "A methodological systematic review of what's wrong with meta-ethnography reporting.", BMC Med Res Methodol., vol. 19, no. 14, pp. 119.

Gale, N.K., Heath, G., Cameron, E., Rashid, S. & Redwood, S. 2013, "Using the framework method for the analysis of qualitative data in multi-disciplinary health research", BMC Med Res Methodol., vol. 13, pp. 117.

Gallagher, S. 2012, "What Is Phenomenology?" in Phenomenology. Palgrave Macmillan, London, pp. 7-18.

Garfinkel, H. 1984, Studies in Ethnomethodology. , 2Rev edn, Polity Press/Blackwell Publishing, Malden MA.

GBD 2017 Disease and Injury Incidence and Prevalence Collaborators 2018, "Global, regional, and national incidence, prevalence, and years lived with disability for 354 diseases and injuries for 195 countries and territories, 1990-2017: a systematic analysis for the Global Burden of Disease Study 2017", Lancet, vol. 392, no. 10159, pp. 1789-1858.

Gilburt, H. 2016, "The King's Fund: Supporting integration through new roles and working across boundaries", .

Glaser, B. & Strauss, A. 1967, The discovery of grounded theory: strategies for qualitative research. , Aldine, Chicago.

Goldman, J., Meuser, J., Rogers, J., Lawrie, L. & Reeves, S. 2010, "Interprofessional collaboration in family health teams", Can.Fam.Physician, vol. 56, no. 10, pp. 368.

Goodman, L.A. 1961, "Snowball sampling", Ann Math Statis, vol. 31, no. 1, pp. 148-170.

Goodwin, N., Curry, N., Naylor, C., Ross, S. & Duldig, W. 2010, Managing People with Long-term conditions. An inquiry into the Quality of General Practice in England, The Kings Fund.

Greaves, C.J., Brown, P., Terry, R.T., Eiser, C., Lings, P. & Stead, J.W. 2003, "Converting to insulin in primary care: an exploration of the needs of practice nurses", Journal of advanced nursing, vol. 42, no. 5, pp. 487-497.

Greengross, P., Grant, K. & Collini, E. 1999, The History and Development of The UK National Health Service 1948 - 1999. Available: https://assets.publishing.service.gov.uk/media/57a08d91e5274a31e000192c/The-history-and-development-of-the-UK-NHS.pdf [2018, 04/06].

Guba, E., G. (ed) 1990, The Paradigm Dialog, SAGE publications.

Halcomb, E.J. 2011, "Expansion of nursing role in general practice: studies suggest patients think that nurses can manage simple conditions but have some concerns about knowledge and competence in some areas", Evidence Based Nursing, vol. 14, no. 1, pp. 28-29.

Halcomb, E.J., Salamonson, Y., Davidson, P.M., Kaur, R. & Young, S.A.M. 2014, "The evolution of nursing in Australian general practice: a comparative analysis of workforce surveys ten years on", Bmc Family Practice, vol. 15, pp. 52.

Healey, E.L., Tan, V., Jinks, C., Chew-Graham, C.A., Finney, A., Porcheret, M. & Mallen, C.D. 2015, "The Improving the care of people with long term conditions in primary care: protocol for the ENHANCE pilot trial. Journal of Comorbidity", Journal of Comorbidity, vol. 5, pp. 135-149.

HEE 2017, Multi-professional framework for advanced clinical practice in England.

HEE 2015a, District Nursing and General Practice Nursing Service Education and Career Framework.

HEE 2015b, Shape of Caring "Raising the Bar": A Review of the Future Education and Training of Registered Nurses and Care Assistants.

Henderson, J., Koehne, K., Verrall, C., Gebbie, K. & Fuller, J. 2014, "How is Primary Health Care conceptualised in nursing in Australia? A review of the literature", Health and Social Care in the Community (Print edition), vol. 22, no. 4, pp. 337.

Higginbottom, G., Pillay, J.J. & Boadu, N.Y. 2013, "Guidance on performing focused ethnographies with an emphasis on healthcare research", The Qualitative Report, vol. 18, pp. 1.

Higgins, J.P.T. & Green, S. (eds) 2006, Cochrane handbook for systematic reviews of interventions 4.2.6 (Cochrane Review): In: Cochrane Database Syst Rev. , The Cochrane Library Issue 4 edn, John Wiley and Sons, Chichester.

Hill, B. 2017, "Research into experiential learning in nurse education.", Br J Nurs, vol. 26, no. 161, pp. 932-938.

Horrocks, S., Anderson, E. & Salisbury, C. 2002, "Systematic review of whether nurse practitioners working in primary care can provide equivalent care to doctors.", British medical journal, vol. 324, pp. 819.

Ihalainen-Tamlander, N., Vähäniemi, A., Löyttyniemi, E., Suominen, T. & Välimäki, M. 2016, "Stigmatizing attitudes in nurses towards people with mental illness: a cross-sectional study in primary settings in Finland.", J Psychiatr Ment Health Nurs, vol. 23, no. 6-7, pp. 427-437.

Jamshed, S. 2014, "Qualitative research method-interviewing and observation", J Basic Clin Pharm, vol. 5, no. 4, pp. 87-88.

Jewell, D. 2001, "Getting the best out of general practice - an open letter to the MInister of Health", BJGP, vol. 51, pp. 523-524.

Jinks, C., Carter, P., Rhodes, C., Taylor, R., Beech, R., Dziedzic, K., Blackburn, S., Hughes, R. & Ong, B.N. 2016, "Patient and public involvement in primary care research - an example of ensuring its sustainability.", Res Involv Engagem, vol. 2, no. 1.

Jinks, C., Morden, A., Chew-Graham, C. & et al 2015, "Integrating Care for Joint Pain and Anxiety and Depression into Reviews for Long-Term Conditions: The Enhance Study", Rheumatology, vol. 54, no. suppl_1, pp. i67.

Jordan, K.P., Tan, V., Edwards, J.J., Chen, Y., Englund, M., Hubertsson, J., Jöud, A., Porcheret, M., Turkiewicz, A. & Peat, G. 2016, "Influences on the decision to use an osteoarthritis diagnosis in primary care: a cohort study with linked survey and electronic health record data.", Osteoarthritis and Cartilage, vol. 24, no. 5, pp. 786-793.

Keele University 2018, Projects Involving Members of RUG. Available: https://www.keele.ac.uk/pcsc/research/ppie/whatisppie/projectsinvolvingmembersofrug/#musculoskeletal-conditions-and-pain [2020, 01/06].

Keleher H., Parker R., Abdulwadud O. & Francis, K. 2009, "Systematic review of the effectiveness of primary care nursing.", International journal of nursing practice, vol. 15, no. 1, pp. 16-24.

Kuhn, T., S. 1962, The Structure of Scientific Revolutions, 1st edn, University of Chicago Press, Chicago.

Kvale, S. 1996, Interviews: An introduction to qualitative research interviewing, SAGE, Thousand Oaks, CA.

Kviz, F.J., Misener, T.R. & Vinson, N. 1983, "Rural health care consumers' perceptions of the nurse practitioner role", Journal of community health, vol. 8, no. 4, pp. 248.

Latkin, C.A., Mai, N.V., Ha, T.V., Sripaipan, T., Zelaya, C., Le Minh, N., Morales, G. & Go, V.F. 2016, "Social Desirability Response Bias and Other Factors That May Influence Self-Reports of Substance Use and HIV Risk Behaviors: A Qualitative Study of Drug Users in Vietnam.", AIDS Educ Prev, vol. 28, no. 5, pp. 417-425.

