Multiple perspectives of Community Nurse Practitioner’s use of Medical Physical Assessment Skills in Primary Care: a qualitative study of current practice in the UK

by

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THESIS

Submitted for the degree of Doctor of Clinical Practice

PART ONE

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Statement of Originality

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Abstract

Multiple perspectives of Community Nurse Practitioner's use of medical physical assessment skills in primary care; a qualitative study of current practice in the UK.

Aim To explore the use of medical physical assessment skills (PAS) by community nurse practitioners in primary care in the UK

Background: Physical assessment skills are commonly practiced by community nurse practitioners in primary care. These skills are used to support GPs to deliver a wide range of services in primary care. There is no evidence on how physical assessment skills are used by community nurse practitioners in primary care.

Methods: A qualitative interpretative embedded case study design.

Results: Participants reported that community nurse practitioners used medical PAS in integrated ways, by bringing together their clinical expertise, leadership, education and liaison skills to work across professional boundaries, to deliver a range of services. Specialist nurses caring for patient with one or more chronic long-term condition use these skills within the constructs of a person-centred framework, which is relationship focussed, holistic and collaborative. Nurse practitioners use physical assessment skills to work as generalists and make independent diagnostic decisions. Competence, capability and performance are necessary to make complex decisions. Failure of community nurse practitioners to take responsibility for assessment decisions creates inter-professional tensions and conflict.

Conclusions: Medical physical assessment skills are successfully being used by community nurse practitioners to deliver a wide range of services in primary care. These skills improve competence, capability and performance for advanced nursing practice roles. Physical assessment skills education and training at universities needs to be validated by allied health professional bodies for advanced practice roles.

Relevance to clinical practice:

- Physical assessment education and training prepares nurses with higher levels of theoretical assessment knowledge and skills that are fit for purpose.
- GPs believe that education and training of physical assessment skills are vital for nurses to manage the burden of assessment work in primary care.
- Common sets of assessment practices between disciplines have better outcomes for patients.
- Registered nurses require a standard of competence which allows them to perform physical assessment skills to the same level as doctors.
- Competence and performance are best achieved when working with patients and experienced clinicians.

Key words: medical physical assessment skills, community nurse practitioners, cross boundary working, diagnostic skills.
Glossary of Terms and Abbreviations

**Advanced Practitioner:** is primary care provider who works in a generalist capacity with a range of patient groups, or in partnership with medical colleagues, and other members of the health and social care team. They are expected to have a broad foundation of advanced knowledge and skills, rather than having expertise in a specific field of care provision (Royal College of Nursing) (RCN) 2012.

**Auscultation (A)** requires the application of the stethoscope to listen to sounds produced by the body.

**Inspection (I)** requires visual coordination of a particular body system or the patient

**IPPA** is the framework used by medical practitioners to collect assessment information through the physical examination.

**Palpation (P)** requires the application of touch to assess for texture, temperature, moisture, organ location and size, swelling, vibration, pulsation, rigidity/spasticity, crepitation, masses and pain.

**PAS (Physical Assessment Skills)** The physical assessment of each body system using the (IPPA) Framework of Inspection/Palpation/Percussion/Auscultation

**Percussion (P)** requires the tapping of the skin to assess sound of underlying structures

**Primary Care:** Patients seen primarily by General Practitioners (GPs), who are doctors based in community practices, and nurses (Audit Commission 2000)

**RCN (Royal College of Nursing)** Nurses Professional Regulatory Governing body in the United Kingdom.

**Specialist Nurse Practitioner in the community is defined as:** nurse who specialises in a defined area of practice in primary care (RCN 2013, factsheet February 2013.p1.)
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Chapter 1: Physical Assessment Skills

1.1 Personal perspectives

I am an experienced practitioner and nurse educator who has worked across a range of domains in the NHS, prior to becoming a University tutor. I spent several years working as a sister in medicine, critical care and acute care environments. As a teacher and lecturer practitioner, I maintained an interest in the development of post-registration nurse education, particularly for acute and critical care education. As a full time tutor, I worked alongside a General Practitioner (GP) of 25 years, who initially led the development of physical assessment skills (PAS) education for registered nurses (RNs) at the University, where I now work. He inspired me to engage in this field of education, and became my mentor/supervisor in the personal development of these skills over a three year period. I have led and taught the Masters level module of advanced physical assessment skills education at the University of Surrey since 2009. During this time, I experienced both challenges and successes with this aspect of nurse education.

1.2 Definition of Physical Assessment

Physical Assessment means the use of a structured framework of assessment to examine different body systems, used by medical doctors, to formulate a diagnosis and a management plan. A typical patient consultation by a General Practitioner (GP) requires a structured approach to taking a health history, a physical examination and an interpretation of findings, to make a differential diagnosis. The diagnoses become the basis for the GP’s decision making (Baid 2006) regarding treatment of patients. For comparative purposes, a definition of nursing assessment will be outlined in the following section.
1.3 Physical assessment skills in nursing

The focus of this study concerns medical Physical Assessment Skills (PAS) and the factors that influenced its inclusion in registered nurse (RNs) education and practice in the United Kingdom (UK). Medical PAS have been taught in undergraduate preparation nursing programmes in the United States (US) and Australia (AUS) for 25-30 years. These skills were introduced to nursing continuous professional preparation education (CPE) programmes in the US and Australia in the early 1970s, to support the development of advanced nursing practice.

1.4 Definition of nursing assessment - UK perspectives

Assessment in nursing practice in the UK is guided by the framework of the nursing process that includes assessment, diagnosis, outcomes, interventions implementation and evaluation (Nursing and Midwifery Council) (NMC 2002). Nursing assessment is considered an aspect of nursing practice, and is an integral part of the daily work in caring for patients. It is conceptualised as a 'cognitive activity' (Latimer 1997.p1), which involves processing information to identify causes of patients’ problems (Crow et al. 1995). Emphasis on the cognitive aspects of assessment has been criticised as mechanistic and instrumental, and not aligned with the many theories of nursing. For example, Benner (1984) accepts that the cognitive component of nursing assessment is necessary to develop skills, but argues that interpretative aspects of nursing assessment are best learned through the experience of practice. This suggests that the interpretative paradigm of nursing assessment remains firmly grounded within the context of nursing expertise, which is practice situated. Crow et al. (1995) provides a clearer argument by stating that nurses use different assessment strategies depending on context of work, but that the purpose of assessment is to make clinical judgements.

In the UK, the physical aspects of nursing assessment have been limited to observational skills related to temperature, pulse, blood pressure and oxygen
saturations via pulse oximetry (Rushforth et al. 1998; Rushforth et al. 2006; Wheeldon 2005 & West 2006). The argument for the inclusion of medical PAS is to complement the basic observation framework in order to support nurses' clinical judgement, and for appraising patients' diagnoses (Price et al. 2000; West 2006 & Rushforth et al. 2008). The following section 1.5 will examine the definition of a nursing diagnosis in the UK.

1.5 Definition of nursing diagnosis - UK perspectives

There are no classification systems for nursing diagnostic strategies within the nursing process. In the UK, nursing assessment activities relate to patients' medical diagnoses and monitoring patients' responses to medical interventions (Carpenito-Moyet 2006). The taxonomy of nursing diagnosis within the nursing process has a minimal knowledge base, which makes it less transferable to other settings (Gordon 1990). From 2001 onwards, professional regulation required RNs' undertaking medical tasks to understand medical diagnoses, or to make medical diagnoses and plan interventions (Baid 2006). A definition of medical diagnosis will be outlined in section 1.6.

1.6 Definition of medical diagnosis-UK perspectives

A medical diagnosis is a statement expressing a diagnosis of a disease or illness for the purpose of medical treatment. Medical diagnoses draw on classification schemes, typical to certain diseases or illnesses (Hammond 1996b & Bowen 2006). For example, when patients present with particular signs or symptoms, the medical doctor determines the cause of illness by combining physical examination findings with patient's history, laboratory data and review of medical records (Goreng & Patel 1985). The findings from historical and clinical data are matched to signs and symptoms, to differentiate possible causes (Bowen 2006). The final clinical diagnosis is based on specific knowledge structures that organise patients' problems into broad groups or categories of illnesses or diseases (Bowen 2006).
The medical diagnosis is usually underpinned by diagnostic reasoning theories that explain how doctors make clinical judgements and decisions (Carnevali & Thomas 1993; Hogston 1997 & Higgs and Jones 2000). The following section 1.7 will discuss the main drivers for the inclusion of PAS to nursing assessment work in the UK.

1.7 Drivers for Change to include PAS in nursing assessment

A range of socio-economic and demographic factors influenced the inclusion of medical PAS in RN roles in the UK. The National Health Service (NHS) had concerns regarding the projected rise in the number of elderly people to 2.6 million by 2018, which had implications for health and social care service in the UK (Office for National Statistics 2012a). Associated with demographic changes is the projected rise in people living with long-term conditions with multi-morbidities and disabilities (DH 2012a).

1.7.1 Factors influencing PAS for RNs in UK hospitals

To manage impending problems, UK policy focussed on modernising health systems by encouraging healthcare staff to work differently (DH 2000 & 2000a). In hospitals, RNs’ were required to expand and extend traditional roles to support reform of postgraduate medical training in the UK, and the reduction in junior doctors’ hours available for service delivery (NHMSE 1998 & United Kingdom Central Council for Nursing, Midwifery and Health Visiting (UKCC) (1992). Together with the drive for efficiency savings, there was increased pressure for RNs’ to take on medical tasks (DH 1998; RCP 2001 & Mullally 2001), and where possible substitute non-medical staff for pre-registration house officers (Richardson & Maynard 1995). These approaches to service delivery required RNs’ to develop specialist knowledge and skills to work independently with defined patient/carer groups, in the absence of doctors (NMC 2002).
1.7.2 Factors influencing PAS use for RNs in UK community care

The community modernisation agenda focussed on improving the quality of health and social care for older people in England with complex long-term conditions (LTCs) (National Service Frameworks Older People (NSFOP) (DH 2001 & RCN 2004c). Increasing emphasis was placed on patterns of care being delivered in patients’ homes (DH 2005 & DH 2005a), which meant that acute aspects of care traditionally provided in hospital or specialist settings had to be undertaken by district nursing teams in patients’ homes (Parkinson 2006). These changes required community nurses to develop skills beyond traditional roles, to take on medical tasks (NMC 2002 & RCN 2004), work independently in either a specialist or advanced generalist capacity, with defined patient groups (RCN 2003; DH 2006a & DH 2006b). Similar to hospitals, these structural changes to service delivery were influenced by a shortage of doctors and contractual changes to GP working hours (Royal College of General Practitioners (RCGP) 2004). Specific core competences were required by nursing professional regulatory bodies, for RNs’ to work in a specialist or advanced nurse practitioner capacity (Ball 2005 & NMC 2005). Two core skills required to work in either capacity were medical PAS and diagnostic skills (Ball 2005; NMC 2005 & Baid 2006).

A review of the evidence regarding the effectiveness of modernisation agendas in the community, suggested that care was good, but did not deliver a patient-centred approach (The Kings Fund 2011), and was failing to work in integrated ways (Ham et al. 2012). Effectiveness in illness prevention was lacking, and services remained focussed on treating ill-health (The Kings Fund 2011). As a result there was a need for greater service integration within general practices (Thistlethwaite- the Kings Fund 2011 & Ham et al. 2012). The success of such a model would depend on GPs delegating further tasks to specialist and advanced nurse practitioners, so that they
could focus on diagnosis and urgent patient needs (Munton et al. 2011). Subsequently, nurses who had progressed to specialist or advanced roles were expected to practice nursing at a level beyond initial training. They were prepared via a discrete University-based programmes related to advanced nursing practice education.

In the community, nurses working in these roles were required to take on additional assessment tasks that were previously the domain of a GP. They were expected to develop medical physical assessment and diagnostic reasoning skills, to identify possible causes of patients’ problems and to act upon findings (Baid 2006). Acting upon the clinical problem was an expectation of specialist and nurse practitioner roles (NMC 2005; NMC 2007; RCN 2008; 2010 & Baid 2009). This meant they utilised medical PAS in consultations, which are not typically used by the majority of nurses. They undertook a focused history and physical examination to make a differential diagnosis where relevant, and prescribed on much the same basis as a medical doctor.

As outlined above, in sections 1.7, 1.7.1 and 1.7.2, the main influencing factors that led to the inclusion of PAS for RNs’ in hospitals and in primary care, were policy drivers to modernise NHS health systems, and service development initiatives to support changes to professional roles. Additionally, RNs wanted to extend, expand and advance traditional nursing roles to specialist and advanced practitioner status, in order to work independently.

Simultaneously in the community, increased GP workloads in response to policy drivers to move care from hospitals to the community, and manage patients with complex LTCs in their own homes, required the delegation of medical PAS to appropriately trained community nurses.
These significant changes led to the researcher’s interest in exploring the use of PAS for specialist and advanced nurse practitioners in primary care, in a designated geographical area of the UK. In order to do this, a literature review was first undertaken to explore and highlight existing gaps in knowledge in this area, and to guide the development of more specific research questions.

For the purpose of this study, and when referring to specialist and advanced nursing roles together, the term community nurse practitioners (CNPs) will be used throughout the study, unless otherwise indicated.

1.8 Research problem
In this thesis, the researcher argues that little is known about how CNPs use medical PAS in primary care. CNPs use these skills to support GPs in dealing with the volume of assessment work in primary care, especially with the management of LTCs patients, but there is limited evidence regarding how this is achieved, and if the use of medical PAS by CNPs benefits patients and the health service.

1.9 Aim of study
The overall aim of this study is to explore the use of medical PAS for registered nurses (RNs) in primary care.

1.10 Design
An interpretative qualitative approach was utilised, using case study method, to explore and capture multiple perspectives of CNPs use of medical PAS in primary care.

1.11 Structure of the thesis
This thesis is organised into seven chapters. Chapter one outlines the background to the introduction to the concept of medical PAS to registered nurses’ roles in the UK, and a personal perspective highlights the researcher’s interest in this concept.
Principal policy initiatives that influenced medical PAS to RNs' roles in the UK are described. The aim of the study is presented.

**Chapter two** presents a review of the literature on the use of medical PAS, why these skills are needed, and the factors that influence their use in nursing work. Gaps in the literature are identified that lead to the development of specific research questions and the research aim.

**Chapter three** explores the epistemological approach and the philosophical basis of the study, and different strategies of enquiry are briefly appraised. The researcher's epistemological position and the most appropriate strategy of enquiry are justified.

**Chapter four** discusses the study design, sample strategies, research setting and the practicalities of the data collection methods, as well as ethical considerations, and an analysis of the data using a framework method.

**Chapter five** illustrates the study’s findings, while **chapter six** presents a discussion on the findings in relation to the extant literature.

**Chapter seven** presents a critical review of the methodology, study strengths and limitations, and discusses the contribution that the study makes to the body of knowledge in this domain.
Chapter 2 - Review of the Literature

2.1 Overview

The previous chapter has outlined the background and focus of the study and has provided an overview of the range of factors that have influenced the introduction of medical PAS for registered nurse roles in the UK.

This literature review provides the reader with a background to position this piece of work in the context of what is known about the topic from previous research, providing a rationale for the study and decisions made (Grant & Booth 2009). To address this comprehensively, this review therefore reports on existing literature on the use of medical PAS for registered nurses roles internationally. It identifies the current gaps in knowledge and methodology and suggests how these gaps can be explored in a way that permits a new perspective on the use of medical PAS for registered nurse roles in the UK.

2.2 Literature review method

A critical review enables the reader to identify, search for, and critically appraise existing literature (Grant & Booth 2009). In relation to this study, the critical review approach provided a narrative synthesis of the primary research studies. This approach was appropriate for this study because the designs were set in both the quantitative and qualitative paradigms. This was supported by a focussed search strategy and critiquing framework to develop the findings (National Institute of Clinical Excellence (NICE) 2006).

2.3 Literature Search Strategy

In developing the search strategy, preliminary electronic data bases, CINAHL and MEDLINE, PsycINFO, EMBASE, Science Direct and the Cochrane Library, were searched. Key words such as ‘physical assessment skills’ and ‘physical
assessment skills education and nursing/doctors’ and ‘physical assessment skills’ and ‘advanced practice’ and nursing and ‘assessment frameworks’ were used to identify primary research articles. Additional primary research articles were identified by examining the reference lists of journal articles. Hand searching identified publications not indexed in the databases, but conference proceedings did not yield any suitable studies. Grey literature was searched within independent organisations policy documents, and within national databases because of the low volume of published material on medical PAS in the UK. The search was conducted between September and December 2011, and re-searched for later studies at the end of the research findings (Table 1). Two new studies were identified (Birks et al. 2012 & Heeyoung et al. 2012).

2.4 Inclusion/exclusion criteria

Inclusion criteria for selecting papers were: that they addressed one or more of the following; physical assessment skills/education for registered nurses and doctors; the use of these skills, why they are needed and how these skills are used in practice. Studies that reviewed the concept of advanced practice in nursing were excluded. This decision was based on the fact that existing literature on the development of advanced nursing practice focussed on role effectiveness relating to doctor-nurse substitution, and policy initiatives for advanced practice roles to meet the needs of service. Subsequently, literature is limited on the educational preparation for advanced nursing practice, to deliver sophisticated levels of practice to appraise patients’ assessment findings, make correct clinical judgements and take sole responsibility for care decisions.

No limitation was placed on the publication date because of the earlier introduction of PAS to the US and Australia. Primary research studies undertaken across the world, and published in English language were included. Difficulties were experienced with using the words ‘physical assessment’ as part of the search
strategy because it can be described and referred to within other disciplines, such as physical education, physiotherapy and occupational therapy. Therefore, papers on medical PAS use within these occupational groups were excluded because they were not relevant to the focus of the study. Studies in language other than English were excluded on the basis that they were not accessible and the reader was only literate in English.

2.5 Search Outcome

An initial search revealed 260 studies following removal of duplicates. The title and abstracts were screened for relevance and 227 articles were discarded as not being directly relevant to the review, because some studies were reported in more than one paper, leaving 80 for examination to determine whether they met the inclusion criteria discussed in 2.4. Studies that looked at the use of vital signs were excluded because they focussed on the provision of critical care outreach services for hospital wards, that explored the links between ward based nursing assessment and ICU patients’ admissions.

In addition, studies were excluded that focussed on assessment tools for ward nurses’ proactive management of deteriorating patients (McQuillan et al. 1998 & Goldhill et al. 1999), because they were not relevant to the aim of the study.

There were very few empirical studies that explored the general topic of medical PAS use by nurses. The majority of the published literature on this topic consisted of literature reviews or individual opinions articles, which attempted to provide the rationale regarding the benefits of medical PAS for nursing practice (Fennessay and Wittmann-Price 2011; Lesa and Dixon 2007 & West 2006). Thirty two (32) primary studies were identified (Table 2) and appraised. The initial searches and study selection were undertaken by the researcher.
2.6 Study location

The use of PAS by nurses were appraised in studies from Australia (n=4) Canada (n=2), Japan (n=1), Korea (n=1) New Zealand (n=2), United States (n=15) and UK (n=7). It is important to note that medical PAS education has been part of undergraduate professional preparation and in Continuous Professional Education (CPE) in the US for the longest duration. It was introduced to CPE professional programmes in the UK in the late 1990s, and only six published studies (2000-2010) examined medical PAS use for RNs’ in that duration, with more emphasis on education rather than practice. It has not been endorsed as an educational component within UK’s nursing undergraduate preparation programmes thus far.

2.7 Study Design

Of the studies included, 25 employed a quantitative research approach and 7 adopted qualitative methods. The quantitative US and Australian studies investigated the educational focus of medical PAS at undergraduate nursing levels mainly. The qualitative studies, mainly from the UK, explored the links between medical PAS educational and nursing practice experiences in the clinical setting. Other UK qualitative studies broadly explored nurses assessment practices, but were unclear which assessment skills were used. One UK study explored specific assessment skills used by RN’s, but did not include medical PAS use. One UK study used a non-experimental design to measure the use of medical PAS by RNs in a hospital setting. Patient experiences were explored in one pilot study from New Zealand. The majority of the quantitative studies used surveys and the qualitative ones used interviews and observational methods to gather data.

2.8 Levels of evidence

The quantitative studies, carried out by nurse educators, were primarily in the US and Australia. The primary aim of the quantitative studies was to evaluate the amount medical PAS used in practice, with the aim of informing undergraduate
nursing programme curriculum development. The levels of evidence presented in the studies ranged from level 1-4 (Sackett 2000). One pilot study included an experimental design, but the majority were descriptive non-experimental surveys, or pre-post-test survey designs, which are considered level 1V, and classed as weak for levels of evidence to underpin clinical practice guidelines (Owens et al. 2010).

Level one evidence is considered the gold standard, traditionally using meta-synthesis to evaluate standardised interventions, for the purpose of generalisability (Owens et al. 2010). This level of evidence is generally not applied to education processes and outcomes because interventions are not usually standardised (Attree 2006). The evidence base of educational practice is largely derived from small-scale single case studies, and most evaluation measuring tools in nurse education have unproven reliability, thus meta-synthesis is not appropriate (Attree 2006). This criticism comes from the fact that healthcare evaluations do not measure effectiveness of education in practice (Attree 2006).

In defence of studies undertaken since 2005, well-known methodological approaches have been used to underpin the research; however findings have made limited contribution to the body of knowledge on the use of medical PAS for nursing, since the first pilot study undertaken by Cowell in 1985.

2.9 Evaluation of the research methods and instruments

The earlier quantitative studies (Colwell & Smith 1985; Brown, Brown & Bayer 1987; Scharre et al. 1988 & Sony 1992) did not state if a particular survey design was used. The survey instruments were researcher developed tools, based on professional opinion in the 28/36 survey items developed from 1985-1990, but were not replicated in other studies. These earlier studies lacked consensus regarding which medical PAS should be included for measurement on surveys, consequently content and face validity of instruments were not established or acknowledged. For
example, Reaby’s (1990) survey instrument had yes/no responses to six barriers to PAS use in practice. These barriers were based on her professional opinion, as no explicit information was provided as to how barriers were identified. Neither were any of the instruments piloted to determine survey reliability. This raises questions regarding the validity and reliability of these studies.

Later studies used a range of survey design strategies, such as a correlation survey design (Yamurchi 2001), exploratory descriptive (Solomon 1990; Skillen et al. 2001; Seacrest et al. 2005; Giddens 2006; Giddens 2007 & Giddens 2009) and quasi-experimental survey designs (Reaby 1991 & O’Farrell et al. 2000). The first survey instrument tested for validity and reliability was Yamurchi’s (2001) 28 items survey questionnaire. All the US and Australian survey instruments used in studies from 2005-2012 were tested for validity and reliability. The exploratory descriptive survey instrument developed by Giddens (2007) was modified by Birks et al. (2012) to ensure demographic relevance to the Australian environment; this was the only survey instrument that was pre-tested by a panel of nursing lecturers. Only one Canadian study used Bandura’s self-efficacy theory to develop a survey instrument (O’Farrell 2000), but this survey instrument was not used in later studies.

An interesting finding was that the earlier surveys evaluated a maximum of 36 medical PAS (Reaby 1991) taught in undergraduate nursing programmes. Over a 14 year period the list of medical PAS evaluated in surveys increased to 122 (Secrest, Norwood and du Mont. 2005). The survey questions were developed based on physical assessment skills listed in standard undergraduate nursing texts books, by Wilson & Giddens (2000) and Jarvis (2004). Researchers justified surveying this range of medical PAS as being related to the levels of competency demanded of students in practice, hence the need to measure relevance for curriculum purposes (Secrest, Norwood and du Mont. 2005; Giddens 2006 & Birks et al. 2012).
Sampling approaches were mostly purposive and convenience based, and data was collected via survey questions that employed likert scales. The scope of the questions asked in the earlier studies from 1985-2001 focussed on lists of core physical examination techniques used in relation to different body systems. Specific questions focussed on frequency of medical PAS use, never used, lack of familiarity, barriers to use and skills not considered a nursing responsibility. Reaby (1990) was the first survey questionnaire to ask for qualitative comments, which were reported.

None of the surveys asked questions as to how medical PAS were used in practice, the acceptability of these assessment skills, and perceived benefits to patients. The scope of questions asked by nurse educationalist survey approaches focussed on lists and range of medical PAS taught at universities, and the usability of these skills by hospital nurses only. Reaby (1991) was the only study that sampled community nurses. Additionally, all the earlier surveys (from 1985-2007) were paper based and self-administered, apart from Giddens (2007:9) and Birks et al. (2012). The sample sizes in these surveys were significantly larger with a view to sampling broadly from diverse geographical areas in a country, via on-line survey questionnaires. Therefore self-administration would be more time consuming and costly.

All of the quantitative studies undertook a statistical analysis of data, but only Yamuchi (2001), Secrest et al. (2005); Giddens (2007) and Birks (2012) results were displayed using matrices, graphs and charts. These descriptive statistical methods facilitated the comprehension of large amounts of textual information (Miles and Huberman 1994).

The qualitative UK studies collected data via interviews. Two studies used direct observation approaches, in conjunction with semi-structured interviews. Data was analysed via thematic approaches to generate themes and concepts.
None of the studies positioned a philosophical framework to underpin methodological approaches; hence the most appropriate strategies of enquiry to underpin philosophical orientations were not examined. Subsequently, the rationale for not adopting other strategies of enquiry for individual studies was not justified.

2.10 Synthesis of themes from both quantitative and qualitative studies

A matrix of the key studies was devised to scrutinise the study’s origin, research focus, methodological approaches, sample sizes, key findings, limitations, and their relevance to this study. This matrix provides an overall picture of the studies’ strengths and weaknesses and knowledge in this field, to support choice of methods for the current studies (Table 2). However, the limitation of the matrix is that it does not enable the researcher to identify themes, hence the use of an alternative approach.

The analytical process used to generate themes for the review was qualitative, based on Braun and Clarke (2006) thematic inductive approaches. This involved reading each paper thoroughly to become familiar with the depth and breadth of the content, and noting down initial ideas. Patterns of interesting features information (codes) were highlighted in a systematic way across the data set, for example barriers and facilitators, use of medical PAS and frequency of use. These codes were collated into potential key themes and sub-themes, and different patterns of information were categorised according to theme or sub-theme, and collated into main themes. The themes developed for the analysis was checked against the coded extracts by reading each paper several times. Major themes were extracted and grouped together, generating a thematic map. Data synthesis was undertaken by constantly comparing findings from each theme and reporting similarities and differences. As each section of the review was written, the original papers were checked for accuracy to ensure that the details discussed were accurate accounts. These accounts were then related back to the research question.
2.11 Results

Following a critical review of the studies four major themes emerged.

The themes were:

1. The use of PAS in practice
2. Physical assessment- role of education- International perspective
3. Physical assessment- role of education- UK perspective
4. Barriers to PAS use in practice.
Table 2 Matrix Summaries of (32) articles reviewed

### Quantitative Studies

<table>
<thead>
<tr>
<th>Author, year</th>
<th>Purpose and Context</th>
<th>Methods</th>
<th>Demographics</th>
<th>Main findings and Limitations</th>
</tr>
</thead>
</table>
| Colwell and Smith (1985) | Purpose: To investigate PAS use for RNs  
Context: Paediatric admission Unit  
Setting: Hospital & tertiary paediatric centre in 400 bed hospital  
Country: US | Sample Size (n=59)  
Sampling: Convenience based  
Response Rates: 100%  
Design: Survey  
Data collection: 36 item likert scale questionnaire. | Registered paediatric nurses sampled from medicine, surgery, community and social health environments. Specific numbers not stated. Demographics accounted for number of RNs who has a BSN and an ADN and the nature of PAS course undertaken | Findings: Clinical application of PAS. Approximately 1/3 of the 36 items listed were used on a daily basis by 74% of participants. Not all skills used on regular basis. Need to teach skills relevant to practice setting  
Limitations: This was a pilot study. A larger and more diverse population needed. Validity and reliability of survey instrument not established. |
Context: Education- Pilot study  
Setting: University  
Country: US | Sample Size (n=359) registered  
Sampling: Purposive  
Response Rates: (n=145) =41%  
Design: Not stated  
Data collection: Survey questionnaire | 50% nurses were aged between 37-47 years. Basic education was diploma and degree. 75% of sample were working in medicine/surgery/community  
| Findings: The need for robust education, skills rehearsal and supervision for PAS integration in practice. As RNs advance role boundaries, they need these skills to initiate independent nursing actions. Limited barriers to use of PAS by physicians, and patient acceptance were very well valued. Peer respect and professional development as a result of the use of PAS  
Limitations: No new findings identified from previous studies |
<table>
<thead>
<tr>
<th>Study</th>
<th>Purpose</th>
<th>Context</th>
<th>Setting</th>
<th>Country</th>
<th>Sample Size</th>
<th>Sampling</th>
<th>Response Rates</th>
<th>Design</th>
<th>Data Collection</th>
<th>Findings</th>
<th>Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scharre et al. (1988)</td>
<td>Purpose.</td>
<td>School of Nurse education</td>
<td>Hospital wards</td>
<td>US</td>
<td>(n=92)</td>
<td>Convenience sampling</td>
<td>(n=62)</td>
<td>Survey</td>
<td>2nd year students only.</td>
<td>Assessment skills used by student nurse in 2nd year were respiratory &amp; cardiovascular systems</td>
<td>Small sample size</td>
</tr>
<tr>
<td>Solomon (1990)</td>
<td>Purpose</td>
<td>A Survey of nurse educators view of what PAS should be taught in undergraduate nursing programmes</td>
<td>55 schools of nursing throughout the US</td>
<td>US</td>
<td>(n=55)</td>
<td>Purposive</td>
<td>(n=42)</td>
<td>A descriptive survey questionnaire: open &amp; closed questions to the perceived need for PAS in education</td>
<td>Sent to Deans and Chair Persons of Nursing Schools across the US.</td>
<td>Physical assessment skills were taught in nursing degree programmes by 98% of schools. Nurse educators thought that a full range of PAS should be taught in undergraduate nursing programmes, as these assessment skills are necessary for practice. These skills are integrated throughout the four year programme.</td>
<td>Not stated</td>
</tr>
<tr>
<td>Reaby (1991)</td>
<td>Purpose</td>
<td>To evaluate PAS education module as an intervention</td>
<td>ICU/Surg/Med wards Community/ Nursing homes</td>
<td>(Australia)</td>
<td>(n= 22 nurses)</td>
<td>Purposive</td>
<td>(n=17) post intervention)</td>
<td>Quasi-experimental pre-post-test design</td>
<td>10 Medical/surgical ward nurses 4 ICU nurses 2 RNs from nursing homes 6 RN’s from community</td>
<td>Post intervention analysis showed that at least 63% of the participants used more than half of the 36 PAS taught. The findings identified that community health nurses use a broader repertoire of PAS in comparison to hospital nurses. The rationale being they are expected to make individual clinical judgements for patients in the community</td>
<td>Small sample size. Findings not verified in data analysis. Validity and reliability of survey instrument not established.</td>
</tr>
</tbody>
</table>
| **Sony (1992)** | **Purpose** | To examine the perceived barriers to PAS use in practice  
Context | Different practice environments  
Setting | Clinical practice  
Country | US  
**Sample Size** | (n=148)  
**Sampling** | Purposive  
**Response Rates** | (n=114)  
**Design** | Survey 42 item likert scale questionnaire.  
Registered nurses sampled from Medical wards/ICU’s/A&E’s Community/Obstetric Community and in Psychiatry Registered years of nursing from 1-6+ Full time and part-time graduate students  
**Findings** | 50% of the PAS taught were used on a regular basis. Nurses who completed PAS update used the skills more frequently. Barriers to use, time, support, lack of equipment and heavy nursing workload. PAS was not seen as a nursing responsibility.  
**Limitations** | Pilot study only. Content and face validity of survey not established Did not examine how use of PAS influenced patient outcomes  
**Notes** |  |
| **Lont (1992)** | **Survey** | (n=50 RN's, Purposive sampling  
**Sample Size** | Survey questionnaire  
Barriers to PAS consolidation by lack of trained staff and appropriate supervision  
**Findings** | Response rate not stated Survey results were self-reported  
**Notes** |  |
| **Peterson et al. (1992)** | **Purpose:** To report on the relative contribution of history, physical examination and laboratory investigations in making a medical diagnosis for new or previously undiagnosed problems using a standardised protocol  
Context | Hospital  
Setting | Medical outpatients  
Country: US  
**Sample** | Purposive  
**Sample Size** | (n=80) patients (n=4) doctors  
**Response Rates** | Not stated  
**Design** | Prospective study design Standardised questionnaire devised by (Hampton et al.1975)  
(n=80) patients (51% men) with a mean age of 48 years. One was Asian, one was African and one was Hispanic origin. The rest were white.  
**Findings** | The findings suggest that history taking is a powerful diagnostic tool for doctors. More emphasis should be placed on developing communication skills. Physical examination and laboratory tests led to fewer diagnoses, than history taking in this study.  
**Limitations** | Methodological limitations of study not reported. Sampling and recruitment processes not reported No information reported on questionnaire validation  
**Notes** |  |
<table>
<thead>
<tr>
<th><strong>Lattimer et al. (1998)</strong></th>
<th><strong>Purpose</strong></th>
<th><strong>Sample Size</strong></th>
<th><strong>Findings</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>To determine the safety and effectiveness of nurse telephone consultations in OFH in primary care; related to adverse events and management of calls</td>
<td><strong>Purpose</strong></td>
<td><strong>Sampling</strong></td>
<td><strong>Nurse telephone consultations produced substantial changes in call management, reducing overall workload of GPs by 50%, whilst allowing callers faster access to healthcare and advice. Nurse telephone consultations were not associated with increased adverse events. This model of care is safe and effective.</strong></td>
</tr>
<tr>
<td><strong>Context</strong></td>
<td><strong>Response Rates</strong></td>
<td><strong>Limitations</strong></td>
<td></td>
</tr>
<tr>
<td>Primary care</td>
<td>Block RCT</td>
<td>Methodological difficulties experienced with results. The trial data did not show when and which nurse referred patients to hospitals, following a telephone consultation. Specialist software and nurse training was a requirement for trial. Different software and lack of appropriate training may yield different results. This questions the transferability of findings.</td>
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<td><strong>Setting</strong></td>
<td>14,0492 calls were received during the specified time</td>
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<tr>
<td>One (n=55) GP cooperatives including 97,000 patients</td>
<td><strong>Design</strong></td>
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<tr>
<td>Country</td>
<td>Block RCT over 1 year. 156 matched pairs of days and weekends in 26 blocks. One of each matched pair was randomised to receive intervention.</td>
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<tr>
<td>UK</td>
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<thead>
<tr>
<th><strong>O‘Farrell et al. (2000)</strong></th>
<th><strong>Purpose</strong></th>
<th><strong>Sample Size</strong></th>
<th><strong>Findings</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>A quasi-experimental pre and post-post course evaluation Purposive sampling</td>
<td><strong>Purpose</strong></td>
<td><strong>Survey instrument based on Bandura’s self - efficacy theory</strong></td>
<td>A significant increase in PAS use post course, but used when only problem presented.</td>
</tr>
<tr>
<td><strong>Sample Size</strong></td>
<td><strong>Design</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Purposive sampling</strong></td>
<td></td>
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<tr>
<td><strong>Limitations</strong></td>
<td></td>
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<tr>
<td></td>
<td>Small sample sizes</td>
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</tbody>
</table>
| Rushforth et al. (2000) pilot study | **Purpose** | To assess the safety of nurse led clerking in paediatric day case  
**Context**  
Paediatric day Case Unit  
**Setting**  
Minor injury unit  
**Country**  
UK |
|---|---|---|
| | **Sample** | (n=60)  
**Sampling**  
RCT- random allocation  
**Design**  
A pilot RCT of medical versus nurse clerking for minor surgery. All children were independently assessed by an anaesthetic registrar to provide the ‘gold standard’ against which practitioner performance was measured  
**Sample** |  
Children aged 3 months up to 15 years were randomised to an RN or an SHO.  
**Findings**  
Nurses were equally safe in clerking and pre-assessment of patients when compared to SHO’s, but took longer to complete assessments.  
Nurses identified more abnormalities in the sample, and were more superior in the history taking process.  
**Limitations**  
The results are not transferable and this was acknowledged. Larger sample sizes needed to generalise findings. |
| Yamauchi (2001) | **Purpose** | To evaluate the usability and frequency of PAS in practice  
**Context**  
University hospital  
**Setting**  
Regional setting  
**Country**  
Japan |
| | **Sample** |  
**Sample**  
Convenience  
**Sample Size** | (n=357),  
Response rates  
94%. Homogeneity of sampling process verified.  
**Design**  
Descriptive -Correlation Survey design  
28 item likert scale questionnaire developed by author. Content, face and construct validity established  
98% = female  
6% = male  
Ages from 21-62 years. Mean ages 39 year  
Median age of 43 years  
94% were Diploma graduates  
6 % were ADG’s  
39 in OPD  
22 in general units  
63 in medical units  
99 in surgical units  
34 in paediatric units  
22 in psychiatric units  
22 in obstetric units  
24 worked in ICU  
22 worked in theatres  
1 worked in rehab unit  
**Examined usability and frequency of PAS. Respiratory and cardiovascular skills mainly used in hospital wards. These skills were integrated to the use of vital signs assessment to enhance assessment findings. Abdominal examination skills were used but less frequently. A range of barriers were identified: presence of physicians, lack of time and support to hone skill, inappropriate clinical setting to use skills: Medical PAS was not considered a nursing responsibility. Lack of time due to heavy workload. Lack of support from colleagues.**  
**Limitations**  
Nurse’s attitudes were not ascertained. No outcome measures were determine |
| Anderson & Skillen *et al.* (2001) | **Purpose** | To identify the perceived learning need of RNs for PAS and barriers to PAS use in care home settings  
**Context**  
Care Home facilities  
**Setting**  
Community  
**Country**  
Alberta Canada | **Sampling** | Purposive  
**Sample Size**  
(21 care home settings)  
(n=214) case managers  
(n=45 ) staff development officers  
**Response Rates**  
(n=15 case managers)  
(n=39 staff development officers)  
**Design**  
Exploratory descriptive survey  
31 item likert scale for case managers  
19 items likert scale for staff development officers. | **Women =144**  
Men 6  
Age range 20-60 years.  
Nursing education  
Registered Diploma  
Baccalaureate degree  
Certificate in gerontology  
Other post-basic nursing education | **Findings** | Case managers viewed PAS as necessary for their role as many of the patients had increased acuity of illness related to a long-term condition diagnosis. They needed these skills as first point of contact, to report changes, as physicians are not on site. They need medical PAS to report altered physiological state of residents, to co-ordinate, and evaluate care plans for maximising health and comfort. Need specialist PAS for geriatric setting taught through a holistic nursing framework as opposed to the rigid body systems medical model  
**Limitations**  
Validity of reliability of survey instruments not reported. |
|---|---|---|---|---|---|---|
| Kinley *et al.* (2001) | **Purpose** | To determine if pre-operative assessment carried out by appropriately trained paediatric nurses is inferior to pre-registration house officers. Specific pre-determined outcomes were set.  
**Context**  
Hospital  
**Setting**  
Setting 4 NHS hospitals in 3 Trusts.  
**Country**  
UK | **Sampling** | Purposive:  
**Sample Size**  
(n=1907) patients randomised  
Response rates(n=1874) completed the study  
**Design**  
RC equivalence/ non-inferiority study  
Intervention: Assessment by one of three appropriately trained nurses or by one or several pre-reg house officers. | All patients attending for assessment before general anaesthesia for general, vascular, urological or breast surgery between April 1998- March 1999 | **Findings** | Nurses were judged to be non-inferiors to pre-registration house officers in pre-operative assessments, although there was a variation in history taking. House officers ordered more tests. This study pointed out that there will not be enough house officers in the future to undertake this role, because of a service shortfall. Therefore specialist trained nurses will undertake this role. There is no reason to inhibit the development of nurse led POA units, provided RNs’ receive adequate training. |
| **Reilly (2003)** | **Purpose:** A retrospective review of hospital records to determine whether physical findings by attending physicians led to important changes in management  
**Context**  
**Setting** - 700 bed General medical inpatient setting  
**Country** US  
---  
**Sample**  
Consecutive sampling process  
**Sample size** (n=100)  
**Response rates** N/A  
**Design**  
A retrospective review of patient records  
**Outcomes measures**  
Pivotal findings would be detected from physical examination of patients  
---  
**Findings:**  
The results showed the superiority of medical PAS examination in excluding the need for diagnostic tests. The effectiveness of PAS is overshadowed by focus on the academic assessment of PAS skills  
**Limitations**  
Sampling limitations- one clinical setting, the timeframe, and bias assessment associated with a single physician review. |
| **Giddens (2004)** (Pilot study) | **Purpose:** To determine whether a difference exists in the frequency that PAS techniques are performed by associate and baccalaureate degree nurses.  
**Context**  
**Setting** Hospital General specialities  
**Country** US  
---  
**Sample**  
Sample Size (n=196) RN’s surveyed.  
**Response Rates**  
Response rate (n=96).  
**Design**  
Cross-sectional exploratory descriptive study using a survey design (pilot)  
124 item likert scale survey questionnaire.  
Non-parametric data analysis  
---  
**Findings:**  
No correlation between years of experience and education and frequency of skills used.  
Not all medical PAS are needed for non-advanced roles in hospitals  
Content/face and construct validity established.  
**Limitation**  
Pilot study and relatively small sample representing nurses from one healthcare facility recruited from one hospital only. |
<table>
<thead>
<tr>
<th>Study</th>
<th>Purpose</th>
<th>Sample</th>
<th>Design</th>
<th>Findings</th>
<th>Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secrest <em>et al.</em> (2005)</td>
<td>To investigate the PAS taught in UG degree nursing programmes and the PAS used by practicing nurses</td>
<td>Non-random sampling&lt;br&gt;(n=51)</td>
<td>An exploratory descriptive survey: 122 item likert scale survey questionnaire&lt;br&gt;Descriptive statistics used to analyse data</td>
<td>For practicing nurses 37% of the skills were never used and 29% were only used on a daily/weekly basis. Based on findings, the content of PAS courses needs to be re-evaluated with courses focussing on what nurse need to know to practice nursing. Main skills used were respiratory and cardiovascular on hospital wards</td>
<td>Lacked homogeneity, more ICU nurses than any other area of practice. Small sample sizes</td>
</tr>
<tr>
<td>Schroyen (2005) (Pilot study)</td>
<td>To investigate PAS use and levels of knowledge</td>
<td>Purposive sampling&lt;br&gt;(n=60)&lt;br&gt;Response rates&lt;br&gt;(n=33)</td>
<td>Survey tool adapted from validated likert scale questionnaire.</td>
<td>PAS structure very useful to ensure consistency of information sharing across healthcare teams. Greater range of PAS used by community nursing teams, depending on population group and context of nurses’ work. Nurse needed these skills because they worked in isolated areas without GP support. Lack of time, equipment, lack of support from clinical colleagues was the main barriers to PAS use.</td>
<td>Pilot study and survey development not described. Small sample size.</td>
</tr>
<tr>
<td>Harris and Watson (2005) (Pilot study)</td>
<td><strong>Purpose:</strong> To evaluate the use of PAS in a nurse-led cardiology day unit.  <strong>Context</strong> Pre-admission unit and patients admitted over 2 months period  <strong>Setting</strong> Hospital  <strong>Context</strong> Cardiology Day Unit  <strong>Country</strong> New Zealand</td>
<td><strong>Sampling</strong> Convenience sampling  <strong>Sample Size</strong> (n=30)  <strong>Response Rates</strong> (N-19 or 63%)  <strong>Design</strong> Patient satisfaction questionnaire (15 questions)</td>
<td><strong>Findings</strong> Patients were satisfied that RNs were competent to undertake physical assessment examinations. Nurse-led clinics staff educated with medical PAS improved nurse-patient relationships and continuity of care  <strong>Limitations:</strong> Development of survey questionnaire not reported on. Pre-admission by doctors was not compared with nurses to determine differences.</td>
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<tr>
<td>Rushforth (2006)</td>
<td><strong>Purpose:</strong> To determine if RNs PAS are equivalent to SHO's  <strong>Context</strong> Preoperative assessment unit-paediatric  <strong>Setting</strong> Hospital POA Units  <strong>Country</strong> UK  <strong>Outcomes were:</strong> Correct identification of abnormality of potential peri-operative significance found during history taking and examination.</td>
<td><strong>Sample</strong> Randomisation  <strong>Sample Size</strong> (n=595)  <strong>Design</strong> Single centre quasi-randomised trial in a paediatric day unit University hospital. An equivalence study</td>
<td><strong>Findings</strong> Reported outcomes focussed on accuracy of assessment and history taking. Findings were similar to Kinley's (2001) study which examined the same outcomes. There was no evidence available for RCT to allow assessment of whether nurse led POA lead to an increase or decrease in cancellations or peri-operative complications, or in knowledge or satisfaction among surgical participants.  <strong>Limitations</strong> It was not possible to blind staff or participants – so performance bias was a risk. Selection bias due to random sequence generation Reporting bias Detection bias due to non-blinding of outcome assessments.</td>
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</tbody>
</table>
| Giddens (2006) (Pilot study) | Purpose | To determine whether a difference exists in the frequency of PAS used by associate and baccalaureate nurses.  
 **Context** | National  
 **Setting** | Hospital  
 **Country** | US  
 | Sample | Purposive  
 **Sample Size** | (n=96) surveyed.  
 **Response rates** | Not stated.  
 **Design** | Cross-sectional exploratory using a descriptive approach  
 124 items survey questionnaire using a 6 point scale.  
 Survey content/face and construct validity established  
 | (n-52) RN’s from medicine, surgery, ICU and OPD  
 (n=24) from paediatric, ICU and OPDs)  
 (n=10) Peri-operative Units  
 (n=10) maternal Infant.  
 All participants worked >20 hours week.  
 27 % worked in ICU  
 | Findings | Response rates justified  
 On line survey was easily distributed and is cheaper.  
 Despite over 88% of 122 PAS taught in all assessment modules across the country, only a small set of these skills are routinely used in clinical practice.  
 Findings suggest a disconnection between theory and practice.  
 UG nursing programmes are over saturated and taught in too much depth, than is needed in hospital environments.  
 The depth of examination performed is not defined by the PAS performed.  
 The focus of nurse education should reflect nursing practice  
 Too much emphasis on teaching PAS skills at the deficit of other aspects of assessment.  
 Teach fewer medical PAS. Concentrate on developing clinical judgement skills reflective of chosen speciality of work  
 **Limitations** | Teaching practices from a relatively small sample so may not be representative of the teaching practices of all nursing programmes.  
 |  
 | Giddens (2007) | **Purpose:** to identify the PAS performed by practicing nurses to identify main competencies required.  
 **Context** | General specialities  
 **Setting** | Hospital  
 **Country** | US  
 | Sample | Random sample  
 **Sample size** | (n=250)  
 **Response rate** | (n=193)  
 **Design** | A descriptive survey  
 | RN providing direct patients care  
 RN’s from medicine, surgery, community and social health environments  
 | Findings:  
 30/122 PAS taught was routinely used in practice.  
 Nurse educators need to assess the amount of PAS taught, and consider what medical PAS are necessary for clinical practice.  
 The findings suggest a disconnection between theory and practice  
 **Limitations** | Reliability of survey instrument was not established, but acknowledged.  
 |
| Kelley & Kopac (2007) | Purpose | Follow-up study to evaluate the content of HA courses, where it is placed in the curriculum, length of time taught and teaching strategies used. How does HA course differ from undergraduate context.  
**Context**  
National Survey  
**Country**  
US  

**Sample:**  
Purposeful  
**Sampling size**  
(n=390) Nursing schools sampled  
**Response rates**  
Response rates (n=135) (44%)  
**Design**  
Survey questionnaire was designed by researchers in 2001  

**Findings**  
The family NP programmes was the most frequently offered. Health assessment was taught in all NP programmes and run concurrent to clinical practice. The major taught components were: Health promotion, History taking, PAS and functional assessment.  
Findings from study reported that almost all the schools sampled were teaching similar ranges and depth of PAS. Creative approaches used to teach PAS.  
Graduate HA courses were in-depth and included PAS and diagnosis reasoning strategies |
| Birks et al. (2012) | **Purpose:**  
To evaluate PAS for RNs in Australia, to inform education  
**Context**  
Setting  
Hospitals & educational institutions  
**Country**  
Australia  

**Sample**  
Purposeful  
**Sample size**  
(n=1119) working in hospital clinical settings  
RN's = 520 (43%)  
Specialist educators or consultant (323, 26.7 %)  
Nurse managers (168, 14%)  
Midwives (69, 5.9%)  
Mental Health (31, 2.6%) Researchers (22, 1.8%)  
All nurses worked in NSW. The remainder were employed in Tasmania and Victoria and South Australia  
Most respondents' were female (n=1081,88%) range from 51-60 years  
Majority worked full time (735, 60.5%)  

**Design**  
Used an existing validated questionnaire  

**Findings**  
The majority of 120 PAS taught are not used in hospital based nursing. Time to use PAS, clinical environments and the presence or absence of doctors in hospitals, determines PAS use by nurses. The presence of doctors on hospital wards discouraged RNs from using PAS regularly. PAS atrophy occurred, when PAS were not use frequently.  
**Limitations**  
Data was self-reported which may subject to bias. The study replicated an earlier design and questionnaire. The use of a median response to represent practices of nurses is an applied statistic, and has limitations. |

<table>
<thead>
<tr>
<th>Purpose</th>
<th>To explore PAS use and frequency of use and training needs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Context</td>
<td>Clinical Practice</td>
</tr>
<tr>
<td>Setting</td>
<td>General and specialists</td>
</tr>
<tr>
<td>Country</td>
<td>Korea</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sample</th>
<th>Sample size (n=104) RNs' Response rates not stated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>Exploratory Survey 3 instrument scales</td>
</tr>
<tr>
<td>1.</td>
<td>Perceived PAS competency scale</td>
</tr>
<tr>
<td>2.</td>
<td>The frequency of PAS scale</td>
</tr>
<tr>
<td>3.</td>
<td>Training needs scale</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Findings:</th>
<th>Lack of competence associated with infrequent use of PAS and training</th>
</tr>
</thead>
<tbody>
<tr>
<td>Results</td>
<td>Correspond to previous studies, which report close relationships between confidence and frequency of PAS use.</td>
</tr>
</tbody>
</table>

**Limitations**
The results have not added anything new to the body of existing knowledge on medical PAS for nursing work.

50% of nurses had over 20 years' experience in clinical practice. 90% had a BSc 10% MSc or Doctorate.
Qualitative Studies

<table>
<thead>
<tr>
<th>Study</th>
<th>Purpose</th>
<th>Sample Size</th>
<th>Findings</th>
<th>Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lattimer et al. (1998)</td>
<td>Ethnographic study of nursing assessment of older patients</td>
<td>n=20</td>
<td>Nursing assessment practices go beyond entering relationship with patients as individuals. Nurse’s assessment of patients aligns with managerial, organisational and medical objectives, to shape nursing identities’.</td>
<td>Difficult to read. Methodological process of discourse analysis difficult to interpret.</td>
</tr>
<tr>
<td>Roberts - Davis, &amp; Read (2000).</td>
<td>A 27 month study using a Delphi Methods to establish similarities and differences between Nurse Practitioners and Clinical Specialist nurses</td>
<td>n=49</td>
<td>Both SNP’s and NP’s require the same core nursing competencies of hands on care as any RN, but practicing at a higher level than is expected of a basic practitioner. 25 of 31 competencies agreed for both specialities were grounded in nursing, although NPs use more medical skills. The main competences for NP were: medical PAS, patient clerking, diagnostic decisions, prescriptive authority, management plans and treatment.</td>
<td>No defined criteria as to who was considered as an ‘expert’ for the Delphi technique.</td>
</tr>
<tr>
<td><strong>Gerdtz &amp; Bucknall (2001)</strong></td>
<td><strong>Purpose</strong></td>
<td><strong>Sample Size</strong></td>
<td><strong>Sample Size</strong></td>
<td><strong>Findings</strong></td>
</tr>
<tr>
<td>-------------------------------</td>
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<tr>
<td>To explore Triage nurses' clinical decision making of urgency in assessment</td>
<td>(n=36) nurses</td>
<td>Male Nurse observed =4</td>
<td>It was found that there was limited use of objective physiological data collected by the nurses' to decide patient acuity, and triage decisions.</td>
<td>Practice standards should include routine measurement of physiological parameters in all patients.</td>
</tr>
<tr>
<td><strong>Context</strong></td>
<td>Purposive</td>
<td>Female nurses observed =22</td>
<td>Findings have implications for the development of assessment standards and triage education.</td>
<td>Validity of observation instrument used was established.</td>
</tr>
<tr>
<td>Adult Emergency Department Setting</td>
<td><strong>Response rates</strong></td>
<td>Levels of experiences in years</td>
<td>The content validity was supported by the literature.</td>
<td><strong>Limitations</strong></td>
</tr>
<tr>
<td>Hospital setting</td>
<td>N/A</td>
<td>&lt;5=6 years</td>
<td>Instrument used to collect data was not discussed</td>
<td><strong>Limitations</strong></td>
</tr>
<tr>
<td><strong>Country</strong></td>
<td><strong>Design</strong></td>
<td>5-10 years =30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Australia</td>
<td>A structured observational study</td>
<td>&gt;10=12 years</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Data collected using a 20-item instrument that recorded the performance frequencies of a decision tasks and a number of observable patient, nurse and environmental variables.</td>
<td>Emergency nurse years</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>&lt;5=9</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>&gt;5=17</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Triage education</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>None =8</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Orientation=16</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Pre-ceptorship = 2</td>
<td></td>
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</tbody>
</table>
| Coombs and Moorse (2002) | **Purpose** | To explore application of PAS in the ICU setting post PAS education.  
**Context**  
Hospital  
**Setting** ICU  
**Country** UK | **Sample** | Convenience  
**Sample size** (n=2)  
**Response rates**  
Design Patient cases studies used | **Findings** | The findings stressed the need for nurses to respond proactively to health policy changes to improve patient outcomes. Role boundary responsibilities for medical PAS application need to be defined.  
**Limitations**  
Findings limited to specialised area of practice only, based on two clinical cases. Findings not underpinned by research approaches. |
| --- | --- | --- | --- | --- | --- |
| McElhinney (2010) | **Purpose**; to determine the barriers to PAS use following education with NP’s.  
**Context** Community  
**Country** UK | **Sample** | Purposive sampling  
Sample s(n=47) NP’s  
**Response rates** (n=21)  
**Design** Questionnaire developed using Delphi technique. Construct validity/face/ content and internal consistency achieved through group consensus. | **Findings** | The results of the study generated valuable opinion factors that help and hinder the use of medical PAS skills in NP roles  
**Limitations**  
The findings are not generalisable due to small sampling sizes and response rates. |
| Aldridge-Bent (2010) Pilot study | Purpose: qualitative exploratory study of PAS for DN’s, and to determine practice and academic application. **Context:** Educational institution Setting University Country UK | Sample (n=10) FG Sample size (n=3) for SSI Design Exploratory descriptive study. Student district nurses from a Community Health care degree All DN’s working in the community from 5 to over 10 years. Had similar educational preparation Findings: Clearer definition of medical PAS needed for nursing practice. The findings highlighted that medical PAS are useful for DN’s work to improve patient outcomes, but not for diagnostic purposes to replace doctors. From educational perspectives, students wanted more information about medical PAS education. Need comprehensive understanding of physical health sciences to understand PAS findings. **Limitations** Small sample size. |
|---|
| Edmunds, Ward and Barnes (2010) | Purpose: To establish cardiac nurses medical PAS use post module of education and factors that influenced their use. **Context:** Hospital Setting Coronary Care Unit Country UK | Sample Convenience sampling Sample Sizes (n=14) Response Rates (n=7) Design: Longitudinal descriptive approach Semi-structured interviews. Self-reporting clinical logs Non-participatory observations The 7 participants worked in variety of cardiac areas including ICU and nurse led clinics Findings The main medical PAS used in the coronary care setting were PAS of respiratory and cardiovascular systems. Use and development of competence was linked to personal characteristics Use influenced by perception of role boundaries, permission and co-operation Use influenced by perception of nursing and development of personal practice Use influenced by environment context **Limitations** Incomplete data set, and reduced amount of data for analysis. Sample size and bias related to data collection methods. The researchers own students took part in the study. Bias related to non-participant observation. |
2.12 Literature Findings

2.12.1 Theme one: The use of physical assessment skills in practice

Studies, primarily using survey-based questionnaires, from the US and Australia over the past twenty-five years have identified the use, and frequency of use of medical PAS for nurses in practice (Cowell & Smith’s 1985; Brown et al. 1987; Scharre et al. 1987; Reaby 1991; Lont 1992; Sony 1992; & Yamauchi 2001). The main concerns to emerge from these studies were that many of the skills taught were never used, particularly on hospital wards. Nurse researchers have questioned the relevancy of health assessment courses in undergraduate programmes, and if the assessment skills taught are purposeful.

Secrest, Norwood and du Mont (2005) surveyed nurse educators and practicing nurses, to compare their views on actual skills used. The findings reported that 37% of 120 medical PAS taught were never used, and only 29% of the skills were performed regularly in clinical practice (daily/weekly). This study identifies that nurses should use medical PAS for nursing specific actions, such as examining patients’ respiratory status when moving or turning patients, to determine appropriate interventions. Researchers questioned the application of the medical framework to teach PAS education for ward based nursing, because it’s more suited to primary care, where the emphasis is on diagnostic work. An important argument put forward by Secrest, Norwood and du Mont (2005) is that medical PAS use for ward nurses should be contextualised to the interpretation of patients’ symptoms, rather than focussing on skills development for diagnostic purposes.

A limitation of that study was that the sample size was small; nevertheless, its findings were consistent with previous studies. Unlike earlier studies, Seacrest
and colleagues did not identify how many medical PAS are necessary for nursing ward work (Secrest, Norwood and du Mont 2005). For example earlier studies identified that ward nurses only need to be taught 36 medical PAS, because specialised skills related to endocrine, reproductive and neurological systems were the responsibility of specialist hospital physicians (Colwell & Smith 1985; Brown et al. 1987; Sony 1992; Lont 1992; O'Farrell et al. 2000; & Yamauchi 2001). Nevertheless, the findings of Seacrest, and colleagues added to the previous body of knowledge, by identifying divergence of opinions between educators and practicing nurses on the value of medical PAS for nursing work on hospital wards. This study also identified the value of this assessment knowledge to understanding patients' disease processes, to determine nursing interventions (Secrest, Norwood and du Mont 2005).

A subsequent survey study of (n=193) nurse participants in both in-patient and out-patient settings prompted the author to question, whether teaching medical PAS assessment skills to such an extent was in fact necessary (Giddens 2007). The survey was developed using two nursing undergraduate physical examination textbooks (Wilson and Giddens & Jarvis 2004). Of the 126 medical PAS included in the survey, the findings reported that only 30 skills were routinely or regularly used. Giddens (2007) reported that the main skills used were those of the respiratory and cardiovascular systems, because the use of these skills is most beneficial to patient outcomes on hospital wards. Giddens (2007) study also confirmed findings of earlier studies (Colwell and Smith 1985; Reaby 1990; Lont 1992; Sony 1992; Yamuchi 2001 & Secrest, Norwood and du Mont 2005) that the core nursing skills used relating to physical assessment were inspection, palpation and auscultation. Core palpation techniques (feeling for organs) were not used by ward nurses because this skill is difficult to master (Cowell and Smith 1985) as its purpose is primarily diagnostic, and ward-based nurses do not make diagnoses.
Giddens (2007) study findings were more specific, by reporting that specialised areas of midwifery practice used the techniques of inspection and palpation and auscultation (IPA) more consistently than any other hospital nurses, because they are core to this area of practice.

Reaby's (1991) Australian survey was the only study that compared the usage of medical PAS in the hospital and in the community following a PAS education intervention. Post intervention analysis at three months, indicated that 62% of the (n=22) sampled participants used more than half (75%) of the 36 medical PAS taught on the module. The findings concluded that ward nurses were less inclined to integrate medical PAS into vital signs assessment of major body systems in comparison to community nurses, possibly related to the presence of medical doctors in hospital wards (Reaby 1991).

Reaby's findings were consistent with Schroyen et al. (2005) pilot survey of medical PAS use for community nurses in New Zealand. Both studies highlighted that a wider range of PAS are generally used by community nurses than hospital colleagues, because community nurses often work in isolation. Medical PAS examinations of respiratory, cardiovascular and neurological were used more frequently in the community because of age related illnesses (Reaby 1991 & Schroyen et al. 2005).

Secrest and colleagues, supports Reabys (1991) and Schroyen et al. (2005) findings, and proposes that a wider range of medical PAS are required for community nursing assessment practices, gained through postgraduate nurse education programmes (Secrest, Norwood and du Mont 2005).

By far the most robust quantitative survey undertaken to examine the relevance of medical PAS in undergraduate nursing programmes for RNs' in hospitals in New South Wales in Australia, was by Birks et al. in 2012. Data was extracted from
1220 completed on-line survey questionnaire from a sample of (n=1518). A diverse range of participants, mostly females from New South Wales (NSW) were sampled from hospitals, but RN’s and midwives made up the largest proportion of the sample (n=520, 43%). The majority of the nurses worked full time and 50% had over twenty years’ experience. The survey questionnaire, based on Giddens (2007) validated survey, was modified to ensure demographic relevance to the Australian environment. The results reinforced evidence found in the above studies, that many of the skills taught are either not used at all (35.5%), or are used rarely (31%).

Birks et al. (2012) survey results add to the previous body of knowledge, by reporting that ward nurses are likely to avoid using the skills of percussion and palpation because of the time needed to complete these assessments. Alternatively, they may avoid using these core skills, knowing the medical team will aim to conduct this part of the assessment in their role. Therefore the findings of three most recent studies (Secrest, Norwood and du Mont 2005; Giddens 2007 & Birks et al. 2012) concur, that the skills of inspection and observation are the most frequently used aspect of nursing assessment practices in hospital environments, with the exception of maternal health (Giddens 2007). They also concluded that the value of medical PAS for nursing ward work is to undertake nursing assessment activities related to the assessment of the respiratory and cardiovascular systems, and not medical diagnostic work.

The purpose of medical PAS for diagnostic work is clarified more specifically in the following medical study by Reilly (2003), who undertook a retrospective study of medical case notes in the emergency setting. Firstly, this study did not view medical PAS as a separate entity, but as a part of a medical assessment framework, that includes a consultation, physical examination and diagnostic reasoning skills to formulate a hypothesis, or make a new diagnosis. The findings
show that these phases of the assessment framework need to be used in a linear manner, to inform each phase of the medical diagnosis (Reilly 2003). The conclusions drawn were that a physician’s ability to use all the core aspects of the assessment framework was pivotal to forming a differential hypothesis, and revision of the patient’s initial medical diagnosis (Reilly 2003). One in four (26%) of the patients’ (n=100) notes sampled revealed pivotal physical findings following complete use of the assessment framework. The findings also reported that the medical assessment framework was superior to diagnostic testing, in leading to changes in treatment in specific groups of patients. The author acknowledges that general application of these findings is not recommended because pivotal physical findings vary in relation to patients’ acuity of illness and physician skills, motivation and time (Reilly 2003). The strength of this study is that it links the use of medical PAS assessment framework with the theoretical foundations which underpin medical diagnostic reasoning. None of the nursing studies make any reference to consultation frameworks, or underpinning theories of diagnostic reasoning, associated with medical physical examination skills.

2.12.2 Summary of Theme one

The number of medical PAS taught in undergraduate nursing degree programmes in US and Australia has increased from 36 to 122 over the past 30 years. The core skills of physical inspection and general observations are the most relevant physical assessment skills used in ward based nursing practice, with respiratory and cardiovascular assessment skills being used the most frequently. The skill of palpation is most relevant to the practice of midwifery only in the hospital setting. A wider range of PAS are generally used by community nurses than by hospital nurses, possibly related to the fact that community nurses have to make independent decisions. Underutilisation of medical PAS is linked to the presence of doctors on hospital wards. For example, ward nurses do not use the core skills
of palpation; this relates to difficulties of mastering the skill and because ward doctors use this core skill to make a diagnosis. In contrast, evidence indicates that doctors tend to use all core aspects of physical assessment framework in a linear sequence to inform medical diagnostic reasoning and decision making.

### 2.13 Theme two: Physical assessment – role of education - International perspective

As mentioned previously, from 2005 onwards nurse educators were concerned about specific factors that were influencing the increasing number of medical PAS taught in undergraduate nursing programmes. There appeared to be a clear dichotomy between nurse educators views as to the amount of skills needed by practicing nurses, and those actually used.

A number of earlier studies examined physical assessment education (Cowell and Smith 1985; Sony 1992; Solomon 1990; Anderson et al. 1995 & Skillen et al. 2001). All the studies agreed on the need to examine RNs’ education in assessment practices with emphasis on the application to nursing practice. This debate was ignited by two US survey studies on nurse educators’ views on which medical PAS should be taught in undergraduate nursing programmes (Solomon 1990 and Bowman & Duldt 1993). Nurse educators’ expressed concerns regarding the identity of medical PAS, and how it fits within the framework of the nursing process.

These findings were also evident in the study by Secrest, Norwood and du Mont (2005) study, which compared medical PAS taught in undergraduate programmes, as reported by (n=12) nurse educators and (n=21) practicing nurses. The findings identified a clear ‘dichotomy between medical physical assessment skills valued by educators and what nurses actually used in practice’ (Secrest, Norwood and du Mont 2005:p117).
Concomitantly, various other studies have described a mismatch between what is taught in undergraduate nursing programmes, and the ability of graduate nurses to function in clinical practice (Lee et al. 2002; & Maben and Clark 2006). International studies over the past decade suggest that nursing graduates in hospitals are not meeting competency expectations from their employers’ point of view, and are not ‘practice ready’ (Bekow, Virkstis, & Stewart & Conway 2009). This has resulted in nurse educators’ saturating the curricula with additional medical PAS, to develop competency-based curricula to prepare nurses for independent practice (Giddens 2007).

Giddens (2007) emphasised the negative effects of over saturation of assessment skills in nurse education. Nursing students are unable to prioritise the development of the main medical PAS skills required for ward work, and are not sufficiently supported to develop medical PAS competence to the fullest capacity, because of the competing demands on hospital wards. Giddens (2007) concluded that more time, qualified staff support, and opportunities for continued presence with ward patients would enable newly qualified nurses develop medical PAS confidence and competence over time. Although Tanner (2006) presents a different view, by proposing that graduate nurses are able to use assessment skills, but lack the ability to formulate clinical judgements from their assessment findings. Both authors concede to teaching fewer medical PAS at undergraduate levels, with emphasis instead on interpretation of assessment findings and developing nurses’ clinical judgement. Giddens (2007) argues that teaching core medical PAS for nursing assessment practices on hospital wards would have better outcomes for patients. Graduate nurses should spend more time understanding and interpreting clinical findings to effectively identify patients who are at risk of deteriorating on hospital wards.
Reilly (2003) reported similar concerns on the inadequacy of professional preparation programmes in preparing medical students for clinical practice. He attributes these findings to medical educators seeking to promote the efficacy of diagnostic testing as a replacement to traditional medical PAS use for making diagnoses. He argues that unless medical students are encouraged by their supervisors to develop medical PAS competence, they will experience deficits in their clinical judgement skills in the long-term. Reilly (2003) proposes that physical examination should remain 'standard care until proven ineffective or superfluous' (Reilly 2003:1104) for medical practice.

Kelly and Kopac (2007) in the US were the only researchers who investigated the use of medical PAS in specialist and graduate nurse practitioner programmes. These findings formed the basis of a five year follow up survey of (n=390) graduate nursing schools, to track changes to health assessment education for advanced nursing practice since 2001. Their findings concluded that an array of medical PAS is core to the advanced nursing practice curricula. These findings were justified on the grounds that advanced nursing practice specialities require medical PAS to be in-depth and comprehensive, because the focus is on forming differential diagnoses. This study reported on the ease of integrating PAS into the holistic assessment framework of the nursing process for specialist roles (Kelley & Kopac 2007).

2.13.1 Summary of Theme two

Nurse educators need to teach medical PAS that are necessary for the practice of nursing related to the philosophical framework of nursing, particularly within undergraduate preparation programmes. A reported problem is that the breadth of medical PAS taught in undergraduate nursing programmes is too exhaustive. Ward-based nursing students are unable to prioritise medical PAS competence to the context of ward work, which is compounded by competing agendas and
reduced access to the patients over sustained periods, because of increased patient-nurse ratios on hospital wards. These factors not only restrict medical PAS competence, but compromise the development of graduate nurses clinical judgement skills. Additionally, opportunities for junior doctors to develop competence for diagnostic purposes are restricted by the focus on clinical diagnostics.

A dichotomy remains; evidence to support the inclusion of a breath of medical PAS in undergraduate nursing programmes is not supported. However, as RNs’ progress to specialist and advanced roles, a greater range and depth of PAS education is required. To achieve this RNs require a broader understanding of an array of medical PAS to begin with, because core medical PAS competence underpins diagnostic work in CPE programmes of nursing.

2.14 Theme three: Physical assessment – role of education- UK perspective

Previous studies show consistency in their findings that; RNs’ assessment practices, particularly physical assessment, is characterised by the needs of practice environment and function, and the competency expectations of employers.

As mentioned in Chapter one, medical PAS are not a component of nursing assessment practices for undergraduate nursing professional programmes in the UK. The development of the scope of nursing practice in the UK (UKCC 1992) acted as a catalyst for RNs to extend and expand roles in significant ways to lead service initiatives’. The inclusion of medical PAS in post-graduate nursing professional preparation programmes was influenced by changing patterns of service delivery and the contribution of RNs’ to meet these changes. Concomitant with these changes was the expectation that RNs' would work flexibly and proactively within healthcare teams (Coombes & Moorse 2002). The following
discussion will provide examples of the use of assessment practices by RNs’, and highlight why the introduction of medical PAS education was necessary to meet changing patterns of service delivery in hospital’s and in the community in the UK.

Latimer’s (1998) ethnographic study explored nurses’ assessment practices in an acute medical assessment units (AMUs) for medical emergencies in the over 75 year age group. The findings showed that the function of nurses’ assessment practices was to meet service needs only. Nurses in the AMU used their assessment skills to judge if patients were in the most appropriate place of treatment and if not, to move them quickly to free the space for another patient (Latimer 1998). This suggests that nurses’ assessment practices in AMU units are perfunctory, where the primary aim is to keep patients moving through the healthcare system.

The assessment practices of RNs’ working in nurse-led triage provided evidence of a similar function for nurses’ assessment skills (Gerdez & Bucknall 2001). This study showed the perfunctory use of nurses’ assessment skills in identifying time critical factors for patients during triage procedures. Time to complete patients’ assessments appeared more important than using these skills to individualise patients’ problems. The rationale being, that time to treatment measures is considered an outcome for triage practices (Gerdez & Bucknall 2001).

This study identified that little is known about how triage nurses use assessment data to decide on patient acuity. This is surprising given that that the type and quality of assessment data collected by triage nurses has the potential to impact on patient outcomes, in terms of time to treatment and accuracy of triage decisions. A noteworthy finding was that triage nurses collected a limited amount of objective physiological data when deciding on patient level of treatment urgency. Triage nurses did not use standardised medical PAS to minimise the risk and
uncertainty associated with triage nurses decision making. A limitation of this study is that it did not identify the level of assessment training triage nurses had prior to the study, and if specific medical PAS education was a requirement for nurse-led triage services. More clarity is offered in the following studies that examine the role of medical PAS education for nurses’ role expansion in developing nurse-led pre-operative assessment (POA), or patient clerking.

Drivers for nurse-led patient clerking in POA in recent years in the UK have coincided with service initiatives to reduce hospital admissions and patients’ length of stay. Traditionally doctors in the UK have performed pre-operative assessment after patient admission to hospital and before surgery. The current emphasis on day case surgery requires timely scoping of patients’ problems that may affect planned procedures, and to give patients pre-procedure information (Jones et al. 2000). In accordance with earlier studies, Read et al. (1997) proposed RNs’ with medical assessment skills training could undertake this role instead of doctors and provide the same standard of care, which would benefit patients and service delivery.

This is evident from Rushforth et al.’s (2000) pilot RCT of medical versus nurse clerking for minor surgery in a children’s paediatric unit.

The findings reported that nurses performed equally well to senior house officers (SHO’s) in preparing patients adequately for surgery. RNs’ demonstrated greater accuracy in the detection of abnormalities in children’s history taking, when compared with the SHO’s. No significant difference was demonstrated between both groups in detecting abnormalities within the physical examination. The views of parents and practitioners with regard to children’s nurses undertaking POA roles were supportive. The views of SHOs and nurses involved in the RCT were
similarly supportive, although nurses revealed a degree of vulnerability when carrying out assessments that were previously considered the domains of SHO’s.

Rushforth’s (2000) national survey that explored the views of nurses and SHOs involved in paediatric POA in the UK, revealed that nurses attribute significantly greater importance and enjoyment in undertaking the POA role when compared with SHO’s; this finding may account for greater accuracy demonstrated by nurses in the RCT.

This study added to the body of knowledge of medical PAS use for nurses’ roles in POA, as it was the first that demonstrated greater accuracy in history taking by nurses when compared with SHOs. Rushforth et al. (2000) cautioned on the general application of results, because meaningful conclusions could not be drawn from the small sample size (n=60). The lack of significant differences needed to be substantiated with a larger equivalence trial before assurances could be given that paediatric assessment might be safely transferred from SHOs to nurses in POA units (Rushforth et al. 2000). Attempts to prove this was undertaken by a non-equivalence RCT study by Kinley et al. in 2001.

The non-equivalence RCT by Kinley and colleagues from participants in four University hospitals in the UK (n=1874), demonstrated the effectiveness of nurse-led POA units when compared with doctors (Kinley et al. 2001). The larger sample size enabled the researchers to measure pre-determined outcomes relating to cancellation of surgery and information/knowledge gained, and pre-operative complications. No evidence from the RCTs showed whether nurse-led POA lead to increased or decreased cancellations, complications, or increased knowledge or satisfaction among patients sampled. There were no differences in outcomes between groups in the economic costs of pre-assessments performed by nurses and that by non-specialist doctors, based on completeness of assessments
Researchers also undertook qualitative assessment of participant satisfaction with (n=42) interviews and one focus group (n=6). Findings showed that nurses tended to spend more time communicating with patients to give advice and promote health, thus improving patient satisfaction.

Rushforths et al. (2006) undertook a quasi-experimental non-equivalence study with a sample of (n=585) children admitted to a paediatric POA, using the same outcomes as Kinley et al. (2001). Conclusions showed that appropriately trained nurses with similar physical assessment skills to doctors provided patient assessments to the same standard. Taking a patient’s history and being skilled in medical PAS was essential for nurses to perform as equally as well as house officers in POA units.

Another example of the benefit of appropriately trained nurses with medical PAS education to meet changing patterns of service delivery in UK hospitals is evident in the Coombes and Moorse’s (2002) qualitative study. This study evaluated the benefits of medical PAS education for nurse-led outreach services for hospital wards (Coombes & Moorse 2002). The drivers for specialist nurses’ trained in medical PAS related to escalating demands on Intensive Care beds, and rising levels of patient acuity in hospital wards (Coombes & Moorse 2002). Medical PAS competence for outreach nurses was considered invaluable for the purposes of surveillance of patient adverse events. Assessment findings determined accurate appraisal of patient change, and facilitated independent nursing actions in the absence of doctors (Coombes & Moorse 2002).

A similar study by Edmunds, Ward & Barnes (2010) on cardiac nurses’ assessment practices following medical PAS education, highlighted the benefits of these skills for nurses’ professional development, but not all nurses used the skills to the maximum post education. Similarly to the US and Australian studies
discussed in theme one, the most frequently used PAS on the coronary care unit were respiratory and cardiac skills. Additionally, cardiac nurses' perceptions of medical PAS use depended on their personal characteristics, professional values and attitudes within that working environment. Nurses who perceived the overall benefits of medical PAS to the wider healthcare context demonstrated confidence and competence in using these skills. They expressed a sense of personal satisfaction through collegially working with others to contribute to better health outcomes for patients (Edmunds, Ward & Barnes 2010).

A theoretical framework linked to role theory, underpinned Edmunds, Ward & Barnes (2010) investigation. The underlying assertions of role theory is linked to professional attitudes, values and behaviours (Biddle 1979 & Conway 1978), and is shaped by contextual factors such as experiences, education and organisational values (Scholes et al. 2008 unpublished works)

The findings of the above studies showed the value of medical PAS for registered or specialist nurses working in different environments’ in hospitals. Although some of these studies are over 10 years old, they contain useful information about the value of medical PAS for nurses’ roles to meet changing patterns of service delivery in hospitals. The following discussion on the role of medical PAS education for community nursing work reflects similar trends in service delivery changes. Similarly, to hospital studies, RNs' assessment practices in the community are context and population focussed, depending on changing patterns of service delivery.


A study by Lattimer and colleagues examined nurses’ assessment practices by measuring the safety of nurse telephone consultations as an intervention in out of
hour’s primary care, in the absence of a GP (Lattimer et al. 1998). This was a block RCT carried out over one year that included a 55 member general practice serving 97,000 patients in Wiltshire. Prior to the study, experienced community nurses were appropriately trained to undertake a systematic assessment of callers’ problems, and make a diagnosis to initiate a course of action. Nurses’ assessment decisions were based on information collected via telephone, to build up a picture of the presenting case with the help of decision support software. Nurse telephone consultations produced significant reductions in all aspects of GP workloads, relating to telephone advice, attendance at primary care centres and reduction in GP home visits (Latimer et al. 1998). A limitation of this study is that evidence was not included regarding how nurses’ assessment practices were judged to be competent prior to the study. Nevertheless, the study highlights that nurses undertaking consultation assessments in the absence of a GP require similar assessment skills. The earliest study that looked at the influence of medical PAS for nurse’s working in advanced nurse practitioner (NP) roles in the community was a Delphi study by McElhinney (2010).

This study’s findings were specific as to the value of a broad range medical PAS for NPs to work in a generic capacity, with defined patient groups in the community, and receive patient referrals. NPs were able to make a diagnosis for defined patient groups based on assessment information, which allowed more timely interventions (McElhinney 2010). Other qualitative findings revealed that medical PAS use by NPs was linked to clinical credibility and peer trust and respect from medical doctors (McElhinney 2010). Positive attitudes in the working environment are implicit for improved health outcomes for patients, which is in keeping with the inherent values of nurses’ professional identities, as guided by the Nursing & Midwifery Councils Standards for Professional Code of Practice (McElhinney 2010).
A year later Aldridge-Bent (2011) explored the value of medical PAS education for a group of District Nurses (DNs) (n=11) in a defined geographical area in the UK. Some DNs expressed negative views to medical PAS education and ‘took limited responsibility for the outcome of their physical assessment findings’ (p.85), because these skills were the domain of a GP. Others saw it as their professional responsibility to report abnormal findings back to a GP for a medical diagnosis on the basis of better patient outcomes. A general consensus from all DNs is that they valued the use of a wide range of medical PAS for the patient groups they cared for in the community. However, they showed reluctance to use medical PAS to make either an undifferentiated diagnosis or a medical diagnosis, as it conflicted with their nursing values.

Aldridge-Bent (2011) highlighted that some DNs’ reactions to extending medical PAS into roles, related to concerns about the demise of district nursing core holistic assessment practices. A general consensus was that a broad range medical PAS was necessary for community nursing work, to monitor and report patient abnormalities, but not to make a medical diagnosis (Aldridge-Bent 2011).

2.14.3. Summary Theme three
This theme demonstrates that nurse’s assessment practices in the UK are context dependent, often related to the function of work environments, concurrent to changing patterns of service delivery, in hospitals and in the community. What is evident is that all RNs’ who undertake assessment practices that were previously the domain of a doctor require additional training in medical PAS education

2.15 Theme four: Barriers to PAS use in practice
The barriers identified by various researchers to medical PAS use in international papers appear not to have changed for twenty five years. The main barriers were mostly systems factors related to time and workload constraints (Barrows 1985;
Ward nurses identified skills atrophy due to insufficient practice and the presence of doctors (Brown et al. 1987; Sony 1992; Yamauchi 2001 & Birks 2012) and an unsupportive professional culture by senior nursing role models. Peer support to corroborate findings and make safe clinical judgements was identified as a barrier by Skillen et al. (2001). Nurses need to be motivated to use these skills regularly if they are to retain medical PAS competence, confidence and usability (Birks et al. 2012).

In comparison, the few UK studies argued that the main barriers are RNs attitudes, in that PAS are a medical responsibility, particularly in the community (Aldridge-Bent 2011). Other reported barriers are nurses’ personal experiences, characteristics of working environments and undefined role expectations. However, confidence and competence with medical PAS use is linked to RNs’ motivation, attitudes and values (Coombes and Moorse 2002 & Edmunds, Ward and Barnes 2010).

Additional factors highlighted are lack of time with clinical experts to hone medical PAS. Time to carry out medical PAS was not balanced against the amount of time nurses had available for other aspects of their role (Rushforth et al. 2008 & Scholes et al. 2008 (unpublished work).

An important barrier identified in two US studies (Secrest, Norwood du Mont (2005) and Giddens (2007) and one Australian study (Birks et al. 2012), is the educational approaches to medical PAS development in nursing. If nurse educationalists continue to base medical PAS teaching on skills development only, the majority of these skills will remain unused, especially on hospital wards (Birks et al. 2012). Nurse educationalist need to work more closely with practice.
colleagues to identify the most relevant medical PAS needed for nursing assessment practices in hospitals and in the community.

2.15.1 Summary of Theme four

The barriers to PAS competence are; time work environments and unsupportive professional cultures for skills rehearsal in practice. Further hindering factors are unclear role definitions, and role expectations.

Nurses’ positive attitudes to medical PAS use are linked to professional values, attitudes and levels of experience. In general, DNs assume that the role of medical PAS is to monitor and report patient abnormalities, and not to make diagnoses.

2.16 Overall Summary

The findings from the quantitative studies are consistent regarding the use of medical PAS in practice. In US and Australia studies, undergraduate nursing curricula have increased the amount of medical PAS taught to meet competency requirements for practice, yet many medical PAS are not used by RNs' on hospital wards. The main medical PAS required for ward based nursing work are the skills of respiratory and cardiovascular, and some aspects of abdominal examinations.

The American literature supports the need for change in educational preparation, to identify what constitutes as core or essential for general nursing assessment practices, to determine content and delivery. More emphasis needs to be placed on teaching and practicing core medical PAS in undergraduate nursing programmes. A broader array of in-depth medical PAS is needed for advanced nursing roles, characterised by nursing speciality needs and work environments.

The qualitative UK literature supports the view that nursing assessment practices vary with context, patient groups and work environments. A consistent finding in
the UK literature is that RNs' require medical PAS education if undertaking patients' assessments that were previously the domain of a doctor.

Barriers to PAS implementation in practice will continue to exist unless there is closer collaboration between educationalists and clinicians in the delivery of medical PAS education. In addition, student employers will need to be more specific about medical PAS requirements for specific population groups in which the student is employed to serve.

Thus in conclusion, this review of the literature has analysed a range of national and international studies to support the use of medical PAS for nursing assessment practices in hospitals and in community settings. From this analysis, gaps in the literature have been identified to support the development of research questions for this thesis. These gaps will be presented in the following section.

2.17 What is already known?

What is already know is that medical PAS have been taught in undergraduate and nursing programmes in US and Australia for the past 20-30 years.

At international levels, medical PAS taught in undergraduate nursing programmes are not utilised frequently in hospital environments. The range of medical PAS taught in nurse education has increased to meet the needs of practice, yet, in practice, only a limited range of these skills are used by RNs', particularly in hospital wards. PAS education for nurses continues to be based on the medical model of patient assessment.

There is some evidence in the limited UK-based literature that indicates positive benefits to the introduction of medical PAS for RNs', especially in hospital environments. What is known is that the use of medical PAS in hospital environments is context dependent.
Evidence on the use of medical PAS in the community and primary care settings is limited, but existing studies suggest that broader range of medical PAS are required for community nurse’s assessment practices.

2.18 Gaps in Knowledge

Multiple perspectives regarding the use and purpose of medical PAS in the community have not been explored in the UK. Furthermore, the use and purpose of medical PAS by specialist and advanced nurse practitioners has not been explored qualitatively with GPs, NHS managers, nurse educators and supervisors in the community. This study will aim to address this.

2.19 Gaps in research

The methodological gap in the research in the UK would suggest the need to for a mixed methods design, to evaluate the use and purpose of medical PAS in different domains of clinical practice in the UK. Existing survey design from the US (Giddens 2007) and adapted by Birks et al. (2012) for an Australian study, could have been adapted for the quantitative component of a mixed methods design. A decision was made not to use this because the survey was primarily designed to evaluate medical PAS education in US undergraduate nursing programmes only. Additionally, the survey was devised on lists of PAS from undergraduate nursing assessment textbooks, based on the medical model, written by US nursing authors. Finally, the survey has been used in studies spanning over twenty five years, but results have made a minimal contribution to the body of knowledge as to the purpose of medical PAS in the current UK context.

2.20 Conclusion

Thus, in summary, this chapter has provided an overview of the literature review strategy, and an appraisal of the literature from national and international perspectives. The paucity of research in the use of medical PAS for RNs' in the
UK has been identified. This supports the aim of this study, and justifies the development of the research questions posed. Therefore, the next chapter will examine the most appropriate methodological framework to underpin this aim.
Chapter 3: Methodology

3.1 Introduction

A discussion of the literature in Chapter two highlighted the paucity of research regarding the use of medical PAS for RNs' in primary care. Much of the research carried out has been located within the quantitative paradigm. Additionally, previous research into medical PAS use for RNs' has not drawn on theoretical frameworks to provide contextual understanding of RNs' experiences.

As identified in Chapter one in particular, the main drivers for the introduction of PAS to specialist and advanced nursing programmes in the community were; the shift of care from hospital to the community, and the contribution of CNPs to the transition. A shortage of GPs, and the burden of managing rising LTCs illnesses in primary care, meant that medical PAS were delegated by GPs to CNPs.

The importance of identifying and understanding RNs' experiences with the use of medical PAS has not been explored in the literature, particularly in primary care in the UK. The lack of research necessitates a study which explores and captures multiple perspectives regarding CNPs’ use these skills in primary care. In order to do this, the researcher will explore the philosophical basis of this study and epistemological approach used to justify methodological choices (Creswell 2007). The current chapter will seek to examine this in the following discussion.

3.2 Philosophical orientation

The philosophical worldview or paradigm that underpins the chosen methodology for this study will be explained. Firstly, some of the basic philosophical principals which underpin researchers' methodological choices will be examined. There are four basic philosophical paradigms, positivist/post-positivist, constructivist, participatory and the pragmatist. They have common elements, but each are underpinned by different sets of ontological and epistemological stances (Crotty
1998). This means that the nature of reality and what there is to know (ontology) and how knowledge is gained (epistemology) differs with each paradigm. Additionally, each have different role values and research processes (methodology) and use different languages to report research findings (Creswell and Clark 2011). Two main paradigms commonly reported in research are positivism and constructivism. These two main paradigms will be examined, but the rationale for not locating this study in the positivist paradigm will be outlined in the first instance.

The ontological stance of positivism is underpinned by realist views (Crossan 2003 & Creswell 2007). This approach would be unsuitable for this study because the aim is not to determine that a single reality exists. In addition the researcher does not intend to collect objective data through empirical observation or measurement, or work deductively from a priori theory, to either add to or contradict that theory (Creswell and Plano-Clark 2011).

The epistemological principles of positivism would also be unsuitable because the researcher does not intend to distance herself in an impartial or objective way to gain knowledge from participants, to meet the study's aim. Furthermore the positivist worldview would not address the importance of context, or the researcher/participant relationships and pre-conceived ideas (Crossan 2003). Therefore, the chosen paradigm to underpin this research is constructivism. The philosophical, methodological and data collection methods which underpin this paradigm will be discussed in the following paragraphs.

3.3 Constructivism

In the constructivist paradigm, views on reality are the opposite of positivism. Its ontological stance is underpinned by relativism, which acknowledges that meaning is socially constructed and truth exists in the context of the person who holds this
truth (Denzin & Lincoln 2011). For the purpose of this research, the ontological stance of the researcher and how she understood the world is shaped by her lived experiences and own values as a nurse, who teaches medical PAS at a University. From epistemological perspectives she aims to gain knowledge by exploring and capturing multiple perspectives (Denzin & Lincoln 2011) of CNPs’ use of PAS in primary care.

Participants meaning will be socially constructed based on the subjective nature of their reality, so different meanings and values (Denzin & Lincoln 2011) will be taken into account. The methodological approach which underpins constructivism is interpretivism (Guba & Lincoln 1994). This requires the researcher to develop an awareness of differing interpretations amongst the participants, and co-construct their meaning through the process of interaction (Guba & Lincoln 2005).

Therefore, participants meaning will be co-constructed from dialogues that will take place (Creswell and Plano-Clark 2011) between NHS managers, supervisors, nurse educators, CNPs’ and the researcher. The relationship between the researcher and the participants will be acknowledged. The values and pre-conceived ideas of the researcher will be taken into account, by acknowledging bias and interpretations (Guba and Lincoln 2005 & Creswell and Plano-Clark 2011.) Interpretation of the data will provide explanations as to participants’ thoughts and actions (Guba & Lincoln 1994), and will be illustrated by some quotes from the raw data (Creswell and Plano-Clark 2011). Data will be collected using a qualitative methodological approach, which will be examined in the next paragraph.

3.4 Methodology- Qualitative

One of the professional responsibilities of those working in healthcare is to understand humans and their behaviours, to promote health and wellness.
Qualitative research offers ways to gain insights into individual experiences or multiple perspectives, through the construction of meaning (Patton 2002). The qualitative interpretative method was chosen because it assists with capturing multiple perspectives about which little is known, to provide more detail as to how CNPs use PAS in practice. An advantage of this approach is that it will take into account the complexities of the participants and their different situations and settings (Morse & Richards 2002) in primary care. It will allow a flexible approach to gathering data because the focus relates to participants’ experiences. Finally, data will be analysed in an inductive way by describing and interpreting meaning of participants’ accounts, by building up views through patterns and themes (Creswell and Plano-Clark 2011).

Therefore, this study will use a qualitative interpretative methodology because the aim is to explore and capture multiple perspectives on CNPs use of PAS in primary care. As mentioned earlier, PAS is a relatively new concept for RNs’ in the UK, so qualitative approaches would provide fresh perspectives as to how CNPs’ used these skills.

In summary, the research framework adopted for this study is situated in the constructivist paradigm. This stance reflects the philosophical nature of the qualitative enquiry, chosen to underpin this study. Therefore, positioning the framework of this study has now provided the researcher with the opportunity to introduce the strategy of enquiry or methodological approach, suitable to the context of this study, which is case study.

Other common qualitative strategies, congruent to the constructivist epistemology that potentially could be used were; phenomenological, ethnographic and grounded theory methods. Reflecting on the theoretical perspectives underpinning these strategies of enquiry, culminated in the decision **not** to adopt any of these
approaches, because exploring and capturing multiple perspectives was explicit to the study's aim. The rationale for not adopting other strategies of enquiry will be examined briefly in the Table 3. 
Table 3. Comparisons between different approaches to qualitative research

<table>
<thead>
<tr>
<th>Approach</th>
<th>Epistemological principles</th>
<th>Key features</th>
<th>Application to study</th>
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</thead>
<tbody>
<tr>
<td>Phenomenology</td>
<td></td>
<td>• Exploration of a phenomenon to understand meaning and significance by those</td>
<td>• Phenomenological methods align with the philosophical orientation of the study, but not with the study’s aim.</td>
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<tr>
<td></td>
<td></td>
<td>experiencing it</td>
<td>• Exploring, capturing and co-constructing meaning of multiple perspectives excludes the use of phenomenological approaches, which aims to explore meaning of ‘individual lived’ experiences (van-Manen 2007)</td>
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<tr>
<td></td>
<td></td>
<td>• Understanding achieved through language and though interview data (Patton 2002)</td>
<td>• This study also sets out to examine the contexts that exist beyond the participants being investigated.</td>
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<tr>
<td></td>
<td></td>
<td>• The researcher describes and attempts to interpret participants’ accounts of the phenomenon (van-Manen 2007).</td>
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<td></td>
<td></td>
<td>• The concept of bracketing (Koch 1995 &amp; Hamill &amp; Sinclair 2010) would be difficult to achieve because the researcher would not be able to set aside pre-conceived assumptions and experiences of the phenomena under study.</td>
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<tr>
<td>Grounded Theory</td>
<td>Ethnography</td>
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<tr>
<td>- A relevant framework for developing theory</td>
<td>- A relevant framework for describing and understanding cultural groups and work environment behaviours (Hammersely &amp; Atkinson 2007).</td>
<td></td>
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<tr>
<td>- Critical realist</td>
<td>- Constructivist-Interpretivism</td>
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<tr>
<td>- Constructivist-Interpretivism</td>
<td>- Explores meaning and social and cultural values of groups (Boyle 1994)</td>
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<tr>
<td>- Explores social processes that occur in human interactions</td>
<td>- Considers behaviours and relationship to environments</td>
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<tr>
<td>- Principal aim is theory development rather than describing social processes</td>
<td>- Data collection through immersion in the 'field of study' using multiple sources (Crotty 1998).</td>
<td></td>
<td></td>
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<tr>
<td>- Research questions are defined at the outset.</td>
<td>- Ethnography was not chosen as a methodology, because the aim is not to understand cultural practices, or enquire about experiences of work environment behaviours (Boyle 1994).</td>
<td></td>
<td></td>
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<tr>
<td>- Data collection, sampling and analysis carried out simultaneously</td>
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</table>

Constructivist Grounded Theory (CGT) approaches could have been considered as having some similarities with the epistemological stance proposed. There was the possibility of identifying commonalities in ways individual participants within similar circumstances made sense of their experiences. It was rejected on the grounds that CGT is concerned with exploring the social processes of human interactions, and generating a theory relating to social processes (Higginbottom and Laurisden 2014).