Lattimer, V., George, S., Thompson, F., Thomas, E., Mullee, M., Turnbull, J. & et al 1998, "Safety and effectiveness of nurse telephone consultations in out of hours primary care: randomised controlled trial", BMJ, vol. 317, pp. 1054-1059.

Lau, R., Stevenson, F., Ong B.N., Dziedzi, K., Treweek, S., Eldridge, S. & et al 2016, "Achieving change in primary care—causes of the evidence to practice gap: systematic reviews of reviews", Implement Sci, vol. 11, pp. 40.

Laurant, M., Reeves, D., Hermens, R., Braspenning, J., Grol, R. & Sibbald, B. 2005, "Substitution of doctors by nurses in primary care.", Cochrane Database of Systematic Reviews, vol. 2, no. CD001271.

Laurant, M., van der Biezen, M., Wijers, N., Watananirun, K., Kontopantelis, E. & van Vught, A.J. 2018, "Nurses as substitutes for doctors in primary care.", Cochrane Database Syst Rev. 2018 Jul 16;7, , no. 16.

Linton, R. 1945, The Cultural Background of Personality, Appleton-Century Company, Inc, New York.

MacDonald, J., Herbert, R. & Thibeault, C. 2006, "Advaned Practice Nursing: Unification through a common identity. ", J Prof Nurs, vol. 22, no. 3, pp. 172-179.

Maguire, M. & Delahunt, B. 2017, "Doing a Thematic Analysis: A Practical, Step-by-Step Guide for Learning and Teaching Scholars.", All Ireland Journal of Higher Education, vol. 9, no. 3.

Manski-Nankervis, J.A., Furler, J., Blackberry, I., Young, D., O'Neal, D. & Patterson, E. 2014, "Roles and relationships between health professionals involved in insulin initiation for people with type 2 diabetes in the general practice setting: a qualitative study drawing on relational coordination theory.", BMC family practice, vol. 15, pp. 20.

Martínez-González, N.A., Rosemann, T., Tandjung, R. & Djalali, S. 2015, "The effect of physician-nurse substitution in primary care in chronic diseases: a systematic review", Swiss medical weekly, vol. 145.

Mays, N. & Pope, C. 2000, "Qualitative research in health care: Assessing quality in qualitative research. British Medical Journal ", BMJ, vol. 320, pp. 50-52.

McCarthy, G., Cornally, N., Moran, J. & Courtney, M. 2012, "Practice nurses and general practitioners: Perspectives on the role and future development of practice nursing in Ireland", Journal of Clinical Nursing, vol. 21, no. 15, pp. 2286.

McKinlay, E., Gray, B. & Pullon, S. 2013, "Interdisciplinary collaboration: working in teams for patient care. Chapter 16." in Cole's Medical Practice in New Zealand, 12th edn, Medical Council of New Zealand, Wellington, pp. 143.

Mercer, S.W. & Watt, G.M.C. 2007, "The inverse care law: clinical primary care encounters in deprived and affluent areas of Scotland ", Ann Fam Med, vol. 5, pp. 503-507.

Merrick, E., Fry, M. & Duffield, C. 2014, "Australian practice nursing: collaboration in context", Journal of Clinical Nursing, vol. 23, no. 23, pp. 3525.

Michie, S., Fixsen, D., Grimshaw, J.M. & Eccles, M.P. 2009, "Specifying and reporting complex behaviour change interventions: the need for a scientific method", Implement Sci, vol. 4, pp. 1-6.

Milligan, J. 2008, "While I am diagnosing, who takes the time to hold a grieving widow's hand?", Nursing times, vol. 104, no. 40, pp. 12.

Mitchell, J., Boettcher-Sheard, N., Duque, C. & Lashewicz, B. 2018, "Who do we think we are? Disrupting notions of qualitative research", Qualitative Research, vol. 28, no. 4, pp. 637-638.

Mozygemba, K., Hofmann, B., Lysdahl, K.B., Pfadenhauer, L., Van Der Wlit, G.J. & Gerhardus, A. 2016, "Guidance to assess socio-cultural aspects" in Guidance for assessing

effectiveness, economic aspects, ethical aspects, socio-cultural aspects and legal aspects in complex technologies [online], eds. K.B. Lysdahl, K. Mozygemba, J. Burns, J.B. Chilcott, J.B. Bronneke & B. Hofmann,.

Nancarrow, S.A. & Borthwick, A.M. 2005, "Dynamic professional boundaries in the healthcare workforce.", Sociol Health Illn, vol. 27, no. 7, pp. 897-919.

NANDA International 2017, ND Knowledge Base: What is the difference between a medical and nursing diagnosis?. Available: http://www.nanda.org/nanda-international-glossary-of-terms.html [2017, Jan/24].

Naylor, C., Parsonage, M., McDaid, D., Knapp, M., Fossey, M. & Galea, A. 2012, Long-term conditions and mental health: The cost of co-morbidities.

Newman, A.R. 2016, "Nurses' Perceptions of Diagnosis and Prognosis-Related Communication: An Integrative Review.", Cancer Nurs, vol. 39, no. 5, pp. E48-60.

NHS England 2019a, Interim NHS People Plan.

NHS England 2019b, The NHS Long Term Plan.

NHS England 2016, General Practice Forward View.

NHS England 2014, Five Year Forward View. Available: http://tinyurl.com/oxq92je [2016, August/28th].

NHS England 2013a, Enhancing the quality of life for people living with long term conditions - The House of Care. Available: https://www.england.nhs.uk/house-of-care/ [2016, Oct 17th].

NHS England 2013b, NHS Outcomes Framework.

NICE 2014, Osteoarthritis: care and management [CG177].

Niezen, M.G.H. & Mathijssen, J.J.P. 2014, "Reframing professional boundaries in healthcare: A systematic review of facilitators and barriers to task reallocation from the domain of medicine to the nursing domain. ", Health Policy, vol. 117, no. 2, pp. 151-169.

NIHR 2019, NIHR INVOLVE: What is Public Involvement in Research?. Available: https://www.invo.org.uk/find-out-more/what is-public-involvement-in-research-2/ [2019, 25/11].

Noble, H. & Smith, J. 2015, "Issues of validity and reliability in qualitative research", Evidence Based Nursing, vol. 18, no. 2, pp. 34-35.

Noblit, N. & Hare, R.D. 1988, Meta-Ethnography: Synthesizing Qualitative Studies, Sage, Newbury Park.

Novick, G. 2008, "Is there a bias against telephone interviews in qualitative research?", Res Nurs Health, vol. 31, no. 4, pp. 391-398.

Nowell, L.S., Norris, J.M., White, D.E. & Moules, N.J. 2017, "Thematic Analysis: Striving to Meet the Trustworthiness Criteria", Int J Qual Methods, vol. 16, pp. 1-13.

Nyumba, T.O., Wilson, K., Derrick, C.J. & Mukherjee, N. 2018, "The use of focus group discussion methodology: Insights from two decades of application in conservation. ", Methods Ecol. Evol., vol. 9, no. 1, pp. 20-32.

O'Connor, M.K., Netting, F.E. & Thomas, M.L. 2008, "Grounded theory: Managing the challenge for those facing institutional review board oversight.", Qualitative Inquiry, vol. 14, no. 1, pp. 28-45.