Ethnography was not chosen as a methodology, because the aim is not to understand cultural practices, or enquire about experiences of work environment behaviours (Boyle 1994).
3.5 A case study approach

In summary, three different strategies of enquiry that underpin qualitative research have been briefly examined. Explanations and reasons have been briefly outlined as to their inappropriateness for this study. Therefore, the following section will provide an outline, and examine the reasons why case study design is best suited to capturing and exploring multiple perspectives and on the use of PAS for CNPs in primary care.

Case study, as a strategy of enquiry, allows researchers to investigate and gain an in-depth, in-context understanding of a contemporary phenomenon of interest (Creswell 1998). The key feature of case study research is that it is context-specific, and seeks to explore and capture multiple perspectives of the phenomena of interest (Thomas 2011).

Yin (1994; 2003) is considered the key writer on this subject and for most holds credibility for its definition in the literature (Casey and Houghton 2010).

Yin (1994) defines a case study

‘as an empirical enquiry, which investigates contemporary phenomenon in its real life contexts when the boundaries between phenomenon and context are not clearly evident and in which multiple sources of evidence are used’ (p.2).

Another well-known contemporary writer on case study research is Robert Stake. In 1995 he wrote:

‘Case study is the study of the particularity and the complexity of a single case, coming to understand its activity within important circumstances’ (1995: x1).

These definitions by two contemporary writers (Yin 1994; 2003 & Stake 1995) emphasise some commonalities and differences. There is a consensus from both theorists that the primary purpose of case study research is to generate an in-depth exploration from multiple perspectives of the complexity and uniqueness of the case. The commonalities and
difference between Yin (1994 & 2003) and Stake (1995) case studies are appraised in Table 4. For the purpose of this study, the practical application of case study method was more suitable than deeper philosophical approaches, because this research reflects real life practice.

3.5.1 Philosophical underpinnings

Key writers on case study Yin (2009) and Stake (1995) argue that case research is flexible and can be designed to suit the case and research questions. Yin (2003) philosophical underpinning appears to align with post-positivist ideals (Thomas 2011). However, Yin also argues that a constructivist approach can be used when the researcher is required to recognise the subjective richness of individuals recounting life experiences (Yin 2003). He also argues its appropriateness when the researcher asks 'how' and 'why' questions to explore contextual conditions, when the boundaries are not clear between the phenomenon and context (Yin 1994 & Yin 2003). For this reason, Yin's (2003) constructivist views will adopted for this case study.

It could be argued that Stake's (1995) case study philosophical underpinnings, which are based on constructivist-interpretative approaches, would be more appropriate to underpin this research. The rationale for not doing so is that Stake’s (1995) case study approach examines context only, whereas in this study the researcher is interested in examining multiple perspectives and conditions within the context of the case boundary.

3.5.2 When to use a case study approach

According to Yin (2003) a case study design should be considered when the focus of the study is to answer “how” and “why” questions; when the aim is to
explore contextual conditions relevant to the phenomenon under study, and when the boundaries are not clear between the phenomenon and context.

3.5.3 Defining the case and case boundaries
Yin (2003) and Stake (1995) propose that defining the boundaries of the case is a significant factor of case study methodology. Suggestions on how to bind a case include; time and place (Creswell 2007); time and activity (Stake 1995); and by context (Miles & Huberman, 1994). The case is defined by Miles & Huberman (1994) as, “a phenomenon of some sort occurring in a bounded context. The case is, “in effect, your unit of analysis” (p. 25). The case can be a person or group of individuals, a programme or a particular process. In this study, the case boundary is ‘primary care’, and ‘physical assessment skills’ use within that boundary context.

3.5.4 Determining Unit of Analysis
Differences exist between the two scholar’s definitions of the ‘unit of analysis’ within case study research. Stake’s (1995) notion of a ‘unit of analysis’ is ‘individuals’, experiencing the chosen phenomenon of study. Yin (2003) proposes that the unit of analysis is only one unit, but may be embedded in multiple sub-units. For the purpose of this study the main unit of analysis is CNPs use of PAS (phenomena of interest) in primary care.

3.5.5 Type of Case Study
The commonalities and difference between Yin’s (1994 & 2003) and Stake’s (1995) types of case studies are appraised in Table 4. There are two main types, single and multiple cases (Yin 2009 & Stake 1995). In multiple case designs, the emphasis is on comparing and contrasting findings, to identify important theoretical features (Thomas 2011). Yin (2009) and Stake (1995)
advocate the possibility of using a single case design, but the limitation of Stake's (1995) definition is that a single case examines the holistic context only, with a view to understanding it. In comparison Yin’s (2009) definition of the single case offers the researcher a wider scope of examining different sub-units that are embedded, or ‘fit within’ within the case. This means that each sub-unit is connected within the principal unit of analysis.

Yin’s (2003) classification of an embedded case design will be used in this study, because it is relevant to the overall aim. These components will be examined in more detail in the following paragraph.

### 3.5.6 Embedded case study design

An embedded case study design is considered appropriate to meet the aim and scope of this study for the following reasons. The case will be located in real life primary and community health care practices in the south of England. Primary and community care in this part of England involves the widest scope of health care. It has a population of all ages of different socioeconomic and geographic origins. Patients within this case boundary experience acute and chronic physical, mental and social health issues, but mostly multiple chronic diseases. Therefore, primary and community care services are the first point of contact for most people in this area of England.

This case boundary has a population of 1.6 million, distributed over the three local authority areas. It has one of the oldest populations in the country with over 25% of the population over 65 years. Frail and elderly population groups account for the majority of healthcare expenditure. One quarter of the population has a long term condition such as diabetes, dementia or lung disease, and 91,700 people aged 75 years+ live alone and experience social
isolation and loneliness. Around 80% of deaths are from major disease, such as cancer and heart disease, often attributable to lifestyle risk factors such as smoking, excess alcohol or poor diet.

Health authorities have reported that the present model of healthcare in this area of England is not set up to deal with the significant increase in demand in services, related to the large and growing elderly population who live with multiple long-term conditions. The health needs associated with such demographics placed significant demands on local and urgent emergency care services in 2012-13. For example, there were over 125,000 attendances at two local A&E departments; nearly 46,000 emergency admissions and over 80,000 calls to 999 ambulance services, an average increase 3% each year in recent years. People admitted to hospital for illnesses in this area did not require hospital care compared to other areas (NHS England (a) 2013).

Feedback from patients related to difficulties accessing local services because they were confusing and difficult to navigate. Frail patients with complex care needs, carers and user groups in this area of England indicated that patients wanted to be in control of their health, feel safe and be cared for in their own homes. They wanted to be supported by healthcare professionals who could proactively identify care needs, and have input from multidisciplinary health and social care teams, where necessary. To meet the health and social care demands of such population groups placed considerable strain on local GPs who were in short supply. Existing services were stretched beyond capacity, and were expected to treat more patients with complex needs in less time.
In line with national policy initiatives’ on workforce planning and re-design (DH 2004), and in negotiation with Royal College of Physicians, experienced CNPs were considered ideally placed to manage these patient groups, if trained in skills similar to GPs. These initiatives were based on the concept that experienced CNPs already played a crucial role in caring for some of the most of the vulnerable people within this case boundary, especially housebound patients with LTCs, and frail elderly people registered with GPs. As well as providing direct patient care, CNPs were considered as ideally placed (DH 2010) to improve the quality of life of individual patients to enable them to care for themselves, or with family members by teaching them how to give care to their relatives. They would be expected to play vital leadership roles in fostering a culture of patient-centred practices, which was pivotal in reflecting the needs of defined patient groups within this case boundary. They would be expected to act as clinical role models and demonstrate leadership in the context if clinical decision making, whilst effectively liaising with multidisciplinary teams. A specific objective of specialist community nurses role was to keep LTC and frail elderly patients’ hospitalisation to a minimum (DH 2010).

3.5.7 Unit of Analysis
Therefore, CNPs trained in medical PAS will be the unit of analysis for this case study, because the aim is to understand different perspectives as to how CNPs used medical PAS in practice within this case boundary. To be trained in medical PAS, CNPs' required knowledge of the theoretical foundations, facilitated by trained educators at a University. Moreover, CNPs’ required funding for PAS education, and organisational support from
line managers to work in a supervisory capacity with experienced GPs or nurse clinicians, to develop competence.

Therefore, an embedded case study design will enable an understanding of the interconnectedness of PAS use for CNPs’ in primary care, where the boundaries between roles and relationship are not clearly evident. This will enable the researcher to analyse the data within the case, otherwise known as within case analysis (Yin 2003 & 2009). The ability to engage in analysis in this way will enable the researcher to better illuminate the complexities of the case (Yin 2009).

### 3.5.8 Sources of evidence

Both Yin (2009) and Stake (1995 & 2006) advise that the conduct of case study research permits the use of a variety of methods of data collection to capture and explore multiple perspectives, but interviews are considered the single most important source of evidence in case study research (Yin 2009).

A discussion on the merits of different sources of interviews will be discussed in Chapter four section 4.9 that follow.

### 3.5.9 The current case study

Sections 3.4 to 3.4.8 highlighted that defining case study and the conduct of case research is a complex task, but crucial to the phenomenon under study. A methodological justification has been provided, that defines the researcher’s epistemological position and research paradigm. The boundaries of the case have been defined, which is a defining factor of case study method. Specific terms of an embedded case study, with embedded sub-units have been described.
Two interview methods will be used to capture and explore multiple perspectives of CNPs’ use of medical PAS in primary care, and ‘how’ and ‘why’ research question will be asked. Adequate contextual description of the case will be provided by the researcher throughout the study. This will allow the reader to develop a deeper understanding of the researcher’s perspective and theoretical position in the study.

3.6 Chapter Summary

In this chapter, the researcher has outlined the philosophical underpinnings adopted for this research. The rationale for the adoption of the constructivist stance has been argued. Various qualitative strategies of enquiry have been briefly appraised and their usability within the context of this thesis examined. The chosen strategy of enquiry, case study to underpin this study, has been justified. Therefore the following Chapter four will explain and clarify the methods of data collection and ethical issues.
Table 4. Commonalities and differences in case study (CS) approaches

<table>
<thead>
<tr>
<th>Approaches</th>
<th>Research paradigm</th>
<th>Key features</th>
<th>Similarities</th>
<th>Classification Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Yin (1994; 2003;2009)</td>
<td>▪ Constructivist- ▪ Post-positivist</td>
<td>▪ Investigates phenomenon in real life context</td>
<td>▪ Agree on key features and purpose of CS. that contextual conditions are relevant to the phenomenon of interest</td>
<td>▪ Explanatory- asks ‘What’ RQs explains links between intervention and outcome e.g programme evaluation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ Boundaries between phenomenon &amp; context not clear</td>
<td>▪ Both agree on in-depth exploration of multiple perspectives of practice situations</td>
<td>▪ Exploratory- ask ‘How &amp; ‘Why’ RQs’ Explores how an intervention with no set boundaries is used in context</td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ Uses multiple sources of evidence (Yin 1994;2003)</td>
<td>▪ Descriptive- describes an intervention in context</td>
<td>▪ Descriptive- describes an intervention in context</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>▪ Single Case study</td>
<td>▪ Single Case study Identifying a specific issue Takes into consideration reality of ‘live practice’</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>▪ Researcher interested in looking at the same issue</td>
<td>▪ Single Case embedded units Researcher interested in looking at the same issue</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>▪ embedded units - places/clinics (units) within larger case</td>
<td>▪ Embedded units - places/clinics (units) within larger case</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>▪ sub-units roles or specialities</td>
<td>▪ sub-units roles or specialities</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>▪ data can be analyzed within the subunits (within case analysis),</td>
<td>▪ data can be analyzed within the subunits (within case analysis),</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>▪ between the different subunits (between case analysis), or across all of the subunits (cross-case analysis)</td>
<td>▪ between the different subunits (between case analysis), or across all of the subunits (cross-case analysis)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>▪ Multiple - Embedded case studies -explores differences/similarities within and between cases across settings</td>
<td>▪ Multiple - Embedded case studies -explores differences/similarities within and between cases across settings</td>
</tr>
</tbody>
</table>
The goal is to replicate findings across cases (Yin 2003), and develop a theoretical proposition (Yin 2009).

| Stake 1995;2006 | **Interpretative-Constructivist** | **Studies the particularity and complexity of single case** | **Single Case study**
| --- | --- | --- | ---
|  |  |  | **Identifying a specific issue**
|  |  |  | **Takes into consideration holistic aspects of the case**
|  |  |  | **Intrinsic case study**
|  |  |  | **The intent is to better understand of the case.**
|  |  |  | **Purpose is NOT to build theory**
|  |  |  | **Limited transferability.** (Stake 1995).
|  |  |  | **Instrumental case studies**
|  |  |  | **provides insight, and scrutinises context and ordinary activities that are not typical of other cases (Stake 1995)**
|  |  |  | **Collective case studies**
|  |  |  | **Similar in nature and description to multiple cases (Stake, 2006; Luck et al. 2006)**

Instrumental case studies

Collective case studies
Chapter 4 Methods Data Collection Ethical Issues and Findings

4.1 Introduction
The previous chapter has justified the reasons for using case studies as a strategy of enquiry, to explore in-depth multiple perspectives and viewpoints on medical PAS use by CNPs in primary care. This chapter will build on the previous discussion and validate the principles of case study research to meet the study's aim and proposed research questions. This discussion will then outline and justify sampling strategies and ethical aspects which underpin this research.

4.2 Aim of study
This study sought to capture and explore multiple perspectives on the use of (PAS) for CNP's in primary care. Views will be sought from CNPs, GP supervisors, nurse practitioner supervisors, NHS managers and nurse educators. As this is an exploratory study, it is anticipated that some insight will be provided as to the use of medical PAS for CNPs' in primary care, by answering the proposed research questions:

1. Why medical PAS are needed for registered nurses roles in primary care?
2. How are these skills used?
3. Why are some medical PAS used more frequently than others?
4. How are medical PAS facilitated and supervised in practice?
5. How and where should medical PAS education be delivered?

4.3 Study design
This is an interpretative qualitative study that used case study as a strategy of enquiry, that sought to recruit up to thirty three (n=33) people who were directly/indirectly involved with the use of medical PAS in practice in primary care.
4.4 Inclusion criteria
A number of specific inclusion criteria were outlined for this study. Participants were eligible if they were RNs' more than two years. Nurse participants were expected to have completed medical PAS education two years previously, and were using these skills in practice. Nurse educators were included if involved in medical PAS education. Supervisors were included if qualified to use medical PAS in practice. NHS managers were included if they had sponsored RNs’ to undertake medical PAS education, and finally participants consented to participate in the study.

4.5 Exclusion Criteria
Participants were excluded if they have not undertaken a medical PAS module of study, and not registered at least two years post registration qualification. Participants were excluded if they were not involved in medical PAS education, and had not supervised RNs' medical PAS competence in practice. Managers were excluded if they had not sponsored RNs' to undertake medical PAS education, and had not consented to participate in the study.

4.6 Sampling strategies
A purposive sampling method was used for this study. This method is sometimes called judgemental sampling, because it allows the researcher to make a decision regarding the most appropriate participants to be selected, based on the phenomena of interest and research questions (Silverman 1998). There are a number of different types of sampling strategies in qualitative search, but purposive or criterion-based are the most common approaches used (Silverman 2010). For the purpose of this study, a purposive sampling strategy was the most appropriate, as it met with the established participants' inclusion criteria, of CPNs, educationalists, GPs and NHS managers, discussed in the inclusion criteria in
section 4.4. The sample size was determined by the methodological approaches, research questions, and study design, as justified in the following discussion.

4.6.1 Sample size

In case study approaches, sample sizes are small and can be either single or multiple (Yin 2009). The emphasis is not on the numbers recruited to the study, but the context of the situation where the study is focussed (Yin 1993). As discussed by Stake (1995), the numbers of case studies chosen should be considered carefully, as the emphasis is gathering in-depth information within a given timeframe. As the case study approach for this study is an embedded case design, it aims to recruit up to thirty three (n=33) participants. The aim is to explore and capture multiple perspective of CNPs' use of medical PAS in primary care, and gather rich and in-depth views, by asking 'how' and 'why' questions. The participants to be recruited will be discussed in Section 4.8, following an outline of the ethical principles that underpinned the recruitment process.

4.7 Ethical principles

Ethical principles underpin research to ensure that the rights of participants are protected throughout each stage of the research process. Key ethical principles have to be followed within healthcare research to ensure that participants’ do not come to any harm.

Therefore this section of the chapter will describe and justify the relevant key ethical principles that were addressed in the current research.

For the purpose of this study, the researcher utilised three primary ethical principles on which standards of ethical conduct in healthcare research are based; beneficence, respect for human dignity and justice (Polit & Beck 2006).
4.7.1 **Principle of beneficence**

Beneficence is the requirement to benefit the research participant, and requires the researcher to anticipate any potential risks to the participants, and deal with any unforeseen circumstances (Polit & Beck 2006). In this study, no risk was identified on the application process with regard to the physical, psychological and emotional problems that could be caused by involvement in the study.

In line with the University's ethical research governance, approval for this study was to be sought from the Faculty of Health & Medical Science Ethics Committee at the University of Surrey and from the Chair of the Faculty Research Ethics and Governance Group (FREGC) at Brighton University for approval to sample participants at that site. On confirmation of approval from the Chair of the FREGC, permission was sought from the Head of School of Health Sciences, to confirm that they were satisfied for staff and students to be recruited to the study (FREGC Brighton University) ([Appendices 1:2](#)).

4.7.2 **Principle of human respect and dignity**

This principle includes the rights to self-determination and the right to full disclosure. This principle means that participants have the right to decide voluntarily whether to participate in the study (Pilot & Beck 2006). The researcher fully disclosed the nature and purpose of the study prior to the interviews. Participants were informed that their rights will be fully respected, and if they wished, they could voluntary withdraw from the study at any time without prejudice (Kvale 1996 & Pilot and Beck 2006). Additionally, extra time was planned during the proposed interviews, to answer questions as to the benefits and risks of taking part. The researched followed the guidelines of the UK Research Governance Framework (DH 2005), when completing the ethical approval information. The application stated that if any of the participants became distressed for any reason,
the researcher would cease the interview, as participants’ welfare would take priority over the research (Appendices 4:5:6:7).

4.7.3 Principle of justice
This principle requires the researcher to be fair to the participants and maintain their right of privacy. The application process detailed that all participants anonymity and confidentiality would be maintained (Polit & Beck 2006). Demographic details would be held and processed in the strictest confidence and in accordance with the Research Governance Framework for Health and Social Care (DH 2005). Interview data would be anonymised in line with the Data Protection Act (DH 2005). Data would be stored on a password protected computer and raw data in a locked cabinet. At the end of the project, all electronic data will be stored on the Health Faculty Shared Drive, and raw data boxed and stored in the Schools archives. The data will then be kept for 10 years in accordance with University Policy.

4.8 Recruitment procedure
This section provides detail of the research process undertaken in order to gain access to the research sites. A description of who was involved, and why they were considered relevant to the aim of this study will be outlined. Firstly, the aim was to recruit participants from Brighton University & Sussex NHS Trusts. Educationalists at the University were considered as key informants as they had knowledge of previous students who undertook medical PAS education at the University. Likewise, students who had undertaken medical PAS education at the University would be key informants as to the names of managers and supervisors from practice environments. Managers would have sponsored the students to undertake medical PAS education at the University, and supervisors would have overseen medical PAS competence in practice
4.8.1 Preparing to enter the Field

Preparing to enter University and practice environments to interview relevant participants has a substantial lead in period that takes place before, during and after the preparation of formal submissions for ethical approval. Following ethical approval from Surrey University of Surrey Ethics Committee and the Head of the School of Health, Brighton University Board of Ethics was sent a summary of the study and the appropriate approval documentation requesting support for the research. Informing staff at all levels who agreed to support the study was important so that the relevant staff was aware of the research in progress and prepared to support it. Following approval, the researcher was granted permission to contact two lecturers who were module leads for the two physical assessment modules of studies at degree and masters level. Time was spent holding two separate meetings with the two module leads to explain the aim and purpose of the study. A copy of the study's summary was given to both module leads for reading. This module was a compulsory requirement at degree and masters levels for RNs' undertaking specialist and advanced practice roles within the community and hospital setting (RCN 2008).

The module lead for the degree medical PAS module of study was a crucial person for gaining access to the relevant participants who had completed medical PAS modules of study at the University. She identified the relevant Continuous Professional Education (CPE) modules that potential participants were undertaking at the University, and dates and times of study attendance. Details of the project and a succinct outline of the nature and purpose of the study were sent online, to this module lead. The project information was emailed to all RNs' who had undertaken medical PAS education at the University of Brighton, and who were enrolled on CPE undergraduate and postgraduate modules of studies during the
spring semester. Students were asked to respond to her email if they wished to be involved in the study.

Educationalists and Lecturer Practitioners (LPs) from clinical practice involved in teaching medical PAS education at the School of Health were invited to participate. Project information was sent to a lead medical educator in the Faculty of Medicine at the University of Brighton with a specific request for voluntary participation of GPs who had supervised RNs’ undertaking medical PAS module(s) of study in clinical practice. They were asked to respond via email if they wished to be involved in the study.

4.8.2 Recruitment- nurse educators

Four academic full time lecturers and two LPs voluntarily agreed to participate in the study via email confirmation. One lecturer decided not to participate on the arranged date due to potential conflict of interest. One LP was unable to participate due to unforeseen circumstances on the arranged date. A total of three (n=3) full time lecturers and one (n=1) LP took part in the focus group interview at the end of a teaching day.

The module lead of the medical PAS module of study was contacted by some students via email to voluntarily participate on a day they were attending the Prescribing Module of study. The researcher was invited to give a ten minute presentation as to the purpose and aim of the study at the beginning of study day, and invited to remain for the duration of the study day through the lectures as a non-participant observer. This approach proved useful as potential participants were able to ask for clarification on the recruitment process and the benefits of participation.
4.8.3 Recruitment-nurses

Five Nurse Practitioners (NP’s) (n=5) volunteered to participate in a focus group interview. All the NPs met the inclusion criteria in that they had undertaken the medical PAS education at Brighton University one year previously and were using the skills in practice. At the conclusion of the interview, each of the NPs was asked to enquire if their managers and medical PAS supervisors would voluntarily participate in the study.

Within the same module group, District Nurses (DN’s) (n=5) volunteered to be interviewed whilst attending the same module for a study day. This interview did not take place at the arranged time as the students were requested to attend an urgent team meeting in their practice area.

Further contact through email with a Community Matron (CM) indicated that it was more feasible to carry out separate focus group interviews (DNs and CMs) in their practice area, because they worked together as a community care team. To meet the inclusion criterion, a suitable date was arranged when both disciplines were present at the practice surgery. An arrangement was made to undertake two separate focus group interviews on different dates. Unfortunately due to service demands and urgent visits for patients who had fallen in their homes, two DNs could not attend the interview. It was decided to go ahead with the scheduled focus group interview arranged for the afternoon. Both disciplines present agreed to participate as a combined group and three (n=3) CMs and two (n=2) DNs met the inclusion criteria.

4.8.4 Recruitment-Managers and Supervisors

The medical educator at Brighton Medical School circulated the project information to trainee General Practitioners and Academic Fellows at the Faculty of Medicine. Two trainee GPs volunteered to partake whilst teaching medical students at the
faculty. The inclusion criteria required supervision of registered nurses who had undertaken medical PAS education. Two trainee (n=2) GP/Supervisors were interviewed in March and May 2013. Another GP who was working as a partner in practice, and employed nurse practitioners at the surgery, contacted the researcher via email to voluntarily participate in the study. He became aware of the study’s aim via a previous student whom he supervised whilst undertaking medical PAS education. He was interviewed in August 2013.

A nurse practitioner undertaking a post-graduate teaching module at the University and with a keen interest in developing on line resources for medical PAS, and as a supervisor in practice, voluntarily participated for a semi-structured interview. Her clinical services manager for the community care team voluntarily participated for a further semi-structured interview at a later date.

Similarly, NPs who participated in the focus group at the University nominated their managers as suitable participants (n=2), who voluntarily participated between April and May 2013. A community nursing team Manager nominated by the CMs and DNs focus group participants, voluntarily participated over the same period (table for summary of recruitment process)

4.8.5 Research participants

Five nurse practitioners were employed in GP practices. These nurse practitioners were experienced clinicians and previously employed in a range of NHS roles in hospitals and in the community. Roles and responsibilities varied depending in the needs of the service. All of them were trained in medical PAS, similar to a GP. Depending on the nature of patients’ complaints, medical PAS use was targeted to assess individual body systems or in a generalist capacity. For example all of the nurse practitioners would use these skills to assess adults and children for minor ailments and illnesses. Two of the nurse practitioners used medical PAS to
assess patients with more specialised problems related to Ear, Nose & Throat and sexual health complaints. They would also use the skills when undertaking home visits for house bound patients in the community.

Three specialist community matrons, employed by community healthcare Trusts have in excess of fifty years clinical experiences in various NHS roles. These specialist community matrons used medical PAS in more specific ways with defined population groups, such as patients with one or two body system chronic diseases. Two district nurses were employed in NHS clinical roles in excess of thirty years, in hospitals and in the community.

Two nurse practitioners’ supervisors used medical PAS in for direct clinical practice, but were working in leadership roles by managing nurse-led clinics in a GP surgery and in a community care Trust. One nurse practitioner had in excess of twenty five years clinical experience, and assumed full responsibility for managing chronic illness clinics at a GP surgery. Additionally, she employed and supervised medical PAS training for specialist nurses employed at the surgery. The other nurse practitioner supervisor used medical PAS across the life-span, and has in excess of fifteen years’ experience, and supervised nurses and allied healthcare professionals undertaking medical PAS training.

Two trainee GPs were undertaking specialist GP training and were assigned to designated GP training surgeries. These skills are compulsory competencies in undergraduate medical professional preparation; therefore trainee GPs would use PAS in generic ways, and undertake PAS supervision for nurses as required.

Three tutors and one lecturer practitioner (LP), who taught PAS education at the University, were trained in medical PAS. Three were previously employed in specialist NHS roles within Critical and Cardiac care in hospitals. The LP was currently employed at a GP surgery.
The three managers work experiences varied. Two were currently employed as managers in community Trusts, and were trained in medical PAS education. One was a practice manager who took a keen interest in employing nurses trained in advanced practice skills, hence her rationale for funding medical PAS training at the GP surgery, where she was a practice manager.

**Table 5 Summary of Recruitment Process:**

<table>
<thead>
<tr>
<th>Date: 2013</th>
<th>Interview Type</th>
<th>Designation</th>
<th>Sample</th>
<th>Venue</th>
</tr>
</thead>
<tbody>
<tr>
<td>5th March</td>
<td>Focus Group</td>
<td>Nurse Practitioners</td>
<td>(n=5)</td>
<td>Brighton University</td>
</tr>
<tr>
<td>5th March</td>
<td>Focus Group</td>
<td>Nurse Educators</td>
<td>(n=4)</td>
<td>Brighton University</td>
</tr>
<tr>
<td>7th March</td>
<td>Semi-structured</td>
<td>Trainee GP/Supervisor</td>
<td>(n=1)</td>
<td>Brighton University</td>
</tr>
<tr>
<td>20th March</td>
<td>Semi-structured</td>
<td>NP- Supervisor</td>
<td>(n=1)</td>
<td>Brighton University</td>
</tr>
<tr>
<td>26th April</td>
<td>Semi-structured</td>
<td>Trainee GP/Supervisor</td>
<td>(n=1)</td>
<td>Brighton University</td>
</tr>
<tr>
<td>29th April</td>
<td>Semi-structured</td>
<td>Practice Manager</td>
<td>(n=1)</td>
<td>Stone Cross Surgery, Pevensey &amp; Westham East Sussex</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Date: 2013</th>
<th>Interview Type</th>
<th>Designation</th>
<th>Sample</th>
<th>Venue</th>
</tr>
</thead>
<tbody>
<tr>
<td>3rd May</td>
<td>Semi-structured</td>
<td>NP/Supervisor</td>
<td>(n=1)</td>
<td>Orchard Lancing Sussex</td>
</tr>
<tr>
<td>7th May</td>
<td>Semi-structured</td>
<td>Clinical Nurse Service Manager</td>
<td>(n=1)</td>
<td>Brighton General</td>
</tr>
<tr>
<td>14th May</td>
<td>Focus group</td>
<td>District Nurses &amp; Community Matrons</td>
<td>(n=5)</td>
<td>Bognor War Memorial Hospital West Sussex</td>
</tr>
<tr>
<td>14th May</td>
<td>Semi-structured</td>
<td>Community Nursing Team Leader/Manager</td>
<td>(n=1)</td>
<td>Bognor War Memorial Hospital West Sussex</td>
</tr>
<tr>
<td>8th August</td>
<td>Semi-structured</td>
<td>General Practitioner</td>
<td>(n=1)</td>
<td>Worthing</td>
</tr>
</tbody>
</table>
The following table provides a brief summary of participants sampled, interview types and job classifications.

Table 6 Participants Job Roles and Activities

<table>
<thead>
<tr>
<th>Participants</th>
<th>Sample size</th>
<th>Interview type</th>
<th>Job Title</th>
<th>Job Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Practitioners Supervisors</td>
<td>(n=3)</td>
<td>Semi-structured</td>
<td>General Practitioners</td>
<td>Two Specialist Practice GPs One full-time GP</td>
</tr>
<tr>
<td>Nurse Supervisors</td>
<td>(n=2)</td>
<td>Semi-structured</td>
<td>Nurse Practitioners</td>
<td>Advanced Nurse Practitioners (ANPs) (DH 2010; RCN 2012)</td>
</tr>
<tr>
<td>Nurse Practitioners</td>
<td>(n=5)</td>
<td>Focus group</td>
<td>Nurse Practitioners</td>
<td>Advanced Nurse Practitioners (ANPs) (DH 2010; RCN 2012)</td>
</tr>
<tr>
<td>Managers</td>
<td>(n=3)</td>
<td>Semi-structured</td>
<td>Manager and Clinical Team Leads</td>
<td>GP Practice Manager Clinical Nurse Specialist Managers</td>
</tr>
<tr>
<td>Community Matrons</td>
<td>(n=3)</td>
<td>Focus group</td>
<td>Community Matrons</td>
<td>Specialist Nurse Practitioners (SNPs) (RCN 2012)</td>
</tr>
<tr>
<td>District Nurses</td>
<td>(n=2)</td>
<td>Focus group</td>
<td>District nurses</td>
<td>Case Managers (RCN 2012)</td>
</tr>
<tr>
<td>Nurse Educators</td>
<td>(n=4)</td>
<td>Focus group</td>
<td>Nurse educators</td>
<td>Specialist tutors Practice educator</td>
</tr>
</tbody>
</table>

4.9 Interviews

To explore the use of medical PAS for CNPs in primary care, a source of evidence was required, that would allow multiple participants views to be heard. Interviews are considered an essential source of qualitative data for case study analysis (Yin 2009). Thus, interviews were selected as the primary source of data collection, to understand participants’ views, thoughts and perceptions. There are a number of interview styles that exist; structured, semi-structured, open, and biographic and narrative (Rubin & Rubin 2012), but the structure of the interview dictates the form the interview will take (Rubin & Rubin 2012). Structured approaches would not deviate from a pre-determined interview schedule, whereas an unstructured approach is more interactive through open discussion (King & Horrocks 2010).
In case study approaches, in-depth semi-structured interviews are recommended to seek individual views about the topic (Yin 2003). The line of questioning should be consistent with the design of the case study (Stake 2006), and use open-ended qualitative approaches to probing; using ‘why’ and ‘how’ questions and asking participants to provide examples. A semi-structured interview schedule should be formulated and approved prior to the scheduled interview date (Appendix. 9). Useful exploratory probes in the interview sheets should keep the question format as open as possible, such as ‘what do you think about?, ‘how do you feel about?’. The aim of the open-ended approach is not to assume, but give opportunities for examples and description of specific events and experiences for the conversation to flow freely (King & Horrocks 2010). Some double barrel questions should be set to get more in-depth and broader scope for the answers (King & Horrocks 2010). The questions should be set out in a simple manner to avoid the risk of participants losing the general flow, that potentially impacts on the quality of the data obtained (Rubin & Rubin 2012). The researcher should be mindful to maintain degrees of distance and non-integration before the interview process to ensure that quality data is obtained (Kvale 1996).

4.9.1 Focus Groups

The second choice of interview chosen for this study is focus groups. This approach to gathering qualitative data in case study method is not usually advised. The advantage is that the on-going conversation of group discussions serves to provide an in-depth exploration of context, because of the interaction between the participants in the group (Gabrium et al.2012). The group concept encourages the participants to investigate ways in which each are similar or different to each other by connecting, expanding and reflecting on statements made (Barbour & Kitzinger 1999; & Gabrium et al. 2012). Friendliness and respect is encouraged through shared views and interactions, by ensuring that each participant’s views are heard.
These similarities of shared experiences and meaning of a homogenous group can create a degree of symbiosis (Gabrium et al. 2012). Ground rules are a requirement of focus group interviews, so that important views and differences are shared (Gabrium et al. 2012). A focus group interview schedule should be formulated and approved prior to the scheduled interview date (Appendix. 10).

4.9.2 Role of the moderator.

Opinions vary in the literature on the role of the moderator in focus groups. Some argue that the moderator should ask all of the research questions (Kruger and Casey 2009). Others argue that the role of the moderator is to deliver the instructions, ask the first question and assist with the on-going group dynamics (Gabrium et al. 2012). There is an agreement in the literature that the moderators’ role is to ensure discussions are not side-tracked by irrelevant issues, and that silent members of the group have an equal chance in the discussion (Kruger & Casey 2009). Therefore the role of the moderator is to control dominant participants who may use the focus group interview to peruse their own agenda (Oliffe & Mroz 2005). An important point raised by Gabrium et al. (2012) is that the influence of the moderator should be minimal if the procedural process of setting up the focus group is well established.

For the purpose of this study, the focus group moderator was working at the University of Brighton. Therefore, the moderator and the facilitator were aware of their ‘personas’ as tutors attached to the University. The facilitator (researcher) recorded the focus group and interview discussions via a discreet palm sized voice recorder, so as to attend to each participant and not be distracted by the moderators note taking (Oliffe & Mroz 2005). Participants were asked to introduce themselves at the beginning of the interviews to help identify individual speakers during transcription, for coding purposes (Pilot and Beck 2004). Participants were thanked for agreeing to talk and opportunities for debriefing at the end of interview
were provided (Rubin and Rubin 2012 & King and Horrocks 2012). Participants were reassured that they would not be judged on the quality of their answers and that the primary interest was hearing their views and experiences (King & Horrocks 2010). The voice recorder discussion was descriptively transcribed for factual accuracy (Chioncel et al. 2003) and then re-played to ensure interpretative validity by adding notes, tones and interactions of voices (Barbour & Kitzinger 1999).

4.10 Preparing to enter Interview environment

Building good rapport with participants is considered key to successful qualitative interviewing (Rubin and Rubin 2012 & Kvale 1996). To achieve this, participants were sent the approved information about the study via written information sheets electronically, so that they understood the purpose of the research and the nature of the interview process (Kvale 1996) (Appendices 5:7). To avoid assumptions that all the participants would remember the date, time and venue of proposed interview, an email reminder was sent out to participants.

The interviews were planned at mutually agreed venues and were conducted whilst participants were attending study days to avoid personal inconveniences. The interview venues at the University were previously booked through an academic lecturer who worked at the faculty. A request was made, through the appropriate channels that venue locations had no distractions and were acoustically suitable. Participants had the right to feel safe in a relaxed non-judgemental and informal environment (Lee 1993). The GP supervisors arranged informal venues with minimal distractions at the Faculty of Medicine. One venue had to be re-arranged due to unforeseen rail travel problems. A suitable time and venue was re-arranged to accommodate the researcher on the same day.

For the purpose of this study, GP supervisors, managers and nurse practitioner supervisors took part in semi-structured interviews. Managers and supervisors
interviews were organised at Trust venues at an agreed time to suit working hours. The need for suitable and quiet venues for the purpose of confidentiality and audibility was reiterated. Permission was sought to place a non-interruption sign on the doors of the venues to ensure privacy and confidentiality to participants (King & Horrocks 2010). Efforts were made to minimise any inequality by dressing appropriately to suit the interview settings (Ollife & Mroz 2005).

4.11 The interview process

The researcher’s inexperience with the practical know-how of the relational and tacit aspects of good qualitative interviewing became apparent following transcription of the first focus group interview. Difficulty was experienced in ensuring a degree of distance with participants during the course of the first focus group interview. Inexperience in balancing the reinforcement of participants’ opinions meant that some of the questions asked were leading. This may have been related to over familiarity with the topic of discussion, or the lack of moderator presence to intervene, and stress the importance of obtaining divergent views. In addition, some questions asked failed to get sufficient in depth answers.

Opportunities were missed in probing and incomplete answers were not followed up by not asking for examples (Kvale 1996 & King and Horrocock 2010). Elaboration probes were missed to encourage participants to keep talking in order to gather more detail, resulting in a restricted time to spend on more crucial topics. Opportunities were missed in seeking clarification and explanations from other participants, and explanation or specific words or phrases that the researcher did not understand. Not actively listening to what was being said (King & Horrocks 2010), meant that the discussion was occasionally steered down a pre-determined path (Rubin and Rubin 2012). This posed a risk of expecting the participant to conform to expectant answers, so the direction of their responses was side-tracked from what might otherwise have said (King & Horrocks 2010). Additionally, the
moderators who agreed to participate in the focus group interviews were unable to attend on the scheduled dates.

4.11.1 Reflection on the Interview process

My research diary was used to reflect on challenges throughout research events and situations as they arouse. The diary was a safe and confidential way to explore and question experiences, when communicating actions to others. Most importantly, the diary provided a strategy to question thought processes, personal values and habitual actions surrounding complexities of occupying triple roles as a researcher, nurse and educator.

Diarised accounts of difficulties experienced during the first focus group interview helped me reflect on my actions and work out what happened. Through the process of reflection' *in action' (Schon.1983), which can be considered through 'the mirror writing' (Bolton 2015), I was able to look at the whole interview scenario, people involved, relationships, situation, place and timing. This involved reliving the experience to bring it into focus, to develop insight into aspects not noticed at this time (Bolton 2015).

From the outset, I was aware of my position as an educator of PAS and the need to maintain a degree of analytical distance. To manage this I prepared the interview and a focus group guide on how to carry out the interview process. The limitation of the literature is that it did not guide the novice researcher how to manage unforeseeable circumstances, like the absence of a moderator and note-taker. Additionally, I had not given thought in how to deal with unfamiliar interview surroundings and safety rules; both could have been achieved by arriving earlier at the venue. The interview was scheduled at the end of a teaching day, and although participants voluntarily agreed to be interviewed, they expressed time constraints related to childcare and travel arrangements.
On reflection ‘on action’ (Schon 1983), from the outset of the interview, I felt untrained in the process of good qualitative interviewing. This was evident in my attempts to rush and deal with administrative tasks, relating to consent (Appendix 8), ground rules, equal participation and the process of recording interviews. The time taken to do this compromised initial opportunities to establish rapport with participants and explore some questions in depth.

In thinking from within this experience, my thoughts and actions were actively shaped by my role as a nurse educator of medical PAS. This role required me to take an active lead in shaping medical PAS education at the University, with the expectation of managing circumstances and associated relationships with students at any time.

On this occasion, I was less alert to the participants’ needs and wants, and was more influenced by personal research objectives. Additionally, I felt guarded by following ‘theoretical rules’, rather than relying on my trustworthy intuition, knowledge and experience of asking questions creatively and imaginatively, as I would do in everyday practice.

*Through-the-mirror* writing (Bolton 2015) in my reflective diary, I challenged my assumptions and questioned my personal thoughts and behaviours to bring things out in the open. I recognised that it was my ethical responsibility to deconstruct my position as a nurse educator before undertaking further interviews. I recognised that it was never good enough to say ‘I did it this way because of theoretical guidance, and because it was part of the research protocol, or having a poor listening style’

These personal assumptions and behaviours were further challenged by my supervisors on review of the focus group transcript. We discussed in specific
detail areas of inconsistency, which highlighted a tendency to summarise some participants’ responses through my own interpretation, rather than funnelling what the participant had said to clarify understanding. Though this feedback, I became aware of the need to use more neutral comments such as ‘anything else’ to facilitate time for participants to reflect on their thoughts. I needed to ‘slow down’ the interview process and allow for pauses between answers to convey to the participants that a fuller answer was required.

My self-awareness was further enhanced by discussing my thoughts and actions on the focus group interview with my clinical practice mentor. He was a medical doctor and educator in this area of research and had recently completed the PhD. He indicated that he experienced similar tensions with his first interview, and shared how he overcame these issues. We discussed the interview schedule and used example questions in how to probe more expertly, to minimise the possibility of using leading approaches. He advised on how to listen in an active way, by noting down ‘action words’ that participant used, and to explore these in depth with as many as the participants as possible, without interrupting the flow of conversation.

On reflection, this feedback was ‘a through the mirror’ experience. I realised the consequences of my previous actions and how they could have been avoided.

I examined my questioning styles and how to avoid ‘unwittingly’ asking leading questions, shaped by knowledge and habitual actions of ways of talking about medical PAS as an educator.

On reflection, I should have undertaken an additional pilot focus group interview in the presence of my clinical mentor, who was familiar with this area of research. It was through these reflexive actions that I was able to review and revise my ethical ways of being and relating, in the interviews that followed.
Throughout the remaining data collection phase my concerns as to my etic influences shifted. In the following interviews efforts were made to guide the focus group discussion informally, and move from question to question in a timely manner. I was more acutely aware to listen actively by giving non-verbal cues such as stopping to take notes. The note taking served as written reminders to follow up action words or issues raised by the participant at a later point, instead of interrupting mid-flow. Efforts were made to keep a written record of non-verbal behaviours as essential to a full and accurate transcription of the interview process. Gestures and facial expressions that conveyed emotional meaning were recorded on interview guides to identify coded sources. Several authors concur (Kitzinger 1994:1995; Kruger 1994; Kvale 1996; Kruger and Casey 2000; & Liamputtong 2007) on the importance of using notes to recall or clarify unclear comments from the recorded data. By listening to participants views on how CPNs used this knowledge in the context of their work, I was able to deconstruct my position, from the expert to the novice. On reflection, this was enlightening, because the novice approach provided me with the freedom to adopt a more neutral stance throughout the research process.

During the data collection phase I did not view myself as completely divorced from the research. I acknowledged that I shared common professional values as a nurse and as a nurse educator, through use of the same assessment language. I viewed this as important to gain respect and establishing rapport with the participants. On reflection, the advantage of having common professional and cultural values with participants enabled me to use my skills of reciprocity. The key factor that influenced this way of thinking was my understanding of my epistemological position. My aim was to carry out my research ‘with participants’ rather than ‘on participants’, and co-construct their meaning and experiences, through my interpretation.
In the semi-structured interviews, some aspects of the discussion focussed in more depth and participants were asked to provide concrete examples and how they dealt with certain situations, as they arose with the use of medical PAS in practice. For example the researcher explored how students coped with additional responsibility, accountability and autonomy associated with carrying out medical physical assessment of patients, that leads to a clinical decision or a possible diagnosis, in the absence of a doctor.

At the end of the interviews, the researcher indicated gratefulness for the time and ideas that the participants shared. They were given the choice of reviewing the transcribed data to facilitate opportunity for further discussions, and editing out some aspects of the content that they deemed unsuitable (Rubin and Rubin 2012 & King and Horrocks 2010).

4.12 Field Notes

Following interviews, field notes were written up that captured the process and content of each interview. A blank structured contact summary sheet detailed participants’ general demographics, general interview context and comments on participants’ behaviours (Miles & Huberman 1994). Reflexive insight into researcher’s actions and salient points were followed up in the next interview. A section was included for debriefing comments for the purpose of further feedback from the participants following the interview. Although these field notes were largely descriptive, they were revisited during the process of analysis (King & Horrocks 2010). The aim was to sensitise the researcher’s focus during the interview stage of the data collection, and as a reflexive resource when analysing the data (Carolan 2003).
4.13 Recording and transcribing interview data.

4.13.1 Transcription

Poland’s (2002) transcription guidance was followed to minimise inaccuracies which could potentially impact on the process of data analysis. The recorded data was listened to and transcribed verbatim as soon as possible after the completion of the interview (Rubin & Rubin 2012), to make it easier to match the paralinguistic or non-linguistic observations to the correct point of interactions. Transcriptions included word for word quotations from each participant and questions asked by the researcher (King & Horrocks 2010). Contextual features captured paralinguistic aspects such as voice intonation, non-linguistic utterances such as humour and pauses, so as to capture the meaning of what was being said. The aim of recording these contextual features was to ensure a deeper understanding of the participants meaning and experiences (King & Horrocks 2010).

The interview transcripts were personally transcribed, allowing immersion and familiarity with emerging themes, which assisted with the first stage in the analysis process (Landridge 2004). The potential threat to the quality of transcription was offset by listening to the interview recordings and checking for transcription accuracy. Reading and listening to the recordings allowed the tidying up of transcribed talk (Poland 2002), where audibility had been difficult and noting the interactive discussions (King & Horrocks 2010).

A digital recorder was used for recording purposes. Threats to quality transcription were minimised by checking the digital recording and acoustics quality (King & Horrocks 2010). The recorder was fully charged, and when interviews were undertaken successively, new batteries were replaced to minimise disruption. Drawing on Rubin and Rubin (2012) suggestion, the potential impact of recording was minimised by emphasising confidentiality and data protection requirements of
the study. The recorder was turned on whilst the interview process was explained so that the self-conscious participants had time to become familiar with the audio machine. The digital recorder was placed unobtrusively in view so that the illuminated record light was visible to the researcher (Rubin and Rubin 2012 & King and Horrocks 2010). To alleviate the potential problems of biased responses, the purpose of the research was reiterated and as full account as possible of participants' views and experiences encouraged. As the researcher became more experienced with the interview process, questions were asked in a clearer voice and at a more measured pace. Participants' views that were expressed unclearly were given the opportunity to repeat answers to ensure that their view was fully understood. In circumstances where participants provided 'off the record' comments after the recorder was turned off, permission was sought to use this material as a written record of what was said. Files were labelled immediately after the interviews to ensure that they were easily identifiable (Patton 2002). Interviews were downloaded onto the researcher’s computer that was password protected and for confidentiality purposes saved as a read-only file (King & Horrocks 2010). The next section will examine how validity and reliability was established to determine the trustworthiness of the methodological approaches used in this thesis.

4.14 Validity and Reliability

Some writers express concerns for the trustworthiness of qualitative methodological approaches to research (McGloin 2008). Therefore, Guba’s (1985) four steps criteria to assess trustworthiness of this study will be expanded on in the next section. Guba’s (1985) proposed four criteria to assess for trustworthiness, credibility, applicability, consistency and reflexivity. Before examining how this criterion was met in this study, it is necessary to reflect on the methodological approaches used. For example, the validity of case study approaches is ensured
when the researcher defines the boundaries of the case, identifies the unit and sub-unit of analysis, and determines the methods of data collection.

As discussed in Chapter three this case study has been defined as an embedded case design, because the aim is explore and capture multiple perspectives of CNPs use of PAS in primary care. Although, multiple methods of data collection are advised in case study research, this study used interviews, but adopted two types, focus groups and semi-structured interviews. The aim of using both approaches was to provide a richer picture of the case findings.

4.15 Credibility
Steps were taken to analyse the data in the most appropriate manner to prevent biases and subjectivity. Personal transcription of data ensured accuracy and a true account of the participants (Maxwell 1992). The researcher used reflexive approaches during data collection and analysis, which enhanced the auditability, credibility and reliability of this study (Maxwell 1992 & Silverman 2010).

This research was carried out in practice, which adds credibility. Throughout the interviews participants were respected for their work culture, language and views, whilst building trust and rapport. The truth of the study findings was established through respondent validation (Silverman 1998), as all transcripts were sent back to participants for review. Interview transcripts were reviewed by supervisors and the findings were peer reviewed for debriefing.

4.16 Applicability
Applicability refers to the degree to which findings can be applied back to other contexts or groups (Lincoln and Guba 1985). As this study focussed on one particular case in one geographical area, its findings are not transferable or applicable to the wider population. McGloin (2008:51) cites the work of Mayer et al. (2000) who proposes that a single case study design are not representative of
the population, because it is grounded in one setting. In addition the sample size relied on small numbers, therefore the findings in this case identify ‘circumstances’ rather than fact. However, as argued by Yin (2003), the focus on such a small sample generates in-depth data from a variety of participants. In this case study ‘circumstances’ surrounding the use of medical PAS by CNPs’ in primary care has been examined.

4.17 Consistency
This criterion of trustworthiness considers the consistency of the data (Lincoln & Guba 1985), if it was replicated by another researcher. An audit trail was maintained during the collection and analysis of the data (Koch 1994). A framework method (Ritchie et al. 2003) was used for the analysis, and dependability was enhanced by ensuring each step of the analysis was visible to the reader.

4.18 Neutrality
Neutrality is the extent to which the findings are the result of the participants in the conditions of the research, and not the result of biases. The researcher made every effort to ensure that a neutral stance was maintained, and the truth value of the research was presented without personal bias. Truth value was also obtained by feedback from supervisors and colleagues, who challenged and questioned personal assumptions. This approach limited the researcher’s subjective stance on the findings, which enhanced the overall rigour of the research (Mays & Pope 1995).

4.19 Reflexivity
The researcher used a research diary throughout the study and reflected on concerns and issues as they occurred.
The following discussion evaluates how I as the researcher developed explicit awareness of my position, cultural values, beliefs and interests, and how these factors shaped and changed throughout the study. Reflexivity is an important element in qualitative research which contributes to quality and credibility (Asselin 2003). I believe that the main factors that influenced my research journey were my positionality, actions, and beliefs, ethical and cultural values. I will expand on each of these attributes in turn, and reflect on how they were shaped and reshaped throughout the genesis of the thesis.

Throughout this study, I worked full time as nurse educator at the University. From the outset I was aware of the difficulties that can arise from the triple roles as a nurse, nurse educator and researcher. I was aware that my professional and personal behaviour and values would affect my research. I had an awareness of the need to be introspective and look at external forces that could shape the study. As such, I was guided and encouraged by reading reflexive accounts within completed theses. A particular thesis that inspired me was McCann’s study ‘Transition or Transfer, An Experimental Perspective on Moving from Paediatric to Adult Cancer Services’ (McCann 2012), and reflexive accounts on studies by Asselin (2003) and Clancy (2007).

The first stage of the reflexive process was that of my positionality, and how it shaped the research interests. Firstly, my motivation and rationale for the research drove my positionality, linked to my experiences as nurse educator of medical PAS within CPE programmes at the University. For these reasons, I acknowledged that I did not enter this research value-free (Patton 2002).

As discussed in the Chapter four, I had difficulty maintaining a neutral stance during the first focus group interview. The usefulness of reflective diary notes allowed a deeper understanding as ‘why’ this happened. I had reflected that I did not use attentive listening skills well, and had a tendency to over reciprocate. In
addition, as described in Chapter four, discussions with my supervisors at this stage were invaluable. Though a process of reflection, my supervisors encouraged me not to deny or hide any issues that arose, but to learn and analyse them. This early experience in the data collection enabled me to tackle personal assumptions during the following interviews, to ensure that participants' accounts were credible and realistic.

In the methodology chapter, I experienced tensions with epistemological foundations, and where to position this research focus. This was compounded by the fact that published nursing studies did not state the epistemological or theoretical foundations, form an educationalist or research perspectives. Common assumptions in the literature were that medical PAS situates itself within the positivist/realist research paradigm, linked to medical assessment approaches.

My anxiety was further enhanced by the fact that nurse educationalists, outside the UK, had not identified the position of medical PAS within the philosophical framework of nursing assessment. In addition, and as guided by research literature, I was required to identify gaps in studies that mainly used quantitative methodological approaches, to inform nurses’ professional preparation internationally.

My decision to base this study within the constructivist paradigm was guided by three specific factors. First, on a personal level, my understanding of nursing assessment in the UK is that it situates itself with the constructivist-interpretative paradigm, underpinned by theory of nursing expertise, skills acquisition and clinical judgements (Benner 1984 & Benner et al. 1996).

Secondly, I was less concerned about generating theoretical knowledge, but genuinely interested in understanding the usefulness of medical PAS for CNPs to advance their ways of ‘thinking’ and ‘acting’ in their roles, to keep patients safe.
Thirdly, as a nurse educationalist, I reflected on my understanding of Malcolm Knowles’ theory of adult learning (Androgogy) (Knowles 1988). I assumed CNPs would be motivated and see the relevance of learning new skills, to develop existing competence, to apply them to their work situation. For these reasons, I was interested in exploring and capturing multiple perspectives of CNPs use of PAS in practice, with a view to co-constructing views and assumptions, to inform my research.

My actions and beliefs as a researcher were further challenged during the analysis of the participants’ findings. Despite realising the importance of identifying and interpreting participants’ accounts correctly, separate from my own experiences, I found it difficult to maintain a middle ground and a degree of analytical distance (Willing & Stainton-Rogers 2013). I felt deep affiliation with many of the participants that I interviewed, but mostly the nurses and doctors. In particular, some of the nurse participants’ determination and motivation to use the skills to challenge professional boundaries provided me with insight as to their deep sense of duty to the patient, and professional practice. I had to be significantly aware of this during my analysis, because I had a tendency in my desire to heighten their achievements, as opposed to seeing the data for what it was.

Because of this, the analysis took some considerable time, to ensure it reflected the data and gave a comprehensive interpretation of what was most important to participants and not to me. Following discussion with my supervisors on my initial interpretations, I could see my desire to over interpret, and reflected on the fact, that if I had not remedied this, it may have poorly reflected the outcomes of the research. I found the supervision process excellent in challenging my assumptions in a supportive way.
When reflecting on my ethical and cultural values, this was demonstrated most when I was undertaking the data collection. Several participants that agreed to be interviewed asked to be contacted via email as a reminder of dates, times and venues. Several emails to two or more respondents did not confirm their intention to attend. On arrival for interview I created a 'warm front' and acknowledged my appreciation for their motivation to attend. This is an example of how my cultural and professional values influenced the research process.

When examining my reciprocal values, two participants became annoyed at educational preparation of undergraduate nursing students, during a focus group interview. They stated that students were unprepared to work hard and seek new learning opportunities as 'they had done', and asked my professional opinion as a nurse educator. I stated honestly, that I engaged significantly with undergraduate professional preparation teaching and assessment. I explained that system factors often constrained student engagement, and that nursing students often experience lack of support and flexibility that allows additional learning opportunities in work environments. I explained that with the emphasis of move from hospital to the community, that it is most likely that they would have opportunities to engage with supportive mentorship in the long-term, and therefore be in a position to influence nurses' professional role preparation.

In this example, I appeared to have slipped effortlessly and unconsciously into my clinical and educational roles. Again, at the end of the other interviews, after the audio-recorder was turned off, I was asked several questions regarding educational issues and advice on module choices. I responded to participants' requests to the best of my knowledge, and often felt that reciprocity was achieved before I left. However, in my reflective diary, I noted some dilemmas with role ambiguity, and had not planned to engage at this level of reciprocity during the interviews. When analysing these instances, I realised that it was possible to
amalgamate different roles during qualitative interviewing to make them work (Carolan 2003). I reflected on the importance of occupying a middle ground between insider and outsider needs, to negotiate relationships with participants respectfully, and so acknowledged dialectic importance following qualitative interviewing (Clancy 2007).

I experienced further challenges in choosing the ‘right method’ to analysing the data. The philosophical constructivist research paradigm adopted for the study appeared at odds with FA methods for data analysis. I was aware that FA methods sit broadly within the family of thematic analysis methods, where commonalities and differences are usually identified before focussing on relationships between the ‘whole and some of the parts’ of the data. However, I should have given more thought to this before attempting to analyse the data in this way. I was attracted to this highly systematic method of categorising and organising the data, and was keen to make it visible to the reader how I interpreted the data in a clear and auditable way. On reflection, I was ‘put off’ by not knowing where to start with an unwieldy volume of qualitative data gathered across the interviews. I soon became aware that FA approaches are just as unwieldy, and required countless hours to identify common descriptive codes across the whole data set, before they could be interpreted into categories.

On reflection, I felt a degree of satisfaction following the identification of common categories across the whole data set (four focus groups and eight semi-semi-structured interviews). However, the challenge started on realising that the interpretative categories had to be clearly defined before taking them back to the whole data set again, for the purpose of indexing. The literature refers to the indexing stage of FA as the most time consuming, because each category code has to ‘fit the data set’, which means I has to go through each transcript again, to ensure that that category code represented the excerpts of data. I was fortunate to
know the transcripts very well as I transcribed them and intuitively knew that my codes were correct and where they were located within the transcripts.

The most difficult challenge was how to interpret the matrix of the charted data, to identify a major theme that represented the categories and sub-categories. It is possible that a more experienced researcher with qualitative data analysis would clearly see deeper explanations and typologies across the data set at this stage. As a novice, it was a challenge, but on reflection it was then that I truly understood my supervisor’s regular reference to the concept of ‘boundary working’ that she saw as emerging from the data, and her constant advice to read around this literature. Coupled with her voice in ‘my head’ and reading around this literature, I immediately understood what she meant. I was suddenly able to link the category ‘negotiation’ to ‘the theme ‘negotiated boundary working’. On reflection, I now truly understood for the first time what qualitative researchers mean when they say ‘you need to think up’.

Reflexivity on this research project has been an active process in which I was able to take time to understand myself, and others involved in this research journey. I have demonstrated how my positionality, cultural and ethical beliefs and values shaped my research journey.

4.20 Summary.

This chapter so far has reported on the methods adopted for this study, and includes an overview of the sampling strategies, ethical issues, methods of data collection and validity and reflexivity concepts, to ensure the aim of the study was met. In the next paragraph, the analysis of the data will be presented through the use of Framework Analysis methods (Ritchie et al. 2003).
4.21 Overview

The previous chapter outlined the conduct of case study approaches, in terms of data collection, the associated practicalities, and validity and reliability principles that underpin qualitative analysis. This chapter will now aim to describe the steps taken to analyse the qualitative data.

Framework Analysis (FA) approaches have been used to analyse qualitative data since the 1980s (Ritchie and Spencer 1994). FA identifies with the features of thematic analysis, where commonalities, differences and relationships within the data are established to develop themes and concepts (Ritchie et al. 2003). It also identifies with thematic approaches to gathering textual data by interviews (Gale et al. 2013). The defining feature of FA is that it is a matrix-based method, involving the construction of thematic categories into which the data are coded (Dixon-Woods 2011).

The FA method has five distinct phases (familiarisation, indexing, charting, mapping and interpretation) that are interlinked and form a methodological and rigorous framework (Ritchie & Spencer 1994; Ritchie et al. 2003 & Ward et al. 2013). These stages enable researchers to understand and interpret data, and move from descriptive accounts to conceptual explanation of what is happening in the study (Gale et al. 2013).

4.22 Rationale for using FA in this study

This study was undertaken after recognition that the use of medical PAS by CNPs within post-registration programmes is not well understood. On this basis, the researcher decided to explore perspectives in healthcare practices in primary care. This approach fits with the overall aim of study, which is to explore and capture multiple perspectives of CNPs’ use of PAS in primary care. It is proposed that the
findings will seek to provide a clearer understanding as to how these skills are used by CNPs in ‘live’ clinical practice.

From a practical perspective, the FA matrix structure assists the researcher to reduce the data for ease of analysis by codes. Subsequently, participants’ views remain connected to other aspects of their account with the matrix structure so that the context is not lost. This structured approach enables individual views to be compared and contrasted, which is a vital component of qualitative analysis (Gale et al. 2013).

4.23 Advantages of FA

The reported advantages of FA are that it provides a series of charted steps to summarise data in a structured manner (Ritchie et al. 2003; Dixon-Woods 2011; Gale et al. 2013 & Ward et al. 2013). The structured approach provides the novice researcher with an audit trail of decisions made (Dixon-Woods 2011), which serves to address issues of dependability (Tobin & Begley 2004, cited in Ward et al. 2013: 2345). This addresses criticisms levelled at thematic analysis for lack of transparency of decisions making processes (Ward et al. 2013).

4.23.1 Stage 1: Data analysis

The first step of the data analysis is similar to other forms of thematic analysis, in that it involves the researcher immersing themselves in the data, to be completely familiar with it, and developing an overview of the main ideas. This step is called familiarisation and is considered a crucial step in constructing the analytical framework to gain an overall view of the data set (Ritchie et al. 2003; Gale et al. 2013 & Ward et al. 2013).

This was achieved through personal acquaintance with the data through collection and transcription. Initial impressions were recorded in margins of the transcripts to capture a holistic overview of the content and initial ideas of ‘preliminary themes’. 
For example community nurses and GPs expressed the importance of using PAS knowledge to work collaboratively across teams. Familiarisation, through reading and making notes in this way assisted with locating relevant parts of transcripts later in the analysis. Field notes (an explanation of these is in Chapter four; section 4.12:95), made throughout data collection were read to assist with understanding the context of the interview. The study’s aim was also reviewed to remind the reader as to the overall purpose of the study (Ritchie et al. 2003). The following paragraph provides an example of how field notes were used to understand the context of one the interviews.

4.23.1.2 Field notes

V1 was a supervisor for students undertaking PAS education. She came across as insightful, focussed and passionate about her work. She viewed her ANP role as a necessary step to command her own work, make decisions, give continuity of care and work more effectively across healthcare teams. She was undertaking a teaching qualification and keen to facilitate learning and use her knowledge of underpinning teaching theories to enhance students' learning. She expressed a keen interest in developing work base learning approaches to medical PAS, through e-learning sources and use of simulation in the community setting in the future. She was concerned regarding the lack of support and resources for consolidating PAS in practice.

4.23.1.3 Feedback from V1:

“Today morning's interview really helped me to spend quality focused time thinking about how I have developed in physical assessment over the years and cemented the rationale as to why I do it. Discussing and answering your questions allowed me time to think about the skills and education I have developed on the PG cert and how I will be able to bridge the learning into clinical practice to ultimately benefit patient care. I enjoyed sharing my experiences and innovative ideas”.
4.23.2 Stage 2: Constructing a coding framework

During the familiarisation stage, notes or ideas were made in the margins of all the transcripts (four focus groups and eight semi-structured interviews), to give an idea regarding the main themes and related sub-themes that appeared to be recurring in the data. Descriptive codes, which is a label assigned to an excerpt to raw data (Gale et al. 2013) were highlighted and underlined by selecting short words or phrases in a separate column in the transcripts. No fixed rule or formula was applied in developing the descriptive codes, as the researcher trusted her instincts and recorded codes as words or phrases that stood out. In identifying descriptive codes, the researcher attempted to stay as close as possible to the participants’ voice, by recording words that represented the topic that was being talked about, rather than the content that was being discussed (Morse & Richards 2002) (Table 7). Staying as close to data at the earlier stage of coding maintains a holistic view of what was ‘going on’ and possible ideas to investigate later (Richards 2005).

To refine the coding framework, the descriptive codes were transferred to a Microsoft word table chart (Table 8). An additional column was labelled interpretative category codes. To develop the interpretative category codes, logical and intuitive judgements were made regarding the overall meaning and content of the descriptive codes. For example descriptive codes such as monitoring, gathering information, reporting, diagnosing and communicating information, was interpreted as ‘case management’. This became an interpretative category code (Tables 9). This is how the interpretative category codes were abstracted across all the sets of interviews (NHS managers, GP and nurse supervisors (sub-units of analysis) and CNPs (unit of analysis).

The interpretative category codes abstracted across the sets of interviews had numerous sub-categories, so were clustered by cross-referencing for the purpose of merging and collapsing (Table 10)
Ten main interpretative category codes were abstracted from across the sets of interview transcripts (sub-units and unit of analysis) (Tables 11). Gale et al. (2013) recommended describing the category codes, and sub-categories if relevant, because it helps to clarify their meaning when applying it back to the data set for the purpose of indexing (Table 12). Indexing is described in the next stage.

4.23.3 Stage 3: Indexing

Richards and Richards (1994) describe the process of 'indexing' as applying the defined interpretative category codes, back to the raw data to see how well they 'fit'. FA analysts (Ritchie et al. 2003) suggest that category codes indexes should an assigned number or abbreviation for easy identification (Ritchie et al. 2003). The interpretative (indexed) category codes abbreviations (Table 12) were applied back to sets of interview transcripts. This was done by re-reading each transcript again, line by line and assigning indexed interpretative category codes, or sub-categories where relevant, in the margin of the transcripts according to the corresponding pieces of text (Ritchie et al. 2003) (Table 7).

This process was time consuming, because each piece of data in the transcripts had to be re-examined systematically. However, it was a useful process for the following reasons; it provided an opportunity to identify a potentially new category code buried within the data that was missed on initial coding. On completion of the indexing, a new category code 'negotiation' was identified due to its frequency in the texts across the five cases.

4.23.4 Stage 4: Charting the data into the framework matrix

This stage of data management involved summarising or synthesising the original data set on thematic charts. Thematic charting is defined by Ritchie et al. (2003) as a process of summarising key points of each piece of data that represents each interpretative category code and overarching theme onto a Microsoft Word/Excel
spreadsheet. A Microsoft Word landscape sheet was used to chart the material from the transcripts that summarised the category codes from the different sets of transcripts. Verbatim words and phrases were abstracted to verify that the text matched the category description. Thematic charting assisted in bringing all the data together that represented each interpretative category code and overarching themes across individual and group interviews. Some interpretative categories were merged at this stage to define the overall overarching theme (Ritchie et al. 2003). (Table 13) is an example of part of a thematic chart.

4.23.5 Stage 5. Synthesising the data

The aim of this stage of FA is to inductively generate emerging themes from the data for further analysis. This was done by reviewing the thematic chart and identifying the overall overarching themes and higher interpretative category codes. The aim was to intuitively look beyond the interpretation of individual participant’s views to provide an explanation for the final themes that were emerging.

To achieve this, the charted data that represented each interpretative category code in the thematic chart was read up and down several times to identify and detect what was going on. For example, patterns of emerging theme/sub-theme ‘Negotiation’ (identified during indexing) was now appearing frequently, across the thematic charts. Mapping and charting in this way enabled the researcher to see how participants’ views remain connected within the matrix, so that the content of individual and group views was not lost. Comparing and contrasting data is vital to qualitative analysis, and the ability to compare with ease data across individual (semi-structured) as well as the (focus) group interviews is built into structure and process of the FA method. The potential final themes, sub-themes and sub-theme categories were further collapsed by comparing the different categories identified, between and within the thematic charts (Table 14).
Finally, three major themes, sub-theme and sub-theme categories are charted for the findings (Table 15).
## Table 15 Final Themes Sub-Themes and Categories

<table>
<thead>
<tr>
<th>Themes</th>
<th>Sub-themes</th>
<th>Categories</th>
</tr>
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<tbody>
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<td>Theme 1. Drivers for medical PAS in primary care</td>
<td>Why CNPs need medical PAS in primary care?</td>
<td><em>Policy perspectives</em></td>
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<td></td>
<td>How do CNPs use medical PAS in primary care?</td>
<td><em>Personalising Care</em>, <em>Diagnosing and Decision Making</em></td>
</tr>
<tr>
<td>Theme 2: Negotiating boundaries</td>
<td>Negotiating supervision boundaries in primary</td>
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<td></td>
<td>Role boundary perceptions to use of medical PAS in primary care</td>
<td><em>Competence and Confidence</em></td>
</tr>
<tr>
<td>Theme 3: Facilitators and barriers to medical PAS use in Practice</td>
<td>Facilitators to medical PAS use in practice</td>
<td></td>
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<tr>
<td></td>
<td>Barriers to medical PAS use in practice</td>
<td><em>Inappropriate appointments to specialist roles</em>, <em>Inadequacies in educational preparation for practice</em></td>
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Chapter 5 Findings

5.1 Introduction

This chapter illustrates the study findings. Each theme will be introduced, followed by an analysis of each sub-theme, and related sub-categories. A summary of each theme will be presented, followed by an overall summary of the three themes. The quotes and extracts presented have been selected because they are illustrative of participants’ views and ways of describing CNPs' use of medical PAS in primary care.

5.2 Theme one: The drivers for medical PAS in primary care

5.2.1 Introduction to Theme

This theme illustrates some of the underpinning drivers for community nurse practitioners to have physical assessment skills (PAS) to respond to national policy directives, to shift care from hospitals to the community. The theme highlights some of the reasons CNPs require these skills for different population groups, in the absence of another suitably qualified healthcare professional. The theme also reveals how CNPs use medical PAS to extend the scope of GP services for older and frail people with complex physical and social health problems, who use hospital services inappropriately. It examines how CNPs use medical PAS within the scope of their specialist and advanced roles in GP surgeries to complete episodes of care. The theme also describes how they use the skills to enable GPs to meet mandatory incentivised assessment targets for defined patient groups. Finally, the theme illustrates how CNPs use medical PAS to co-ordinate and personalise care for defined patient groups, and how this information is used to inform their clinical judgements or make a diagnosis.
5.2.2 Sub-theme 1: Why do community nurse practitioners need medical PAS in primary care?

5.2.2.1 Policy Perspectives

The data suggest that CNPs need medical PAS to carry out policy directives towards transforming healthcare services in the community. The following extract from a GP illustrates participants' views on the relevance for CNPs' medical PAS to align with that of GPs, to support them in the delivery of services for designated patients groups in the community.

‘Certainly, I think there is an ongoing drive for nurses to have medical PAS in providing effective services which are more accessible to patients. Certainly in terms of rise in chronic and acute disease management that can be done by healthcare professionals other than doctors. Therefore it’s vital that nurses are skilled in these so that there’s an element of service provision to maintain standards and in terms of getting the correct services to the people when they need them essentially’ [General Practitioner. T1]

This GP explains that one of the main drivers for re-evaluation of skills mix in primary care are epidemiological, related to the rise in acute and chronic illness conditions. He suggests that CNPs and other allied health professionals in the community are well placed to use medical PAS, because they are more accessible to these patient groups. He suggests that it is necessary for RNs to be appropriately trained with these skills to maintain standard services for patients with acute and chronic health problems. He described ‘effective services’ for these designated patients groups as having access to specialist nurses. Similarly, another GP illustrates that it makes sense for CNPs to have medical PAS to support GPs to manage workloads in primary care.
'the real steep increase in burden of our patients, the increase in chronic disease, we are going to have to be sensible about this. We need more doctors and nurses doing medical PAS' {General Practitioner S1}

This GP also suggests that one of the main drivers for common sets of interdisciplinary assessment skills relates to the constraints in healthcare needs for patients with chronic illness conditions. He mentions that a range of suitably qualified healthcare professionals require common sets of assessment skills, to cope with the ‘burden’ and workload of chronic health illnesses. He highlights that a ‘sensible’ way forward is to align generalist assessment practices between nursing and medical disciplines to balance demands of community care services.

A nurse educator makes a similar suggestion for CNPs to align their assessment skills with those of GPs to meet national policy initiatives for 'new ways of working in the community'

‘What practice wants from medical PAS is new ways of working in the community, to take on different roles and work differently. When you have got advanced physical assessment skills it is not just about consolidating your practice, there’s an expectation from me that it should take it to a slightly different level {Nurse Educator. M1}

This nurse educator illustrates the instrumental value of medical PAS for CNPs, to support the vision of transforming community care services. She states that a driver for medical PAS for CNPs is to ‘work differently’ at the interface of practice to meet the demands of services. She highlights that an essential element of moving care to the community is for CNPs to advance their core assessment skills, even if they do not self-select themselves to do so. By contrast, the next extract suggests the value of medical PAS education, as the same nurse argues that these skills enhance CNPs professional practice.

‘being more holistic in their assessment and taking your skills forward if that’s what they want out of it, because some nurses come expecting a
more holistic focus, better patient care as a main outcome. Physical assessment is wonderful and it does give you a better understanding, it takes your clinical practice forward such as running cardio clinics’ {Nurse Educator. M1}

She clarifies that medical PAS education benefits community nursing assessment practices in their daily work, and to expand the scope of their existing roles. Alternatively, they can use the skills to broaden their existing assessment knowledge to lead an aspect of service. This extract suggests that medical PAS education offers CNPs the flexibility to work differently to enhance their assessment practices, to provide direct clinical care as the main priority for patients. In addition, they can use the skills to undertake a leadership role to develop an aspect of service. Both of these aspects support policy initiatives for the development of community nursing services in primary care. This view is supported by a clinical nurse manager, who describes how CNPs can use medical PAS to clinically lead aspects of community nursing service work. She suggests the alignment of their assessment skills with other healthcare disciplines to minimise variation in service delivery within community care teams.

‘to provide an equitable service our commissioners were really looking at the model for long term conditions. Through a consultation and they pooled the resources of various teams to try and reduce the fragmentation in care, so they have integrated the teams and not have they only integrated the nursing aspects of the teams, but have brought therapists into the team. Our Advanced Nurse Practitioner (ANP) is a very much a clinical leader in the team and medical PAS is very much a part of that role’ {Clinical Nurse Manager. LA}

This clinical nurse manager clarifies the position of medical PAS education for advanced nursing practice clinical leadership roles in primary care. She identifies that they need these skills to work with the ‘model for long term conditions’ management for primary care practices. She suggests that they can use the skills to minimise disjointed approaches to care delivery, which prevents them working in
isolation, or in silos from other primary health care teams. She illustrates the value of medical PAS to work with other health disciplines, to integrate assessment skills and knowledge, to respond to needs of patients who have long-term condition diagnoses. A GP in the next extract confirms the constraints on their roles to meet the assessment demands of patients with long-term conditions. He suggests that one of the main reasons for this is that they are time limited in what they do. He suggests that the creation of new specialist nursing roles such as community matrons, are better placed to care for defined patient groups with LTCs’

‘but you just can't take your 80 year old poorly patient who moves a mile a minute and give them an hour to 'get your coat off, get your cardigan off get your undergarments off and then get down to examining, you just can't do it because there's no flex [ibility] in the system, because of time, this gets dropped’ {General Practitioner. S1}

This GP argues that it is difficult for GPs to care adequately for patients with LTC illnesses because of time constraints. They are unable to provide adequate physical assessments for the frail older person, because shorter consultations do not allow sufficient time to engage. He provides an example, and suggests that full physical assessment examination of an ‘80 year old poorly patient who moves a mile a minute’, would take far longer to complete than the allocated time. He identifies in the next extract, the constraints of mandatory incentivised targets, set by national policy directives, on time to engage with this population group.

'yes, our time for patients is limited because of the four hour targets etc and the financial drives. The QOF targets are coming up and you get a list of things that are missing for this patient and they will come and see you about something that is completely different and you end up using the time to say " I have to ask you this and this and it takes time.. It takes time away from what the patient actually wants and needs. These financial drivers and incentives are almost mandatory; as you have to get them done then otherwise you won't get the money’ {General Practitioner. S1}
In this quote it is clear that he views shorter GP consultation times as having a negative impact, in that they get in the way of ‘what the patient wants and needs’. He mentions that mandatory ‘QOF targets’ do not acknowledge the complexity of the needs of patients with LTCs, because these incentivised assessment approaches divert from important issues that the patient brings to the consultation. Therefore, mandatory QOF assessment targets require GPs to delegate assessment tasks for patients to specialist CNPs because their work is financially incentivised. He clarifies his views further in the next extract, when he identifies ways specialist community nursing roles can contextually focus medical PAS around designated patient groups in primary care.

‘Yes, and the Community Matron, she holds quite a high role in our practice and she takes on a lot of responsibility for preventing admissions, so she currently sees a lot of patients who keep bouncing in and out of hospitals and tries to prevent that. Her early identification with these patients, because of the close relationship she has with these patients that perhaps someone is relapsing, relies heavily on physical assessment skills. I think the independent environment these nurses find themselves in and the high level of responsibility that they take on in their environment, that at any at least basic physical assessment skills are needed at this level in their roles’ {General Practitioner S1}

He describes how specialist roles such as the community matrons are far better placed to use skills such as medical PAS more intensively for patients in the community who are frequent users of hospital services. For example, he examines how medical PAS assists community matrons to identify patients who are at risk of relapsing and readmission to hospital. A distinct advantage is that they have a greater degree of access to these patient groups, because of time to get to get to know patients as individuals, but acknowledges their levels of responsibility while working in independent environments. A Clinical Nurse Specialist Manager illustrates similar views to the GP, but is more specific as to the
expectations of community matrons’ role for case management for patients with complex illness needs.

‘It’s the complexity of the patients with chronic illnesses; I said we have not got community matrons now as they are called Advanced Nurse Practitioner (ANPs) and they are expected to work pro-actively. We have something called the Urgent Care Team Dashboard, so they have the urgent bit of who is going in and out and also got the predictive model as part of this and it stratifies patients and gives them a risk category, who is a high risk of admission and their trends to increase, stable or decrease. We’ve got very high, high, medium risk of going into hospital. This Urgent care Dash board is encouraging our APs to work pro-actively with relevant healthcare staff, which I think medical PAS is fundamental to that role. They are expected to case manage they need the medical PAS for these patients’ {Clinical Nurse Specialist Manager LA}

She highlights that the clinical nurse specialists actively use medical PAS to stratify patients’ levels of ‘risk’, to identify complexity of health needs and to prevent unplanned hospital admissions. This nurse manager suggests that medical PAS underpins the core concepts of proactive case management for patients who are at a higher risk of readmission. By contrast, a nurse educator suggests that the value of medical PAS for CNPs is to complement nursing assessment work and not to undertake medical assessment responsibilities.

‘really fancy things, like heart sounds and percussion and they look at prescribing antibiotics but they’ve forgotten to do mouth care, it should not be separated and the physical assessment, it’s got to be in your practice and a complement or viewed as adding to the nursing model. But they should not forget the basics when carrying out medical PAS, because if you’re not doing the mouth care, talking to the family and the patient, who cares if you’re prescribing medication’ {Nurse Educator K1}

She warns of the dangers of extending scope of practice with skills such as medical PAS and prescribing, in that they can minimise nurses’ time to carry out nursing work, such as providing basic nursing care needs and time to communicate well with families. She highlights the value of medical PAS to
'complement' the 'basics' of nursing assessment work but not to replace it with technical aspects associated with medical diagnostic skills.

5.2.2.1 Sub-theme one summary

This subtheme illustrates that the main drivers for CNPs to have medical PAS is to respond to national policy directives, to shift the location of care from hospitals to the community. It also demonstrates participants' awareness of the need for medical PAS to meet the reorganisation of primary care services. Specialist and advanced community nurse practitioners need these skills to work with the long-term conditions model in primary care practice, or take on a leadership role to lead an aspect of service development.

5.2.3 Sub-theme 2: How do community nurse practitioners use medical PAS in primary care?

This sub-theme illustrates how specialist and nurse practitioners use medical PAS in a flexible manner to support GP services in primary care practices. It highlights how they vary medical PAS use to triage patients though the system, or complete episodes of care in the absence of a GP.

In this first example, the nurse practitioner illustrates how she uses medical PAS to triage patients in a Rapid Access Clinic (RAC). She identifies how her use of medical PAS in this context is transitory, depending on patients' needs on the day, especially for patients who request same day appointments only.

'patients that ring up in the morning I see them for an appointment and often I do not see them again and I put them into an appointment slot and it's not always in my RAC clinic, so sometimes my job is more assessing and signposting' {Nurse Practitioner.G1}

Her emphasis on 'appointment slots' suggests that her primary use of medical PAS in these clinics is to categorise and process patients by triaging them through the
system, to be seen by other healthcare professionals. This illustrates a perfunctory use of medical PAS with limited opportunity to provide continuity of care. By contrast, the following extract from a nurse practitioner illustrates the dual purpose of medical PAS in her role in a GP surgery. Although she uses the skills in a fragmentary manner on some occasions, she uses them on other occasions to complete episodes of care by doing home visits

'Like we do telephone triage in the Minor Ailments Units, but on a Monday and Tuesday I do the GP visits, and on them occasions I get much more time to be holistic with long-term conditions patients' {Nurse Practitioner. K1}

She describes how she standardises the use of medical PAS to give patients advice over the telephone, or ‘triage’ to the most appropriate healthcare professional. This suggests that her use of medical PAS in these situations is more time pressured and fragmented, based on minor ailments complaints. Then she describes how she uses medical PAS to extend the capacity of the GPs' role by carrying out ‘GP visits’ for designated patient groups with LTCs. She illustrates that she uses her medical PAS differently for this designated patient group because she is not time limited, and has more time to deliver person-centred care and treat these patients as individuals. Therefore, this extract highlights that time pressures and practice contexts influence the use of medical PAS in different ways. By contrast, another nurse practitioner illustrates how she uses medical PAS in her advanced practice role to carry out more specialised patient assessments in a GP surgery.

“I do ENT specialist practice so I would say that most patients in the GP surgery would come and see me rather than the GP. So I use ENT on a daily basis and I use and teach it as a specialist practitioner, so I use it a lot. I would say I use respiratory medical PAS a lot but I would use them all when needs must’ {Nurse Practitioner. J1}
Firstly, she illustrates that medical PAS knowledge complements her ENT specialist skills because both are an expectation of her advanced ‘specialist’ practice role. She describes that she is competent in the field of ENT specialist practice and uses the skills ‘a lot’ on a practical basis ‘daily’. She also suggests that she is confident to combine medical PAS/ENT and use a range of these skills together depending on patients’ particular requirements. Alternatively, she uses medical PAS in a routine and standardised way to assess patients with chest problems. This suggests that she has the ability to integrate her foundational medical PAS knowledge with her specialist ENT skills to undertake specialist and routine patient consultations. Therefore these findings suggest that she readily work in a specialist/generalist capacity to extend the scope of GP services in this surgery, where she is employed as a nurse practitioner. By contrast, another nurse practitioner illustrates that she uses medical PAS in a less specialised way, because her role in the GP surgery is to case manage patients with chronic illness conditions.

‘do Chronic Disease Clinics so I'm looking at Diabetes, high blood pressures, they have a lot of co morbidities and what I like about having the medical PAS is that if they are not feeling well they come in they have high blood sugars or a chest infection, they don't have to wait long, as the chronic disease clinic is quite a long consultation and you can see them and use these skills to reassure them’ (Nurse Practitioner.D1)

She describes that the main focus of her use of medical PAS is to monitor and evaluate progression of patients’ symptoms with established medical diagnoses of chronic illness conditions such as ‘Diabetes’. She suggests that she uses medical PAS flexibly with these patient groups because of the nature of their primary diagnosis. She clarifies that medical PAS are useful to evaluate symptom progression because these patients have complex symptoms, and need time to have their ‘blood sugars’ checked. She mentions the value of medical PAS to
communicate with patients her assessment findings to ‘reassure’ them if they feel anxious. She also illustrates the need for the practitioner to be perceptive to their levels of physical vulnerability if kept waiting and ‘not feeling very well’. Overall, she values the use of these skills, for the longer consultation to complete patients’ episodes of physical and psychological care, reducing the possibility of other professionals attending to their problems. Similarly, the community matron identifies that she uses medical PAS in a similar way to the previous nurse practitioner, and focuses her skills around a defined group of patients with other chronic illness such as chronic lung disease.

‘for COPD tends to be our main bread and butter, so the COPD is the area that we’re called on most because there isn’t anybody else to pick those patients up other than the GPs themselves, so we’re used as the eyes and the ears for the surgery to monitor those patients {Community Matron. MA}’

She explains that Respiratory medical PAS is her primary assessment activity to monitor and evaluate patients’ symptom progression. She suggests that she has to use medical PAS to work independently with this population groups ‘because there isn’t anybody else to pick those patients up’. This suggests that in the absence of her not having these skills to monitor those patients, the responsibility would rest with GPs. Therefore, the community matrons’ use of medical PAS for this population group is twofold; to systematically monitor patients’ respiratory disease progression and to extend the GPs’ capacity to monitor this patient group in their absence. This extract may also suggest that the use of medical PAS in sub-specialist manner, around primary patient groups with well-defined diagnoses, such as ‘COPD’ limits specialist nurses opportunities to work in a generalist capacity. Another community matron contradicts this view, and argues that she uses a range of medical PAS when caring for patients with LTCs. She illustrates similarities in her medical PAS use to the previous community matron example, but
argues the necessity of these skills for on-going monitoring purposes, to keep patients safe in the absence of GPs.

‘to do a neurological assessment, because it’s a degenerative condition where they lose sensation, to actually be able to monitor how that’s changing is quite handy. So it’s quite useful and because the condition can be variable if there’s another condition at the same time or if they’ve got an infection elsewhere, then it can also affect the neurological side of things and so you can pick up, if this part of the Charcot-Marie-Tooth or is it another condition that’s likely to come back to that level, and that’s the undifferentiated bit’ {Community Matron MM}

However, she states that she adapts her medical PAS use to suit the context of her patient group in primary care. She explains that even though the patient has a diagnosis of a single system disease, the progression of their symptoms is ‘variable’. She suggests the value of a range of skills to pick up ‘undifferentiated’ symptoms, which occur with disease progression. Therefore, community matrons’ use of medical PAS is selective to monitor and evaluate patients’ symptoms progression with a defined medical diagnosis. However, a range of medical PAS are required for assessment of patients with ‘degenerative conditions’ to monitor the changing boundaries of their chronic illness condition. This suggests that they are able to use the skills in a diagnostic manner. In comparison, the case manager (formerly a district nurse) illustrates how she is expected to use medical PAS as defined by her job role in the community

‘you see my role would be different because being case manager I wouldn’t necessarily go in and listen to somebody’s chest unless M..... away and they’ve requested they want a community nurse and I’d go in for ..... but mine is more sort of abdominal assessments, skin assessments if somebody’s got cellulites, being able to sort of diagnose cellulites and ask the GP for antibiotics’ {District Nurse. MG}

She views her role and responsibilities as a district nurse with medical PAS, to monitor patients for progression of symptoms, with a known diagnosis, in relation
to ‘abdominal assessments and skin assessments’. She identifies medical PAS of the respiratory system as a community matron role, unless required to do so in their absence. However, she states the importance of medical PAS to evaluate severity of changes to a patient’s condition, particularly in relation to skin assessments. This suggests that medical PAS findings enable her to achieve a clearer understanding of the patient’s problem, which she regards as important to report back to the GP, so that he can make a decision as to the appropriate intervention. This extract also suggests that a district nurse will extend her medical PAS use, subject to direction and requests from community matrons. This indicates that district nurses and community matrons work in close association with each other, to maintain comprehensive patient group assessments in each other’s absences. These approaches to medical PAS skills use for community matrons and district nurses (case managers) is confirmed by a clinical nurse specialist manager who funds medical PAS education for both specialities. This manager suggests that medical PAS use by district nurses is more generic and skills focussed, and community matrons’ use of medical PAS is specific to the care provision of patients with long-term conditions disease.

'I would say case managers use abdominal most and the matrons use the respiratory most, but as their manager I don’t know that for a fact but I hear them say that like COPD assessment and management they act as the nurse specialist in that field and I think with the Case managers they do a lot of everything but mainly with the problems linked to constipation, they are more likely to use the full Abdominal medical PAS for their assessment {Manager. J3}

The manager’s extract illustrates congruence with the findings from the previous two extracts, in that both nurse specialists are selective in their use of medical PAS. This manager clarifies that community matrons’ use of medical PAS sits within the ‘specialist’ practice continuum of community nursing practice, because
medical PAS expertise is contextually focussed around designated patient groups. On the other hand, the manager suggests that distinct nurses’ use of medical PAS sits within the specialist-generalist practice continuum of community nursing practice, because they do some specialist work, but mostly use them in a multi-task way.

5.2.3.1 Personalising Care

This sub-category theme illustrates the role of medical PAS to maintain continuity and quality of patients’ assessments, particularly those housebound patients with chronic illnesses in the community. This is influenced by CNPs having more access as first point of contact, and longer consultation times in comparison to GPs.

The first example from two nurse practitioners illustrates the importance of medical PAS to maintain continuity of assessment through telephone support. They suggest that telephone support offers a different method of contact for patients that do not require a formal consultation.

‘the lovely thing about primary care is that you get the chance to review the patient, even if it is with telephone conversation, so you can always get back to that patient even if there are other multidisciplinary issues by getting other team members involved’ {Nurse Practitioner. J1}

Also, if there are issues to follow up and the doctor has gone out and reported back to me ‘really not sure about this patient, I think they will need a follow up’ I will then telephone, for example a diabetic patient who is not well I can telephone and follow up that way. It allows us different methods of offering care, but you can still encompass the use of the physical assessment skills by knowing what to ask them on the telephone {Nurse Practitioner. D1}

Both nurse practitioners illustrate the importance of obtaining assessment information via telephone follow-up to maintain continuity for the patient with other
professionals over time. The use of medical PAS in this way ensures vulnerable patient groups with multiple co-morbidities stays in the community and that their needs are co-ordinated across disciplines of care. The use of a standardised medical PAS framework maintains continuity, in that each discipline will know ‘what to ask’ over the telephone which assists with the transferability of findings. In contrast, two GPs illustrate the importance of medical PAS specialist community nursing roles, to maintain standards of patients’ assessments, because they have more access to different population groups, who experience difficulties accessing appropriate and timely services

‘Community specialist nurses can effectively assess and manage chronic illness to provide consistent and accessible services to patients with chronic and acute disease’ (General Practitioner. T1)

‘Consistent approaches to maintain assessment standards, in terms of getting the correct services to the people when they need them’ (General Practitioner. J4)

Both GPs highlight the importance of medical PAS for CNPs’ work for patients with chronic illnesses in the community. They explain that consistency and standardisation of assessments of these patient groups are important, so that they receive the care and support they need when necessary. By contrast, a community matron places less emphasis on standardised approaches to assessments for patients with chronic illness conditions. She places emphasis on personalised approaches to patients’ assessments, tailored to their individual needs and circumstance.

‘Being more accessible to patients as the only point of contact to safeguard them because they require more frequent monitoring to evaluate their disease progression’ (Community Matron. MM)
This community matron explains that personalised care approaches means that this patient group know who to contact and when, so that they feel safe and cared for, throughout different phases of their illnesses. Similarly, a nurse practitioner working in the community with a specialist nursing team, identifies that she personalises the use of medical PAS from the bio-psycho-social perspective to advocate patients' needs, and champion their voice;

"buys more patient time for physical care' work closely' to look, listen, attend and talk when interacting with a patient, to understand their problem. I know better when they are in their exacerbations 'and what's their 'norm' for them because I supervise and work so closely with my patients and I know them so well, and act as an advocate for my patients it's given me that inward power for my patient, so acting as their voice and advocate for the very frail person or undereducated people in socially deprived area, they don't always know what they want to articulate, so we spend a lot of time together and getting to know them, better than the GPs would now these days" {Nurse Practitioner. V1}

This nurse practitioner suggests that medical PAS allows her to build a biography of patients' illness from the physical and personal perspectives over time. She validates the use of medical PAS using person-centred approaches by observing and responding to the patient's individual needs. She suggests that she uses these assessment opportunities to work closely and build a relationship with the patient. She then illustrates how she also uses medical PAS findings from the social and ethical perspectives, and mentions that she acts as the patient's 'advocate'. She defends the importance of this, and perceives frail patients' levels of vulnerability, because they are not always able to determine and express their preferences in a language that is understood. This nurse practitioner illustrates the value of medical PAS to understand the uniqueness of frail older individuals' physical and social problems. In this example, she uses medical PAS to reconcile the frail older patients' individual assessment needs, using a person-centred
approach, and shows a willingness to engage in their world as recipients of care as
a person. Similarly, a community matron in the following extract illustrates why a
patient-centred approach is important for ongoing assessments for patients with
chronic illnesses, who are managed in their own home. She demonstrates how
she uses her assessment findings to personalise the patient’s consultation, and
work with chronic illness patients to enable them to successfully manage their
symptoms to live a better quality of life

‘but that’s quite good because it demonstrates that he understands what’s
happening with his chest so I think it’s because you’ve had that relationship
where you can discuss each time anything that occurs, what’s going on
with the chest and then I think patient’s understanding actually what’s
wrong with them and what’s occurring gives them that confidence, it stops
that panic and I think one of the worst things must be that feeling of not
being able to breathe. So your understanding of the physiology of what’s
going on and how you can control it, to talk them through that and to
reiterate it on a regular basis until they’ve really grasped it and then know
that they can make a difference themselves and, you know and actually it
does sort of demonstrate that he had a better understanding of his
condition {Community Matron. MM]

Again, she uses this assessment opportunity to spend time getting to know the
patient to build a trusting relationship over time. She examines the importance of
the assessment focus to know patient and to judge their perceptions of their
norms, and what the patient feels and values. She suggests that she uses these
opportunities to promote patients' self-control of their physical symptoms by getting
them involved in setting their personal goals and for them to understand what their
symptoms mean. She illustrates that she does this by talking ‘them through and to
reiterate it’, until they have understood. She suggests the importance of her
assessment findings to encourage the patient to understand the progression of
symptoms and develop self-interest to manage their own condition. She suggests
that this allows the patient to develop an understanding of ‘what’s wrong with
them’, and to accept the limitations of their chronic illness and live a better quality of life. An advanced nurse practitioner, who works in a team supported by GPs, highlights that community matrons use medical PAS to make a difference to patients’ lives with chronic illness conditions.

‘They CMs will use the medical PAS much more intensively in these patients with heart failure and COPD and acute chronic diseases, so they may need to see these patients like I would ask them to spend more time with sitting down with the patients and their family in their own home and sorting things out to see how the patient is coping, whereas I can't give this patient this time here, so I refer this patient to her and she will use her medical PAS to assess this patient in this way, yea’ (Nurse Practitioner Supervisor. S2)

This nurse practitioner illustrates that community matrons need more time to use these skills well, for patients with chronic illness symptoms. She clarifies that community matrons ‘spend more time’ using medical PAS in different ways, because they work inclusively with the patient and family, and carers. She explains how she uses medical PAS as an opportunity to get to know the patient and their family to identify the patients ‘coping’ mechanism. Therefore this extract identifies that community matrons use medical PAS in a family centred way to deal with whole situations around the patients’ chronic illness management, but requires sufficient time to do it well. A clinical nurse specialist manager, who manages community matrons, places less emphasis on medical PAS for direct clinical care, and more about community matrons using their assessment findings to manage the social and functional requirements of patients with chronic illness.