Oelke, D., Besner, J. & Carter, R. 2014, "The evolving role of nurses in primary care medical settings", International journal of nursing practice, vol. 20, no. 6, pp. 629-636.

Oxford Consultants for Social Inclusion 2015, Department for Communities and Local Government (DCLG). The English Indices of Deprivation 2015.

Palaganas, E.C., Sanchez, M.C., Molintas, M.V.P. & Caricativo, R.D. 2017, "Reflexivity in Qualitative Research: A journey of learning ", The Qualitative Report, vol. 22, no. 2, pp. 426-438.

Palinkas, L.A., Horwitz, S.M., Green, C.A., Wisdom, J.P., Duan, N. & Hoagwood, K. 2015, "Purposeful Sampling for Qualitative Data Collection and Analysis in Mixed Method Implementation Research.", Adm Policy Ment Health, vol. 42, no. 5, pp. 533-544.

Parker, R., Forrest, L., McCracken, J., McRae, I. & Cox, D. 2014, "What primary health-care services are Austrailian consumers willing to accept from nurse practitioners? A National Survey", Health Expectations, vol. 17, no. 5, pp. 733.

Paskins, Z., Sanders, T., Croft, P.R. & Hassell, A.B. 2015, "The Identity Crisis of Osteoarthritis in General Practice: A Qualitative Study Using Video-Stimulated Recall", Ann Fam Med, vol. 13, no. 6, pp. 537-544.

Patterson, E.A., Del Mar, C. & Najman, J. 2000, "Medical receptionists in general practice: who needs a nurse? ", Int J Nurs Pract, vol. 6, pp. 229-236.

Polonsky, W.H., Capehorn, M., Belton, A., Down, S., Alzaid, A., Gamerman, V. & et al 2017, "Physician-patient communication at diagnosis of type 2 diabetes and its links to patient outcomes: New results from the global IntroDia® study.", Diabetes Res Clin Pract, vol. 127, pp. 265-274.

Polonsky, W.H., Fisher, L., Guzman, S., Sieber, W.J., Philis-Tsimikas, A. & Edelman, S.V. 2010, "Are patients' initial experiences at the diagnosis of type 2 diabetes associated with attitudes and self-management over time?", Diabetes Educator, vol. 36, pp. 828-834.

Potter, J. & Wetherell, M. 1987, Discourse and Social Psychology: Beyond Attitudes and Behaviour, Sage, London.

Primary Care Workforce Commission 2015, The future of primary care; creating teams for tomorrow.

Pullon, S. 2008, "Competence, respect and trust: Key features of successful interprofessional nurse-doctor relationships", J Interprof Care, vol. 22, pp. 133-147.

Quinney, L., Dwyer, T. & Chapman, Y. 2016, "Who, Where, and How of Interviewing Peers: Implications for a Phenomenological Study", SAGE Open, [Online], , pp. 06.02.2020. Available from: https://doi.org/10.1177/2158244016659688.

Rashid, c. 2010, "Benefits and limitations of nurses taking on aspects of the clinical role of doctors in primary care: integrative literature review.", J Adv Nurs, vol. 66, no. 8, pp. 1658-1670.

RCN 2020, Mental Health. Available: https://www.rcn.org.uk/clinical-topics/mental-health [2020, 02/04].

RCN 2018, Advanced Level Nursing Practice Section 2: Advanced level nursing practice competencies.

RCN 2012, "RCN Competences. Advanced nurse practitioners. An RCN guide to advanced nursing practice, advanced nurse practitioners and programme accreditation Royal College of Nursing London", .

Redsell, S.A. & Cheater, F.M. 2008, "Nurses' roles in primary care: developments and future prospects. ", Qual Prim Care, vol. 16, no. 2, pp. 69-71.

Richardson, W.S. & Wilson, M.C. 2008, "The process of diagnosis " in Users' Guides to the Medical Literature: A Manual for Evidence-Based Clinical Practice, 2nd ed. edn, McGraw-Hill, New York, pp. 101-108.

Ring, N., Jepson, R. & Ritchie, K. 2011, "Methods of synthesizing qualitative research studies for health technology assessment", Int.J.Technol Assess Health Care, vol. 27, no. 4.

Ritchie, J., Lewis, J., McNaughton Nicholls, C. & Ormston, R. (eds) 2014, The Foundations of Qualitative Research: Qualitative Research Practice: A Guide for Social Science Students and Researchers., Second edn, Sage, London.

Rolfe, G. 2014, "Advanced nursing practice 1: understanding advanced nursing practice", Nurs Times, vol. 110, no. 27, pp. 20-23.

Rolfe, G. 2006, "Validity, trustworthiness and rigour: quality and the idea of qualitative research", J Adv Nurs, vol. 53, no. 3, pp. 304-310.

Rosemann T., Joest K., Korner T., Schaefert R., Heiderhoff M. & Szecsenyi, J. 2006, "How can the practice nurse be more involved in the care of the chronically ill? The perspectives of GPs, patients and practice nurses.", BMC family practice, vol. 7, pp. 14.

Rushforth, B., McCrorie, C., Glidewell, L., Midgley, E. & Foy, R. 2016, "Barriers to effective management of type 2 diabetes in primary care: Qualitative systematic review.", British Journal of General Practice, vol. 66, no. 643, pp. e114-e127.

San Martin-Rodriguez, L., Beaulieu, M.D., D'Amour, D. & Ferrada-Videla, M. 2005, "The Determinants of Successful Collaboration: A Review of Theoretical and Empirical Studies ", J Interprof Care, vol. 19, no. Suppl 1, pp. 132.

Sandelowski, M. & Barroso, J. 2002, "Reading qualitative studies. International Journal of Qualitative Methods", International Journal of Qualitative Methods, vol. 11.

Sandelowski, M., Docherty, S. & Emden, C. 1997, "Qualitative metasynthesis: issues and techniques.", Res Nurs Health, vol. 20, pp. 365-371.

Sanders, T. & Harrison, S. 2008, "Professional legitimacy claims in the multidisciplinary workplace: the case of heart failure care", Sociol Health Illn, vol. 30, no. 2, pp. 289-308.

Saunders, B., Sim, J., Kingstone, T., Baker, S., Waterfield, J., Bartlam, B., Burroughs, H. & Jinks, C. 2018, "Saturation in qualitative research: exploring its conceptualization and operationalization", Qual Quant, vol. 52, no. 4, pp. 1893-1907.

Saxon, R.L., Gray, M. & Oprescu, F.I. 2014, "Extended roles for allied health professionals: an updated systematic review of the evidence", Journal of Multidisciplinary Healthcare, vol. 7, pp. 479-488.

Schadewaldt, V., McInnes, E., Hiller, J.E. & Gardner, A. 2016, "Experiences of nurse practitioners and medical practitioners working in collaborative practice models in primary healthcare in Australia - a multiple case study using mixed methods.", BMC Fam Pract, vol. 29, no. 17, pp. 99.

Schutz, A. 1962, Collected papers, volume 1. Martinus Nijhoff, The Hague.

Shaw, R.J., McDuffie, J.R., Hendrix, C.C., Edie, A., Lindsey-Davis, L., Nagi, A., Kosinski, A.S. & Williams, J.W.J. 2014, "Effects of nurse-managed protocols in the outpatient management of adults with chronic conditions: a systematic review and meta-analysis. ", Ann Intern Med, vol. 161, no. 2, pp. 113-121.

Sim, J., Saunders, B., Waterfield, J. & Kingstone, T. 2018, "Can sample size in qualitative research be determined a priori?, Methodology, 619-634. ", Int J Soc Res Meth, , pp. 619-631.