‘Community matrons, they can arrange all sorts of things for them from the home, for example physiotherapists, occupational therapists and we can do that from here, within the proactive team they are all part of the team now. The fact that the patients will get treated much more quickly because there's a smoothening out effect of the treatment of the patient, so it seamless in that they don't have to see so many people and they do not
have to say the same thing over and over again' (Clinical Nurses Specialist. Manager. J3.)

She suggests the value of these skills for the co-ordinating function of the community matrons’ roles, to anticipate patients’ needs with other allied health professionals. This approach saves time, and they receive care in a timely manner which prevents a lack of repetitiveness of assessments by different healthcare professionals. The other advantage is that the patient does not have to repeat the nature of their problem to a multitude of people. Therefore, this extract demonstrates the benefit of medical PAS for community matron roles, to co-ordinate patients’ assessment needs, for a smoother care experience, delivered in their own home. However, a significant factor that enables her to do so, relates to longer times for patient consultations. The constraints associated with reduced contact time for seeing patients with LTCs at the GP surgery, is illustrated in the following extract from a nurse practitioner. She claims that reduced consultation time limits the level of engagement with patients who have chronic illnesses.

‘Well we have 10 minutes appointments and I just can’t do them all now in that time so I have split them into 6 minute appointments into 2 lots so I do an hour of booked and an hour and half appointments and another lot of booked, so it pressure from government, it’s targets, so the targets are a barrier to using the medical PAS to an extent, because some say “you will just have to come back and I will do a 20 minute appointment or something”. so they would have to re-book their appointments sometimes, which is something I do not do, hence I run late all the time and I do as much as I can in one consultation. I think the RCN said that all NPs should have 20 minute appointments but in reality we don’t, because of the pressures from the amount of patients we see I think. (Nurse Practitioner Supervisor. S2)

She describes the difficulties in working with national set targets in a GP surgery, as they do not take into account the complexities of patients with chronic health assessment needs and the time required to complete them. She suggests that
these targets are not a good measure of nursing workloads for patients with chronic illness. She provides an example in how she manages the reduced time for patients consultations with ‘10 minutes appointments and I just can't do them all now in that time so I have split them into 6 minute appointments. She identifies that she has to ‘re-schedule appointments because she cannot complete the consultation, or she has to work extra hours to ensure that patients' consultations are complete to avoid a recall at another time. She views this as difficult for the patient and for her as a practitioner, because it may curtail time to use all the necessary medical PAS, and consider other options for the patient. She also reflects on her professional requirements to give these patients a full consultation because ‘the RCN said that all NPs should have 20 minute appointments'; but this guidance conflicts with service demands due to a high patient caseload.

5.2.3.2 Diagnosing and Decision Making

This sub-category theme illustrates that some CNPs in primary care make diagnostic judgements to problem-solve patients' problems and make decisions in the absence of a GP. This first example by a GP illustrates that nurse practitioners are the most likely group of primary care nurses to make a diagnosis in the absence of a doctor. He explains how they use the same consultation approaches to gather health information from patients to make a diagnosis as would a physician. He suggests that their expertise in primary care lies in their ability to operate as a 'generalist', and to be able to make a diagnosis to complete episodes of care for patients with a wide range of problems.

'making a diagnosis, definitely the nurse practitioners do masses amount of diagnosis because they are managing a multitude of problems and they are diagnosing and managing that and they need medical PAS for that. They are doing exactly the same as GPs, using the same diagnostic judgement strategies, so I do think they are making diagnoses by taking the history, carrying out the examination and recognising new symptoms or an
This GP then illustrates how CNPs would use the same reasoning skills as GPs to make a diagnosis. He explains that they would gather the biography of patients’ illnesses to guide the nature of the physical exam, and then determine the nature of the patient’s presenting complaint. Similarly to a GP, they assimilate this information to determine an intervention ‘or refer on’ to another healthcare professional. A nurse practitioner, who works in a team supported by doctors in a GP surgery, illustrates the situational factors that influence a nurse’s ability to make a diagnosis.

‘lower back pain and you assess them, knee pain, shoulder pain, I’m not terribly confident with that, but I would do the history, be able to do a basic physical examination of the shoulder and tell something was wrong, but not able to diagnose, so would refer. I don’t feel I know enough in that area or I have not had the opportunity to practice’ {Nurse Practitioner. K1}

This nurse practitioner describes how she uses a rule based approach to structure the patient consultation to guide her initial judgement to hypothesise the nature of the patient’s problem, but not ‘to diagnose’. She highlights that her reason for not being able to make a diagnosis, relates to her confidence and competence, because she has not had opportunities to develop her clinical judgements skills to that level. In the next extract, the same nurse practitioner appears confident to make differential diagnosis based on her practice expertise for a patient with an urgent/acute health problem. Similarly to her previous extract, she describes that she uses the structure of the physical assessment framework to gather the patient’s history in the first instance, but then to make a diagnosis.

‘use medical PAS framework by taking the history, physically examining the child and doing a multi-systems approach around that child’s primary complaint, followed by a focussed clinical examination to formulate a
differentiated diagnosis. This reassures mums who are anxious about their children and they go away much happier rather than asking them to come back to see the GP’ (Nurse Practitioner. K1)

In this quote, she illustrates that she has a practical grasp of the nature of the patient’s problem from the outset, because of her knowledge of acute illness symptoms. She then describes the need to undertake a more focussed and systematic examination, to rule out other potential concerns. She ably assimilates this information to make a differential diagnosis, and a decision as to the patient’s problem. She suggests that the advantage of being able to do this, is that she is able to complete an episode of care, without input from another healthcare professional, or for the patient to wait for a GP appointment. This in turn increases patient/carers level of satisfaction. By comparison, a nurse practitioner illustrates in the next extract how she use her knowledge taxonomy of years working as an advanced nurse practitioner, to inform her decision making.

‘I have been in general practice for 25 years. I have worked at an advanced level for 10 years and so with my experience and experiential knowledge of what I have seen, so it is intuitive knowledge, sometimes I can’t tell you why I have reached that decision, but usually it’s the right one luckily. I know I am not a doctor, I know my boundaries and I know when my sixth sense comes in and you ask yourself “should I, shouldn’t I” then I would ask’ (Nurse Practitioner. S2)

This nurse practitioner suggests that she often makes her decisions based on her perceptive skills, because she is able to recognise patient’s problems quite quickly, related to years of expertise in her field. She indicates that she is less inclined to use a structured approach to inform her decisions, because she relies on her ‘sixth sense’. She demonstrates self-awareness by acknowledging her limitations and ‘boundaries’, by seeking advice on decisions outside the remit of her role. This approach differs to the following community matrons’ account of how she uses
medical PAS to make a decision about a patient. She appears to place emphasis on the patient experience and the biography of their illness to make a diagnosis.

‘but just to understand the basic structure of what their lungs look like and therefore if they’ve got a pain in a certain area what’s that likely to mean, is it significant or isn’t it. Quite often it is dependent on their ability to give you a clear history of what they’re experiencing. Obviously with the pain it’s down to them to tell us what they’re feeling but making them focus on, is it painful when they breathe in or is it painful when they breathe out or is it painful constantly, is it in a particular area or is it across the whole chest, is it likely to be muscular because they’ve been coughing a lot to try and clear mucus... so to be able to ask the right questions and get the right understanding of what they’re experiencing helps us and then it helps them to understand their own condition as well ’ {Community Matron. AM}

This community matron illustrates the importance of asking the patient to make a judgement about the severity of their symptoms, by getting them to understand the physical ‘structure of what their lungs look like’. She suggests that their ability to self-report changes to their condition is significant to determine a worsening of symptoms. However, she states that for the patient to do this well, they need to understand the nature of their symptoms; otherwise she may not ‘be able to ask the right questions’ to understand ‘what they’re experiencing’. This extract suggests that when patients know and understand their diagnosis, they can take a more active role in their treatment decisions. By contrast, a clinical nurse specialist manager highlights the value of medical PAS for community matrons to pick up unexplained symptoms for patients who are unknown in the health system. She identifies the advantage of these skills is to differentiate normal from abnormal symptoms so that patients can be treated more urgently.

'Yes, I think they use medical PAS for unknown patients so that they can report back to the Heart Disease Nurse Specialist, and the thing is it is much easier to report back if you know what you are reporting rather than saying “well he has got this funny thumping noise and he is not quite right and will you go and have a look” but if you tell them what it is they will probably make a decision to go and see that patient urgently or if it can wait
She explains that community nurses need to be able to use medical PAS to make appropriate diagnostic judgements to ‘report back’ accuracy of findings. Her medical PAS findings ensure that the patient gets referred to the most appropriate healthcare professional. She implies also that the community matrons’ clinical assessment findings require accuracy, to determine the urgency of her referral request.

5.2.3.3 Sub-theme summary

Advanced nurse practitioners use medical PAS in a generalist manner to make a diagnosis and complete episodes of care as a GP would do, across a range of healthcare environments in primary care. Specialist nurse practitioners use medical PAS to make diagnostic judgements with defined patient groups in areas of practice in primary care. They use these skills to complete episodes of care, which often reduces the need for input for other healthcare professionals. These approaches to medical PAS use ensures that continuity of care is maintained for designated patient groups, because CNPs are the first point of contact. They also have longer consultation times than GPs. Care becomes disjointed and less personalised when they do not have adequate time to carry out necessary assessments for patients with LTCs.

5.2.4 Overall summary of Theme one:

This theme illustrates that the main drivers for community nurse practitioners to use medical PAS relate to the shift in care from hospitals to the community.
All participants demonstrated awareness for medical PAS to meet the reorganisation of primary care work, in line with national directives to transform community care services.

CNPs need these skills to specialise within a specific context of primary care practice, or take on a leadership role to lead an aspect of service.

5.3 Theme 2 Negotiating the Boundaries

5.3.1 Introduction to the theme

This theme illustrates some of the underlying tensions around role shifts between disciplines in primary care. As illustrated in Theme one, the drive by national policy directives to shift care from the hospital to the community has led to changes to professional roles and responsibilities in primary care. To meet these policy objectives, primary care services have focussed on developing nursing roles with the right balance of skill mix and knowledge to deliver services more effectively, around the needs of patients. For these reasons CNPs work in new ways to perform tasks that were previously undertaken by another healthcare professional. Such occupational shifts have required CNPs to challenge entrenched professional boundaries around the use of skills such as medical PAS, particularly with GPs. Therefore, some of the key points which define this theme illustrate some of inter-occupational tensions with medical PAS use, for specialist and advanced nurse practitioners roles in primary care. These will be discussed under the following sub-themes.

5.3.2 Sub-theme 1: Negotiating Supervision boundaries in primary care

This sub-theme illustrates that for CNPs to develop medical PAS to align with that of a medical doctor, they have had to negotiate specialist supervision with GPs.
One of the main problems for CNPs was negotiating adequate supervision to develop their medical PAS competence. Negotiating supervision, especially with GPs often led to conflict and inter-occupational tensions between the two disciplines. To achieve a solution they have to be motivated and confident to challenge the need to develop medical PAS competence. There was less resistance by some GPs to undertaking supervision, when they had a better understanding of the expectations of the supervision process. As CNPs developed medical PAS competence, they gained the trust and respect of their medical colleagues, because they could use the same language to negotiate work boundaries.

This first extract by a nurse practitioner highlights the degree of resistance that can be experienced in the supervision process. She demonstrates that confidence is necessary to negotiate the boundaries of CNPs supervision in primary care.

"NPs have to strongly negotiate the boundaries of GP's supervision. I had to really force him and say 'look I need to work with you, I need to work alongside with you" it's a clinician’s work, a GP's work that I need to build on. I still needed to work with him and he found that quite difficult. When I get really stuck on something I kind of can say "well show me and tell me what you mean or show me where to look to find out about this' and I will do it". If that does not work I will say' well what are your thought processes now? What are you thinking now, so that I can put that into practice you really have to push it' {Nurse Practitioner. D1}

This nurse practitioner explains that for her to use medical PAS in a competent manner in the future she needs to learn 'a GP's work'. She considers that she has no other option but to negotiate medical PAS supervision and stresses need to work ‘alongside’ this GP, so that she is competent to use medical PAS in the long-term. She describes the resistance she experiences because she has to be confident and motivated to encourage him to ‘show’ her what he means and ‘show’ her what to do. The GPs resistance to provide adequate supervision may relate to
an encroachment of domain knowledge. Another nurse practitioner supported by a
team of GPs in a surgery, experiences similar resistance to her medical PAS
competence development initially. However, time and familiarity with each other’s’
roles and expectations led to a positive student/supervisor relationship. She
highlights, that the initial stages of supervision were difficult because the GP
supervisor was uncertain as to how engage with the process.

‘we clashed a little bit...‘dancing around each other, wondering... because
we did not know each other...got to know each other, he turned out to be a
really good teacher, ‘like he will now say I want you to start leading the
consultation, if there's anything glaring I will not interject but will not put you
in a situation make you feel uncomfortable. When we discuss anything, we
do it when patient goes, that's when we discuss things’ {Nurse Practitioner.
J1}

This degree of uncertainty is evident in her descriptions of ‘clashing and dancing
around each other’, which suggests that he is initially uncomfortable in her
presence because they had not worked together previously. They appear to
resolve each other's tensions by getting to know each other and learning to
negotiate each other’s role boundaries. Tensions resolve as they work together,
and the GP gets to know her expectations. This is evident when he asks her to
‘lead the consultation’. He respects her newness to medical PAS development
when he suggests that she is not put in a situation where she feels out of her
depth. He negotiates feedback on her performance at the close of the patient
consultation. Therefore, this extract shows that the supervision process creates
inter-occupational tensions when professional role boundaries are not well
understood. However, inter-occupational tensions are less of an issue when the
supervision expectations are negotiated with GPs prior to nurse practitioners
undertaking medical PAS education. However, this extract illustrates that
supervision works well through mutual agreements, understanding and compromise.

'I had worked with him for many years and I asked him if he could very kindly help me and I helped him in return. He let me run some of his clinics towards the end by building rapport and negotiating the supervision process' [Nurse Practitioner. V1.]

This nurse practitioner illustrates that the boundaries of her supervision were negotiated with the GP, based on her level of capability and competence in return for his time. She demonstrates a trade-off arrangement when she mentions that she has to undertake some aspect of GP work. This suggests that getting to know the GP supervisor prior to medical PAS supervision is essential to a more positive learning experience. It also highlights the benefits for GPs to invest time in the supervision process, as nurse practitioners with these skills can supplement their workload. By contrast, a nurse educator illustrates her anxieties when experienced medical supervisors carry out supervision in a perfunctory manner. It appears that if the supervisor negotiates the boundaries of the supervision from the outset, it can limit opportunities to build a student/supervisor relationship, or time to negotiate students' expectations.

'the doctor would ask, what are you going to do about that finding, what's going to happen, why is that important, you've told me all these different findings, which is most important? I found that helpful but it was very much medical findings' [Case. 4. NE. JH]

This nurse educator describes how this supervisor based his supervision expectations on medical practitioner role, when supervising medical PAS competence. She illustrates that the supervisor requires her to have knowledge of the reasoning theories that underpin medical PAS use for medical practice. This is demonstrated in his approach to questioning, by probing the student to
hypothesise the nature of the patient’s problem. Alternatively, this approach to the supervisor’s questioning could be viewed in a positive light, in that he/she is motivated enough to challenge the students ability to think critically. Although, the extract shows that supervision process appears based on medical practitioners’ frame of thinking and reasoning, where medical PAS use are directed towards medical diagnoses. This extract therefore shows that the supervision process is domain driven, as opposed to focussing on the development of medical PAS for alternative ways of working for nurses. The following extract demonstrates the opposite, in that supervision process can be negotiated in ways that create conditions for a better understanding of each other’s roles and expectations. For example, a nurse practitioner, who works in a GP surgery, demonstrates that collegiality and respect between occupational disciplines is encouraged through a team approach to medical PAS supervision

'I have been work here for in excess of 10 years and the doctors here are brilliant at negotiating but you have to wait until they are finished their patients, but I am the same with the Diabetic patients, they will say “can you come in”? And then they have to wait, so we really work well as a team and you will not survive this job without it’ {Nurse Practitioner S2.}

This nurse practitioner suggests that for this to work effectively each discipline needs to respect each other's professional boundaries in the supervision process. She illustrates how she negotiates her own personal supervision on the basis of mutual discussion and shared understanding to problem solve with ‘doctors’. She suggests that the basis for good team supervision is good team working. In her next extract she identifies the limitations of one-to-one supervision and indicates that the student has to take on greater levels of responsibility to ensure that they get the appropriate supervision. For example, she reflects on how she undertakes
one-to-one medical PAS supervision, with the expectation that the student is mature, well able to negotiate and take the lead for their learning.

‘My role is here to facilitate their learning in advancing their knowledge and medical PAS and not there to do it for them’ (Nurse Practitioner. S1).

She highlights her expectations of the supervision relationship from the outset, when she states that her role in the supervision process is to facilitate learning, therefore students need to be proactive as to how they want to manage this process. This suggests that experienced supervisors drive the supervision agenda and negotiate the ground rules from the outset. This approach appears to create less room for inter-disciplinary tensions. This may occur because the levels of personal engagement are limited, and opportunities to know and respect each other’s roles appear less important to the supervision process. Other CNPs adopt similar supervision styles and make similar arrangements when undertaking district nurses medical PAS assessments.

‘Negotiating and forward planning that works both ways, because one day you will come out with me’ (Community Matron. MM)

This community matron illustrates that students require a high level of motivation to negotiate and organise the supervision process. She suggests that the supervision relationships between the same occupational disciplines have less behavioural tensions, because they are familiar with boundaries of their roles. Tensions may also be less because they negotiate supervision time around their personal workloads. The attitudes and values of nurse managers, who sponsor students to undertake medical PAS education, do not differ remarkably from nurse supervisors. They illustrate that the responsibility for appropriate supervision, rests solely with the student
‘PAS students negotiate supervision time, identify appropriate placements for assessments and create their own learning opportunities’ (Nurse Manager JB1)

“she looked tired and stressed and was always working, but she is very motivated’ (Nurse Manager KH)

Two managers views on student supervision process to develop medical PAS, is that it is entirely down to the student levels of personal interest to develop their competence. The quote suggests that students have to take full responsibility for organising learning opportunities, and extra placement experiences outside individual working areas. This extract also illustrates perhaps, that managers may be unaware of the inter-occupational tensions students may experience when negotiating medical PAS supervision. The second manager demonstrates some insight as to the level of personal stress the student experiences whilst undertaking medical PAS competence. She notices that the student ‘looked tired and stressed and was always working’. She justifies the student’s commitment to undertaking medical PAS competence as perhaps altruistic, but recognises that the student needs to be highly motivated to develop her medical PAS competence.

The third manager illustrates more insight as to the stresses students experience in negotiating adequate supervision, perhaps because she works in clinical practice on a weekly basis.

‘team supervision at weekly case meetings and the student can present the patient case’ or negotiate joint visits arranged by the student and GP to provide GP verification’ (Nurse Manager LA)

She examines different ways students can be creative in achieving adequate supervision within their own specialist areas, by thinking laterally. She identifies that medical PAS competence can be developed with proactive approaches to team supervision, and by CNPs organising and negotiating joint home visits with
GPs. Alternatively they can involve patients who are willing to take part in routine assessments, as illustrated by a nurse practitioner.

'negotiating assessment with patients and respecting their boundaries, time and place with student for medical PAS assessment. Needless to say I ask the patients' permission first as obviously it's quite invasive as it's a learner doing it and we book out a little bit more time' (Nurse Practitioner. V1)

She suggests that patients can play an active role in the supervision process. She considers this approach as favourable because 'assessment with patients' can be arranged by the student if the patient voluntarily consents. This suggests the importance of the service user involvement in the supervision process for medical PAS competence development.

5.3.2.1 Sub-theme summary:

The development of common sets of assessments skills between disciplines can create inter-occupational tensions, especially when one disciple supervises the other. Opportunities for conflict are less when each discipline has knowledge and understanding of each other's role boundaries and expectations throughout the supervision process. Students play an active role in the negotiation of appropriate supervision for medical PAS competence. They need to be motivated, self-assured and able to manage their own learning outcomes.

5.3.3 Sub-theme 2: Role boundary perceptions to the use of medical PAS language in primary care

This sub-theme illustrates how the use of the language of physical assessment enables community nurse practitioners to engage with GPs in collegiate ways to manage primary care workloads. Working with medical PAS language in this way gains medical colleagues' trust and respect which deliver consistent approaches to
patient assessment across teams. The use of the same language encourages equality between teams and can minimise interdisciplinary conflict. However, this sub-theme also shows that not all GPs readily accept CNPs’ use of medical PAS language, because it sits within the disciplinary domain of medical practice.

In this first extract below, the GP expresses the view that engagement, respect and trust in assessment practices between disciplines in primary care provides the best care for patients. He suggests that when disciplines have common sets of assessment skills and language it harmonises teamwork, because each discipline has an understanding of what the other is doing.

'I like an element of medicine there’s the realisation that actually the best care is given to patients when everybody gives respect to what everyone else is doing and the different skills and roles and everyone needs to contribute. I think it improves your own skill set and your ability to work and the service you deliver because there’s more consistency in what you are doing and there’s just that natural thing of talking to each other and finding out and sharing of experiences and respecting each other' {Case1.GP.T1}

This GP suggests the practical use of common assessment language to maintain ‘consistency’ in assessment practices between teams, which benefits patients. He highlights that for this to work, individual disciplines need to work interdependently, but simultaneously take responsibility for their own assessment actions. Another GP builds on this argument and illustrates that the language of medical PAS not only maintains consistent assessment approaches, but each discipline can choose to integrate it into their professional practices, which benefits patients and teams.

'I took a gentleman out of hours who was having rigours; I had a chat with the nurse practitioner I said "I saw this chap could you check that he is ok today? So she was using her medical PAS and was equally proficient in assessment as I. She has a wealth of information if I need to ask her anything' {General Practitioner. S1}
This GP provides an example of the benefits of a common assessment language for different professional groups. In this instance he evaluates that the nurse practitioner was just as capable of using medical PAS in the same way he would as a medical doctor. This collegial approach to medical PAS use illuminates the importance of a shared approach to the patients’ assessments, rather than one discipline individualising ownership of the patient’s problem. A nurse practitioner takes a different view, and places less emphasis on medical PAS language. She focuses more on the complementary nature of similar assessment skills to work more effectively as a team.

*I think we all work in teams and it's about those bits of knowledge in the team that complement each other*’ (Nurse Practitioner. S3)

She illustrates her views when she refers to how aspects of medical PAS knowledge complement interdisciplinary ways of working. A GP follows through the nurse practitioner’s argument, and states the precise benefits of interdisciplinary knowledge for teamwork.

'*As I said there's an understanding that everyone has something to contribute and everyone has different skills sets. Education plays an important role in teamwork. I think overall in what we are taught now there's so much more of a multidisciplinary team work to everything so learning and education and all these things go very much hand in hand and learning together*’ (General Practitioner. S1)

Similarly, this GP demonstrates the collective benefits of sharing of common sets of knowledge and skills for teamwork. However his views differ in that he focuses more on the benefits of interdisciplinary education. He suggests that interdisciplinary education enables different disciplines to understand what each other have to ‘contribute’ to enhance competencies and capabilities around the needs of patients. These views are echoed by another GP in the following extract,
who illustrates the necessity for interdisciplinary foundational knowledge and competencies because of changes to professional roles and expectations.

‘in terms of education there’s a realisation in terms of actually there’s no point in educating 100 GPs about diabetes without educating nurses, GPs don’t know what to do with that information, they don’t see these patients anymore. Honestly there is a realisation that there is a much more interdisciplinary feel about it. A lot of the time the doctors will know that the nurses know just as much, maybe more than the GP will know. As a GP you feel very much on par with your colleagues and appreciate your boundaries, similar to the way doctors and nurses learn medical PAS in primary care much more ‘even footing and less distinctions’ {General Practitioner. T1}

For example, this GP mentions that CNPs require similar assessment skills and knowledge of chronic diseases as GPs, because LTC management is CNPs’ primary remit. He views this in a positive light, because it creates a much more contemporary way of working. He suggests that GPs respect and value the fact that CNPs are educated to their level of knowledge in these domains. His extract suggests the necessity for interdisciplinary foundational knowledge to underpin primary care practice. These approaches to education suit primary care service needs, because it encourages equality and reduces role conflict between professionals

Despite the positive views of some GPs on the benefits of interdisciplinary education for primary care, the following extract from a community matron illustrates a different set of dynamics played out between GPs and specialist nurses working in the community. It illustrates that some GPs’ attitudes remain indifferent to the development of interdisciplinary assessment knowledge and competence in primary care, because conflict and role boundary defensiveness is often evident at the front line of practice
'It’s also how you describe the symptoms to the doctor because some doctors absolutely hate it that nurses can actually do this and you’ll find if you go in and say, well it’s very typical of cellulitis, you’re not actually saying it is cellulitis, you know it is but if you go in and say, "well actually it’s very typical of cellulitis" they’ll probably accept it more than you going in guns blazing and say, "well he’s got raging cellulites, needs antibiotics", blah-blah-blah so if you have to do .. you do it sort of softly-softly’ (Community Matron. MM)

This community matron illustrates that to gain GPs’ trust and respect for medical PAS assessment findings; she must attempt to do so in an agreeable manner. Her extract suggests that she has to act cautiously to communicate her assessment findings without appearing to make a diagnosis, because ‘some doctors’ feel threatened that nurses are able to diagnose and make decisions, in an equally competent way. She is aware that she has to use the language of medical PAS in a non-diagnostic manner, when describing her assessment findings to a GP. She demonstrates this in the way she communicates her assessment findings, such as ‘well it’s very typical of cellulitis; you’re not actually saying it is cellulitis’. This suggests that she avoids using medical PAS language in this way that may cause role boundary disagreements. For these reasons she communicates her findings in a meaningful but medical passive manner, to subtly prompt the GP for an anticipatory diagnosis, as opposed to stating the diagnosis. For example she uses words like ‘typical of’ as opposed to ‘it is’, making it appear that the final diagnosis was initiated by the GP. However, this may also suggest that the community matron may lack confidence to be challenged, or justify her diagnosis, hence her subtle mode of communication with this GP. Another typical example can be viewed in the following extract from another community matron, but her attitude differs in relation to her professional role boundary as a specialist nurse. Her extract suggests that she uses medical PAS knowledge to emphasise the
boundaries of her professional practice, and that she is capable of understanding and using this language equally as well as the GP.

'I think that we should take professional pride in the fact that we are able to do a physical assessment and present our finding as, you know, skin feels palpable, erythema is present and that is the diagnosis, rather than saying 'oh it's a bit hot and sticky, a bit red, you know, they're pyrexial. You have to say well they've got crackles and saying where they are, whether inspiratory or on expiration, and to talk in medical terms irrespective as to what they think' (Community Matron AM)

This community matron demonstrates confidence, authority and competence in her professional practice role in primary care. She identifies that it is not her concern to adjust her assessment language to communicate in a manner that is of interest to the GP. She defends RNs rights to use this assessment language because it benefits patients and nurses because they are able to understand and communicate assessment findings more clearly. This extract also illustrates that she is in command of her own clinical judgements and for these reason she is not be keen to pay deference to GPs’ role boundary defensiveness in relation to her use of medical PAS to make a diagnosis. This was a typical attitude also of nurse educators, when challenged as to the position of medical PAS for community nursing work. These attitudes will be examined in the next sub-theme ‘competence and confidence’

5.3.4 Sub-theme 3 Competence and Confidence

A nurse educator suggests that community nurse practitioners need to align their assessment skills to that of GPs. She argues that they need to be confident and competent with the use of medical PAS language to take joint responsibility for patients’ physical health problems in primary care.
’to work inter-professionally from the interconnecting aspects, because we’re not standalone as nurse professionals anymore. medical PAS not just about the individual nurse being able to self-select themselves to broaden their knowledge base not just for practice and individual personal development, but for that the vision of nursing or vision of working from multidisciplinary perspectives’ {Nurse Educator. H1}

The nurse educator suggests that medical PAS offers community nurses opportunities to professionalise their roles, because medical PAS competence is necessary for the future vision of community nursing work. She proposes that community nurses should use medical PAS language to their advantage, to become familiar with the expertise and boundaries of other roles to work collaboratively. She indicates the negative effects of individual approaches to medical PAS education because it may only serve as an exclusion strategy to protect and demarcate individual community nursing boundary roles, and advises that this may thwart their efforts ‘to work inter-professionally’ in the long-term. Another nurse educator argues this point further in the extract below, and states that CNPs will need to demonstrate competence and confidence in the use of medical PAS, because it is now ‘normalised’ to community nursing documentation.

‘it has changed, become more normalized for a nurse to be doing physical assessment. Now that medical PAS is in the nursing assessment documentation it’s expected that you will at some point listen to the heart sounds and you will make a decision and it may well affect the patient outcome and there is an expectation that you will do that, so it’s the expectation, its back to professional responsibility, it’s your responsibility as a nurse, {Nurse Educator H2}

This nurse educator illustrates the level of clinical accountability with medical PAS use, as this assessment framework is normally used by doctors to make treatment decisions that ‘may well affect the patient outcome’. She illustrates this more clearly in her next extract when she suggests that proficient use of medical PAS requires higher levels of confidence and competence.
If you’re interested in patient care and getting it right then you’re going to want to make sure you are confident and competent, if you have less concern about the other then what does it matter if I fudge it, but if I rely on someone else, someone else will….well a doctor will do it, they’ve trained long enough, they must have the skills and I’ll leave it to the doctor’ {Nurse Educator. H2}

She suggests that when CNPs do not demonstrate confidence and competence, they are more inclined to ‘fudge it’ or stall assessment decisions and most likely to leave it to the doctor. Therefore, this extract suggests that medical PAS competence aligns with higher levels of professional responsibility to ensure accuracy of assessment findings. These views are typical in the following two GP extracts, who suggest that nurses physical assessment practices in primary care requires confidence and competence to act safely and responsibly. They suggest that a nurse practitioner be individually accountable for their assessment decisions as a GP would be.

‘nurses need to know what they are doing and what they are talking about and if they carry out the physical examination in the same way the GP would traditionally have done {General Practitioner. T1}

‘need to take responsibility for what they are doing if can’t make decisions no point in medical PAS like decisions related to findings and taking responsibility for that, otherwise she is shifting responsibility and handing over’ to doctors to make the final decisions’ {General Practitioner S1}.

These GPs refers to the levels of ‘responsibility’ associated with medical PAS use for community nurse practitioners. Again they highlight the need for competence and capability when using medical PAS. As one GP suggests, the problem with not assuming responsibility for assessment findings, is that it may be misinterpreted as not being competent or capable to use these skills in the first instance. This suggests that medical PAS use requires higher levels of professional accountability in relation to clinical decision making in practice. A
nurse practitioner agrees with the GPs’ views, and states that competent assessment practices are linked to advanced nurse practitioners’ professional role expectations. She illustrates that nurse practitioners who work in advanced practice roles are very much aware of competencies required with medical PAS use, within the boundaries of their professional practice, hence the need for further medical PAS education.

‘it’s a big responsibility, need to be motivated and a special type of personality, but we need regular updates on medical PAS learning as it’s an individual responsibility, it’s your call, your responsibility as a nurse practitioner’ (Nurse Practitioner. G1)

Her extract suggests that it is nurse practitioners’ professional ‘responsibility’ to maintain proficiency in medical PAS assessment practices over the duration. Therefore, this extract suggests that nurse practitioners attach an expectancy value to the use of these skills for the advanced practice roles.

Memo: In the focus group discussion, and from the notes in my reflective diary, I noted how nurse practitioners were confident and competent to use the full range of these skills, to suit different patient needs and contexts. I also noted that at least three in the group were intrinsically motivated to seek out challenging medical PAS activities such as ENT and sexual health competence outside the scope of their present role. They believed that these additional medical PAS activities were useful for their roles, their patients and the team they worked with. They described how they enjoyed using these skills and valued them, by positively discussing the ways that they used them to make decisions. They described the importance of being motivated to maintain procedural medical PAS competence, to fit with future plans in undertaking modules such as Independent Nurse Prescribing and for the long-term vision of developing the service. The nurse practitioners’ views were in
direct contrast to community matrons’ use of medical PAS to make clinical decisions. This community matron describes her anxieties related to the development of competence in specialist roles in the community

‘need to have conviction in yourself’ to use these skills confidently and competently in practice to interpret properly assessment findings to safeguard patients. It’s about preparing yourself psychologically and around recognising your own personal limitations as well, isn’t it, okay we’ve done the course but we need to recognise from a professional point of view that if we don’t feel confident to do something then there’s the risk of making an error in what it is that you’re looking at so it’s discussing it with someone who is more au fait with that system that you’re talking about. {Community Matron. MM}

She expresses concerns regarding the use of medical PAS in practice in line with specialist practice levels of accountability. She suggest that specialist community nurses should prepare themselves ‘psychologically ‘for the levels of responsibility in the use of medical PAS for making clinical decisions. She stresses that the specialist practitioner works within the remit of their professional expectations, and not to take risks to interpret assessment findings incorrectly that would not safeguard patients.

This may relate to the fact that the margin for error is higher as they often work alone in primary care. This specialist practitioner’s view is to always ensure that the patient is safe, and if unsure to consult with a more experienced healthcare professional. This suggests that specialist practitioner’s readiness to use medical PAS confidently and competently, is motivated by safe practice, and willingness to take responsibility for not assuming medical PAS assessment findings, when it is not safe to do so.
5.3.5 Overall summary of Theme two:

To manage primary care workloads there is the need for interdisciplinary education to enhance core competencies and capabilities, and work in a more contemporary manner, to meet the needs of patients. Interdisciplinary education and supervision can create inter-occupational tensions, unless each discipline understands each other role boundaries and expectations. The development of core competences between community nurse practitioners and GPs can assist with breaking down professional boundaries, and can make an overall contribution to patient outcomes. For this to happen, CNPs need to be professionally accountable for their decisions, because failure to do so may lead to further role boundary tensions between GPs.

5.4 Theme three: Facilitators and barriers to medical PAS use in practice

5.4.1 Introduction to theme

This theme identifies the facilitators and barriers to medical PAS use in practice. One of the main facilitators of medical PAS use in practice is that CNPs are able to understand the language of medical PAS to make clinical judgements to inform their assessment decisions. This is enhanced by a theoretical understanding of the principles of the terminology and language of medical PAS to communicate patients' assessment findings across primary care teams. Other facilitating factors are CNPs' professional attitudes to the use of medical PAS in practice to benefit patient outcomes.

The main barriers to medical PAS use in practice are CNPs’ lack of foundational knowledge of physical health sciences, related to the theoretical concepts of physical assessment practices. This is compounded by Universities’ approaches to medical PAS education and academic assessment constraints. Other barriers
are CNPs' lack of understanding of how medical PAS links to their specialist role requirements. Specific barriers to medical PAS competence are the physical challenges of workplace environments.

5.4.2 Sub-theme one- Facilitators to medical PAS use in practice

The following extract from a nurse educator illustrates that the terminology of medical PAS is a common language used in healthcare practices by doctors, nurses and allied healthcare professionals. She identifies that nurses use a similar language to report significant changes to patients' physical health to doctors:

'I have this sense that these are words (PAS) that doctors use, these are words that physiotherapists use, these are words that nurses use, and actually we’re all doing very similar things with assessment, so actually why can’t it just be a part of everybody’s vocabulary and if that’s the language that medical doctors understand whether it’s the outreach nurse or the doctor or whatever, it’s language that people use. For example when identifying the abnormality by picking up the phone, making that call, it’s the language they use {Nurse Educator. K1}

This extract highlights the positive benefits of using a common assessment language to provide transparency of information between disciplines. The nurse educator describes the importance of understanding assessment terminology to communicate information when a patient's condition warrants advice. She mentions that this terminology is widely understood by specialist nursing teams such as 'outreach', so using the same language facilitates better information flows across primary and secondary care teams. By contrast, another nurse educator identifies some problems associated with not being able to understand medical PAS terminology when communicating assessment information:

'some nurses are afraid to use the proper medical terms but rather than just saying you have dodgy knee, well actually they could use medical PAS to explain in a way that is understood when they pick up the phone and call
This nurse educator suggests that RNs are not keen to articulate patients’ assessment data using *medical terms*, because it identifies with the work of doctors as opposed to nursing practice. She proposes that not using this assessment language may create professional barriers to developing RNs assessment practices, and effective communication skills with other disciplines. She justifies nurses’ vulnerability in using medical PAS terminology because they may not use it well, or because they are afraid of making an inaccurate diagnosis. This nurse educators then goes on to say, that when nurses learn medical PAS they become comfortable in using this language to explain patients’ problems. She suggests however, that this is big shift in their thinking, because prior to medical PAS education nurses would not view a medical diagnosis as their remit, because they would be accepting additional responsibilities outside their nursing roles. She then clarifies that the use of the medical PAS terminology is not just about making a medical diagnosis, but more about using the language to communicate patients’ assessment findings. For example, she identifies that nurses can use the words to *explain patients’* symptoms and have clear reasons to consult with a doctor, rather than thinking that the patients’ diagnosis is not their responsibility. This view is supported by another nurse educator, who describes the advantage of nurses understanding medical PAS terminology, because they already engage in medical PAS diagnostic work in practice.

*if you’re diagnosing that somebody has dehydration that to me that’s still a diagnosis. I’ve never learnt that a diagnosis is medical, like I’m not going to say that is a lung cancer because of my nursing, so yeah, I’ve never shied away from that as a diagnosis because that was already part of my identity,*
Typical to the previous nurse educators' view, she identifies the importance of medical PAS terminology to report a disruption to a patient's physiological status such as 'diagnosing that somebody is dehydrated'. Similarly to the previous nurse educator, she suggests that nurses may be uncomfortable with the terminology of medical PAS, because they view the language as not being part of their professional knowledge base. She describes resistance to the use of medical PAS terminology because of how it is viewed in UK healthcare nursing practice, because it does not identify with their professional boundary role work. Therefore, this extract summarises that nurses can resist using medical PAS terms, mainly because it would identify them as something they are not, however the use of the language can give them confidence to understand patients diagnosis in the context of their practice

'It's confidence, like, you've already got lots of history taking skills, you haven't necessarily had this level of physical assessment but your decision may not be that different than before, but for a lot of nurses it's giving them the confidence when they didn't have confidence before, and it's giving them the language when they didn't have the language before, rather than just avoiding the whole situation altogether' {Nurse educator. K1}

She provides examples of two different forms of practice knowledge such 'history taking skills and decision making'. She then describes how the use of such language gives the nurses more confidence to raise problems and challenge medical decisions, because they are able to engage with medical doctors on their terms. This approach helps nurses to engage with doctors in different ways, rather than thinking the patient's problem is the doctors remit, as they may have done prior to medical PAS education. Another nurse educator describes the advantage of medical PAS language for nurses to engage more holistically with patients
'through its application for patient care and I use the physical assessment skills actively in patient care. I would say there is a strong motivator for nurses. I think also what’s helpful is that medical PAS re-enforces how to communicate with patients, it’s clinically focused when you assess a person but actually in order to get them to move to do what you want them to do you have to have good communication skills I think, that’s a good benefit regardless of what finding you have {Nurse Educator. M1}

She suggests that medical PAS language offers nurses the scope to provide better nurse-patient interactions, and engage in more holistic ways. She identifies that familiarity with medical PAS language enables the nurse to communicate instructions clearly, by asking the patient to carry out a movement that is understood by them. She views the use of the medical PAS terms in this way as beneficial to patients, regardless of other factors pertaining to medical PAS use. The previous nurse educator follows this argument through when she reassures students that they are already using many aspects of physical assessment in the holistic ways for patients they care for.

‘and I value inspection actually, because I think that takes us back to basics and I think I often at the beginning of my sessions about how you could tell if a person’s got heart disease just by looking at them, they become quite fascinated by that. And I also like the idea of laying your hands on the patient and actually touching them. One of the first things I teach to them when they start their exam is to shake hands with your patient, which appears to be just a polite move, but it’s of course its founded in a lot of principles of physical examination’ {Nurse Educator K1}

She clarifies this further and suggests that they use simple concepts of medical PAS such as ‘inspection’ and ‘looking’ and ‘touch’, in their everyday nursing practice. She identifies a clinical case to propose how medical PAS assessment practices are already identifiable in the work they do, in caring for patients with ‘heart failure’. Therefore these extracts highlight that not all medical PAS terms are complicated, and that aspects such as inspection, observation and palpation, identify with the assessment language of the nursing processes framework.
However, the following extract from a nurse practitioner illustrates a different view to the nurse educator. She states that the framework that underpins medical PAS is more formalised in workplace environments to gather health assessment information and make a diagnosis.

‘provides structure and consistency. I use the same IPPA structure for physical skills assessment to cover all the basics and you know where to begin and end with this structure, it keeps you framed so you don’t miss anything’ {Nurse Practitioner. S2}

She suggests that the structure of the medical PAS framework is logical which helps to gather health information in a detailed and structured manner, because it helps to ensure that nothing is missed. This view is supported by another nurse practitioner in the following extract, who illustrates the importance of the medical PAS framework to report assessment findings and make decisions. She describes in her extract below how she uses the medical PAS structure to manage the patient’s problem. Initially she used the skill of inspection to identify that her patient did not look well, in her description of ‘someone who’s a bit blue’

‘it goes back to that intuitive bit does it not, like you see someone who’s a bit blue, but now you would use the IPPA framework to report it. I always on my note taking put, on examination, inspection, palpation, percussion and auscultation to frame, write up and report the findings. At the end of that, I pull it all together and I write a differential diagnosis, plan of action and then to report if I have prescribed anything’ {Nurse Practitioner. V1}

She then describes how she uses the medical PAS framework to gather more detailed clinical information to determine the potential cause of the patient’s problem. She states that this information helps her to assimilate information to inform the diagnosis and management plan for the patient. She illustrates the importance of the medical PAS structured assessment format to document her findings for patients’ sake as well as other teams. Therefore this extract illustrates
that she uses the skill of inspection to rapidly determine the need to gather objective data. The other three components, palpation, percussion and auscultation, enable the search for more explicit information to analyse the patient’s problem, and to report and share this knowledge with others. The same nurse practitioner goes on to describe the benefit of this approach for community nursing practice, to provide transferability of patient assessment information between disciplines.

‘I leave my notes at the patient’s house and if you were a specialist practitioner coming in behind me, say the heart failure nurse or whatever, you would be able to see what I exactly had done that day and then you would be able to look at what that person was like on that day I was there and what you are looking at today. So you are able to compare and contrast consistently’ (Nurse Practitioner V1.)

This nurse practitioner illustrates how medical PAS framework enables assessment information to be presented more accurately other healthcare professionals. She considers this as important for other disciplines to make consistent judgements when patient’s condition change. This suggests that gathering physical assessment information, thorough a structured framework using common terms, provides a consistent approach to evaluating changes to patients’ condition over time. This view was confirmed by a GP in the following extract, who clarified the importance of medical PAS language for his decision making and patient management.

‘Well my feeling is that the language is important in medicine because it’s very precise actually and the physical assessment skills, well one example of that is actually it affects management as you need to be using and we all need to be using the correct terminology because if we are not it can cause confusion and one example of that is like listening to someone chest and you might think they are having a chest infection; well have they got a lower respiratory tract infection or a bronchitis or a pneumonia or exacerbation of COPD, so what is going on? So their management will be dictated by that language’ (General Practitioner T1)
His view differs to the nurse practitioner in that he focuses more on the meta-cognitive processes that underpin the language of medical PAS for medical practice. He illustrates the importance of precision of medical PAS language to inform decision making and the actions to be taken on behalf of the patient. He suggests that the medical PAS framework is used to standardise patients' routine assessments using the correct terminology, irrespective of context of the clinical situation. He suggests that this is necessary because the precise use of medical PAS language underpins medical diagnoses which serve to avoid inconsistency, especially if the clinical situation is ambiguous. He describes that the precise language of medical PAS guides the assessor, even if they have to modify their thought processes midstream, to re-evaluate findings with the patient. He illustrates that the nature of patients' problems needs explanation using precise terms. The reason for this is because the course of action needs to be understood by disciplines collectively, because patients' management decisions will be informed by ‘that language’. The importance of medical PAS language for defining management decisions was also recognised by the nurse practitioner.

‘better knowledge and understanding of what is going on and I have better clinical reasoning skills. I am able to actually articulate what I want rather than saying “oh I think s/he has a chest infection. Well that’s not good enough really is it. You need to be able to say, well I have done x, y and z and I’ve heard this and I think that’s because of that and now I want to prescribe this and I’m going ahead with it because of that’ {Nurse Practitioner. V1}

This nurse practitioner describes how the knowledge of medical PAS enables her to more effectively articulate why she thinks the patient is unwell. This means that she uses medical PAS knowledge to organise and interpret her assessment findings to understand the nature of the patients' problem. She then suggests that that she is able to link the clinical cues of assessment information and categorise it
to a known medical diagnosis. She explains that she is required to justify the knowledge of the patients problem, because she needs to be ‘able to say, well I have done x, y and z’, to determine treatment. Similarly to the GP, she uses the language of medical PAS to ‘articulate’ a course of action for the patient that is transparent and understood by others. She then goes onto describe the benefit of medical PAS language to inform her clinical judgement and decision making. In the extract below she compares how she would have undertaken a patient’s a physical examination prior to undertaking medical PAS education, with how she would approach her assessment now.

'so like you are going to look at Mr X and he is not very well and you know he is not very well, but prior to medical PAS I would most probably have said' oh you know he is not very well from an intuitive perspective' and now I will say " he is not well and I’m going to do x,y and z and I’m going to listen for this and look for that and I'm going to cluster all of that together which will give me a medical diagnosis and reasoning to take back to the doctor and say why I did what I did, rather than saying "you know I don't think Fred is very well' (Nurse Practitioner' V1).

In this extract she describes the benefits and limitations of intuitive approaches to clinical reasoning. She defends the value of intuitive reasoning skills to guide her early perceptions of the patient's problem, and to guide her course of action to undertake a more comprehensive assessment. She highlights the limitations of describing the patient's problem only, related to her perceptual cues of a change in a patient's condition. She argues that she needs to be more articulate in her assessment findings to highlight the severity of a patient's condition, so that she can present a course of action in a precise language that is understood by others. She mentions that medical PAS gives her more confidence to assimilate clinical information because she has to be accurate in her judgements, and be accountable for her decisions. An additional factor is that she is required to use this language to communicate a change in a patient's condition, because that is
the language that is understood by medical doctors. This view is defended by a
GP in the following extract, who suggests that practitioners will experience
difficulties in using medical PAS terminology without adequate theoretical understanding.

‘the language is important because it ties back as to why I think the
physical assessment skills are learnt with a sound theoretical base,
because if you don’t take time to do this, you never quite grasp it and you
miss the other bit and it will be difficult to grasp those concepts, so I think
terminology is important’ {General Practitioner. T1}

He justifies medical PAS language as having a ‘sound theoretical’ basis, hence the
reason it has to be learned and understood. These thought processes are
described in the following extract by a nurse educator, who illustrates that a
common barrier for nurses is the linking of medical PAS to practice, mainly
because they have limited understanding of anatomy and physiology that
underpins medical PAS language.