Staniszewska, S., Brett, J., Simera, I., Seers, K., Mockford, C., Goodlad, S., Altman, D.G., Moher, D., Barber, R., Denegri, S., Entwistle, A., Littlejohns, P., Morris, C., Suleman, R., Thomas, V. & Tysall, C. 2017, "GRIPP2 reporting checklists: tools to improve reporting of patient and public involvement in research.", BMJ, vol. 358:j3453.

Stern, P. & Harris, C. 1985, "Women's health and the selfcare paradox: a model to guide selfcare readiness – clash between the client and nurse. Health Care for Women International", Health Care Women Int, vol. 6, pp. 151-163.

Strauss, A. & Corbin, J. 1998, Basics of qualitative research: Techniques and procedures for developing grounded theory, 2nd edn, Sage, Thousand Oaks, CA.

Tan, V., Jinks, C., Chew-Graham, C.A., Healey, E.L. & Mallen, C.D. 2015, "The triple whammy: anxiety, depression and osteoarthritis in long-term conditions.", BMC Fam Pract, vol. 16, no. 1, pp. 163.

Tannenbaum, C., Greaves, L. & Graham, I.D. 2016, "Why sex and gender matter in implementation research.", BMC Med Res Methodol., vol. 16, no. 1, pp. 145.

Teh, Y.Y. & Lek, E. 2018, " Culture and reflexivity: Systemic journeys with a British Chinese family", Journal of Family Therapy, vol. 40, pp. 520-536.

Toney-Butler, T.J. & Thayer, J.M. 2019, Nursing Process, StatPearls Publishing [Internet], Treasure Island (FL).

Tong, A., Flemming, K., McInnes, E., Oliver, S. & Craig, J. 2012, "Enhancing transparency in reporting the synthesis of qualitative research: ENTREQ. ", BMC Med Res Methodol., vol. 12, pp. 181.

Tong, A., Sainsbury, P. & Craig, J. 2007, "Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups.", Int J Qual Health Care, vol. 19, no. 6, pp. 349-357.

Toye, F., Seers, K., Allcock, N., Briggs, M., Carr, E., Andrews, J. & Barker, K. 2013, "A meta-ethnography of patients' experience of chronic non-malignant musculoskeletal pain.", Health Serv Deliv Res, vol. 1, no. 12.

Troya, M.I., Chew-Graham, C.A., Babatunde, O. & et al 2019, "Patient and Public Involvement and Engagement in a doctoral research project exploring self-harm in older adults. Health Expect. 2019;22(4):617–631. doi:10.1111/hex.12917", Health Expect, vol. 22, no. 4, pp. 617-631.

van Eijk-Hustings, Y., van Tubergen, A., Boström, C., Braychenko, E., Buss, B. & Felix, J. 2012, "EULAR recommendations for the role of the nurse in the management of chronic inflammatory arthritis.", Ann Rheum Dis, vol. 71, no. 1, pp. 13-19.

Walsh B., Yardley L., Donovan-Hall M. & Smith, H. 2005, "Implementation of nurse-delivered vestibular rehabilitation in primary care: A qualitative study of nurses' views on involvement in an innovative service.", Journal of Clinical Nursing, vol. 16, no. 6, pp. 1072-1081.

Walsh, D. & Downe, S. 2005, "Meta-synthesis method for qualitative research: a literature review", Journal of advanced nursing, vol. 50, no. 2, pp. 204.

Welsh, V.K., Mallen, C.D., Wynne-Jones, G. & Jinks, C. 2012, "Exploration of GPs' views and use of the fit note: a qualitative study in primary care. ", Br J Gen Pract, vol. 62, no. 598, pp. e363-370.

Welsh, V.K., Sanders, T., Richardson, J.C., Wynne-Jones, G., Jinks, C. & Mallen, C.D. 2014, "Extending the authority for sickness certification beyond the medical profession: the importance of 'boundary work'", BMC family practice, vol. 17, no. 15, pp. 100.

Williams, E.N. & Morrow, S.L. 2009, "Achieving trustworthiness in qualitative research: A pan-paradigmatic perspective", Psychother Res, vol. 19, pp. 576-582.

Zhang, W., Doherty, M., Peat, G., Bierma-Zeinstra, M., Arden, N., Bresnihan, B. & et al 2010, "EULAR evidence-based recommendations for the diagnosis of knee osteoarthritis", Ann Rheum Dis, vol. 69, no. 3, pp. 483-489.

Appendices

8.1 Appendix one: Guidance for Reporting Involvement of Patients and the Public 2 short form (GRIPP2-SF)

Section and topic	Item	Reported on page No
1: Aim	Report the aim of PPIE in the study	75
2: Methods	Provide a clear description of the methods used for PPIE in the study	75
3: Study results	Outcomes—Report the results of PPIE in the study, including both positive and negative outcomes	158
4: Discussion and conclusions	Outcomes—Comment on the extent to which PPIE influenced the study overall. Describe positive and negative effects	158, 172-173
5: Reflections/critical perspective	Comment critically on the study, reflecting on the things that went well and those that did not, so others can learn from this experience	15-159,170, 172-173

PPIE = patient and public involvement and engagement

8.2 Appendix two: COnsolidated criteria for REporting Qualitative studies (COREQ): 32-item checklist

No. Item	Guide questions/description	Reported in section:
Domain 1: Research team and reflexivity		
Personal Characteristics		
1. Inter viewer/facilitator	Which author/s conducted the interview or focus group?	Methods
2. Credentials	What were the researcher's credentials? E.g. PhD, MD	Background
3. Occupation	What was their occupation at the time of the study?	Background
4. Gender	Was the researcher male or female?	Strengths and limitations
5. Experience and training	What experience or training did the researcher have?	Background and reflections
Relationship with participants		
6. Relationship established	Was a relationship established prior to study commencement?	Methods and strengths and limitations
7. Participant knowledge of the interviewer	What did the participants know about the researcher? E.g. personal goals, reasons for doing the research	Methods and strengths and limitations
8. Interviewer characteristics	What characteristics were reported about the inter viewer/facilitator? E.g. Bias, assumptions, reasons and interests in the research topic	Background and strengths and limitations
Domain 2: study design		
Theoretical framework		
9. Methodological orientation and Theory	What methodological orientation was stated to underpin the study? E.g. grounded theory, discourse analysis, ethnography, phenomenology, content analysis	Methods
Participant selection		
10. Sampling	How were participants selected? E.g. purposive, convenience, consecutive, snowball	Methods
11. Method of approach	How were participants approached? E.g. face-to-face, telephone, mail, email	Methods
12. Sample size	How many participants were in the study?	Results
13. Non-participation	How many people refused to participate or dropped out? Reasons?	N/A
Setting		

14. Setting of data collection	Where was the data collected? E.g. home, clinic, workplace	Methods
15. Presence of non-participants	Was anyone else present besides the participants and researchers?	N/A
16. Description of sample	What are the important characteristics of the sample? E.g. demographic data, date	Results
Data collection		
17. Interview guide	Were questions, prompts, guides provided by the authors? Was it pilot tested?	Methods
18. Repeat interviews	Were repeat inter views carried out? If yes, how many?	N/A
19. Audio/visual recording	Did the research use audio or visual recording to collect the data?	Methods
20. Field notes	Were field notes made during and/or after the inter view or focus group?	Reflexivity
21. Duration	What was the duration of the inter views or focus group?	Results
22. Data saturation	Was data saturation discussed?	Methods
23. Transcripts returned	Were transcripts returned to participants for comment and/or correction?	N/A
Domain 3: analysis and findings		
Data analysis		
24. Number of data coders	How many data coders coded the data?	Methods
25. Description of the coding tree	Did authors provide a description of the coding tree?	Results
26. Derivation of themes	Were themes identified in advance or derived from the data?	Methods
27. Software	What software, if applicable, was used to manage the data?	Methods and reflections
28. Participant checking	Did participants provide feedback on the findings?	N/A
Reporting		
29. Quotations presented	Were participant quotations presented to illustrate the themes/findings? Was each quotation identified? e.g. participant number	Results
30. Data and findings consistent	Was there consistency between the data presented and the findings?	Results
31. Clarity of major themes	Were major themes clearly presented in the findings?	Results
32. Clarity of minor themes	Is there a description of diverse cases or discussion of minor themes?	Results

Adapted from:

Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *International Journal for Quality in Health Care*. 2007. Volume 19, Number 6: pp. 349 – 357

8.3 Appendix three: Ethics and HRA approval documents

Ref: ERP2290

23rd June 2016

Dr Valerie Tan
Research Institute for Primary Care and Health Sciences
Keele University

Dear Valerie,

Re: Role extension: Practice nurse perspectives of role extension and diagnostic work in long term conditions in primary care; a qualitative study

Thank you for submitting your application to amend study. I am pleased to inform you that your application has been approved by the Ethical Review Panel. The following documents have been reviewed and approved by the Panel as follows:-

Document	Version	Date
Flow Diagram – Practice Nurse Invitation Process	3	20-06-2016
Participant Reply Slip	3	20-06-2016
Interview Participant Information Sheet	3	24-05-2016
Interview Consent Form	3	20-06-2016
Invitation Letter	3	24-05-2016
Reminder Letter	2	24-05-2016

If the fieldwork goes beyond the date stated in your application **30th September 2017**, you must notify the Ethical Review Panel via the ERP administrator at research.erps@keele.ac.uk stating **ERP2** in the subject line of the e-mail.
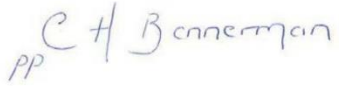
If there are any other amendments to your study you must submit an 'application to amend study' form to the ERP administrator stating **ERP2** in the subject line of the e-mail. This form is available via http://www.keele.ac.uk/researchsupport/researchethics/

If you have any queries, please do not hesitate to contact me via the ERP administrator on research.erps@keele.ac.uk stating **ERP2** in the subject line of the e-mail.


Yours sincerely

pp C H Bannerman

Dr Colin Rigby
Chair – Ethical Review Panel

CC   RI Manager
          Supervisor

Professor Carolyn Chew-Graham
Professor of General Practice
Keele University
Arthritis Research UK Primary Care Centre
Research Institute for Primary Care & Health Sciences
Keele, Staffordshire
ST5 5BG

Email: hra.approval@nhs.net

28 September 2016

Dear Professor Chew-Graham,

Letter of HRA Approval

Study title:	**Role extension: Practice nurse perspectives of role extension and diagnostic work in long term conditions in primary care; a qualitative study**
IRAS project ID:	**201959**
Sponsor:	**Keele University**

I am pleased to confirm that **HRA Approval** has been given for the above referenced study, on the basis described in the application form, protocol, supporting documentation and any clarifications noted in this letter.

Participation of NHS Organisations in England

The sponsor should now provide a copy of this letter to all participating NHS organisations in England.

Appendix B provides important information for sponsors and participating NHS organisations in England for arranging and confirming capacity and capability. **Please read** *Appendix B* **carefully**, in particular the following sections:

- *Participating NHS organisations in England* – this clarifies the types of participating organisations in the study and whether or not all organisations will be undertaking the same activities
- *Confirmation of capacity and capability* - this confirms whether or not each type of participating NHS organisation in England is expected to give formal confirmation of capacity and capability. Where formal confirmation is not expected, the section also provides details on the time limit given to participating organisations to opt out of the study, or request additional time, before their participation is assumed.
- *Allocation of responsibilities and rights are agreed and documented (4.1 of HRA assessment criteria)* - this provides detail on the form of agreement to be used in the study to confirm capacity and capability, where applicable.

Further information on funding, HR processes, and compliance with HRA criteria and standards is also provided.

It is critical that you involve both the research management function (e.g. R&D office) supporting each organisation and the local research team (where there is one) in setting up your study. Contact details and further information about working with the research management function for each organisation can be accessed from www.hra.nhs.uk/hra-approval.

Appendices

The HRA Approval letter contains the following appendices:

- A – List of documents reviewed during HRA assessment
- B – Summary of HRA assessment

After HRA Approval

The attached document *"After HRA Approval – guidance for sponsors and investigators"* gives detailed guidance on reporting expectations for studies with HRA Approval, including:

- Working with organisations hosting the research
- Registration of Research
- Notifying amendments
- Notifying the end of the study

The HRA website also provides guidance on these topics and is updated in the light of changes in reporting expectations or procedures.

Scope

HRA Approval provides an approval for research involving patients or staff in NHS organisations in England.

If your study involves NHS organisations in other countries in the UK, please contact the relevant national coordinating functions for support and advice. Further information can be found at http://www.hra.nhs.uk/resources/applying-for-reviews/nhs-hsc-rd-review/.

If there are participating non-NHS organisations, local agreement should be obtained in accordance with the procedures of the local participating non-NHS organisation.

User Feedback

The Health Research Authority is continually striving to provide a high quality service to all applicants and sponsors. You are invited to give your view of the service you have received and the application procedure. If you wish to make your views known please email the HRA at hra.approval@nhs.net. Additionally, one of our staff would be happy to call and discuss your experience of HRA Approval.

HRA Training

We are pleased to welcome researchers and research management staff at our training days – see details at http://www.hra.nhs.uk/hra-training/

Your IRAS project ID is **201959**. Please quote this on all correspondence.

Yours sincerely,

Emma Stoica
Senior Assessor

Email: hra.approval@nhs.net

Copy to:

Ms Jacqueline Gray, contact on behalf of the sponsor: j.gray@keele.ac.uk
Ms Lauren Thakrar, lead NHS R&D contact: studysupportpccrnwestmidlands@nihr.ac.uk
Dr Valerie Tan, researcher/student: v.a.tan@keele.ac.uk
NIHR CRN Portfolio Applications Team: portfolio.applications@nihr.ac.uk

8.4   Appendix four: Examples of the topic guide used for the semi-structured interviews

Practice Nurse Interview: Topic Guide (V1)

Role extension: Practice nurse perspectives of role extension and diagnostic work in long-term conditions in primary care; a qualitative study

The purpose of this study is to explore the views of practice nurses' regarding role extension, defined as 'substitution of doctors' traditional role', including perceived barriers and how these may be overcome. The interview will last approximately 30 minutes and will help us understand your experiences of role extension and give us an insight into the views of those on the frontline of primary care.

All the information that you provide will be treated in the strictest confidence and used only for the purpose of research.

Do you have any questions? Before we proceed, please may I take you through the consent form confirming your agreement to participate in this study?

Nurse details

- Could you describe what your current role entails?
- What experience do you have in managing people with LTCs?