‘have an understanding of the body and anatomy and physiology and
enough physiology to know what they’re looking for because there’s no
point having the skills if you don’t understand what they are looking at. If
not we have to spend [sic] quite a bit of time in our job teaching this, to get
the balance right, when we expect them, post registration nurses to have a
good base of A& P, but in reality they don’t’ {Nurse Educator F.1}

This nurse educator describes that all healthcare disciplines need to understand
medical PAS terminology and the concepts that underpin physical health science
knowledge. She then goes on to suggest that although this is a form of bioscience
knowledge, it needs to be understood because it underpins physical assessment
practices. She suggests that failing to understand this foundational knowledge
makes it more difficult to re-contextualise medical PAS to practice. She mentions
that as a nurse educator she experiences frustration with the lack of knowledge of
RN’s understanding of physical health sciences, because it takes longer for them
as learners to ‘get the balance right’. She goes on to describe this problem in more detail.

‘you were teaching about heart scans and if they don’t actually understand the physiology that cause murmurs but we’re asking them to pick up murmurs so there’s a disconnection there’ {Nurse Educator F1}

She illustrates the problems with the ‘disconnection’ between theory and practice, because the practitioner is unable to re-contextualise their findings to distinguish normal from abnormal. This is confirmed by a nurse practitioner who describes her difficulties in re-contextualising assessment data.

‘I wanted to have that knowledge, because it frustrated me that I could not articulate things for years. I wanted to know how and why that was like that and people used to say like crackles in lungs and I wanted to know where they found that and why they found it’ {Nurse Practitioner. V1.}

She identifies that nurses will experience a sense of frustration at not being able to understand patients’ altered physiological status, linked to health assessment data. She identifies that in her novice practitioner state she could not communicate or justify her assessment findings because she did not understand the language. As she becomes more competent and confident with its use, she develops a more explicit understanding of the origins and meaning of patients’ problems linked to assessment symptoms, and attempts to analyse these to the patients’ diagnosis.

A GP also expresses similar views on the importance of having a firm grasp of common foundational knowledge of physical health sciences to understand the language of physical examination.

‘if a patient presents with loin pain and a Upper Urinary Tract Infection is suspected, the nurse practitioners working in MIU would need to be competent in the forms of knowledge to know which part of the abdomen to examine and to know what they are looking for to help or refute the
He suggests that for nurses to work in specialist and advanced practice roles, this knowledge needs to underpin their physical assessment practices to make a diagnosis, and communicate an action on the patient’s behalf. He refers to an example of nurse practitioners who work in Minor Injury Units, and explains why they may experience barriers to using medical PAS terminology competently for a patient who presents with abdominal pain. In the absence of a GP, the nurse practitioner would need to be able to locate the source of the patient complaint to identify the patient’s problem. He then suggests that unless they have this knowledge, they will not be able to distinguish normal from abnormal to make a differential diagnosis. He highlights that as a consequence of this the nurse practitioner may not be able to communicate the patient’s problem in a manner that is understood by others. He follows this argument through, when he describes similar disadvantages for nurse practitioners who work in GP surgeries. He suggests they lack a broad base of generalist knowledge to triage ‘children and peads’ as ENT is specialist knowledge for Minor Injuries and Minor Ailments’. He then suggests that not only do all nurses need to know the disciplinary knowledge of physical health sciences, but need to be able to relate this to each body system when using medical PAS. He provides a further example and refers to the community matrons’ role in primary care. He identifies that they need a common grounding of physical health sciences because the patient group they care for have a range of chronic illness conditions with mixed co-morbid disease presentations. He suggests that unless they have a common grounding in both when examining a patient, they will have an essential element of skill and practice
missing, and will not be able to contextualise medical PAS knowledge to their nursing role work.

Another GP illustrates his frustration with nurses who lack generalist knowledge of physical health sciences and physical health assessment. In the extreme case, he goes on to say that if specialist nurses lack knowledge of medical PAS, this can 'put patients’ lives at risk'. He refers to his experience of this in the following extract when he describes a case in which he was asked to review a patient in the Mental Health setting.

‘Mental health nurses lack basic foundational knowledge of physical health sciences and vital signs assessment knowledge and skills. I went on the ward to see a patient and yes, when I saw her she was behaving absolutely manically, but managed to calm her down and did some basic physical observations on her " the poor lady" she was septic, dehydrated, has a temperature of 38.5, blood pressure in her boots, tachycardic, and I found she had a massive cellulites on her leg. This poor woman needed IV antibiotics and did not need to be sectioned at all, yet she required good nursing care, but she was struggling to live physically {General Practitioner S1}

His extract illustrates some of the barriers to specialist nurse training, as opposed to a generalist approaches to knowledge development. In this incident he describes a case of misdiagnosis, based on mental health nurses’ lack of competence with basic physical health assessment skills for patients in their care. His extract suggests that patients in mental health units who have physical co-morbidities are at risk of a misdiagnosis, because mental health nurses are unable to do temperature, pulse and blood pressures. He illustrates the inherent dangers of specialist disciplinary knowledge, in that these nurses are unable to articulate basic physical health findings outside their domain roles. He suggests all registered nurses should have knowledge and understanding of how to
competently undertake a basic physical health assessment of any patient, irrespective of practice discipline.

5.4.2.1 Sub-theme summary:
The main advantage to medical PAS use is that the language is precise and easy to understand, which enhances the transparency of assessment information across healthcare teams in the community.

5.4.3 Subtheme two- Barriers to medical PAS use in practice
This subtheme identifies barriers that participants experience in using medical PAS practice. Barriers to medical PAS use are nurses’ inappropriate appointments to specialist roles, which affects their motivation and attitudes to use medical PAS appropriately. Further barriers to medical PAS use are inadequacies of educational preparation and assessment strategies for practice. Workplace environments often present challenges for students to consolidate medical PAS whilst undertaking medical PAS education.

5.4.3.1 Inappropriate appointments to specialist roles
The first barrier identified in this sub-theme by a nurse educator is that some community nurses are inappropriately appointed to specialist and advanced nursing practice roles, without having the correct skills

‘they are already in those roles, probably 2/3 years by the time they hone the skills, what other profession are you given the job and then eventually a couple years later you figure out the actual theory behind how to do physical assessment. They’re filling the gap for skills that would have been done by a GP or whatever and yet they haven’t been given the skills, yet but they’re already in the role, rather than the other way around of training people up to fill the gap’ {Nurse educator. K1}

This nurse educator explains the limitations of inappropriate appointments of nurses to specialist roles. She argues that some nurses are unsuitable to
undertake these roles because they not appropriately trained to substitute doctors. She suggests that they are often placed in these roles as an organisational reaction to meet urgent service needs in the absence of a more suitably qualified healthcare professional. She describes some nurses naivety as to the levels of competence required before undertaking medical PAS education, because it is not until they complete medical PAS education that they realise they have significant gaps in knowledge. Some recognises that some nurses may have limited choice but to undertake these roles, and by the time they become competent they only really learn what they should have known in the first instance. Another nurse educator describes the importance of competence and confidence in using medical PAS for patient care.

‘if you’re interested in patient care and getting it right then you’re going to want to make sure you are confident and competent in medical PAS, if you have less concern about the other then what does it matter if I fudge it, but if I rely on someone else, someone else will....well a doctor, they’ve trained long enough, they must have the skills and I’ll leave it to the doctor’ {Nurse educator. K1}

She suggests that nurses who undertake medical PAS education need to be self-motivated to maintain medical PAS competence to act accountably as required by professional standards. The use of these assessment practices requires a positive attitude and personal motivation to retain clinical credibility to a level of that of a doctor.

5.4.3.2 Inadequacies in educational preparation for practice

By contrast, other staff provided alternative explanations, in that self-motivation and positive attitudes and values may not be the only reason not to practice these skills confidently and competently.
‘the course needs to be longer and what they are getting is not enough. What they give us does not match the level to what we are expecting and so it does not quite add up. The course does give us the building blocks, but I think we are working at a much higher level that and it needs to be more involved over a longer period of time with more credits at the end of it’ {Nurse Practitioner D2}

This nurse practitioner identifies the inadequacies of education preparation to prepare CNPs with medical PAS confidence and competence for professional practice roles. She describes how medical PAS education approaches to professional preparation in Universities are bland, with a one size fits all approaches. She mentions the positive benefit of the medical PAS course in providing ‘the building blocks’, but not necessarily with higher level of medical PAS required for advanced practice roles. She suggests that CNPs are practicing at advanced levels because they have higher levels of responsibly when expected to work at GP level. For these reasons there is a mismatch between course content and practice expectations. One of the reasons for this is because course duration is too short, which does not allow students time to consolidate their medical PAS sequentially over extended periods. Nurse practitioner (D2) is more specific as to what she feels about the medical PAS course teaching.

‘purely adult focus only and does not encompass specialist skills categories and all of it is adult focused. Also, it does not include any sexual health assessment skills, urology or genito-urinary medical PAS, apart from abdominal assessment, so I think that there were big chunks missing, for example the ENT, but the University will say," well we give you the building blocks" well that's not good enough’ {Nurse Practitioner. D2}

She argues that the medical PAS knowledge content does not reflect the skills of specialist nurses practice preparation, to increase the scope of their roles. She describes that there are significant knowledge deficits. This suggests that the course content is generic rather than specific, and does not prepare specialist nurses to utilise medical PAS knowledge within specialist practice work
environments. The lack of specialist knowledge like 'sexual health assessment skills, urology or genito-urinary medical PAS and ENT', suggests that specialist nurses may be unprepared to differentiate a patient's condition, for specialist practice examinations in their work environment(s). Others participants also felt that the medical PAS course content was too generic.

'in one day is a bit unrealistic. The depth that they went into probably was a bit medical students ish, and they have 6 months to consolidate these skills, but I guess if you are doing this level you need it, but they certainly gave you enough, possibly a bit more than you needed and more than you would use in the real world, {Nurse practitioner G1}

This nurse practitioner suggests that some of the course content is too in depth and over complicated for community nursing practice. This suggests that nurses experience difficulties contextualising complicated core content knowledge, because they are unable to prioritise which aspects are relevant. She also suggests that nurses are given minimal time to link theory to practice, unlike medical students, who have extended periods to hone their medical PAS in work environments. These views were contradicted by other nurse educators.

'Knowledge-based competence using a body systems approach was effective, because it complements the structure in which participants work in practice. This structured approach to knowledge delivery is not holistic enough in the class room setting, hence the reason procedural medical PAS competence is situated in practice because the student needs real patients to link theory to practice' {Nurse educator. K1}

Her extract illustrates that medical PAS education core knowledge content meets the requirements of specialist and advanced nursing practice roles. Her view is that a structured approach to knowledge delivery, based on body systems, enables nurses to develop their medical PAS competence in a systematic manner, because it resembles the ways they 'work in practice'. She acknowledges the limitations of the University teaching environment to resemble the workplace itself,
and suggests that students have limited opportunities to practice medical PAS in a controlled environment. She defends this limitation, in that medical PAS competence is best developed on 'real patients', because they have opportunities to re-contextualise their medical PAS content knowledge to the real world of practice.

Another nurse educator who had undertaken medical PAS education prior to teaching it at the University, was less complimentary as to the approaches used to deliver medical PAS content because

‘the approaches used to teach and assess knowledge-based competence as ritualistic, and process driven and fails to link theory to practice’ {Nurse educator. H1}

She feels that nurses experience challenges in linking core medical PAS knowledge to workplace knowledge. This suggests that medical PAS content knowledge is not simplified or made realistic when it is taught at the University. She further illustrates that core medical PAS content knowledge, selected by the University is 'process driven' and not designed to meet the needs of nurses' professional roles. This view is supported by a nurse practitioner, but the nurse practitioner challenges the lack of educational resources in practice to re-contextualise medical PAS.

‘Relaxed simulated environment so that you can practice with your colleagues, a protected environment where you can make mistakes, where you don’t feel threatened. Nice to have a place where you can do the work-based learning stuff, because you don’t get any medical PAS refreshers and to have a skills lab in the community, means that I would be able to go in there with my students and refresh myself on my own skills. It would be a protected environment and not with a patient where you don’t make mistakes’ {Nurse Practitioner V1}. 
She highlights the importance of further investment in ‘simulated’ educational resources in primary care, to strengthen, increase and maintain a repertoire of medical PAS over time. She describes the necessity to have ‘protected’ learning time so that students can learn under supervision. She proposes the benefit of simulated learning experiences where students can assimilate risks in a controlled and unthreatening manner. A contrasting view is a nurse practitioner’s reflection on the limitations of medical PAS assessment strategies to develop competence in practice.

‘PAS ‘competence focuses on the process of signing off of skills logs as a tick box exercises instead of general competence development of learning how to do the job’ {Nurse Practitioner. D2}

She describes medical PAS competence development as procedural and task based, where the content knowledge of medical PAS specific skills logs appears more codified to the University assessment criteria, rather than the reality of practice. She identifies the limitations of the skills log as the focus being on psychomotor skills development only. She views this form of assessments as task focussed, with few opportunities for students to think critically about the complexities of medical PAS competence in the workplace. This suggests that students have limited time to hone their medical PAS competence in a progressive manner over time, which may be limit their ability to perform adequately. She portrays a similar view as to the limitations of a task driven approach to medical PAS assessment in the following extract

‘the nature of physical assessment lends itself to rote learning and it tends to be very test card driven, like we’ve got a skills sheet and we ask them to tick things off and not linking theory to it’ {Nurse educator. M1}
This suggests that the nature of medical PAS knowledge has a pedagogical foundation, with the emphasis on skills development only. This illustrates that learners have limited opportunity to use these skills with other forms of knowledge, because the emphasis is on development of the technical aspects of medical PAS as a tick box exercise. This suggests that the skills log design is prescriptive and procedural, where learners have no freedom to adapt the skills set in a general way, to integrate theory to practice, to suit their work environments. These views were echoed by a GP, who considered medical PAS log assessment as task work, where learning is limited to technical proficiency, as opposed to developing transitional approaches to medical PAS competence over time.

'procedural approach and is task orientated which judges skill proficiency, as opposed to learning and developing the art of medical PAS competence over time. Therefore, learning is not facilitated but judged, which suggests that learning the skill only occurs within 'a fixed timeframe' and on-going skills development is halted and 'perceptions change' because the supervisor focuses on medical PAS using a judgement on the skill at that time’ {General Practitioner. T1}

He describes how the technical approaches to assessment limit the assessor’s ability to provide a good learning experience for the student. He then goes on to explain that opportunities to contextualise physical assessment practices are lost, because the assessor has to judge a student’s capability through ‘one off’ performances. This suggests that skills based log assessment criteria halts learning, and limits opportunities to recapture or facilitate additional learning experiences over time. He clarifies his concerns that if a supervisor witness’s poor performance at the time of assessment there is a lack of opportunity to re-asses capability and performance of that student at a later time. By contrast, another nurse practitioner identifies that the problem of medical PAS competence development is not just related to the practical methods of skills assessment, but
more often related to environmental factors, such as lack of appropriate practice placements to hone the skills.

'caught in the middle with the University business approach to medical PAS'. There's a lack of protected time to hone these skills is stressful, have to find our own placements, and manage our own workloads with colleagues, which is stressful. We often have to pay for our own course and pay for child care and our travel costs from own pocket, it's a lot to expect’{Nurse Practitioner. D2}

Her extract illustrates the frustration with University and service contractual arrangements. She describes her personal stresses when undertaking medical PAS education, related childcare and travel arrangements. She illustrates her concerns with workload balance and how she has to rely on colleagues for support, and describes a sense of frustration with being 'caught in the middle' because of the University’s contractual and lean approaches to medical PAS education. Further service constraints related to competing interests for appropriate supervision to develop medical PAS competence were identified by a nurse manager

‘The supervision process is challenging to arrange with competing interests for primary care education’{Nurse Manager.JB}

She identifies that one of the main challenges to supervision for medical PAS competence development in primary care is that other students from different healthcare disciplines require supervision within similar timeframes.

5.4.3.3 Sub-theme two summary

Appointments of specialist nurses in primary care are in response to a shortage of a more skilled healthcare professionals’. Some specialist community nurses undertake medical PAS to meet service needs rather than self-select for their own professional development. Medical PAS education at Universities provides a
sound theoretical basis for medical PAS knowledge, but does not adequately prepare some students with the higher level of medical PAS required in advanced practice roles. Assessment strategies are technical and pedagogically focussed, and often difficult to contextualise to work environments. In addition assessment of medical PAS competence and overall student capability is difficult to achieve related to the traditional maxims in academia set by the University. In addition, nurses’ workplace environments present challenges to medical PAS competence development, relating to supervision, time, and lack of appropriate learning resources.

5.4.4 Overall summary-Theme three

The main facilitators of medical PAS use in practice by specialist and advanced nurse practitioners in primary care, is that they can use these skills to increase the scope of their professional role(s). The use of the language of medical PAS facilitates transparency of patients’ assessment findings across primary teams.

The main barriers to medical PAS use are inappropriate appointments to specialist roles in the community. Universities provide a sound theoretical basis for medical PAS in practice, but are limited in scope for the preparation and assessment for advanced practice roles. Community care work environments can constrain the development of medical PAS in practice.

5.5 Chapter summary

This chapter has illustrated that three main factors have influenced the use of medical PAS for CNPs in primary care. These factors are situated in three specific domains, policy, practice and education. These factors will be briefly outlined and taken forward to the next chapter the discussion.
From policy perspectives, the main driver for GPs to delegate medical PAS to CNPs was to supplement their workloads, with the emphasis on the reorganisation of primary care work. This was influenced by the focus on shifting care from hospitals to the community. The findings show that the use of medical PAS has benefitted service perspectives, because experienced CNPs are able to complete whole patient care episodes and make independent decisions, particularly for defined patient groups in primary care. This approach appears to enhance continuity and consistency and maintains standards.

From contextual perspectives, the development of core assessment competences between CNPs and GPs, assists with breaking down professional boundaries, and makes an overall contribution to patient care experiences, but it is not without its challenges.

From the educational perspective, universities attempt to provide a sound theoretical basis for medical PAS in practice, but have limited resources to develop competence, in preparation for professional practice. Assessment initiatives are hamstrung by the fact that RNs’ do not have a sound theoretical basis to underpin medical PAS knowledge. Therefore, practice assessments focus on developing technical proficiency as opposed to the development of patient case knowledge; consequently there is a mismatch of knowledge and expectations for specialist and advanced practice roles.

Additionally, community care work environments can constrain the development of medical PAS in practice, because educational resources are limited to aid knowledge transfer, although medical PAS competence is best achieved when working with patients and experienced colleagues in primary care.
Thus, and in summary, three main points will be taken forward and analysed for the discussion.

1. **Policy context**: how the use of medical PAS has assisted national initiatives to transfer hospital care to the community.

2. **Practice perspective**: the challenges associated with cross boundary working in primary care.

3. **Education perspectives**: the challenges associated with CNPs developing medical PAS competence in primary care.
Chapter 6: Discussion

6.1 Introduction

This chapter will examine the findings in the context of current literature in three main areas.

1. The policy context and use of medical PAS in a shifting healthcare configuration of delivery and organisation
2. The practice perspectives of negotiating work boundaries in primary care
3. The educational perspectives, linked to competence development

6.2 Overview of study

This study focussed on exploring and capturing multiple perspectives on CNPs use of PAS in primary care. A constructivist qualitative methodology was utilised, using an embedded case study design. The data gained from the interviews provided an in-depth account of multiple perspectives of CNPs use of medical PAS in different contexts in primary care practice.

6.3 Policy context-rationale and use of medical PAS in a shifting healthcare configuration

A central tenet to moving care from the hospital to the community was the contribution that community nurses to deliver care patients wanted. National policy initiatives focussed on optimising community nurses skills to undertake assessment tasks, previously the domain of a GP. The aim was for experienced community nurses to complement GP workloads, and/ or act as substitutes when working with designated patients groups in primary care. Certain skills were required to work in this way, and one such skill was medical physical assessment.
Overall, the data showed that participants believed that CNPs’ use of medical PAS has directly influenced policy initiatives for workforce redesign (DH 2004b) and moving care from hospitals to the community (DH 2008 & DH 2009 & 2012a). Participants reported that CNPs used medical PAS in integrated ways by bringing together their clinical expertise, leadership, education and liaison skills to work across professional boundaries (DH 2010; RCN 2012). The relevance of this was seen in how they supported GPs in absorbing assessment tasks previously undertaken by them. Specialist nurses working in GP surgeries worked independently, and took sole responsibility and accountability for episode of care for defined population groups. For example CNPs used medical PAS to undertake routine and standardised assessments tasks for patients with minor and acute illnesses and for telephone follow up consultations, to offer patients advice and information as required. CNPs undertook home visits for housebound patients, and independently used assessment findings to review effectiveness of treatment intervention, make changes as needed, and organise follow-up visits to ensure continuity of care.

Participants reported that the use of medical assessment skills for these purposes was a more appropriate use of services, because GPs had more time for reviewing patients with acute conditions. GPs’ views were that this type of service was better for defined patients groups with LTCs, and using medical PAS with this patient group posed no detriment to quality of life, and services were usually less fragmented. At the same time this type of service did not incur any greater costs, because it reduced the burden on GP time for home visits.

Participants reported how CNPs used medical PAS to provide high levels of clinical practice, decision making and leadership skills as set out by DH (2010) position statement and NMC (2012) competency statements for advanced nursing
practice. Tangible examples reported how CNPs integrated assessment data with expert knowledge to corroborate with GPs to manage complex patient cases, or refer patients directly to hospital consultants. In line with national initiatives on hospital admissions admission avoidance (DH 2009), CNPs used assessment findings to triage patients in Rapid Access Clinics (RACs) to determine clinical urgency, referral to another healthcare professional or send patients home.

Specialist community nurse practitioners identified medical PAS as core to the skills set (DH 2006b), required to case manage patients with LTCs. Medical assessment skills were of added value to specialist nurse roles because they were able complete episodes of care to minimise unnecessary involvement of other health care professionals, hence care approaches were less fragmented. This way of working compensated for service deficiencies, or addressed gaps in patients and carers’ knowledge, not provided by other services.

Goodman et al. (2010) reported similar findings in a study that investigated the contribution of nurses as case managers for people with LTCs. Similarly, these skills were used to supplement other services, to address problems such as a break in continuity of service caused by lack of effective communication strategies between patients, families and other services. This approach ensured that care episodes were less fragmented and disjointed.

Participants reported that CNPs were able to provide this level of care for LTC patients because they were more accessible as first points of contact in contrast to GPs. This was justified on the grounds that they had longer consultation times, as patients in this care group required more time (RCN 2012).

The data showed that GPs viewed the care of patients with established LTCs as the responsibility of nurses who worked in specialist and advanced roles. This
suggests that CPNs trained in medical assessment skills are equally as good as GPs and can substitute for them in the provision of such services. However, this finding contradicts policy initiatives of transferring hospital care to the community (DH 2009), in that the delegation of assessment tasks to CNPs was to support GP workloads, but not to act as substitutes (Ham et al. 2012). Laurent et al. (2004) reported that nurses trained in medical skills could produce the same-high quality care as primary care doctors and achieve comparable outcomes, but GP workloads remain unchanged, but patient satisfaction was higher for nurse-led care (Laurent et al.2004). Other studies reported greater levels of patient satisfaction with nurse-led-led care versus doctor-led care in general practice (Shum et al. 2000) and in emergency care (Sharples et al. 2002). Patients were more satisfied with nurse consultations because they provided better treatment, more information, were easier to talk to and were more effective in communicating with other professions.

Similarly, Adair (2008) evaluation study of patient’s satisfaction with advanced nurse practitioner (ANP) roles found that patients were equally satisfied with ANP services as they were with GPs. Over three quarters of patients surveyed did not view the ANP as a GP substitute. Levels of satisfaction related to ANPs being able to provide similar service to GPs, using assessment consultations to work in integrated ways with healthcare teams (Adair 2008). It would appear from the findings in this study that the value of CNPs having these skills is less to do with doctor substitution, but more about being able to complete episodes of care for designated patient groups, subsequently, the provision of care is more continuous, consistent and integrated.
These findings contrast with US analysis on the attainment of advanced practice skills for nurses. In the US, studies that examine nurse/physician role substitution in primary care focus specifically on role efficacy in relation to care outcomes (Bauer 2010). This study reports on the economic and professional benefits of highly trained nurses having similar skills to GPs, particularly with the expected expansion of hospital care to the community (Bauer 2010).

A limitation of the present study is that the contribution of highly trained nurses with medical assessment skills for nurse-led lead care initiatives in primary care has not been measured quantitatively. Considine et al. (2006) points out that it can be difficult to identify a specific relationship between nurses’ assessment skills and patient outcomes, because assessment tasks are complex to measure. However, this study’s qualitative findings show that the contribution and capabilities of CNPs use of medical assessment skills in primary care, has been recognised by GPs as being at least as good. They played key leadership roles in the provision of expert clinical practice, which was pivotal in directly reflecting the needs of patients not met by other professionals. This was evident in the range of specialist nurse-led minor illness/ailments, sexual health and chronic disease clinics run independently by some CNPs. These findings are similar to previous studies that compared the safety and effectiveness of specialist nurse-led care versus doctor-led care, in providing a range of specialist services for patients with stable long-term conditions. Nurse practitioners-led services for patients with chronic chest disease (Sharples et al. 2002) rheumatoid diseases (Hill & Thorpe 2003) and Parkinson's (Hurwitz et al. 2005), reported that nurse-led care is safe and effective. Additional findings were that patients taught self-care strategies by specialist nurses had a positive impact on symptom control (Jacks et al. 2002 & Hill & Thorpe 2003), with
no particular differences in costs (Hurwitz et al. 2005). They were also effective in reinforcing the implementation of evidence based practice through the use of guidelines and protocols (Gerrish et al. 2006). Other impacts reported were reductions in unnecessary admissions (Chaney et al. 2007). Therefore, the researcher argues that this is an important finding that determines that the use of medical PAS should not be restricted to any particular professional group in the UK.

These findings have relevance to policy initiatives on the transfer of hospital care to the community in the UK, with particular emphasis on patient-led services, which promote the concept of self-care. These concepts were first outlined in the policy, ‘Creating a Patient-Led NHS’ (DH 2005), which promoted choice, personalised care and empowerment for people to improve their health. It stressed the need for healthcare professionals to move away from a service that does things *to patients and *for patients, to one which is patient-led through self-care (DH 2005:3) (authors’ emphasis). It is against this policy backdrop that the concept of self-care is increasingly being promoted as a paradigm of practice for healthcare professionals in the UK (Bovaird 2007: 846).

The literature also supports the view that specialist nurses can provide leadership and improve the quality of care for defined patients groups with multiple LTCs. They can deliver a service that reflects self-care initiatives’ for patients (RCN 2009) who want to be cared for at home.

These views concur with this research data findings, which showed that using a symptom focussed physical assessment in person-centred ways enabled self-care initiatives, which benefitted patients with LTCs. There was less chance of patients with LTC illness being admitted to hospital with an acute episodic event if
symptoms were well understood. Participants reported on how specialist nurses used assessment findings to identify and respect patient priorities when reaching care decisions. Aspects of patients’ lifestyle and thinking were considered alongside the biography of chronic illness experiences.

Participants also reported that for frail patients with end-stage chronic illness, specialist nurses often used their caring attributes and sympathetic presence during assessment consultations, to anticipate psychological and emotional needs. Assessment findings were often used to provide clinical deliberate instructions, discuss and answer questions, or make informal suggestions’ about how to deal with emotional issues with patients and carers. The data also showed that longer consultations times were necessary when using the holistic principles of friendliness and partnership approaches to motivate LTCs patients to consider alternative lifestyle changes.

In comparison, GP reported difficulties in maintaining patient-centred approaches related to the brevity of GP consultation times. This has a detrimental effect on providing patient-centred care, especially for people with LTCs. Hastings and Redsell (2006) present a different view on shorter GP consultation time, and argue that the success of patient consultations is less to do with time, but more to do with behavioural competence’. Experienced nurses’ professional attributes (RCN 2009) and behavioural competence during consultations was regarded as superior to GPs. They communicated in holistic ways that included eye-contact, active listening and silence and touch (Hastings & Redsell 2006).

Findings from the nurses’ data in this study challenges Hastings and Redsell (2006) views on consultation times, with a view to enabling patients to self-care. Longer consultation times are crucial to maintaining patient-centred holistic
assessments. Lack of time prevented opportunities to build trusting patients relationships, necessary to motivate patient’s to self-care. Data showed that when CNPs workloads were time pressured, they reverted to ‘fixing problems’ because longer consultations were difficult to justify in terms of time. In these situations a care co-ordinating approach was undertaken by liaising with other services, especially if patients’ conditions were viewed as too complex, and considered not well enough to engage with self-care initiatives.

Data also reported that some CNPs viewed the concept of self-care as more achievable with some patients with chronic illnesses than others. Patients, who had a good understanding of their illnesses symptoms and causes of their disease, were more motivated to self-care. Older and frail age groups with complex health needs, who lived alone and in socially deprived areas, had limited understanding of their illness conditions. They did not know about support they could receive or where to go for services to support them to self-care. These findings are supported by Horrocks and Johnson (2014), who suggest that the ability to self-care requires individual patients with long-term illnesses to have a thorough understanding of their disease.

Reports from the study’s findings also showed that CNPs efforts in supporting patients’ ability to self-care remained invisible and essentially unquantifiable at organisational levels. This suggests that policy initiatives that advocate the concept of self-care for patients with incurable diseases appear more prescriptive than transformative. In the main, the findings of this study demonstrate that the use of medical PAS within the LTCs model works when the emphasis on person-centred self-care approaches is transformative within every part of the health and social care system (Realpe & Wallace 2010). Although, the concept of self-care is highly
promoted in recent health policy initiatives (Ham et al. 2012), there is some evidence in this study's findings, that initiatives to sustain the concepts of person-centred self-care with defined patient groups were individualised and context dependent.

Additional factors that mitigate against patients developing the concept of self-care, were nurses’ attributes. Data showed that CNPs needed to be consistently able to perform at a highly sophisticated level of practice to appraise patients’ findings, make correct clinical judgements and take sole responsibility for decisions (RCN 2010; DH 2012). Participants reported that an inability to work in this way limited nurses’ ability to engage and negotiate with patients to develop self-care initiatives’.

However, a limitation of this study is that multiple perspectives were not captured regarding how CNPs promoted the concepts of self-care during assessment consultations. Nonetheless, the data showed that consultation approaches used by CNPs to promote patients’ self-care concepts, corresponded in many ways to the framework of person-centred nursing, promoted by McCormack & McCance (2006). The person-centred approaches outlined in this framework, requires the nurse to engage with a sympathetic presence throughout the consultation, and take into account patients’ beliefs and values (McCormack & McCances 2006).

Additional factors raised in the literature on the concept of self-care are the socio-cultural challenges faced with patients’ active involvement in self-care. Views in the literature, Stenner et al. (2011:44, citing Entwistle et al. 2008) proposes that patients’ level of desired involvement varies, with many patients preferring the nurse to make decisions’ about the appropriate treatment for them. There was limited reference to these challenges in this study's data, except a nurse
practitioner’s frustrations in emphasising the concept of self-care to younger patients with chronic disease symptoms. She argued that over emphasis on consumer led partnerships leads to lack of respect for expert care and knowledge. It was her experience that some patient groups show an unwillingness to engage with the principles of self-care, because they viewed the responsibility for health management as that of healthcare professionals.

6.4 Negotiating boundaries in primary care

The instances of role boundary shifts between GPs and CNPs have grown because of the challenge to provide care for people with chronic conditions satisfactorily, cost effectively, and in line with patient wishes; they often wished to be cared for in the home (Walby & Greenwall 1994). The boundary changes between both professional groups have been further challenged, given the widespread movement towards transfer of care from hospital to the community, with emphasis on rapid discharges and hospital at home patterns of care (Walby & Greenwall 1994). Radical approaches to service delivery through role re-design and skills mix teams initiatives, have further challenged the boundaries and patterns for interaction between these two professional groups (DH 2004c). Such workforce changes have shown a decline in community nurses, and a drive to take on more responsibility to meet the needs of patients.

Over the medical past ten years macro and meso level factors have affected the patterns of interaction between GPs and CNPs. Macro level factors such as nationally agreed role expectations on scopes of practices (NMC 2008; RCN 2008; DH 2010 & RCN 2012) enabled CNPs to expand their breadth of practice. These nationally agreed elements facilitated the delegation of specific assessment tasks from GPs to CNPs in primary care. With relevance to this study, these macro level
conditions have also shaped the patterns of GP-community nurse interactions, with most GPs willing to delegate routine aspects of medical PAS to highly qualified community nurses. GPs believed that such nurses produced good levels of care or equivalent to what they would provide (Laurent et al. 2009).

At meso level, conditions for negotiation were challenged by government initiatives for GPs to recognise the contribution experienced CNPs in primary care work (DH 2008c). These challenges prompted the Royal College of General Practitioners (RCGP) to re-evaluate the benefits of better professional engagement with community nurses to support them in managing the burden of primary care work (RCGP 2008). Subsequently, conditions surrounding the negotiation of workloads, affected the pattern of interactions between these two professional groups.

Such changes have been reported in previous sociological studies by Allen's (1997: 510:511), who cited the work of Rushing 1965; Stein 1967; Devine 1978; Hughes 1988 & Porter 1995), to understand patterns of interaction between professional groups. Svennson (1996) made an explicit case for adopting the negotiated order perspective as the most appropriate theoretical framework to understand patterns of doctor-nurse interactions. Allen (1997) built on Svennson's analysis and explored some of the features of nurses and doctors work that inhibited inter-occupational negotiations, but have resulted in changes to the medical-nursing division of labour.

Although, Svennson's (1996) and Allen's (1997) studies on 'negotiated order perspectives' were carried out in hospital wards, their findings have relevance to this study. This theoretical framework draws on the work of Strauss et al. (1978) on negotiated orders, which examined ways in which work gets done in organisations. Allen's (1997) study cites Strauss et al. (1997; 1985) and Hughes's
(1984) works that examined ways the formal division of labour was sustained between doctors and nurses. Doctors’ power often focussed on the monopoly of medical case knowledge and diagnostic knowledge in clinical practice. This at times permeated the negotiation of work boundaries and social positions between both professions. Allen (1997) argued that nurses are well placed to make relevant diagnostic decisions, and have been doing so intentionally by undertaking medical tasks, and refers to this concept as ‘de facto boundary blurring’ (Allen: 510).

Allen (1997) re-labelled de facto boundary blurring as purposive boundary blurring. This concept has relevance to this study, because CNPs used medical assessment skills in the absence of GPs to make medical diagnoses or undifferentiated diagnoses for defined patient groups. Allen’s (1997) study characterised the purpose boundary blurring into five subtypes, but in this study, three sub-types are relevant, continuity boundary blurring, judgement boundary blurring and rule orientated boundary blurring.

There are tangible examples throughout the findings where GPs supported CNPs use of such skills to case manage patient groups with complex chronic health conditions. Case knowledge was particularly necessary for the assessment of multiple case mixes of LTC patients, and required understanding of physical, social and environmental factors. Reports from the CNPs showed them purposively integrating assessment data to patient case knowledge to make clinical judgements and/or a medical diagnosis as a GP would do. To do this, they required knowledge of the patient as a case, because patients’ treatments were structured around case knowledge management. Therefore use of medical assessment skills enabled CNPs to combine medical PAS with case, patient and person knowledge, to observe responses to treatments in terms of knowing...
patients’ as individual cases. Although case management comes under the jurisdiction of medical practice (Stein-Parbury & Liaschenko 2007), data in the researchers study showed that the overall management of patient cases with chronic illnesses was the remit of CNPs.

However, the data from this study also reported that inter-professional tensions existed when communicating case knowledge findings with some GPs. This had to be done subtly, with authority and with confident understanding, because of the doctors’ focus on biomedical language to make medical decisions (Stein-Parbury & Liaschenko 2007). Additionally, nurses using medical assessment skills to validate assessment findings had to take responsibility for their assessment decisions. This meant that there were limited opportunities for CNPs to work in the spirit of one rule, even if meant breaking another, such as negotiating assessment decisions back to GPs.

Allen (1997) characterises this approach to negotiation as 'rule orientated boundary blurring' (p.511). CNPs had to be confident and competent in the use of medical PAS and acknowledge accountability for assessment decisions and treatments, otherwise there was potential for inter-occupational conflict. Additionally, medical PAS findings had to be strongly and assertively articulated from the medical standpoint; otherwise this led to potential disagreements. The GPs considered that ultimate authority and accountability rests with the individual who uses medical PAS to make clinical decisions, otherwise the value of having these skills in the first instance was questionable.

This data showed that CNPs assessment consultations was often more suitable to patients with LTCs than a GPs, because of a greater understanding of the biography of patients’ illness symptoms. This meant that they adapted their
medical PAS to patient assessment requirements. Allan (2009) argues that changes to nurse-led practice may emerge, when nurses believe that they may approach a task differently to a doctor, in that the nurse brings something qualitatively to the task (Allan 2009:135). This qualitative element is evident in the findings of this study. CNPs demonstrated an awareness of, or ability to combine medical PAS knowledge with social, environmental and patient knowledge factors, with chronic illness symptoms. Subsequently this knowledge benefitted patients because CNPs negotiated alternative approaches to treatments, not only with GPs, but with families and wider disciplinary teams.

The data showed CNPs concerns that assessment findings by GPs were often poorly utilised to negotiate alternative interventions, other than medication. Knowing the patient and family was not always acknowledged in negotiating alternative treatments. Nevertheless, GPs actions were defended on the basis that they often do not know the patient, family and other disciplinary teams well enough to negotiate alternative treatment interventions. This is confirmed in this study's findings, that GPs have less opportunity to use medical PAS to get to know patients well because of the changing contextual features of primary care work. In any case, as evident from the findings, GPs thought that CNPs were best placed to use medical PAS to care for these patient groups, because they have more time, and are more accessible as first points of contact.

Allen (1997) suggests a different reading of her data. She argues that time is not the issue but that nurses are more skilled at using assessment data to co-ordinate patient care. For these reasons they have to formally mediate the boundaries of doctor’s work, to negotiate the continuity of patient treatments. Allen (1997) describes this as continuity boundary blurring. The data from this study supports
Allen’s (1997) findings, suggesting that if CNPs are to substitute GPs in case managing patients with long-term conditions, they need these skills to provide direct clinical care, as a GP would do. Using the skills in this way, puts CNPs in a better position to negotiate the needs of patients with allied health professionals, to provide consistency and continuity.

Allen (1997) cited the work of Melia (1979) who proposed that the way nurses work prevents organisational turbulence for patients. Both authors refer to this as the degree of permanency nurses maintain for patients. Therefore, the use of medical PAS by CNPs makes sense, because of permanence, access and having a broader range of holistic nursing skills.

This study’s data adds to Allen’s (1997) work in that the use of medical PAS is a key influencing factor in negotiating changes to community nurse practitioner/ GP boundary work. Community nurse practitioners played key leadership roles in co-ordinating patient care, and used medical PAS to actively influence patient treatment decisions. They achieved this by managing own patient caseloads, and leading aspects of services within GP surgeries. In addition, GPs often relied on them to manage information flows, related to evidence based policy initiatives for various treatment protocols that underpin chronic disease management in primary care.

This study’s findings also show the negative aspects or the ‘taken-for-granted-feature’ of community nurses taking on GP medical PAS tasks. Consideration was not given to the potential occupational tensions that can occur, when domain boundaries are crossed. One of the main reasons for this according to Walby & Greenwall (1994) is that overt conflict and role boundary tensions are minimal with cross boundary working changes in UK healthcare practice. Allen (1997) refers to
this as ‘non-boundary blurring’ (p.511), but views it as a possible hidden agenda for skill mix initiatives to provide cost effective services.

Another argument put forward by Allen (1997) is that the levels of skilled expertise and knowledge of some nurses, enables them to consciously blur their own professional boundaries, even when doctors do not delegate tasks. Allen (1997) refers to this a ‘judgement boundary blurring’, and argues that experienced nurses use perceptual or intuitive reasoning skills to undertake tasks beyond the remit of boundary roles. Data in the findings showed similar accounts, but the researcher argues that the extent of judgement blurring depends on the practitioners’ level of skilled expertise with the use of medical PAS.

For example, CNPs used medical PAS for intuitive judgement tasks that covered several different tasks and functions, relating to the extent of the patient’s problem. Examples showed skilled nurse practitioners validating clinical judgements based on biography of patients’ illness conditions and their levels of skilled expertise. These cognitive reasoning skills were based on Dreyfuses’ five stage model of skill acquisition ranging from novice to expert (Dreyfus & Dreyfus 1983). Nonetheless, the opposite is shown in situations when CNPs were less confident and skilled in the use of medical PAS. The practitioner followed the rules and used analytical cognitive strategies as opposed to intuitive and skilled expertise (Eraut 1994). Physical assessment data was gathered using a systematic framework, which emphasised presenting information in a logical and sequenced manner.

The findings from this study showed that this approach was useful and necessary when the practitioner was a novice or an advanced beginner (Benner 1984). It meant that the CNP had the opportunity to gather assessment information in an ordered, logical and factual format. Evidence from the findings highlighted that
GPs and nurses valued this systematic approach to medical PAS use, irrespective of whether the practitioner was a novice or experienced healthcare professional. They stressed that these approaches to assessment strategies benefitted patients. Information was more transferable by using a unifying structure to base further assessments or make a diagnosis; hence care was more consistent and integrated. This ensured that when caring for the same patient groups in primary care, GPs and nurses were working collaboratively, to support actions taken.

An additional factor that benefitted patients was that primary health care teams worked more collaboratively when using the same assessment language. Using medical PAS language promoted better social interactions and less 'judgement boundary blurring' (Allen 1997) between teams, because GPs had fewer opportunities to reinforce their professional boundaries when communicating patient information.

The literature highlights the consequences of poor communication between healthcare professionals is adverse patient outcomes. A Toronto based study by Lingard et al. (2004) on inter-professional collaboration in Intensive Care Units (ICUs'), found that communication failures between nurses and physicians remains insufficiently addressed. Negative effects were inefficiency, professional boundary tensions and delays (Lingard et al. 2004). A review of twenty five studies on the topic of nurse-physician communication by Manojlovich (2010), suggests that the use of common language used between doctors and nurses fosters collaborative practices, through improved communication.

Studies that examined barriers to nurse-doctor communication (Cadogan et al. 1999; & Tyia et al 2009) in geriatric and long-term care settings, found that nurses lacked preparedness in using correct assessment language to report changes to
patients conditions. Unpreparedness when calling physicians negatively affected nurse-physician interactions and opportunities to work collaboratively (Tyia et al. 2009). This study’s findings demonstrate similar issues, in that a key component of collaborative practice was being prepared to use a common assessment language, to explain patients’ problems concisely and articulately. The researcher of this study argues that the findings add to the previous body of knowledge on doctor-nurse interactions. The use of a shared mental model of assessment fostered interdependent practice, through mutual trust and respect, thus ensuring collaborative practice. This was most evident when CNPs had direct access to GPs, to report changes to patients’ medical condition, when working at same surgery.

The study’s findings also showed that using a common assessment framework to promote collaborative practice was not always effective, especially when reporting changes to medical conditions of housebound patients. The general findings were that GPs and CNPs worked separately to manage patient groups, because GPs were less interested in patient outcomes. Therefore, CNPs valued medical assessment skills to work collaboratively with allied professionals’ for house bound patients. It was often less frustrating and time consuming, rather than waiting on GPs review, which would not necessarily change plans of care. This suggests that these changes to boundary blurring benefitted housebound patients in particular, because care was integrated with other disciples, which ultimately eased the burden of work for GPs.

6.5 Competence Assessment

Physical assessment competence for CNPs is developed through theoretical and practical approaches. Theoretical foundations underpinned medical PAS concepts
taught at the University, and judgement of medical PAS competence was context dependent in ‘live clinical’ practice. Levels of medical PAS knowledge were assessed through the traditional maxims in academia at the University, to specify a medical PASs mark and grading criteria to judge levels of knowledge. These approaches to competence development are supported in the literature (Eraut et al.1998 & Bradshaw 2000b). The integration of theory and practice is a significant feature of competence development for clinical expertise in practice (Gonczi et al. 1994 & Eraut 1994). Knowledge and skill in equal measures are prerequisites to inform competence (Hand 2006), because ‘knowing that’ is equally important to the ‘knowing how’ (Ryle 1949; cited in Watson et al. 2002:3).

However, the literature on competence development in nursing primarily focuses on domain knowledge and values development for the qualifying practitioner (Benner 1984; Gonczi et al. 1993 & Bradshaw 2000b). These concepts were broadened by the NMC in 2010, to include ‘technical abilities that underpin safe and effective nursing practice and interventions’ (p.45). There remains a concern that competence descriptors in curricula design in nursing professional preparation programmes are too broad and diverse, with too much professional freedom about what nurses should know and be able to do (Ashworth and Morrison 1991 & Bradshaw 2000b).

Medical PAS sits within the assessment of applied knowledge for registered nurses’ ongoing assessment of competence (Knowledge Skills Framework (KSF) DH 2004). Performance of medical PAS is assessed on demonstrating standardised tasks under direct observation by a skilled assessor, usually a GP. Skills performance is based on achieving a satisfactory level of technical skills for each component of the defined task(s) observed, to be subsequently integrated.
with patient case knowledge. There are different opinions in the literature regarding technical competence for nursing work, often considered as reductionist (Gonczi 1994) and ritualistic, with the risk of excluding other key skills domains considered necessary for nursing work (Watson et al. 2002).

This view is contradicted by data from this study, which show that technical competence is a necessary component of the framework of physical assessment. Failure to demonstrate technical competence would have limited CNPs ability to make clinical judgements and decisions. As stated previously, these definitions of competence appear more aligned to professionalisation of nursing roles. For these reasons descriptors of competence by Eraut (1994) are suited for RNs’ roles in the community setting, because the focus is on performance and capability, necessary to carry out community nursing work.

This definition of competence aligns to the Dreyfus and Dreyfus (1983) reference to ‘the situational experience premise’, in that judgement of competence is on the ability of the student to transfer the theory learned at the University, to ‘live’ clinical practice. The findings identify that as CNPs became more proficient with medical PAS competence over time, they focussed less on technical proficiency.

Although competency is defined in different ways, two main themes occur from the above literature; work base competencies and behavioural competencies. Therefore competency may be best understood as the way an individual behaves whilst carrying out his/her role.

The data reported here also reveal that this was not always the case. Developing technical competency in medical PAS was challenging for some CNPs, who found it difficult to transfer theoretical knowledge of medical PAS to nursing work. GP supervisors reported this in the data that some CNPs’ abilities to transfer medical
PAS theory to practice environments were sometimes lacking. Knowledge transfer was hampered by a lack of foundational specialist and biomedical knowledge that underpin the theoretical foundations of medical PAS language. These findings are consistent with some aspects of a study by Evans et al (2010) which examined how different forms of knowledge are put to work in different ways according to context. Evans et al. (2010) refer to this concept of re-contextualisation, when knowledge of one discipline is abstracted from another and put to use in different ways, often to serve a new purpose. This concurs with the data findings in that there was an assumption that medical PAS, which is the discipline base knowledge of medicine, would easily be re-contextualised in the context of professional nursing work. These researchers (Evans et al. 2010) drew on Bernstein's (2000) and Barnett's (2006) idea, that a particular domain knowledge, when re-worked in different environments has the potential to move from its disciplinary origin, because it can become re-shaped by other practice traditions. This re-shaping can be viewed as positive because it can spur innovation in the workplace and in education (Oers' 1998 cited in Evans et al. 2010:246).