Role extension

- What does the term 'role extension' mean to you?
- Would you consider any of the work that you currently do 'role extension'?
- How happy are you for your current role to be extended? In what way?
- What might be included in the remit of the extended nurse role?
- If something had to be given up to allow for role extension, what would this be?
- How do you think role extension would affect your relationships with other HCPs, both inside and outside of primary care?
- How do you think patients will feel about role extension?
- What are the barriers and facilitators to role extension?

Focusing specifically on 'Diagnosis'

- Does your current role involve making diagnoses?
  - o People with Acute/chronic conditions

- - What are your experiences of making a diagnosis?
  - What training have you had?
  - Do you receive specific supervision/support and if so, by whom? How often?
- What, if any, types of condition do you think PNs should diagnose?
  - Acute/chronic conditions
- What needs to change in order to make role extension possible?
  - e.g. Training/included on curriculum
  - Support from GPs
  - Indemnity and accreditation
- What safeguards if any would need to be put in place?
- Osteoarthritis
  - What experience do you have in supporting/managing patients with osteoarthritis?
  - Do you think PNs should make the diagnosis of OA?
  - What contribution can PNs make in managing patients with OA?
  - What are the barriers to PNs supporting patients with OA?
- Do you have anything to add?
  Thank you …

Practice Nurse Interview: Topic Guide (V8)

Role extension: Practice nurse perspectives of role extension and diagnostic work in long-term conditions in primary care; a qualitative study

Thank you for agreeing to participate in this study. The interview will last approximately 30 minutes and will help us understand your experiences of role extension and give us an insight into the views of those on the frontline of primary care.

Do you have any questions? Can I just confirm that you have read and signed the consent form confirming your agreement to participate in this study?

Nurse details

- Can you please tell me what your current role is, how many years you have been registered?
- Could you describe what your current role entails?
- What are the fundamental differences between a PN and a NP/ANP?
- What experience do you have in managing people with LTCs?
- Are there any challenges in managing patients with multimorbidity?
- What skills and knowledge do staff need to manage multimorbidity?
- What is the best way to learn from those with experience in managing multimorbidity – what would help them as a practice?

Role extension

- What does the term 'role extension' mean to you?
- Would you consider any of the work that you currently do 'role extension'?
- How happy are you for your current role to be extended? In what way?
- Patients – how do they feel?
- Colleagues – how do they feel?
- Challenges
- Benefits
- Support needed?
- Clarity of role - important
- Training
- Is GPN a speciality in its own right?

'Diagnosis'

- What are your experiences of making a diagnosis?
  - What training have you had?
  - Do you receive specific supervision/support and if so, by whom? How often?
- Do you think PNs should diagnose?
  - LTC/acute?
- Focusing on one particular LTC – what does the term osteoarthritis mean to you?
- Have you come across any patients with OA

- In some earlier interviews, PNs weren't sure they would recognise OA and thought they may confuse this with osteoporosis – is this how you feel?
- What experience do you have in supporting/managing patients with osteoarthritis?
    - Do you think PNs should make the diagnosis of OA?
    - What contribution can PNs make in managing patients with OA?
    - What are the barriers to PNs supporting patients with OA?

- Do you have anything to add?
  Thank you …

8.5 Appendix five: Letter of invitation to participate

To the Practice Nurse

Role extension: Practice nurse perspectives of role extension and diagnostic work in long-term conditions in primary care; a qualitative study

Dear **Nurse's name**,

My name is Valerie Tan and I am a researcher working at the Research Institute for Primary Care and Health Sciences at Keele University. I am part of a team conducting a study looking at the extended roles of nurses in primary care. I enclose a Participant Information Sheet that describes the study in more detail.

If you are interested in taking part in an interview, I would be grateful if you would complete and return both the enclosed reply slip and consent form in the pre-paid envelope provided (no stamp required), or contact me via email or telephone using the contact details provided below.

If you do agree to take part, I will contact you by telephone or email to arrange a convenient time and place for the interview.

If we do not hear from you we will send another invitation via email and/or post and will call to check you have received this. We can send the study documentation by fax if needed. If we do not hear from you we will call one final time. No further attempts to contact you will be made after this point.

Please can I assure you that should you participate in the study, your details will be kept in the **strictest confidence**.

If you have any questions or would like to know more about this study please contact me at Keele University on 01782 734930 or via email at **v.a.tan@keele.ac.uk**

Thank you very much for your help with this research study.

Yours sincerely,

Valerie Tan

Enclosed:

Participant Information Sheet

Consent form

Reply slip

Pre-paid envelope (if applicable)

8.6   Appendix six: Information sheet for participants

Practice Nurse
Participant Information Sheet

Role extension: Practice nurse perspectives of role extension and diagnostic work in long-term conditions in primary care; a qualitative study

My name is Valerie Tan and I am a GP Research Fellow working at the Research Institute for Primary Care and Health Sciences at Keele University. I am part of a team conducting a research study funded by a National Institute of Health Research (NIHR) In-Practice Fellowship grant looking at the extended roles of nurses in primary care.

What is the purpose of this study?

The purpose of this study is to explore practice nurse views on role extension, defined as 'substitution of doctors' traditional role', including perceived barriers and how these may be overcome.

What will the study mean for me?

We are inviting you to participate in one interview, which will last approximately 30 minutes. If you would like to take part, we would be grateful if you could complete the enclosed reply slip and consent form and return them to us in the pre-paid envelop or respond directly via email to v.a.tan@keele.ac.uk. We will then contact you to arrange either a face-to-face interview (at your place of work) or interview over the telephone. This will be arranged at your convenience. The interview will help us to understand your experiences of role extension and give us an insight into the views of those on the frontline of primary care. We are interested in your views and as such there are no right or wrong answers. It is unlikely that the topics discussed will cause upset or distress although it is recognised that you may discuss feelings about aspects of your work. No preparation for the interview is required.

Why have I been invited to take part?

You have been selected because you are a practice nurse working at a GP surgery within the West Midlands area.

Do I have to take part?

No. Your involvement is entirely voluntary. **You are free to withdraw from the study at any time, prior to, during or after the interview process, even after providing consent and without giving reason.**

Will my details be kept confidential?

All information provided will be treated in the strictest confidence and used only for the purpose of research. We would like to audio record the interview. The interview will then be transcribed with all information anonymised using unique numerical identifiers. Whilst quotations from the interviews may be used in reports; your identity, and that of your practice, will be removed such that the data is anonymised. Your participation in the study will not be disclosed to anyone outside of the research team (Valerie Tan plus supervisors Clare Jinks and Carolyn Chew-Graham).

The audio recordings and transcripts will be archived securely and may be used by other researchers from the Research Institute for Primary Care and Health Sciences or other research centres in the future. Transcripts will bear **no personal identifying information**. All electronic data will be stored indefinitely in keeping with the Research Institute's Standard Operating Procedure for the archiving and destruction of data. Any paper copies of transcripts will be shredded after use.

What will happen to the results of the study?

We intend to disseminate the results of the study through publication and presentation at conferences. You will not be identified in any report or publication, quotations may be used in reports of the study but your identity or that of any third party will not be disclosed in any such report.

Contact for further information about the study?

If you have any questions or would like further information about this study please contact **Valerie Tan** on **01782 734930** or email v.a.tan@keele.ac.uk

If you are unhappy about the research and/or wish to raise a complaint about any aspect of the way that you have been approached or treated during the course of the study please write to Nicola Leighton, the University's contact for complaints regarding research, at the following address:-

Nicola Leighton
Research Governance Officer
IC2
Keele University
ST5 5NH
E-mail: n.leighton@keele.ac.uk
Tel: 01782 733306

Thank you for taking the time to read this Participant Information Sheet.