There is good evidence in this data that most CNPs ably re-contextualised medical PAS within nursing disciplines, in work environments in primary care. However, there are also examples where this was not the case, and medical PAS knowledge proved challenging to re-contextualise to some aspects of community nursing work. Evans et al. (2010) proposes that re-contextualisation of another discipline's knowledge is quite often intricate. These researchers examined the benefits and challenges in four different domains; content re-contextualisation, pedagogic re-contextualisation, workplace re-contextualisation and learner re-contextualisation. These domains are relevant to the findings of this study, and will be used to examine how CNPs re-contextualised medical PAS knowledge in primary care.
6.5.1 Content re-contextualisation

Content re-contextualisation looks at how medical PAS knowledge, delivered at the University was transferred to community nursing practices. From a content perspective this data showed some constraints related to University curriculum approaches, which re-cast PAS knowledge of the medical discipline to the CPE nursing professional programmes. Boundaries were not negotiated regarding how medical PAS was to be put to work within the context of nursing specialist and advanced roles, prior to medical PAS education. As highlighted in the literature review, the main factors that governed the inclusion of medical PAS for the discipline knowledge of nursing was to meet competency expectations of practice, defined as a service need. In addition this data showed that learning activities and assessment strategies were influenced heavily by medical PAS curricula and foundational knowledge. CNPs often reported a mismatch of learning and teaching activities around knowledge for specialist and advanced nursing roles. The ‘codified’ medical PAS learning content was often considered too challenging or insufficient in depth, because it was either too factual or abstract.

This study’s data also reported CNPs ably enjoying the challenges associated with re-contextualising this knowledge from vertical perspectives, by selecting and combining the most relevant medical PAS to their domain roles in practice, often leading to innovation in service. In contrast, CNPs who worked with defined patient groups were often constrained to re-contextualising medical PAS knowledge in horizontal ways, because the boundaries of speciality roles were restricted to procedure and process orientated practices.
6.5.2 Pedagogical re-contextualisation

Pedagogical re-contextualisation considers how knowledge is put to work in the teaching and facilitating environment (Evans et al. 2010). The design and organisation of the teaching and learning dimensions of medical PAS education emphasised the general principles that underpinned medical PAS knowledge similar to that of medical curricula. This was based on the assumption that CNPs required a comprehensive body of codified medical PAS, to cope with similar demands and patterns of work to GPs in primary care. The findings of this study showed that differences in curriculum characteristics and educational objectives between both professions, created uncertainty amongst nurse educators as how best to teach medical PAS education. Students reported on professional competence and confidence of nurse educators prepared in medical PAS, similar to GPs.

Negative learning experiences were reported when high levels of condensed medical PAS knowledge was delivered over short time frames. CNPs valued opportunities for skills rehearsal outside work environments so that they could ‘test bench’ (Evans et al. 2010:245) and question theoretical principles prior to re-contextualisation to work environments. When this occurred, students reported being better prepared for performing medical PAS in live clinical practice. Evans et al. (2010) refer to the importance of sequencing knowledge elements, to increase students' orientation outwards to operational environments.

Medical PAS theory assessments were based around University timeframes, often leading to procedural approaches to re-contextualising medical PAS knowledge. The data showed a balance was sometimes achieved, through academic
assessment dimensions, which required students to resituate medical PAS knowledge into patient cases.

6.5.3 Workplace re-contextualisation.

Workplace re-contextualisation examines how students put knowledge to work in workplace environments (Evans et al. 2010). The study's data showed that one of the most influential ways that CNPs put medical PAS knowledge to work was developing medical PAS competence under the guidance of medical or experienced nurse practitioner supervisors. In general, CNPs valued positive coaching strategies to develop their overall medical PAS performance. Confidence improved when working alongside GPs informally, to resolve patients' problems through mutual engagement. Examples in the data showed GPs and nurse supervisors engaging informally by encouraging some CNPs to lead patient consultations, followed by formal feedback on performance. Other examples of informal supervision and learning occurred when GPs and nurses tackled recurring patients' problems together, and over time.

Formal supervision approaches were favoured by students in the novice stages of medical PAS competence. In these situations supervisors would lead patient consultations and CNPs would observe, ask questions or act on GP instructions. Examination of informal learning in work environments by Eraut (2011) advocates similar approaches to Evans et al (2010) underlying principles of contextualising knowledge in workplace environments. Eraut (2011) suggests the value of informal learning, when students consult with knowledgeable colleagues and ask questions to develop tacit understanding of how experienced clinicians read situations to make decisions.
Reported difficulties for some nurses in contextualising knowledge to work environments related to medical models of supervision, where supervision strategies referenced to medical problem-solving approaches only. Working alongside knowledgeable medical colleagues required adaption to the formal and informal supervision strategies of GP work environments. This data showed that assessment of competence in this manner excluded tacit knowledge and skills competence from holistic perspectives, because capability did not always assess everything the nurse could do or think, relevant to their nursing profession. Other challenges to putting medical PAS knowledge to work were instrumental, related to organisational demands. Work environments demands often appeared misaligned to the value CNPs placed on developing skilled medical PAS expertise. The data showed that instrumental values of work environments often affected CNPs commitments to develop medical PAS to their fullest extent. Medical PAS atrophy occurred if the CNP did not feel confident and competent to use these skills safely in the long-term.

6.5.4 Learner re-contextualisation

Learner re-contextualisation takes places through the strategies learners use to bring together knowledge gained through the programme and gleaned from working with more experienced people in the workplace (Evans et al. 2010: p.247). The data showed tangible examples of how CNPs used different strategies and learning activities to develop medical PAS knowledge and professional competence. They engaged in deliberate practices through work-based activities and often undertook focussed efforts to improve medical PAS performance outside workplace environments. Self-assessment of performance was often undertaken by individual and repetitive assessment of medical PAS tasks, guided by standardised medical PAS competence criteria. Data from this study showed
CNP\textsuperscript{s} deliberate actions to hone medical PAS psychomotor skills competence, and knowledge of equipment for physical examinations, before working with GP supervisors.

The rationale for this appeared twofold; GPs short time-frames to undertake job-related tasks, often compromised time to engage in deliberate learning activities to develop competence. CNP\textsuperscript{s} were proactive regarding medical PAS outcomes they needed to achieve within particular timeframes, but on occasions valued shorter supervision times because it allowed time to hone medical PAS and opportunity for reflection on performance.

This data also showed that some GP supervisors regarded the ‘one off’ snap shot assessments of medical PAS psycho-motor skills as ritualistic and not in line with their expectations of nurse working to advanced practice concepts. Most CNP\textsuperscript{s} preferred methods of medical PAS competence activities related to patient care and specific patient cases. This was best achieved through negotiating longer supervision experiences with GPs within surgeries, or undertaking home visits for pre-arranged routine consultations of patients with known diagnoses.

Other examples in data showed students inviting known stable patients (users) to volunteer for routine patient consultation at GP surgeries, with known medical conditions. Assessments were structured and timed, aimed at performance improvement, though immediate feedback from GP supervisors and patients. This suggests that motivation to develop competence was directly related to patient care, and performance of medical PAS was tied to knowledge of patients’ conditions. The discussion and feedback from patients and GP supervisors were highly valued for professional development perspectives, especially when GPs included teaching and updating activities. This suggests that learning, teaching
and practicing, intertwined with the everyday experiences in delivering patient care develops confidence and competence.

This view is supported by van de Wiel et al. (2011) who explored deliberate practices in medicine and how physicians learn in the workplace. Findings suggest that physicians’ learning is largely guided by practical experiences rather than deliberately sought. GPs’ expectations of nurses’ proficiency in psychomotor medical PAS may be related to their framed references as to how they developed medical PAS competence. As van de Wiel et al. (2011) suggest, physician competence of repetitive tasks like medical PAS are usually contextualised through simulation and diagnostic measures, and not directly achieved when diagnosing patients’ conditions. Additionally, self-assessment of performance and identification of learning needs play a crucial role in advancing physicians’ knowledge and reasoning skills in clinical practice. Data in this study reported similar findings, but the researcher argues that a difference exists.

Community nurse practitioners had to engage in deliberate practices to develop overall medical PAS capabilities. To achieve this they had to be motivated, able to negotiate well and take professional responsibility for self-regulation of learning objectives. Learning was planned through goal setting, by identifying peer assessors, specialist supervisors, patient cases and specific placements to meet academic objectives.

The data showed that the main factors that mitigated against focussed efforts to improve performance and capabilities, related to lack of time to engage productively with supervisors. Tensions existed between balancing workload demands and supernumerary status for medical PAS specialist skills competence. Eraut's (2011) conclusions on the importance of feedback in the work-based
setting regarded constructive feedback as vital in engaging learners’ commitment to do well, and develop confidence and overall capabilities in the long-term. Engestraom (2001) review of acquisition of expert performance in medicine, acknowledges that immediate informative feedback is the best condition for performance improvement, when practice activities were structured in optimal learning environments.

6.6 Summary

This chapter has discussed the findings in the context of the current literature. The contribution of medical PAS for CNPs to meet national policy initiatives is evident from the discussion. CNPs ably used medical PAS to support workforce design strategies and support GPs in dealing with the volume of assessment work, for designated patient groups in primary care. The use of medical PAS assessment practices has enabled CNPs to work flexibly across boundaries and provide better care for patients that are more consistent and timely. CNPs case managed defined population groups in the same way as GPs, particularly patients with LTCs. These assessment skills enhanced CNPs ability to make independent judgements, and a diagnosis where appropriate, which fostered collaborative practice with GPs, patients and teams. CNPs’ achieved this by re-contextualising medical PAS assessment practices to the requirements of individual and specialist roles and the needs of services in primary care.
Chapter 7

A critical review of the methodology, study strength and limitations will follow. A critical evaluation of the research process will also be presented. The contribution of the study to the body of knowledge, methodology will be discussed, recommendations will be made and a conclusion of the main points presented.

7.1 Discussion on Methodology

Overall, the study was successful in that the research questions were answered. A lack of studies adopting qualitative methods that explored and captured multiple perspectives of medical PAS use for CNPs in primary care was highlighted in the literature in Chapter two. Previous methodological approaches have been mainly quantitative and undertaken in the US and Australia. In addition, the majority evaluated the use of medical PAS in undergraduate nursing programmes. In comparison, this study justifies its theoretical underpinnings, research paradigm and research methods, which gives credibility to the findings. It is the first study to use an embedded case study design, to describe the phenomenon of interest, which enabled the researcher to illuminate the complexity of the case through within case analysis.

7.2 Study Strengths

The qualitative approach allowed the co-construction of knowledge between the participants and the researcher. This research approach was robust in capturing multiple perspectives of CNPs use of medical PAS in primary care, as detailed in Chapter six. The qualitative approaches used were well suited to exploring the contextual factors that influenced the use of these skills for CNPs in 'live clinical practice'. As mentioned earlier, the researcher, as a nurse and educator helped to understand the challenges associated with data collection. Furthermore, the
researcher’s professional links with healthcare practice environments and other universities, assisted access. The use of two different interview strategies, allowed views to be expressed in a general and in-depth manner, thus strengthening the study’s findings. By incorporating GPs, managers, nurse educators and supervisors, a variety of perspectives were gained, which minimised nursing bias; thus strengthening this study’s findings.

A further strength was the use of Framework Analysis (Ritchie et al. 2003) to analyse the data. This model of analysis provides a detailed account of a step-by-step approach to data analysis data, and provided transparency to the overall research process.

7.3 Study Limitations
As this was a qualitative study, the subjective narratives that explored and captured multiple perspectives as to CNPs’ use of medical PAS in primary care, were self-reported by the researcher. Due to its focus, the study was unable to explore the use of medical PAS in other healthcare environments, such as hospitals. In addition, the study did not consider the impact of these skills on patient outcomes. Nevertheless, it can be seen from Chapter five, that the study provided an in-depth account of the use of these skills by CNPs in different contexts of primary care practice.

In qualitative enquiries, the researcher is the primary research instrument. As a nurse tutor working at a University who teaches medical PAS education, it was important to consider credibility. Bias was minimised by acknowledging personal attitudes and beliefs, and by taking the necessary steps to ensure the data spoke for itself.
I acknowledged that the findings of this study would only be an interpretation of what was elicited from the interviews. I acknowledged my novice role as a researcher, and the influence it may have had as to how participants engaged with this study.

Researching this topic in such a short time frame was challenging. However every effort was made to recruit diverse samples of participants who either used, or were involved with practitioner’s who used medical PAS across healthcare settings. Additionally, participants were recruited because of varied levels of professional and practice experiences, which enabled the researcher to capture rich narratives’ from multiple perspectives of the use of medical PAS for CNPs in primary care.

7.4 Contribution to Methodology

This study offers an original contribution to methodology in this area, as it is the first to use an interpretative qualitative methodological approach to explore and capture multiple perspectives of CNPs’ use of medical PAS in primary care. The use of an embedded case study design required the researcher to have an in-depth understanding of how the case design was theoretically and methodologically situated. Underpinning this case study within the constructivist paradigm supported the researcher’s personal interaction with the case throughout. Furthermore, the case was developed with the researcher and the participants, and presented to engage the reader in understanding the case findings.

7.5 The contribution to knowledge

Firstly, the use of these skills by CNPs goes beyond the initial policy objectives of the delegation of assessment tasks to support GP workloads, with the expected expansion of hospital care to the community. This study showed that not only do
CNP use these skills to supplement GP workloads, but they were mainly responsible for the care and management of defined patient groups with LTCs in primary care, particularly housebound patients.

The study showed how CNPs ably integrated medical assessment skill within the four constructs of the person-centred framework (McCormack & McCance 2006). Their attributes as experienced nurses in the community, were evident in their ability to integrate these skills into their professional knowledge domains to make decisions and prioritise patient care, to keep patients safe. Experienced CNPs interpersonal skills reflected their ability to communicate assessment data with patients/carers and other healthcare professionals on a variety of levels.

This study showed how CNPs used medical assessment skills in a population focussed manner, within the context of primary care. These skills were considered necessary to work flexibly across professional boundaries, and take the lead in delivering a range of alternative services for designated patient groups in primary care. The findings reported how CNPs used patient assessment findings when communicating information on risk and probability, to share treatment decisions with GPs and hospital doctors, to avoid hospital admissions.

The study demonstrated how these skills were used in person-centred ways, to work with patients’ beliefs and values, through engagement and with a sympathetic presence, which promoted ability to self-care. Using medical PAS in holistic ways with patients with end-stage chronic disease, enabled them to make sense of what is happening to them, to cope with the emotional and social consequences of living with a LTC.

This study contributes to knowledge and understanding of an existing theoretical framework related to negotiated order perspectives, which draws on the work of
Strauss et al. (1978), Hughes (1984), Svennson (1996) and Allen (1997). As demonstrated by these theorists, conditions have changed in the ways nurses accomplish authority in the course of their everyday work. This study contributes to this body of theoretical work, in that the use of medical assessment skills by CNPs is a major influencing factor in mediating change to role boundary working. Allen (1997) argued that the main factors that permeated the negotiation of work between doctors and nurses were the monopoly of case knowledge and diagnostic skills. This study contributes to this theory, by challenging the notion that case knowledge is no longer the jurisdiction of medical diagnostic work. GPs believed that CNPs ably integrated medical assessment findings to patients’ diagnoses, and were able to consider aspects of patients’ lifestyle alongside biological factors when reaching care decisions. Subsequently, CNPs determined treatment interventions to complete episodes of care, which minimised unnecessary involvement of other healthcare professionals, particularly GPs.

The findings also contribute to Allen’s (1997) description of rule orientated boundary blurring, meaning that when CNPs use these skills to make diagnoses, they were accountable for their decisions.

The findings reported that CNPs use of medical assessment skills significantly contributed to supporting GPs in managing the burden of assessment work for patients with LTCs in primary care. GPs believed that CNPs ability to use medical PAS in person-centred ways, relates to longer consultation times, and because they are more accessible to patients with LTCs illnesses.

The value of medical assessment skills training for CNPs’ is that it enhanced their clinical credibility to make independent decisions for defined population groups, as opposed to acting as a substitute for a GP. Subsequently, care provided was more

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continuous, consistent and integrated, which lead to improved patient experiences and better health outcomes, especially for patients with LTCs. This contribution needs to be acknowledged by policy and workforce developers, as it will have significant cost benefit to service delivery, particularly with the emphasis on the transfer of hospital care to the community.

7.6 Implications of the study
The findings of this study have implications for healthcare practitioners, policy makers and educators and these will now be discussed. As discussed at the beginning of this study, health systems are under continued pressure to cope with an increasing burden of disease, related to multi-morbidities and disabilities caused by LTCs, hence the drive to transfer hospital care to the community.

7.7 Contribution to education
This study finding will provide information for healthcare curriculum planners in particular, based on the knowledge that medical PAS are best taught and assessed when integrated into patients’ illness experiences. Therefore, in the long-term, user involvement will be very important in service re-design and professional curriculum development. Education and assessment strategies will need to pay particular attention to person-centred approaches, in order to learn how people experience disease and treatment. This approach will assist curriculum planners to decide where medical PAS should be positioned within the discipline of nursing knowledge, and its instrumental value for nursing work.

Furthermore, this study finding provide a platform for revisiting the manner in which medical PAS should be integrated into undergraduate professional preparation programmes, across all healthcare disciplines. Shared mental models of assessments will be required by healthcare professionals to work
interdependently. Common sets of assessment practices between disciplines will avoid inconsistency in the transferability of information across teams, so the course of action for patients is understood by all, to keep patients safe.

For this to be achieved, interdisciplinary undergraduate professional preparation programmes will need to provide sound theoretical foundations of health sciences to underpin physical health assessment education. The medical PAS assessment practices most relevant for patients with acute and chronic illness in hospitals and in the community are assessment of respiratory, cardiac, abdominal systems, and specific neurological assessment skills. In undergraduate nursing programmes, medical PAS practices should not be limited to the development of technical competence only, but taught in a manner that reflects assessment practices of person-centred-nursing.

Physical assessment skills practices in undergraduate nursing programmes should be taught in ways that engenders habits to direct what a nurse sees, hears and looks for, to make accurate clinical judgements, to identify what needs to be done. Developing medical PAS assessment practices in this way will provide a basis for RNs’ professional preparation for medical PAS assessment practices, consistent with the expectation of the CPE curriculum objectives. The subsequent impact is that University CPE programmes will be able to teach medical PAS with increased depth and comprehensiveness in an integrated way, and develop assessment strategies that focus on performance and capability.

Performance and capability in medical PAS assessment practices required CNPs to be accountable for their actions and decisions. Therefore medical PAS atrophy needs to be minimised through CNPs personal initiatives to remain competent and capable for specialist and advanced roles. Lack of competence and capability will
to lead to an inability to re-contextualise assessment information to different practice environments, for different population groups, and could lead to unsafe decisions.

This can be achieved through professional development updates facilitated at Universities, with knowledgeable and expert practitioners. Simulated medical PAS assessment practices, and video analysis in University environments, can assist in maintaining medical PAS competence on an annual basis. Alternatively, this can be achieved through protected learning time in practice or at the University, where the nurse works under the guidance of an experienced mentor/supervisor or University tutor, who is able to provide critical, but supportive feedback on capability and performance, for short periods of time.

At Universities, where medical PAS education is formally recognised as a requirement of specialist and advanced nursing roles, academic assessment strategies should be developed that focus on patient centeredness and partnership, especially for patients with LTCs. This could be achieved by medical PAS assessment strategies being modelled within a framework for person-centred nursing (McCormack and McCane 2006), that focuses on four constructs; *nursing attributes; the care environment* which focuses on the context that care is delivered; *person-centred processes*, and *expected outcomes* that result in effective person-centred nursing. The expected outcomes centred within the person-centred care model are; increased patient satisfaction through involvement, and better sense of well-being through an increased capacity to self-care. These person-centred approaches are embedded in many policy initiatives that promote patients capacity to self-care.
7.8 Contribution to practice

This study showed that CNPs ably re-contextualised medical PAS to the context and function of professional nursing work, around defined population groups in primary care. This was viewed as a positive innovation for CNPs as they were able to enhance their competence for their individual roles, which benefitted patients and teams. In addition the alignment of common assessment practices between professional teams in primary care is better for patients, and is viewed as a more contemporary way to work.

7.9 Implications for further research

Nursing professional bodies need to firmly acknowledge the importance of longer consultation times for CPNs assessment practices, for patients with LTCs that promotes ability to self-care. No research has been undertaken that determines how RNs' use medical PAS assessment practices during consultations, which enables patients with LTC to self-care.

This could be done with a further qualitative study that explores patients' and nurses' views in the community and in hospitals, as outlined in the following discussion.

In different primary care regions, a range of study sites could be sampled with patients with a diagnosis of a LTC. Patients could be recruited from specialist nurse’s case loads. Similarly, a range of hospitals, with designated assessment units, particularly pre-operative assessment (POA) nurse led units, could be sampled. Patients with a known diagnosis of a LTC, who attend POA for a consultation, could be sampled.

A multiple case study approach, using a collective case study design (Stake 2005) could be used, that included a purposive sampling of 5 case study sites in the
community and 5 case study sites in hospitals. To fit with this design, multiple sources of data collection would need to be employed (Stake 2005). Data could be collected in two phases by using semi-structured interviews and video-taped consultations. In phase 1, nurses from each site would be asked to videotape 5 patient consultations, with the view to collecting 50 videotaped consultations in total. In phase 2, up to 40 semi-structured interviews could be carried out with patient carers, nurses and others members of the healthcare team who work alongside the nurse at individual study sites.

Those who expressed an interest in the chosen sites, and who met the inclusion criteria, would be contacted to confirm willingness to participate. Support from nurse managers to recruit nurses who met the inclusion criteria, would aid the recruitment process. Nurses would be asked to recruit appropriate patients. Patients would be asked to nominate a carer, if relevant for interviews. Managers, who identified nurses, and other relevant healthcare professionals who work alongside the nurses, would be invited to take part in the semi-structured interviews.

To comply with ethical principles, information about the proposed study relating to consent, and ethical risks would be made transparent. The study would need to be approved by appropriate research and governance committees. Recruiting patients, who met the inclusion for videotaped consultations, would require them to have an information sheet about the proposed study, and relevant contacts to answer any questions, before deciding to participate. Consent would be gained from all those expressing a willingness to participate, stating that they can withdraw at any time, without giving a reason, and that a decision to withdraw would not affect care they received.
The interview schedule for the semi-structured interviews could be informed by literature on the person-centred nursing framework (McCormack and McCance 2006). The outcomes which underpin this framework is based on patient satisfaction, patient wellbeing, patient involvement, and creating a therapeutic environment that increases patients’ confidence to self-care (McCormack & McCance 2006). The rationale for using this framework is that the findings from this study showed that CNPs are using person-centred approaches whilst undertaking physical assessment practices during consultations, with patients with known LTCS.

Analysis of videotaped consultations would be undertaken by adapting existing video-analysis observation tools (Courtenay et al. 2009a). Interviews would be analysed using thematic approaches (Braun & Clarke 2006).

The findings of this proposed study could be used to inform national policy and nursing professional bodies of the importance longer consultations for nurse assessment practices that can ultimately empowers patients with LTCS to self-care.

The findings could also be used to work collaboratively with specific researchers who are interested in RNs’ assessment practices, in nurse consultations that enable patients with LTC to self-care. Two specific researchers, who have contributed to use of medical PAS assessment practices for nurses in the literature are, Janet Giddens in US and Melanie Birks in Australia.

7.10 Conclusion

At the beginning of this study, the researcher highlighted an interest in exploring and capturing multiple perspectives on the use of medical PAS for CNPs in primary care. The study’s findings have identified the contribution of medical PAS
for CNPs to work interdependently, in response to national policy emphasis on moving care from hospitals to the community. An unexpected finding is the desire of experienced community nurses to take on assessment tasks, beyond the traditional caring boundaries of nursing work, because this was good for patients. Another unexpected finding is the support of GPs for CNPs to use medical PAS to develop their professional practice, because it was good for patients and services, as identified throughout the study's findings.
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Table 1. Search Strategy

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Appendix 1

Letter of Approval

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GU2 7XH

20/12/2012

Dear Mary

EC/2012/23 Protocol Amendments

On behalf of the FHMS Ethics Committee, I am pleased to confirm a favourable ethical opinion to the amended protocol submission received in December 2012.

Date of confirmation of ethical opinion: 20th December 2012

The list of documents reviewed and approved by the Committee is as follows:-

Document Type: Amendments to proposal and supporting documents
Version: 2
Dated: December 2012

This opinion is given on the understanding that you will comply with the University’s Ethical Guidelines for Teaching and Research, and with the conditions set out below.

1. All data must be retained securely for 10 years on University(indicate how and where)

2. The Participant Information Sheet must include contact details for the supervisor

3. You must provide the committee with copies of permission documents and ethical approval from Brighton.

The Committee should be notified of any amendments to the protocol, any adverse reactions suffered by research participants, and if the study is terminated earlier than expected, with reasons.
You are asked to note that a further submission to the FHMS Ethics Committee will be required in the event that the study is not completed within five years of the above date.

Please inform me when the research has been completed.

Yours sincerely

Prof Peter Goldfarb  
Chair, FHMS Ethics Committee

cc: Wendy Knibb FHMS

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Mary EC12 23\Amendments Approval letter EC 2012 23.doc
Appendix 2. Approval Letter – Brighton University

From: Hilary Ougham [mailto:H.A.Ougham@brighton.ac.uk]
Sent: 15 January 2013 09:26
To: Raleigh M Ms (Health & Social Care)
Subject: RE: Recruitment of University of Brighton students for research study

Dear Mary,

I have now received confirmation from Shirley Bach that she is happy for you to recruit students and staff from her School for your study, and you may now therefore proceed with this.

Regards,
Hilary

From: Hilary Ougham [H.A.Ougham@brighton.ac.uk]
Sent: 03 January 2013 11:30
To: Raleigh M Ms (Health & Social Care)
Subject: RE: Recruitment of University of Brighton students for research study

Dear Mary,

Many thanks for your email and I confirm that I did receive your previous email with all the attachments.

Can I just check, are you intending to recruit participants just from the School of Nursing and Midwifery, or from any other Schools within the University?

And are you hoping to recruit both staff and students, and if students, at what level (ug/pg)?

Regards,
Hilary

From: Raleigh M Ms (Health & Social Care)
Sent: 03 January 2013 11:07
To: H.A.Ougham@brighton.ac.uk
Subject: RE: Recruitment of University of Brighton students for research study

Dear Hilary,

I'm Mary Raleigh, a tutor at the University of Surrey. I spoke with you briefly just before the Christmas break regarding ethics permission to sample at Brighton Faculty of Health (Nursing). I have sought re-approval from Surrey again, with a view to data collection outside my own faculty. I am attaching the re-approved documentation that went to Surrey ethics committee and the re-approval letter. I would be most grateful if you let me know what other elements of documentation you require to proceed with ethics application at Brighton.

Thank you
Appendix 3. Indemnity Letter

Whom It May Concern

Our ref: NK/IND  8 July, 2011

Zurich Municipal Customer: University of Surrey and wholly-owned Subsidiary Companies

This is to confirm that University of Surrey and wholly-owned Subsidiary Companies have in force with this Company.

Public Liability:  £35,000,000 any one event
Products Liability:  £35,000,000 for all claims in the aggregate during any one period of insurance
Pollution:  £35,000,000 any one event

Excess:
Public Liability/Products Liability/Pollution: £250 any one event
Employers’ Liability: Nil any one claim

Indemnity to Principals:
Covers include a standard Indemnity to Principals Clause in respect of contractual obligations.

Full Policy:
The policy documents should be referred to for details of full cover.

Yours faithfully

Underwriting Services
Zurich Municipal
Farnborough
Appendix 4. Invitation Letter- Focus Groups

Dear Participant,

I am a tutor at the University of Surrey and currently undertaking a Doctorate of Clinical Practice. I would like to invite you to participate in a research project entitled ‘

*An investigation of Physical Assessment Skills (PAS) in practice in primary care*

**What is the purpose of the study?**

The purpose of his study is to investigate Physical Assessment Skills (PAS) in education and practice. By participating, it is hoped that you will find the experience meaningful and constructive. Your participation is vital to the future development of physical assessment skills for nursing professional preparation programmes of study at the University. The research findings will be used to inform PAS education.

**Please see the participant information sheet for further details**

If you would like to participate in this research, you will be invited to take part in a focus group interview lasting approximately 1.5 and up to 2 hours. The focus group interview will be held in……………… at the University. The findings from the interview data will be presented at two stakeholder workshop meetings, to which
you will also be invited to attend to inform the future development of PAS education. This information will be recorded.

Taking part in the study is your decision and you are free to withdraw at any time, without it affecting your relationship at the University. Your identity will remain completely anonymous and any details that refer to you during the focus group interview will be omitted. Absolute anonymity is completely assured.

If at any time throughout the interview you feel uncomfortable, you will be free to discontinue without prejudice and the recorded discourse will be completely destroyed.

Thank you very much for considering taking part in this study. If you would like to participate or if you have any queries about the research, please contact

**Name and contact of Principal Investigator**

Mrs Mary Raleigh  
School of Health and Social Care  
Faculty of Health and Medical Sciences  
Duke of Kent Building  
University of Surrey  
Guildford, Surrey.  
GU2 7TE  
Tel: 0148368 2529  
E-Mail: m.raleigh@surrey.ac.uk

**Name and contact of Principal Supervisor**

**Dr Wendy Knibb**  
School of Health and Social Care  
Faculty of Health and Medical Sciences  
Duke of Kent Building  
University of Surrey  
Guildford, Surrey.  
GU2 7TE  
Tel: 0148368 4631  
E-Mail: wendy.knibb@surrey.ac.uk
Appendix 5. Information Sheet for Focus Groups

INFORMATION SHEET FOR PARTICIPANTS FOR FOCUS GROUP(S)

Title:

An investigation of Physical Assessment Skills (PAS) in practice

Invitation

I would like to invite you to participate in this research study on the Physical Assessment Skills (PAS) education at the University of Brighton. It is important that you understand why the research is taking place and what your participation will involve. Please take time to read the application carefully and discuss it with others if you wish. If there is anything you are not clear about, or you would like more information, please contact me using the details provided below.

Part 1: Tells you about the purpose of the study and what will happen to you if you take part

Part 11: Gives you more detailed information about the conduct of the study.
Part 1

What is the purpose of the study?

The purpose of his study is to investigate Physical Assessment Skills (PAS) in education and practice.

Why have I been chosen?

You have been chosen because as a registered nurse you have undertaken a PAS module of study at either degree or masters level at the University whilst practicing as a District Nursing, Community Matron, Specialist or Nurse Practitioner or as a ward based nurse. You have also been chosen because you are a Director of Nursing, module leader or specialist tutor who is involved in PAS education at the University. Your views or beliefs will be explored as to why PAS are needed for registered nurses roles in practice, how these skills are used and if some PAS are used most frequently. Your views will be explored as to how and where the PAS education be delivered and how PAS assessment is facilitated and supervised in practice. Finally, how barriers to the use of PAS education are overcome in the UK healthcare context, will be examined.

Do I have to take part?

No. Participation is entirely voluntary.

What will happen if I take part?

If you wish to take part in this study, you will be invited attend a ‘focus group’ interview. This means that you will be part of a group of up to eight people who will be selected on the basis of being a registered nurse, practicing in District Nursing, Community Matron, Specialist or Nurse Practitioner roles or as a ward.
based nurse and have undertaken PAS modules at degree or masters level at the University. You have been chosen because you are a Director of Studies, module leader or specialist tutor who is involved in PAS education at the University. You may know some of the selected group members from the University, or you may know them from clinical practice. The researcher and an additional person known as the moderator will conduct the focus group interview. You will be familiar with the language of the topics chosen for the focus group interview. The interview questions will be asked to all of the group members present and you will be able to talk and interact freely with other members of the group when giving a reply. Prior to the focus group interview you will be sent an information pack that will inform the basis for the discussion. The moderator may ask group members to clarify their explanations and take notes during the discussion. The moderator will record the group feedback and manage the recording equipment and the time. The focus group interview will take approximately 1.5 or up to 2 hours. The date, time and place for the focus group interview will be arranged at your convenience.

**Will my participant in the study be confidential?**

Yes. Any information obtained during the study will be treated confidentially. All information will be kept strictly confidential and in accordance with the UK Data Protection Act (1998). Once the study is completed, it will be stored for 10 years on the premises of the FHMS. All data within any publications will be anonymised.

**What are the possible benefits of taking part?**

The findings from the interview data will be presented at two stakeholder workshop group meetings. The output from the finalised action plan from the meetings will be disseminated to Head of Professional Development Programmes
at the University and Trust Stakeholders who commission PAS education from the University.

**Part 11**

**What are the possible disadvantages or risks of taking part?**

You should only take part in the study if you want to; choosing not to take part will not disadvantage you in any way. During the focus group interview, if for any reasons the topics being discussed cause you any emotional distress, the interview will be stopped immediately.

**Will the outcome of the research be published?**

Yes. The findings will be presented at academic and professional conferences and in academic journals. If you would like information about the results of the study, you can request this information through direct contact with me.

**Who has reviewed the study?**

This research project will be reviewed by the Faculty of Health and Medical Sciences (FHMS) Ethics Committee of the University of Surrey and the Faculty Research Ethics and Governance (FREGC) at Brighton University.

**Thank You**

Please allow me to offer my sincere thanks to you for reading this information and considering taking part in this research. If you have any queries, please feel free to contact me at any time.
Any complaints or concerns about any aspects of the way you have been dealt with during the course of the study will be addressed; please contact the Principal Investigator or the Principal Supervisor.

**Name and contact of Principal Investigator**
Mrs Mary Raleigh  
School of Health and Social Care  
Faculty of Health and Medical Sciences  
Duke of Kent Building  
University of Surrey  
Guildford, Surrey.  
GU2 7TE  
Tel: 0148368 2529  
E-Mail: m.raleigh@surrey.ac.uk

**Name and contact of Principal Supervisor**
Dr Wendy Knibb  
School of Health and Social Care  
Faculty of Health and Medical Sciences  
Duke of Kent Building  
University of Surrey  
Guildford, Surrey.  
GU2 7TE  
Tel: 0148368 4631  
E-Mail:
Appendix 6. Invitation Letter for Semi-structured Interviews

Schools of Health and Medical Science
Duke of Kent Building
Stag Hill Campus
Guildford, Surrey GU2 7AX
Mary Raleigh
0044(0)1483682529
m.raleigh@surrey.ac.uk
www.surrey.ac.uk

Dear Participant,

I am a tutor at the University of Surrey and currently undertaking a Doctorate of Clinical Practice. I would like to invite you to participate in a research project entitled

An investigation of Physical Assessment Skills (PAS) in education and practice

What is the purpose of the study?

The purpose of his study is to investigate Physical Assessment Skills (PAS) in education and practice.

By participating, it is hoped that you will find the experience meaningful and constructive. Your participation is vital to the future development of physical assessment skills for nursing professional preparation programmes of study at the University. The research findings will be used to inform PAS education.

Please see the participant information sheet for further details

If you would like to participate in this research, you will be invited on to take part in a semi-structured interview lasting approximately 30-40 minutes. The interview will be held in……………… at ………... The findings from the interview data will be presented at two stakeholder workshop meetings, to which you will also be invited to attend to inform the future development of PAS education. This information will be recorded.

Taking part in the study is your decision and you are free to withdraw at any time, without it affecting your relationship at the University. Your identity will remain completely anonymous and any details that refer to you during the interview will be omitted. Absolute anonymity is completely assured.
If at any time throughout the interview you feel uncomfortable, you will be free to discontinue without prejudice and the recorded discourse will be completely destroyed.

Thank you very much for considering taking part in this study. If you would like to participate or if you have any queries about the research, please contact

Name and contact of Principal Investigator
Mrs Mary Raleigh
School of Health and Social Care
Faculty of Health and Medical Sciences
Duke of Kent Building
University of Surrey
Guildford, Surrey.
GU2 7TE

Tel: 0148368 2529
E-Mail: m.raleigh@surrey.ac.uk

Name and contact of Principal Supervisor
Dr Wendy Knibb
School of Health and Social Care
Faculty of Health and Medical Sciences
Duke of Kent Building
University of Surrey
Guildford, Surrey.
GU2 7TE

Tel: 0148368 4631
E-Mail: wendy.knibb@surrey.ac.uk
Appendix 7. Information Sheet for Semi-Structured Interviews

School of Health & Medical Sciences
Division of Health and Social Care

Duke of Kent Building, Stag Hill
Guildford, Surrey GU2 7XH UK
T: +44 (0)1483 686700
F:+44 (0)1483 686701
www.surrey.ac.uk

INFORMATION SHEET FOR PARTICIPANTS FOR SEMI-STRUCTURED INTERVIEWS

Title:

An investigation of Physical Assessment Skills (PAS) in practice

Invitation

I would like to invite you to participate in this research study on the Physical Assessment Skills (PAS) education at the University. It is important that you understand why the research is taking place and what your participation will involve. Please take time to read the application carefully and discuss it with others if you wish. If there is anything you are not clear about, or you would like more information, please contact me using the details provided below.

Part 1: Tells you about the purpose of the study and what will happen to you if you take part
Part 11: Gives you more detailed information about the conduct of the study.

Part 1

What is the purpose of the study?

The purpose of his study is to investigate Physical Assessment Skills (PAS) in education and practice.

Why have I been chosen?

You have been chosen because as a manager you have sponsored a registered nurse, practicing in District Nursing, Community Matron, and Specialist or Nurse Practitioner roles or as a ward based nurse to undertake PAS modules of study at degree or masters level at the University. As a clinical supervisor, you have been chosen because you have facilitated the assessment and supervised PAS competency of District Nurses or Community Matrons or Specialist or Nurse Practitioners or ward based nurses in clinical practice. A nominated clinical supervisor in practice is a requirement of PAS education at the University. Your views or beliefs will be explored as to why PAS are needed for registered nurses roles in practice, how these skills are used and if some PAS are used most frequently. Your views will be explored as to how and where the PAS education be delivered and how assessment is facilitated and supervised in practice. Finally, how barriers to the use of PAS education are overcome in the UK healthcare context, will be examined.
Do I have to take part?

No. Participation is entirely voluntary.

What will happen if I take part?

If you wish to take part in this study, you will be invited to attend an interview which will be called a ‘semi-structured’ interview. This means that you will be interviewed by the researcher on a one to one basis. The researcher will have an interview schedule with questions on topics that you will be familiar with. You will be able to talk and interact freely with the researcher when giving your replies. Prior to the semi-structured interview you will be sent an information pack that will inform the basis for the discussion.

The interview will be recorded. The interview will last approximately 30-40 minutes hour. The date, time and place for the interview will be arranged at your convenience.

Will my participant in the study be confidential?

Yes. Any information obtained during the study will be treated confidentially. All information will be kept strictly confidential and in accordance with the UK Data Protection Act (1998). Once the study is completed, it will be stored for 10 years on the premises of the FHMS. All data within any publications will be anonymised.

What are the possible benefits of taking part?

The findings from the interview data will be presented at two stakeholder workshop group meetings, to which you will be invited to attend. The output from the finalised action plan from the meetings will be disseminated to Head of
Professional Development Programmes at the University and Trust Stakeholders who commission PAS modules of study from the University.

Part 11

What are the possible disadvantages or risks of taking part?

You should only take part in the study if you want to; choosing not to take part will not disadvantage you in any way. During the interview, if for any reasons the topics being discussed cause you any emotional distress, the interview will be stopped immediately.

Will the outcome of the research be published?

Yes. The findings will be presented at academic and professional conferences and in academic journals. If you would like information about the results of the study, you can request this information through direct contact with me.

Who has reviewed the study?

This research project will be reviewed by the Faculty of Health and Medical Sciences (FHMS) Ethics Committee of the University of Surrey and the Faculty Research Ethics and Governance (FREGC) at Brighton University.

Thank You

Please allow me to offer my sincere thanks to you for reading this information and considering taking part in this research. If you have any queries, please feel free to contact me at any time.
Any complaints or concerns about any aspects of the way you have been dealt with during the course of the study will be addressed; please contact the Principal Investigator or the Principal Supervisor.

**Name and contact of Principal Investigator**
Mrs Mary Raleigh  
School of Health and Social Care  
Faculty of Health and Medical Sciences  
Duke of Kent Building  
University of Surrey  
Guildford, Surrey.  
GU2 7TE  
Tel: 0148368 2529  
E-Mail: m.raleigh@surrey.ac.uk

**Name and contact of Principal Supervisor**

Dr Wendy Knibb  
School of Health and Social Care  
Faculty of Health and Medical Sciences  
Duke of Kent Building  
University of Surrey  
Guildford, Surrey.  
GU2 7TE  
Tel: 0148368 4631  
E-Mail: wendy.knibb@surrey.ac.uk
Appendix 8. Consent Form

CONSENT FORM FOR PARTICIPANTS IN RESEARCH STUDIES

Title of Study:
An investigation of Physical Assessment Skills (PAS) in practice

☐ The nature, aims and risks of the research have been explained to me. I have read and understood the Participant Information Sheet provided. I have been given full explanation by the investigator of the nature, purpose, location, likely duration of the study. I fully understand what is expected of me. I have been given the opportunity to ask on all aspects of the study and have understood the advice and information given to me.

☐ I agree to being interviewed, with the interview being recorded.

☐ Once the study is completed the data will be stored for 10 years on the premises of FHMS.

☐ I agree to the findings being published and presented at seminars and conferences on the premise that all data is anonymised.

☐ I recognise that I can withdraw from the interview at any stage without giving a

☐ I understand that all personal data relating to volunteers will be processed in the strictest confidence and in accordance with the UK Data Protection Act (1998). I agree that I will not restrict the use of the findings of the study on the basis that my anonymity is preserved.
I acknowledge that there will not be a fee or compensation for taking part in this study.

I confirm that I have read and understood the above and freely consent to participating in this study. I have been given adequate time to consider my participation and agree to comply with the instructions and restrictions of the study.

My identity and identities of any other person I may have discussed during the interview will remain completely anonymous. I consent to taking part in this research study.

Please sign and date if you agree with the above:

Name of volunteer
Signed
Date

Name of Researcher/ person taking consent
Signed
Date:
Appendix 9. Interview Schedule – Focus Groups

Interview Schedule: {Focus Groups- District Nurses, Community Matrons, Nurse Practitioners, and staff involved in PAS education at the University}

This interview schedule will be used for the four focus groups

Researcher: My name is Mary Raleigh and I am a doctorate student at the University of Surrey.

Role of researcher:

1. Mary greet participant(s) and thank them for taking the time and interest in attending the focus groups
2. Mary will ensure that participants are seated comfortably and can help themselves to refreshments provided
3. Mary introduces the moderator and her role as note taker throughout the focus groups interviews
4. Mary states the aim and purpose of the study
5. Mary explains the need for completed consent forms and remind participants that interviews will be recorded
6. Mary assures participants privacy and confidentiality through the use of coded fictitious names, such as participant AB1, AB2 and so on
7. Mary provides opportunity for participants to ask any questions or concerns before the interview begins.

8. Mary ensures that the environment is relaxed and interruption free by placing an ‘Interviews in progress - do not disturb’ sign at entrance to the venue.

9. Mary gains permission to commence the interview with participants introduction, first names, area of work and how long.

**Theme 1.**

Would you please describe and explain *why* you think physical assessment skills are needed for the following roles in the domains of healthcare practice and education.

**Focus group one:** District Nurses,

**Focus group two:** Community Matrons

**Focus group three:** Nurse Practitioners (community setting)

**Focus group five:** Director of studies, module leaders and specialist tutors

**Probes:**

- Can you please describe the environment you work in and why you think PAS are needed for your/their role(s)?
- Can you please elaborate by giving examples?
- Can you please explain what you mean?
- Can you please expand or clarify what you mean?
- Why do you think that way, I would like you to say more about that?
- Yes, that’s interesting, so what did you do in that situation?

►►explore as much as possible using other probes triggered within the interview► ◄

**Theme 2.**

Would you please describe *how* PAS are used in registered nurses roles in their clinical practice environments?

Would you please explain the *frequency* in which you think PAS are used and describe why this is the case?

**Encourage free narration using the following probes**

- Can you please elaborate on your views?
- Can you please explain what you mean?
- Can you please expand or clarify what you mean by giving examples?
- Why do you think that way?

►►explore as much as possible using other probes triggered within the interview► ◄
Theme 3.
What are your particular views and beliefs as to how PAS are *facilitated* and *supervised* in practice?

*Encourage free narration using the following probes:*
- Can you please describe some experiences
- Can you please elaborate on these experiences
- Can you please explain what you mean?
- Can you please expand or clarify what you mean by giving examples
- Why do you think that way
- What did you do in that situation

►► explore as much as possible using other probes triggered within the interview ◄ ◄

Theme 4.
What are your particular views and beliefs as to *how* and *where* the PAS education is taught and delivered?

*Encourage free narration using the following probes:*
- Can you please describe some experiences
- Can you please elaborate on these experiences
- Can you please explain what you mean?
- Can you please expand or clarify what you mean by giving examples
- Why do you think that way
- What did you do in that situation

►► explore as much as possible using other probes triggered within the interview ◄ ◄

Theme 5.
What are your particular views and beliefs as to *how* and *where* the PAS module of study is taught and delivered?

*Encourage free narration using the following probes:*
- Can you tell me how you were involved with the PAS education?
- Can you please describe some experiences
- Can you please elaborate on these experiences
- So could you identify one or two main features of PAS education
- Can you please explain what you mean?
- Can you please expand or clarify what you mean by giving examples
- How did you find the guidance/support/information and advice you received regarding the PAS education?
- Can you please expand or clarify what you mean by giving examples
- What are your feelings about the time involvement with PAS education?
- Can you think of what may be the strengths and positives about PAS education?
- Can you think of what may be the weaknesses and disappointments about PAS education?
- What did you do in that situation?
Why do you think that way?
Have you got any other experiences or any other information that you would like to share with me about the PAS education

Theme 6.
Would you please describe and explain how barriers to the use of PAS are overcome in the UK healthcare context?

Encourage free narration using the following probes:
- Can you please describe some experiences
- Can you please elaborate on these experiences
- Can you please explain what you mean?
- Can you please expand or clarify what you mean by giving examples
- Why do you think that way
- What did you do in that situation

►► explore as much as possible using other probes triggered within the interview► ◄

Theme 7
What are your views and beliefs on nurses’ confidence and competence by having these skills in practice?