8.7 Appendix seven: Consent form

Practice Nurse Interview Consent Form

Title of Project:
Role extension: Practice nurse perspectives of role extension and diagnostic work in long-term conditions in primary care; a qualitative study

Name and contact details of researcher:
Valerie Tan
Research Institute for Primary Care and Health Sciences,
Keele University, Staffordshire, ST5 5BG
01782 734930 or v.a.tan@keele.ac.uk

Please initial

1   I confirm that I have read and understand the Healthcare Professional Interview Participant Information Sheet v3.1 dated 28.09.16 and have had the opportunity to ask questions. ☐

2   I understand that my participation is voluntary, that I can refuse to answer any given question, and/or withdraw my consent at any time prior to, during or after the interview process, without giving a reason. Any data collected will be destroyed safely and securely. ☐

3   I understand that the interview will be digitally recorded and transcribed, and that the recordings will be securely stored in the Research Institute for Primary Care and Health Sciences at Keele University. Transcripts will bear no personal identifying information. ☐

4   I understand that audio recordings and electronic transcripts will stored indefinitely and archived securely and may be re-used by researchers from the Research Institute for Primary Care and Health Sciences or other affiliated research centres in the future. ☐

5   I understand that quotations from the interviews may be used in reports and/or publications, but that this data will be anonymised such that I cannot be identified. ☐

6   I agree to take part in the above study. ☐

Please complete in BLOCK CAPITALS:

<u>Healthcare Professional</u>

_____   _____   _____
Name   Date   Signature

<u>Researcher</u> (Name of person taking consent):
I have explained the study to the above named participant and he/she has indicated his/her willingness to participate

_____   _____   _____
Name   Date   Signature

If you have any further questions about this study you can telephone **Valerie Tan** on **01782 734930** or email **v.a.tan@keele.ac.uk**

Study ID

8.8   Appendix eight: Participant reply slip

Practice Nurse Interview Reply Slip

Title of Project:
Role extension: Practice nurse perspectives of role extension and diagnostic work in long-term conditions in primary care; a qualitative study

Name and contact details of researcher:
Valerie Tan
Research Institute for Primary Care and Health Sciences,
Keele University, Staffordshire, ST5 5BG
01782 734930 or v.a.tan@keele.ac.uk

Please tick one box and complete details:

☐   **Yes, I agree to be contacted by a researcher to participate in an interview.**

   OR

☐   **No, I do not want to be contacted by a researcher to participate in an interview.**

Name:...

Work Address:...

....

Telephone numbers: (Mobile):...

                              (Home):……………………….......………………………….

                              (Work):…………………...

Email:...

What time of day is best to contact you?...

If we do not hear from you we will send another invitation via email and/or post and will call to check you have received this. We can send the study documentation by fax if needed. If we do not hear from you we will call one final time. No further attempts to contact you will be made after this point.

Please return this reply slip in the pre-paid envelope enclosed with this letter (no stamp required). Please complete and include the enclosed consent form if you wish to participate in this study. Thank you for your time.

Study ID

8.9   Appendix nine: Participant invitation reminder

To the Practice Nurse

Role extension: Practice nurse perspectives of role extension and diagnostic work in long-term conditions in primary care; a qualitative study

Dear **Nurse's name**,

My name is Valerie Tan and I am a researcher working at the Research Institute for Primary Care and Health Sciences at Keele University. I am part of a team conducting a study looking at the extended roles of nurses in primary care. You should have recently received information describing the study in more detail and inviting you to participate. We are still interested in hearing your views and enclose a Participant Information Sheet that describes the study in more detail.

If you are interested in taking part in an interview, I would be grateful if you would complete and return the enclosed reply slip and consent form in the pre-paid envelope provided (no stamp required), or contact me via email or telephone using the contact details provided below.
If you do agree to take part, I will contact you by telephone or email to arrange a convenient time and place for the interview.

If we do not hear from you we will call to check that you have received our letter of invitation. We can send the study documentation by fax if needed. After a further two weeks, if we have not heard from you we will call one final time. No further attempts to contact you will be made after this point.

Please can I assure you that should you participate in the study, your details will be kept in the **strictest confidence**.

If you have any questions or would like to know more about this study please contact me at Keele University on 01782 734930 or via email at **v.a.tan@keele.ac.uk**
Thank you very much for your help with this research study.

Yours sincerely,

Valerie Tan

Enclosed:

Participant Information Sheet

Consent form

Reply slip

Pre-paid envelope (if applicable)

8.10 Appendix ten: Participants' descriptions of their scope of practice

"whole range of things" (IN_188)

"You get patients who have everything" (IN_13)

"it's everything really… pretty much everything really that we cover in general practice." (IN_151)

"anybody that comes through the door, basically" (IN_82)

"Jack of all trades' 'a well-rounded role in the practice" (IN_13)

"Jack of all trades" (IN_125)

"a piece of string with no end"; "Anything and everything" (IN_139)

"it's a massive list… too much to remember" (IN_191)

8.11 Appendix eleven: Example of tabulated data and coding

What is role extension?

IN_188	
Well that's when you're taking on extra skills and, er, things that you do in your day-to-day job that [yeah] you're initial training doesn't cover or qualify you for but obviously for me is taking on the minor ailments and injuries was role extension, and moving from being a practice nurse to a nurse practitioner. And then again becoming a nurse prescriber, an independent nurse prescriber but really when you get into primary care even as a practice nurse just basic things like cervical cytology that is a role extension, er, and obviously vaccinations and immunisations as you don't do that anywhere else in primary care so again that's a role extension.	Extra skills – over and above your initial training Also PN to NP Sees basic PN work to be role extension as additional to original training
The practice nurse but obviously their role extensions coming out of secondary care.	Sees role extension as coming out of secondary care
IN_83	
well in 1986 I qualified, er, the scope for a nurse was very narrow, we didn't even do phlebotomy [didn't you] no I think phlebotomy came in, I can remember being one of the first ones being trained up to do it, oh I can't even remember when it was, was it late 80's - late 80's so when you think about role extension there healthcare support worker does all that role now. So I mean in practice I, I've done some bloods this morning for a chap who was due his bloods but came to see me about something else and I thought if I don't grab him now he'll never come back but that is the role of the healthcare support worker here whereas when I look back in 1986 it was like the role of the doctor [yeah].	Roles are moving on – HCA now doing what a Dr would have done
the extension from there to what we do now it would have been mind blowing wouldn't it in 1986 to think that you would have a nurse sitting in a doctor's surgery seeing all the minor illnesses [yeah]. Whereas now it's the norm isn't it, even patients know it's the norm now because even when I started back in 2004 you know a patient didn't want to see you with a cough, cold or sore throat because they thought they wanted antibiotics and they needed to see a doctor for a prescription for antibiotics whereas now, and it's great with the young people, er, they actually say I know I probably don't need antibiotics but I just want you to come, so that's great whereas ten years ago they thought if you had a cough, cold you needed antibiotics.	Change in roles and expectations
now I don't think of anything to be an extension because I've been doing this role for so long [okay] so I did my prescribing at the end of my degree in 2004 so I've been prescribing now for 12 years so that doesn't feel like a role extension it's my role isn't it.	Implies role extension is something acute – once used to it then no longer an extended role

what would be an extension to my, well I suppose if I was to do something new, I don't know suturing perhaps because I don't suture, I don't work in a minor injuries centre.	Role extension = something new
IN_151	
I think as in like, more of an extended role, I think we have more, a lot more autonomy than we used to have, with our erm, in that respect. I know when I first started it was more, for a treatment room Nurse, the Doctor would say, you know, can you do this dressing or just check their blood pressure, whereas now there's a lot more, a lot more pressure I suppose and you are working a lot more autonomously, you know, a bigger workload and I'd say a lot more responsibility, you're taking on a lot more, yeah the role is really expanding.	Role extension means increased autonomy, workload and responsibility – GP previously dictated what the PN would do
the knowledge as well, making sure that you're up to date as we are expected to know a lot more now than previously yeah.	Role extension requires an increase in knowledge
IN_82	
moving on from practice nurse to nurse practitioner really; that's my extension, and prescribing	Sees role extension as PN to NP – 'her' extension so could have different meanings to different people
So they go all over the world, as you can imagine, so we do an extensive travel. That was the bit that I would class that as role extension 'cos it's not your normal.	Role extension = anything outside of the norm
all this advancement in nursing because there is a shortage of doctors so they're hoping to fill the gap really.	Role extension is an answer to Dr shortage – needs of the population not the needs of the nurse Doesn't want to be a doctor but compares her role to this
IN_13	
I mean it obviously depends where you work, I don't think there's any hard and fast rule about what a role extension is I think it's more to do with provide whatever your basic level of expectation is in your role as per your job description when you first start that's your baseline and then a role extension to me would be, er, looking at the service and what is needed and then taking on an additional role to what was from your base line so it would be looking at okay for us there's a big issue with frailty let's see what role we can develop to improve that service.	Can be for patient unmet need or apply to practice nursing in general Benefit for patients
That might mean taking on additional training which it has for me, what project can we do that will actually have an impact on the frail elderly population to me that's a role extension	Impact on patients
In other ways you could look at role extensions in the sense of just nursing roles in general you know how many years ago was it when nurses weren't prescribers or certainly weren't, er, doing any sort of forms of physical assessment. Whereas that	Role changes are happening across nursing as a whole but also on an individual or specific basis

is getting really common now so there's a specific role extension where you look at the service that you're in but then there's the actual role change within nursing as a whole.	Local needs of pt vs general change in nursing
it's not just minor illness… you get patients that have everything	Patients present with 'everything'
(role extension is) all things that I've had additional training on passed my, er, specialist practice, general practice nurse degree so it's you know additional things for me.	Training/extra qualifications = role extension
IN_121	
That would mean, er, like the spirometry and phlebotomy and ECG that's all something that's an extension to my original training… having done the asthma diploma and the COPD diploma they're extensions to my basic role	Anything outside of original nurse training
IN_135	
(what does the term role extension mean to you?) are you then talking about the practice nurse to role extension, or is it my role extension?	Interesting question – are they different?
I think it just means that you, you, sort of, developing your skills and knowledge and taking on new responsibilities	New skills, knowledge and responsibilities
IN_125	
I think it is around long, to be I think it's around long-term conditions so perhaps doing, you know, erm if you did COPD for long-term conditions and they did need stepping up or they did need their inhalers changing and things like that. To me it's more about managing their medication or, you know…	Being able to affect change when needed
IN_139	
Well, this is it. I mean whereas it used to be doctors [mmm] that would organise [yeah] and the patient would go to the doctor and the doctor would say, 'We need a PFT. We need an ECG. We need some bloods. We need this. We need that. We need the other'. Now, as nurses, what we're doing is we're being proactive in the diagnostics, thinking, 'Okay'	Nurses being more proactive – instigating tests to prove/disprove a working diagnosis
IN_32	
For me, it would be Practice Nurses who were atten-, - who were going to university to do either a Level 6 or a Level 7; physical assessment erm, or prescribing. I suppose I'm – broadening what they already do… rather being just a nurse that comes and does blood pressure, it's just extending what you do [okay] to meet the demands	Attributes a definitive level of nurse to role extension and 'broadening' what they do – driven by demands **Deviant**
I think prescribing – independent prescribing is a role extension [okay]. Physical assessment – the skills of physical	List of role extension

assessment is a role extension [okay] and managing peers – managing staff	
IN_175	
I suppose in, in my profession, it would be sort of Nurse Practitioner erm, that, you know, do – sort of doing more training to be able to prescribe; things like that. I'd probably think, in my role, I probably do extend it a bit because I do go out do some home visits.	Role extension = NP Need training to extend role but does home visits and considers this to be an extension
experience makes – erm, sort of extends your role because you obviously can teach people, [yeah] you know, what, what you know erm, or advise [yeah] or help.	Role can be extended through experience – teaching etc
IN_76	
IN_191	
an extended role of, er, anything from a nurse taking over the GP role, you know, sort of, erm, I don't really know	Substituted role
the mental health bit and the, erm, the A&E letters, that's probably an extension to my role.	See mental health as a role extension – she has taken this on herself – not at anyone's request – not acknowledged
IN_114	
an extended role for me would probably, erm, for me to do the prescribing really. So that would probably be an extended role.	Equates role extension with prescribing
maybe if I was, erm, probably specialising in a certain area, say, then diabetes and things like that, erm, 'cause not all practice nurses do all the conditions	Also specialising = role extension – something that not all other PNs can do
I suppose, in a way, yes, compared to some of the nurses because probably I'm a mentor whereas some of the other nurses aren't [okay]. So I think we all do different things, so I would probably – role extension would something I do different than the others.	Mentoring is an extended role as not all nurses do it
GPs definitely want, erm, encourage them to do extra roles, cause obviously, I think the future is, whereas nurses will take more of a doctor's role and heathcares will take more of a nurse's, that sort of thing. So I think everybody's happy to move forward.	Role extension will result in extension to all roles – who will do the HCP role?
IN_155	
It's taking on advanced skills. Erm, I'm, at the moment erm, stepping into the role of the Advanced Nurse Practitioner [yeah]. It's a, a, a role that I'm looking at developing. I'm	Advanced skills rather than knowledge

currently doing my Masters for it as well [okay] erm, so – obviously, I've taken on advanced skills so erm, things like I've looked after and trained in coil fitting and implant fitting [right] – those kinds of skills.	
I think it's looking at something that is out of the original role that you specify and looking at the – you know, learning those new skills, having the underpinning knowledge, making sure you're using the evidence base [okay] erm, studies – you know, being assessed at, at, at those things. Erm, I think it all depends on the individual because what could be an advanced skill for one person might not be for another.	Role extension is specific to the individual – but requires learning new skills, with underpinning knowledge and being assessed – need to assess those skills and knowledge – how?
for myself, it's more of the erm... extended skills this year, going on to do more diagnostic skills – those kind of things – treating erm... you know, a lot of Practice Nurses, you know, never used to prescribe but, you know, we've now got – taken on that extended role.	Diagnosis, prescribing – extended roles
IN_111	
where you've gone beyond your, erm, range of competence if you like [okay] and your, you know, your, where you've gone and you've been educated in, erm, a role that's outside the, the traditional nursing role of dealing with a patient with a diagnosed condition. Where you've extended your education [yeah, yeah] beyond that, that traditional set of skills I guess.	Education outside of the traditional set of skills – beyond the competencies of a PN
IN_87	
Role extension, um… going outside expanding your role outside the traditional role of the nurse or practice nurse.	Expanding beyond traditional duties of a PN