Encourage free narration using the following probes:
- Can you please describe some experiences
- Can you please elaborate on these experiences
- Can you please explain what you mean?
- Can you please expand or clarify what you mean by giving examples
- Why do you think that way

►► explore as much as possible using other probes triggered within the interview► ◄

In thinking back over the PAS module of study, have you noticed any other changes in your (their) practice since the module completion? Has anyone else commented on these changes, for example, your (their) manager(s), your (their) peers, and your (their) patients?
As I begin this research, what one important piece of advice would you like to give me about physical assessment skills modules of studies?
Are you surprised by anything we have asked or have not asked?
Appendix 10. Interview Schedule – Semi-Structured Interviews

School of Health & Medical Sciences
Division of Health and Social Care
Duke of Kent Building, Stag Hill
Guildford, Surrey GU2 7XH UK

T: +44 (0)1483 686700
F: +44 (0)1483 686701

www.surrey.ac.uk

Interview schedule (Semi-structured interviews - Managers and Supervisors
(GP & Nurse supervisors)

This interview schedule will be used for the nine semi-structured interviews

Researcher: My name is Mary Raleigh and I am a doctorate student at the University of Surrey.

Role of researcher:

- Mary greet participant and thanks him/her for taking the time and interest in attending the interview
- Mary ensures that the participant is seated comfortably and can help him/herself to refreshments provided
- Mary states the aim and purpose of the study
- Mary explains the need for completed consent form and reminds the participant that the interview will be recorded
- Mary assures participant privacy and confidentiality through the use of a coded fictitious name, such as participant BB1.
- Mary provides opportunities for participant to ask any questions or concerns before the interview begins
• Mary ensures that the environment is relaxed and interruption free by placing an ‘Interviews in progress - do not disturb’ sign at entrance to the venue.
• Mary gains permission to commence the interview with participant introduction, first names, area of work and how long

**Theme 1.**
Would you please describe and explain why physical assessment skills are needed for District Nurses, Community Matrons, Nurse Practitioners primary care settings) {where relevant}
You can talk about what physical assessment skills are important in particular in relation to the environment you/they work {where relevant}

**Encourage free narration using the following probes:**

1. Thinking of your own area of practice, can you describe why you think PAS are necessary in your practice area? …… Can you please elaborate by giving examples and explain what you mean?
2. Do you feel that PAS are needed in those situations? … are they important? ……
3. Can you please expand or clarify your views and explain to me what you mean by giving me some examples……ok, so why do you think that way, I would like you to say more about that…… right … so you said ……can you possibly identify why that is the case …..and if there are differences? ……ok… and what do you see as the main ones?….

**Theme 2.**
Would you please describe how you think the PAS are used and explain why you think they are used in this way in clinical practice environment?

**Encourage free narration by using the following probes**

1. Thinking of your own area of practice you elaborate on how PAS are used and which skills do you think you use most frequently? … so you said you use ……those PAS skills …. can you tell me why this is the case and elaborate on your views and explain what you mean by giving examples……right … so you said……and is this how it is done in practice? … I would like you to expand or clarify why you think that way….and what you do in those situations?

◄► explore as much as possible using other probes triggered within the interview ►◄
Theme 3.
What are your particular views and beliefs as to how PAS are facilitated and supervised in practice?

Encourage free narration

Probes:
- I would like you to talk about supervision and what you see as the main requirement for the student undertaking PAS education, compared to what they were doing before...so can you please tell me your thoughts and feelings about the way in which you facilitated and supervised PAS education in practice.....right so you said.....but can you identify or describe some experiences
- Can you please explain what you mean... right..... so you said..... clarify what you mean by giving examples.........and tell me why do you think that way?
- What did you do in that situation...... you did that right? .....so what would you do if this occurred again?

Probes:
- Can you tell me what kind of support in your perception do you think you should have been given if you were a supervisor?  Ok ... so you said... is that correct? .... Right ... so can you please expand or clarify what you mean by giving examples

So how do you think this support should have been given to you? .....and why do you think that?
Can you explain what you would do in that situation if it occurred again?

▶ explore as much as possible using other probes triggered within the interview◀

Theme 4.
I would like to talk about your particular views or beliefs as to how and where the PAS module of study is taught and delivered?

Encourage free narration using the following probes:
- Can you tell me how you were involved with the PAS education?... and describe some examples and experiences of your involvement... so you said you were involved in this way... am I right? ... so could you possibly elaborate on these experiences.......so what are your feelings about the time involvement with PAS education and how its delivered? .... So you said it should be delivered in this way...am I right? .... If so... where do you think it should be delivered?

- So could you identify one or two main features of PAS education please explain what you mean by these features by expanding or clarifying what you mean by giving examples.....
- So how did you find the guidance/support/information and advice you received regarding the PAS education?
Can you please expand or clarify what you mean by giving examples
So can you have identified what may be the strengths and positives about the PAS education? … Right… so… what do you think may be the weaknesses and disappointments about PAS education?
So what did you do in that situation?
Why do you think that way?
Can you tell me if you have any other experiences or any other information that you would like to share with me about the PAS education either at the University or in practice?

Theme 5.
Could you please describe and explain how barriers to PAS are overcome in the UK healthcare context?

Encourage free narration using the following probes:

- In this section I want to ask you about barriers to the use of PAS in practice and how they are overcome? … I would like you to identify how you have overcome some of the possible barriers that you have experienced to the use of PAS in practice and how you managed these by elaborating on some of these experiences
- Can you please explain what you mean…… expand or clarify by giving examples
- Can you possibly why you think that way and what did you do in that situation?…. ok.. so how do you think this can be changed or improved in the future?
- What else do you think can be done

Could you tell me your views or beliefs on nurses’ confidence and competence in having these skills in practice?

Encourage free narration using the following probes:

- Can you please describe some experiences
- Can you please elaborate on these experiences
- Can you please explain what you mean?
- Can you please expand or clarify what you mean by giving examples
- Why do you think that way

In thinking back over the PAS education, have you noticed any other changes in your (their) practice since completion? Has anyone else commented on these
changes, for example, your (their) manager(s), your (their) peers, and your (their) patients?

As I begin this research, what one important piece of advice would you like to give me about physical assessment skills education?

Are you surprised by anything we have asked or have not asked?
### Table 7 Constructing Coding Framework

<table>
<thead>
<tr>
<th>7th March 2013</th>
<th>Participant V1 { Nurse Practitioner - Supervisor - Primary Care} { Unit of analysis}</th>
<th>Interviewer: Researcher</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Interview: …. Interview Duration: 56 minutes</td>
<td>Venue: ….</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Int</th>
<th>Participant welcomed and seated comfortably. Introductory statement as to the aim of study stated. Ground rules of interview explained. Purpose of consent and confidentiality clarified. Finishing time clarified and opportunities(s) for debriefing following interview explained.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Int</th>
<th>Question 1. tell me why you need PAS in your role as an Nurse Practitioner in Primary Care</th>
</tr>
</thead>
</table>
| V1  | 1. I do chronic disease management and prevention of hospital admissions, so to be able to prevent hospital admissions, you need to be able to physically assess people's health at that present time and assess their exacerbations at that time that could possibly take them into hospital.  
5. Also, I am able to ARTICULATE better to fellow medical colleague’s clinical findings. These benefits patients as it keeps them well, it keeps them OUT of hospital, teaching them about their own healthcare and their own conditions, their education and health promotion aspects. Also, as a result of having these skills, I have built better rapport with my GP colleagues, being able to PROPERLY assess and |

<table>
<thead>
<tr>
<th>Memos</th>
<th>Descriptive Codes</th>
<th>Comments</th>
<th>Indexing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Chronic Disease Management Admission Avoidance Monitoring Reporting Health Promotion Diagnosing</td>
<td>Awareness to role outcomes</td>
<td>Unmet care needs Consistency &amp; Standardisation Triaging patients</td>
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<tr>
<td>11. <em>diagnose my patients</em> (strong tone)</td>
<td></td>
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<tr>
<td>Int</td>
<td><em>Can you clarify the last point in relation to assessment and diagnosis and give examples if you wish?</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V1</td>
<td>12. Yes, because I have better knowledge and understanding of what is going on. I have better clinical reasoning. I am able to ACTUALLY articulate what I want rather than saying &quot;oh I think s/he has a chest infection&quot;. well that's not good enough really is it. You need to be able to say, well I have done x, y and z and I've heard this and I think that's because of that and now I want to prescribe this and I'm going ahead with it. because of (pause) and I'm going to go back and review them and now I have such a better rapport with our GP's, yea, yea (pause)</td>
<td>Links to NP's, DN's &amp; CM's Knowledge (clinical) Clinical Reasoning Reporting Determine Intervention Makes a hypothesis Knowledge</td>
<td></td>
</tr>
<tr>
<td>Int</td>
<td><em>you mentioned reasoning.. can you clarify that a bit more please ?</em></td>
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<tr>
<td></td>
<td>20. <em>my ability to reason more effectively, it's about being able to put clusters together. I know my patients really well, we spend allot of time together and getting too know them, better than the GP's would now these days. I know better when they are in their exacerbations ‘and what’s their ‘norm’ for them and being able to cluster all that together and articulate it to medical colleagues</em></td>
<td>Clinical Reasoning Knowing Patient Monitoring Assimilating information Case management</td>
<td></td>
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<tr>
<td>Int</td>
<td>you mentioned 'clustering it all together' -can you clarify what you mean and give examples</td>
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<tr>
<td>V1</td>
<td>27. To make a differential diagnosis and I has to as it goes hand in hand with 28. the prescribing really. Working in this way give you a better rapport... 29. work better with the doctors</td>
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<tr>
<td></td>
<td>Differential Diagnosis Medication intervention</td>
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<tr>
<td></td>
<td>Case management</td>
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<tr>
<td>Int</td>
<td>You mentioned that you have a better rapport and work better with the doctors ...can you clarify and give any examples?</td>
<td></td>
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</tr>
<tr>
<td>V1</td>
<td>30. Yes, I think there was a big gap (pause) I don't think the doctors actually 31. respected us (pause) we were hand maidens and kind of doers and I 32. don't think as nurses we were not able to ARTICULATE exactly what we 33. mean. These skills have given me more power to be able to articulate 34. why I think my patient is unwell. So you learn the skill, so like you are 35. going to look at Mr X and he is not very well and you know he is not 36. very well, but prior to PAS I would most probably have said 'oh you know 37. he is not very well from an intuitive perspective' and now I will say &quot; he is 38. not well and I'm going to 39. do x, y and z and I'm going to listen for this 39. and look for that and I'm going to cluster all of that together which will 40. give me a medical diagnosis and reasoning to take back and say why I 41. did what I did, rather than saying &quot; you know I don't think Fred is very 42. well&quot;. therefore I think that has built better relationships with our 43. medical colleagues</td>
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<tr>
<td></td>
<td>Links to FG's, NP's, DN&amp; CMs</td>
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<tr>
<td></td>
<td>Weakness in reporting Empowerment Patient Advocate Clinical Reasoning Medical diagnosis Building Relationships</td>
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<td></td>
<td>Use of PAS language</td>
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<td></td>
<td>Communication</td>
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<td></td>
<td>Boundary working</td>
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</tbody>
</table>
In relation to your last point, on building your relationship with medical colleagues, can you clarify what you mean?

44. Yes, I act more professionally I think (pause), belief, they listen to me allot better, they trust me allot more and out of that has come allot more referrals of patients with acutely unwell people with existing co-morbidities, so the doctors have let go some of their power.

You mentioned power? do you want to expand and clarify this or give examples by what you mean by this?

48. Well because I supervise and work so closely with my patients and I know them so well, and act as an advocate for my patients (p), it's given me that inward power for my patient, so acting as their voice and advocate for the very frail person or undereducated people (confident tone), in socially depredated area, they don't always know what they want to articulate, so being able to have that has given me some power back from the medical profession.

<table>
<thead>
<tr>
<th>Int</th>
<th>Building Relationships</th>
<th>Role delegation</th>
<th>Trust</th>
<th>Teamwork</th>
</tr>
</thead>
<tbody>
<tr>
<td>V1</td>
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<tr>
<td>44.</td>
<td>Yes, I act more professionally I think (pause), belief, they listen to me allot better, they trust me allot more and out of that has come allot more referrals of patients with acutely unwell people with existing co-morbidities, so the doctors have let go some of their power.</td>
<td>Building Relationships</td>
<td>Role delegation</td>
<td>Trust</td>
</tr>
<tr>
<td>V1</td>
<td>You mentioned power? do you want to expand and clarify this or give examples by what you mean by this?</td>
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</tr>
<tr>
<td>V1</td>
<td>Well because I supervise and work so closely with my patients and I know them so well, and act as an advocate for my patients (p), it's given me that inward power for my patient, so acting as their voice and advocate for the very frail person or undereducated people (confident tone), in socially depredated area, they don't always know what they want to articulate, so being able to have that has given me some power back from the medical profession.</td>
<td>Links to FG's, NP's, DN &amp; CMs</td>
<td>Knowing the patient</td>
<td>Patient-centeredness</td>
</tr>
</tbody>
</table>

| Patient advocate | Empowerment | | |

Links to FG’s, NP’s, DN & CMs
Knowing the patient
Patient advocate
Empowerment
Person centered care Boundary working
<table>
<thead>
<tr>
<th>Int</th>
<th><strong>You mentioned using PAS being the patient’s voice and advocate can you elaborate more on what you mean by this?</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>55</td>
<td>Yes, I use it as a communication tool, Yep (pause) and the GP’s are so busy, they have 5 or 10 minute slots. I don't have 5-10 minute slots, I have time, and doing a patients physical assessment buys me more time with my patients. I work autonomously and I book out my diary and I do some more 'rapid assessments' and I work with another colleague so my time is managed independently, but doing physical assessment allows me time to think, it give me quiet time to stop, to let you do the physical assessment and it gives you time to think and they open up a little bit more and share more things with you as well.</td>
</tr>
<tr>
<td>64</td>
<td>Yes, absolutely, which the doctors don’t get.</td>
</tr>
<tr>
<td>Int</td>
<td><strong>So V, you mentioned that PAS buys you more time with the patient...</strong></td>
</tr>
<tr>
<td>V1</td>
<td></td>
</tr>
<tr>
<td>Descriptive Codes</td>
<td>Descriptive Codes</td>
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<tr>
<td>SG</td>
<td>TC</td>
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<tr>
<td>Patient Monitoring</td>
<td>PAS Primary Care</td>
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<td>drive for nurses</td>
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<td>Patient Reporting</td>
<td>Nurses more</td>
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<td>accessible to</td>
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<tr>
<td>Gathering</td>
<td>Delivering LTC</td>
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<tr>
<td>Information</td>
<td>service</td>
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<tr>
<td>Admission</td>
<td>New Ways of</td>
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<tr>
<td>Avoidance CM's</td>
<td>Working</td>
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<tr>
<td>Early Detection</td>
<td>Maintaining</td>
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<tr>
<td></td>
<td>Care</td>
</tr>
<tr>
<td>Preventing</td>
<td>More efficient</td>
</tr>
<tr>
<td>deterioration</td>
<td>service</td>
</tr>
<tr>
<td>Raising Patient</td>
<td>Role substitution</td>
</tr>
<tr>
<td>Concerns</td>
<td></td>
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<tr>
<td>Taking</td>
<td>Run acute -on-call</td>
</tr>
<tr>
<td>Responsibility</td>
<td>services</td>
</tr>
<tr>
<td>Triaging</td>
<td>Nurse led services</td>
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<td></td>
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<tr>
<td>Seeing and</td>
<td>Consistency in</td>
</tr>
<tr>
<td>treating</td>
<td>expertise</td>
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<tr>
<td></td>
<td></td>
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<tr>
<td>Chronic Illness</td>
<td>PAS knowledge</td>
</tr>
<tr>
<td>Management</td>
<td>used to sub-specialise</td>
</tr>
<tr>
<td>Deskilling Junior</td>
<td>PAS use offers</td>
</tr>
<tr>
<td>Drs and GP's</td>
<td>consistency</td>
</tr>
<tr>
<td>Role Substitutions</td>
<td>Links to evidence</td>
</tr>
<tr>
<td></td>
<td>based practice</td>
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</tbody>
</table>

Table 8 Descriptive codes lists - Supervisors (doctors & nurses) (Sub-unit 2 {Example}).
<table>
<thead>
<tr>
<th>LTC Management</th>
<th>Rigorous develop of PAS in education</th>
<th>Role boundary defined</th>
<th>PAS articulate meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time Factor for Drs</td>
<td>PAS used daily</td>
<td>Challenging decisions</td>
<td>PAS are Empowering for nurses work</td>
</tr>
<tr>
<td>Power Shifts</td>
<td>Interdisciplinary Working</td>
<td>Knowledge</td>
<td>Patient advocate</td>
</tr>
<tr>
<td>PAS Primary Care requirement</td>
<td>CM’s use PAS management Plans</td>
<td>Competence And confidence</td>
<td>Clinical reasoning</td>
</tr>
<tr>
<td>Diagnostic testing</td>
<td>PN’s use PAS CDM</td>
<td>Taking diagnostic responsibility</td>
<td>Building relationships</td>
</tr>
<tr>
<td>Advocating Patients needs</td>
<td>PN’s &amp; CM’s use PAS daily</td>
<td>Justify decision</td>
<td>Role delegation</td>
</tr>
<tr>
<td>PAS for diagnostics</td>
<td>PAS for Sub-specialisation SH &amp; GI &amp; CVS</td>
<td>Reluctance to make decisions</td>
<td>Knowing the patient</td>
</tr>
<tr>
<td>Drs Knowledge of LTC compromised</td>
<td>CM use of PAS dictated - patient population</td>
<td>Personal motivation</td>
<td>Patient advocate</td>
</tr>
<tr>
<td>Knowing the patient</td>
<td>PAS use commissioning factor</td>
<td>Role satisfaction</td>
<td>Empowerment of others</td>
</tr>
<tr>
<td>PAS for Diagnostic use</td>
<td>PAS needed for general services</td>
<td>Patient Rapport</td>
<td>Longer consultations for nurses</td>
</tr>
<tr>
<td>PAS honed to HPC</td>
<td>Nurses &amp; Drs common grounding PAS education</td>
<td>Listening to patient</td>
<td>Autonomous working</td>
</tr>
<tr>
<td>Working together</td>
<td>Repeated use of PAS needed</td>
<td>Supporting patient</td>
<td>Time</td>
</tr>
</tbody>
</table>
Table 9 Descriptive and Interpretative Category Codes: Doctors and Nurse Supervisors {Sub-unit 2}

<table>
<thead>
<tr>
<th>Descriptive Codes (GP1)</th>
<th>Interpretative Codes</th>
<th>Descriptive Codes (GP2)</th>
<th>Interpretative Codes</th>
<th>Descriptive Codes (SB 1- Nurse supervisor)</th>
<th>Interpretative codes</th>
<th>Descriptive Codes (V1- nurse supervisor)</th>
<th>Interpretative</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAS needed for higher levels roles and responsibility like CM's</td>
<td>Clinical Autonomy (Advanced Nursing roles)</td>
<td>PAS Primary Care drive for nurses to have more access to patients with LTC</td>
<td>Nurses first point of contact LTC patients</td>
<td>PAS needed to work alongside doctors and broaden the scope of nursing practice</td>
<td>Team working (Partnership working)</td>
<td>Monitoring, gathering information, reporting, diagnosing, building rapport with patients, health promotion, determining intervention</td>
<td>Clinical Autonomy (Case Management)</td>
</tr>
<tr>
<td>PAS required for patient Monitoring, reporting and gathering of information</td>
<td>Clinical Autonomy (Reporting)</td>
<td>Maintaining Care Standards/a more efficient service</td>
<td>New Ways of Working (Consistency in care approaches)</td>
<td>NP's need PAS finds for prescriptive purposes</td>
<td>Prescriptive interventions</td>
<td>PAS knowledge helped to develop case knowledge and reason more effectively</td>
<td>Knowledge (Case knowledge)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nurses with PAS Running acute -on -call and Nurse led services</td>
<td>New Ways of Working (Nurse led service)</td>
<td>NP’s having PAS allows patient choice for consultation</td>
<td>Professional Autonomy (Patient choice)</td>
<td>PAS needed to Advocate patient choices</td>
<td>Professional Autonomy (Patient champion)</td>
</tr>
<tr>
<td>CM's use PAS - Admission Avoidance</td>
<td>Service expectations of CM's</td>
<td>PAS use for Drs &amp; nurses Consistency in expertise in maintaining standards</td>
<td>New ways of working (Consistent approaches)</td>
<td>NP's with PAS, listen to patients story, make a clinical judgment, interpret findings, order tests and make a diagnosis</td>
<td>Clinical Autonomy (Case management)</td>
<td>PAS use helps to building relationships with team and patients</td>
<td>Team working (building relationships)</td>
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<tr>
<td>PAS used by CM's to detect early patient deterioration/relapsing and advocating patients concerns</td>
<td>Clinical Autonomy (Patient champion)</td>
<td>Nurses use PAS knowledge to sub-specialise</td>
<td>Knowledge (Contextual)</td>
<td>NP's when using PAS also use their Experiential and intuitive knowledge to challenge decisions</td>
<td>Knowledge (Advanced Practice)</td>
<td>Time Barrier GP shorter consultation</td>
<td>Measured care disempowerment</td>
</tr>
<tr>
<td>Taking Responsibility</td>
<td>Consequence of Action</td>
<td>PAS linked to evidence based practice through rigorous development of PAS education</td>
<td>Knowledge (Empirical)</td>
<td>Role boundaries are defined in PC which works well</td>
<td>Team working</td>
<td>PAS knowledge used daily embedded in SNP &amp; ANP roles. Resp &amp; CVS used most</td>
<td>Knowledge (contextual)</td>
</tr>
<tr>
<td>PAS used by SNP's &amp; ANP's to triage patients with acute clinical presentations and with MA's &amp; MI's</td>
<td>Clinical Autonomy (triaging patients)</td>
<td>PAS use important for Interdisciplinary Working</td>
<td>New Ways of Working</td>
<td>ANP's have to be competent and confident and take diagnostic responsibility and accountability to justify decisions</td>
<td>Professional competence &amp; confident to make decisions</td>
<td>PAS structured approach systematic and consistent way to report findings and is transferable</td>
<td>Consistency and continuity in assessment practices</td>
</tr>
<tr>
<td>Community Nurses use PAS to manage Chronic Illness Management of LTC</td>
<td>Service role of PAS (Case management)</td>
<td>CM's use PAS for Chronic Disease management</td>
<td>Case management</td>
<td>Some SNP’s are reluctant to take responsibility for PAS findings and like being led</td>
<td>Attitudes &amp; Values Responsibility</td>
<td>PAS enables Interprofessional working</td>
<td>Team working</td>
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<tr>
<td>Junior Drs and GPs are becoming deskillled of PAS use</td>
<td>Skills &amp; competence</td>
<td>PN’s &amp; CM’s use PAS daily</td>
<td>Clinical Autonomy</td>
<td>Personal motivation and related job satisfaction important to PAS use and competence development</td>
<td>Attitude &amp; Values (Motivation)</td>
<td>Competency assessment is managed through role modelling</td>
<td>Knowledge &amp; Skills &amp; Judgment</td>
</tr>
</tbody>
</table>

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Table 10 Sub-unit 2 Interpretative Category Codes and Sub-categories (cross referencing): (doctor & nurse supervisors) {Example}

<table>
<thead>
<tr>
<th>Interpretative Category (1) Team working (Primary Care Categories:</th>
<th>Interpretative Category: (3) Clinical Autonomy Categories:</th>
<th>Interpretative Category: (5) Service expectations for PAS Categories:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1.1 Partnership working</td>
<td>1.3.1 Advanced Nursing roles</td>
<td>1.5.1 Case management (Community Nurses)</td>
</tr>
<tr>
<td>1.1.2 Consistency in care approaches</td>
<td>1.3.2 Gathering information</td>
<td>1.5.2 Unmet care needs- mental health/Long-term conditions</td>
</tr>
<tr>
<td>1.1.3 Nurse led services</td>
<td>1.3.3 Decision making</td>
<td>1.5.3 Chronic Disease Management</td>
</tr>
<tr>
<td>1.1.4 Building relationships</td>
<td>1.3.4 Determining Intervention</td>
<td>1.5.4 National Drivers and Targets</td>
</tr>
<tr>
<td>1.1.5 Collegiality</td>
<td>1.3.5 Patient champions/advocate</td>
<td>1.5.5 Community Nurse working as generalists</td>
</tr>
<tr>
<td>1.1.6 Trust &amp; Respect</td>
<td>1.3.6 Case Management</td>
<td>1.5.6 Consistency &amp; standardisation of care</td>
</tr>
<tr>
<td>1.1.7 Interprofessional Learning</td>
<td>1.3.7 Triaging Patients</td>
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<tr>
<td>1.1.8 Interdisciplinary Working</td>
<td>1.3.8 Patient/person centeredness</td>
<td></td>
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<tr>
<td>1.1.9 Collaborative Working</td>
<td>1.3.9 PAS use contextual</td>
<td></td>
</tr>
<tr>
<td>Interpretative Category (2) Knowledge Categories:</td>
<td>1.3.10 PAS flexible assessment tool</td>
<td></td>
</tr>
<tr>
<td>1.2.1 Case knowledge</td>
<td>1.3.11 Diagnostic Reasoning</td>
<td></td>
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<tr>
<td>1.2.2 Specialist Nursing</td>
<td></td>
<td></td>
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<tr>
<td>1.2.3 Practice knowledge</td>
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<tr>
<td>1.2.4 Domain knowledge</td>
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<tr>
<td>1.2.5 Skill(s) &amp; Competence</td>
<td></td>
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<tr>
<td>1.2.6 Empirical knowledge</td>
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<td></td>
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<tr>
<td>1.2.7 Patient knowledge</td>
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<td></td>
</tr>
<tr>
<td>1.2.8 Transferable knowledge</td>
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<td></td>
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<tr>
<td>1.2.9 Expert knowledge</td>
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<tr>
<td>1.2.10 Theory-practice knowledge</td>
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<tr>
<td>Interpretative Category: (4) Holistic Focus (PAS) Categories:</td>
<td></td>
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</tr>
<tr>
<td>1.4.1 Building patient relationships</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.4.2 Use senses to assess</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.4.3 Person centred approach</td>
<td></td>
<td></td>
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<tr>
<td>1.4.4 Patient centred knowledge</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.4.5 User perspectives</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.4.6 Communication strategies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interpretative Category: (6) Trust &amp; Respect Categories</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.6.1 Building relationships</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.6.2 Collegiality</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.6.3 Competence &amp; Confidence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.6.4 Valued and appreciated</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.6.5 Patient acceptance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interpretative Category: (7) Empowerment Categories:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.7.1 Patient able to self-care</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.7.2 Nurse-patient relationships</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.7.3 Nurse(s) role diversification</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interpretative Category: (8) Disempowerment Categories:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.8.1 Doctors deskilled of PAS assessments</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.8.2 Measured Care</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.8.3 Doctors have shorter consultations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interpretative Category: (9) Facilitators to PAS use Categories:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.9.1 Inter-professional learning</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.9.2 Competence &amp; Confidence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.9.3 Structured approaches to physical assessment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.9.5 Language transparency</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table 11 Final Interpretative Category Codes and Sub-categories of all sub-units

<table>
<thead>
<tr>
<th>Category Code: <strong>Team working</strong></th>
<th>Sub-categories:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Partnership/Interdisciplinary working</td>
</tr>
<tr>
<td></td>
<td>Interdisciplinary learning</td>
</tr>
<tr>
<td></td>
<td>Building Relationships</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category Code: <strong>Knowledge</strong></th>
<th>Sub-categories:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Case Knowledge</td>
</tr>
<tr>
<td></td>
<td>Patient Knowledge</td>
</tr>
<tr>
<td></td>
<td>Practice/Domain/Specialist Knowledge</td>
</tr>
<tr>
<td></td>
<td>Foundational Knowledge (theory)</td>
</tr>
<tr>
<td></td>
<td>Knowledge deficits</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category Code: <strong>Trust &amp; Respect</strong></th>
<th>Sub-categories:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Trustworthiness</td>
</tr>
<tr>
<td></td>
<td>Collegiality</td>
</tr>
<tr>
<td></td>
<td>Valued &amp; respected by others/patients</td>
</tr>
<tr>
<td></td>
<td>Credibility to others and patients</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category Code: <strong>Barriers &amp; facilitators</strong></th>
<th>Sub-categories:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ability to negotiate effectively</td>
</tr>
<tr>
<td></td>
<td>Role conflict</td>
</tr>
<tr>
<td></td>
<td>Role tribalism</td>
</tr>
<tr>
<td></td>
<td>Role modelling</td>
</tr>
<tr>
<td></td>
<td>Time</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category Code: <strong>Attitude &amp; Values</strong></th>
<th>Sub-categories:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Competence &amp; Confidence</td>
</tr>
<tr>
<td></td>
<td>Motivation</td>
</tr>
<tr>
<td></td>
<td>Negotiation skills</td>
</tr>
<tr>
<td></td>
<td>Responsibility and Accountability</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Category Code: <strong>Case Management</strong></th>
<th>Sub-categories:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Organising &amp; Co-ordinating care</td>
</tr>
<tr>
<td></td>
<td>Managing patients with LTC’s</td>
</tr>
<tr>
<td></td>
<td>Gathering information</td>
</tr>
<tr>
<td></td>
<td>Providing unmet care needs</td>
</tr>
<tr>
<td></td>
<td>Diagnosing/ Decision Making</td>
</tr>
<tr>
<td></td>
<td>Safeguarding &amp; risk assessments</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category Code: <strong>Knowing/Centring patient</strong></th>
<th>Sub-categories:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Physical patient care</td>
</tr>
<tr>
<td></td>
<td>Psychological patient care</td>
</tr>
<tr>
<td></td>
<td>Emotional work with LTC patients</td>
</tr>
<tr>
<td></td>
<td>Building relationships</td>
</tr>
<tr>
<td></td>
<td>Measured Care/National Targets</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category Code: <strong>Professional Preparation</strong></th>
<th>Sub-categories:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Developing competence</td>
</tr>
<tr>
<td></td>
<td>Supervision process</td>
</tr>
<tr>
<td></td>
<td>Supervision preparation</td>
</tr>
<tr>
<td></td>
<td>Academic preparation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category Code: <strong>Consistency &amp; Standardisation</strong></th>
<th>Sub-categories:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Nurse led services</td>
</tr>
<tr>
<td></td>
<td>Equitable services</td>
</tr>
<tr>
<td></td>
<td>Transferable assessment information</td>
</tr>
<tr>
<td></td>
<td>Consistency in communication</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category Code: <strong>Triaging Patients</strong></th>
<th>Sub-categories:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Managing patient flows</td>
</tr>
<tr>
<td></td>
<td>Gathering information</td>
</tr>
<tr>
<td></td>
<td>Reassuring patients</td>
</tr>
<tr>
<td></td>
<td>Admission avoidance</td>
</tr>
</tbody>
</table>
Table 12 Coding Framework for all sub-units of analysis

Definition of Overarching Interpretative category codes and sub-categories for indexing

<table>
<thead>
<tr>
<th>Memo: 'Inter-professional / Interdisciplinary Working (Overarching category)'</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inter-professional concept focuses on boundaries and roles, particularly privileging individuals and by implication contribution where sharing may be construed to a threat to professional identity”. In contrast interdisciplinary is seen to feature the procession of knowledge and may therefore be valued in sharing (National Institute for Health Research) (NIHR) 2012</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Names : Category Codes :</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team Working</td>
<td>Team working is can be described as working collaboratively and cooperatively with a view to integrating specialised resources to meet the needs of patients and the service.</td>
</tr>
<tr>
<td>Inclusion Criteria</td>
<td>&quot;This description fits with the concept of interdisciplinary working</td>
</tr>
<tr>
<td>Knowledge</td>
<td>Using different kinds of work knowledge such as Case knowledge, Practice/theory and patient knowledge’ to exchange and manage information flows.</td>
</tr>
<tr>
<td>Inclusion criteria</td>
<td>Communication and managing information flows: Nurses and doctors used PAS knowledge to exchange clinical assessment information about patients. Patients used PAS knowledge that nurses have educated them about their symptoms to report a change in their condition. Nurses used PAS knowledge to develop competence of PAS in practice and academically at the University.</td>
</tr>
<tr>
<td>Attitudes &amp; Values</td>
<td>Mature and self-directed learner, who is motivated, acts accountably and responsibly, is able to negotiate well and deal with uncertainty.</td>
</tr>
</tbody>
</table>
| **Inclusion criteria** | Positive and negative attitudes of role expectancy in relation to PAS use  
Community nurse practitioners had to demonstrate competency & confident use of PAS in their role in a variety of ways. GP's voiced different attitudes to nursing attitudes to nurses using PAS. They stressed the importance of taking responsibility for their assessment findings and dealing with uncertainty. |
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td><strong>Trust &amp; Respect</strong></td>
<td>Trust &amp; respect can be described as individuals who are trustworthy, commands respect by working with others in a collegial manner. A dimension of trust and respect also centred on patients’ attitudes to nurses’ use of PAS.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Inclusion criteria</strong></th>
<th>Nurses who used PAS in their roles were usually able to work autonomously make clinical decisions on behalf of their patients and when working within MDT team, they were able to justify and communicate their actions to doctors.</th>
</tr>
</thead>
</table>

**Memo: Standardisation of Services (Overarching category):**

**Definition** - Nurses responsible for the overall co-ordination, management and continuity of patient care through seamless and integrated approaches to improve patient experiences and service delivery. Protocol driven approaches for specific treatment and interventions and where medical doctors will participate as appropriate (British Medical Journal 2005).

<table>
<thead>
<tr>
<th>Category Codes:</th>
<th>Description from data</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Case Management</strong></td>
<td>Co-ordination of services for patients with long terms conditions in the community setting. Providing an equitable and 'joined up' approach to patients' individual needs and use of service.</td>
</tr>
<tr>
<td><strong>Inclusion criteria</strong></td>
<td>Consistency &amp; standardisation were viewed as important component of case management for patients with LTC needs. An important element related to standardised and transferable physical assessment information within multidisciplinary teams.</td>
</tr>
<tr>
<td><strong>Triaging Patients</strong></td>
<td>Prioritising patient needs and circulating patient's throughput and rationing resources.</td>
</tr>
<tr>
<td><strong>Inclusion criteria</strong></td>
<td>The NP's who participated frequently used their PAS in Minor Injury Units on a 'see and treat' or refer basis. Specialist NP's used PAS in GP's surgeries for the same reasons.</td>
</tr>
<tr>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>---------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>Knowing/Centring patient</strong></td>
<td>Establishing a rapport with patients, patients champion, patients and helping them to manage their symptoms and interventions</td>
</tr>
</tbody>
</table>

**Inclusion criteria**

The use of PAS assessment framework requires the nurse or doctor to bring the patients into ‘their view’ by using their senses looking, listening and use of touch.

<table>
<thead>
<tr>
<th>Physical Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nurses &amp; doctors use PAS to physically assess and examine patients presenting complaints to report an abnormality or worsening of clinical condition.</td>
</tr>
</tbody>
</table>

**Description**

<table>
<thead>
<tr>
<th>Psychological Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community nurses consider psychological care and emotional work with patients with LTC as an important aspect of their role, particularly CM’s as it’s specified as a role outcome.</td>
</tr>
</tbody>
</table>

**Inclusion criteria**

Community matrons highlighted this important aspect of their daily role, but felt that this aspect of their role was not valued by GP’s because it was not financially incentivised or measured care.

<table>
<thead>
<tr>
<th>(Overarching category) Professional preparation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Category Codes:</strong> Competence development</td>
</tr>
<tr>
<td><strong>Description</strong></td>
</tr>
</tbody>
</table>

**Inclusion criteria**

There are competing demands for supervision in PC due to changes in commissioning of services. Lack of time to consolidate skills & knowledge Constraints associated with academic assessment approaches

Time is a significant factor for GP’s and use of PAS.

Nurses using these skills do the work of doctors and potentially de-skill junior doctors.

<table>
<thead>
<tr>
<th>Barriers &amp; facilitators to PAS (Overarching category)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Category Codes:</strong> Role Tribalism/conflict</td>
</tr>
<tr>
<td><strong>Description</strong></td>
</tr>
</tbody>
</table>
### Inclusion criteria
Community matrons highlighted this important aspect of their daily role, but felt that this aspect of their role was not valued by GP’s because it was not financially incentivised or measured care.

### Professional preparation

#### Competence development
The development of their PAS through theory of PAS education and the consolidation of these skills in practice by experienced nurse mentors or medical supervisors.

#### Inclusion criteria
There are competing demands for supervision in PC due to changes in commissioning of services. Lack of time to consolidate skills & knowledge. Constraints associated with academic assessment approaches. Time is a significant factor for GP’s and use of PAS. Nurses using these skills do the work of doctors and potentially de-skill junior doctors.

### Barriers & facilitators to PAS

#### Role Tribalism/conflict
Difficulties with referring patients to hospital sector due to AHP resistance and tribalism. Not all GP surgeries embrace specialist and advanced practice concept in nursing. Not all patients take on board nursing/medical work.
<table>
<thead>
<tr>
<th>Overarching Category</th>
<th>Category Code</th>
<th>Category Code</th>
<th>Category Code</th>
<th>Category Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inter-professional/ Interdisciplinary working</td>
<td>Teamwork</td>
<td>Knowledge</td>
<td>Trust &amp; Respect</td>
<td>Attitudes &amp; Values</td>
</tr>
<tr>
<td>Supervisor V1 Nurse Practitioner</td>
<td>I felt comfortable (confident tone) I knew he was not going to criticise me in front of a patient and it was a nice learning environment and he did not criticise me at all and it's just that we had a good working relationship, P.11</td>
<td>NP's expressed a sense of frustration not understanding what PAS findings meant so they could make links to patient care. it FRIUSTRATED me that I could not articulate ... for years. Wanted to know HOW and WHY. say like &quot;crackles in lungs&quot;... Wanted to KNOW where and why and what it MEANT.yea..p.12</td>
<td>PAS knowledge has allowed NP's to command respect through the use of language (pause), they listen to me allot better, they 35.trust me allot more with 36.acutely unwell people with existing co-morbidities, so the doctors have let go some of their power....P.3</td>
<td>Yea, some of the grades, some, because they do not sit back and reflect on what they are actually doing and yea (pause) again they all have that intuitive knowledge but not all of them think bigger about doing what they do...p.16</td>
</tr>
<tr>
<td>Supervisor SB Nurse Practitioner- Lead</td>
<td>Decision making is important to teamwork ...but you work together.... you complement each other. the way you are working in that team and what's needed within that team actually and I think we all work in teams and it's about those bits in the team that complement each other, yea....P.3</td>
<td>Experienced NP's in Primary Care viewed PAS as complementing experiential knowledge ...intuitive Knowledge...P.2. It started with the PAS. ... Gave me depth of knowledge to do my job.... I have. Broader view now .... solid foundation of PAS.. Which I did not have before...p.4</td>
<td>Commanding own work is an expectation of NP autonomy. long appointments. Bring back or refer...I can do all that without asking... have my own patient list...often will never see a doctor. my own area of expertise.. Diabetes.. 400 hundred patients on my books. More or less. Doctors... Do. p6 The younger doctors coming through... ' more comfortable feel about 238.it out there'</td>
<td>Knowing limitations and role boundaries. you have to push the boundaries and not all nurses want to... working at this level ... knowledge confidence. Responsibility... it is a big responsibility ...not all nurses want that level of responsibility. Be a special type of personality.. Person to actually do..p.2. Some older GP's can feel threatened or intimidated by role substitution ' because</td>
</tr>
</tbody>
</table>
**Practice** 226 that there’s less divisions and hierarchy between doctors & nurses 227: ‘much MORE ‘ even footing’. less distinction. There a realisation. all contributing their own sets of skills. achieve. common aim. **LOOKING** after patients. 

The physical assessment skills, one example of that is actually it affects management ...and we all need to be using the correct terminology’. Language ties back... to PAS learnt with a sound theoretical basis...it describes different processes & mgnt P. 19

They are keen to learn from anyone in practice so the time that I spend with the practice nurse and community matron was a real educational process. 

...243 would be thinking ‘well this person is actually better at managing diabetes and all the acute... resp and cardiac stuff’ and they might have better skills 'lines 243/244. p.10

**Learning together is important factor in teamwork** 'there’s no point in educating 100 GPs... about diabetes without educating nurses. GPS don’t know what to do with that information because...they don’t see these patients anymore. There is a realisation. a much more INTERDISCIPLINARY feel about it. P10. line 232

PAS has definitely blurred the boundaries... like ‘hands on and diagnosis’ The use of PAS language has ‘opened up a world of opportunities for nurses which is correct for the patient’. It helps everybody. helps the nurses themselves, the patients, the doctors. Nobody loses basically and its... that common ground knowledge’ p.19

The breaking down of barriers within primary care have become (pause) ammm.. ‘like an element of medicine there’s the realisation that actually the best care is given to patients when everybody gives respect to what everyone else is doing and the different skills and roles... and everyone needs to contribute.’ p.12

Clinical decision making and accountability are historically ‘contexts of the doctor’s roles as the one who knows it all and who makes a decision’ nurses was assistant to that. These sorts of things. I think lots of doctors still hold that belief that that is the way and the buck stops with them and the responsibility stops there...p.12

**Education appears to play an important role in teamwork**! think overall in what we are taught now there’s so much more of a multidisciplinary team work to everything. 250. now. so learning and education and A common grounding to PAS is necessary because ‘all of us are going to end up in areas where we feel more comfortable, but PAS teaching in medicine has become refined 75.. leads to a lack of understanding, 76

Opportunities in PC for nurses to have the same knowledge as GP’s- no distinctions made... 222...certainly there are lots of courses within general practice that are open to GP’s and nurses and there's
<table>
<thead>
<tr>
<th>Lines</th>
<th>Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>249/250</td>
<td>all these things go very much hand in hand and learning together. P. 10.</td>
</tr>
<tr>
<td>251.</td>
<td>and ... much more protocol driven speciality without the sort of art of managing patients without the natural feel. p.4 lines 75/76/77</td>
</tr>
<tr>
<td>224.</td>
<td>no separation made in terms of who attends, so lines 222/223</td>
</tr>
<tr>
<td>225.</td>
<td>Interdisciplinary learning is positively perceived in PC - overall in what we are taught now there's so much more of a multidisciplinary approach, so learning and education and all these things go very much hand in hand and learning together. P. 10</td>
</tr>
<tr>
<td>226.</td>
<td>A systems based approach is a practical way to do it. Opposed to doing it on the job in the community. You have to have that theory base and there's no way around it, you've got to learn as how to do things properly. You have to have a sound foundation. p.8 lines 182/183</td>
</tr>
<tr>
<td>227.</td>
<td>Specialist nurses are able to command respect and trust through knowledge and expertise. Younger doctors coming through a much more comfortable feel. I don't have any help. Welcome any knowledge and teaching. Anyone in practice time spent with PN's /CM's was a real educational process. p. 10</td>
</tr>
<tr>
<td>228.</td>
<td>Gp's who have been practicing for longer can perceive nurses extended roles as a threat. They might have better skills than me. p. 10. lines 243/245</td>
</tr>
<tr>
<td>229.</td>
<td>Greatest skills and the fun of general practice I think. Its proper medicine to be honest. Diseases/illnesses managing the person first. Decisions taken are based on their opinions. What they want. What might be best for them. That point in their life. Problem they are having in the context of their work/family. 16</td>
</tr>
<tr>
<td>230.</td>
<td>Specialist NP's knowledge has helped to break down barriers. Have much better knowledge that some doctors in terms of day to day practical working and care of these patients independent practitioners now. I think that helps in terms of breaking down barriers. 12</td>
</tr>
<tr>
<td>231.</td>
<td>Teaching PAS as a common foundation was considered a positive move because more consistency in what you are doing and there's just that natural thing of talking to each other/sharing of experiences and respecting each other. 268.to each other/ sharing of experiences and respecting each other. 269. which is all part of it and just sort of breaking down the barriers. p.11</td>
</tr>
<tr>
<td>232.</td>
<td>Power bases in PC - outlook changing slowly. Elements of power/hierarchy, changing massively. New cohorts of GP's doctors an understanding that everyone has something to contribute. Different skills sets. The doctors will know that the nurses know just as much. Maybe more than the GP will know. p.11.</td>
</tr>
</tbody>
</table>
PAS bring you closer and ammm (pause) and one of the great joys of medicine is talking and interacting with people and as a nurse if you have PAS it brings you that bit closer to the patient and allows you to be more involved with them as an individual rather than being just procedural based practitioner. P.16

There's a real focus in PC to reduce barriers in GP barriers are almost gone which is amazing encouraging. Trainee GP. Much on a par. Appreciate your boundaries respect boundaries.. Encouraged to contribute.. views and knowledge, like supervisor acknowledges skills, similar model to doctors and nurses when learning PAS p.13

There is more emphasis now on linking theory to practice, which requires a rigorous approach to knowledge development 35. Students are being taught and developing these skills is doing it in a much more rigorous fashion with much more sound evidenced based knowledge in their assessment and their practice. p. 2

A trainee GP gave an example of how a patient was managed by respecting each other’s knowledge boundaries. I took a gentleman out of hours who was having rigours. I had a chat with the PN. I said “I saw this chap.. could you check that he is ok today” So she was using her PAS and was equally proficient in assessment as I...p13

Nurse have to be motivated to use PAS to maintain their confidence and competence because unless someone is using the skills and is competent to use the skills "...might get it wrong or something" so won't be motivated to do it at all. P.14

Motivation is linked with competence and accountability if you are motivated you will want to know it, do it, prove it and for nurses there's a financial motivation in primary care for the services and using those...
<table>
<thead>
<tr>
<th>Supervisor S! Trainee GP S3</th>
<th>Trainee GP’s view PAS as essential to working more effectively within teams for better patient outcomes. 'nurses who come to do courses like PAS, surely it can only be additive. I only see it as a positive involvement and developing these skills can only help the patient and us as a team to work more effectively ... P. 5.</th>
<th>GP’s concerned as to the lack of basic knowledge of psychiatric nurses assessment skills because they were not trained in physical assessment skills at all which puts the patient at risk because the way psychiatry works the patient sectioned... long delay...several hours doctor see them, on 'out of hours' p.7</th>
<th>Trainee GP’s seek advice, work with experienced nurses who sub-specialise in different practice context e.g. she specialises in all of the sexual health, she has a wealth of information if I need to ask her anything...or if supervised by trainee GP’s, they fall into that category no different to medical students really, or anyone less skilled. P. 11</th>
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<td></td>
<td>Motivation is linked with competence and accountability ‘if you are motivated you will want to know it, do it, prove it and for nurses there’s a financial motivation in primary care for the services and using those skills. Yea, the personal motivation in using those skills and accepting that responsibility ... p.14</td>
<td>Emphasis was placed on the importance of accountability in maintaining safe practice ‘taking responsibility for what they are doing whether you are, doctor, practice nurse, midwife, we are all accountable for what we do and even the HCA’s and acting within safe limits of your own competence, which is a professional responsibility anyway. p. 15</td>
<td>Doctor’s levels of responsibility and accountability more defined ‘because expected they deal with the uncertainty in a different way to nurses .....the ’difference I see between doctors and nurses is that doctors are the ‘riskier of the two’...Power base related to responsibility decision making. p. 13</td>
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<td>Doctor's levels of responsibility and accountability more defined 'because expected they deal with the uncertainty in a different way to nurses .....the 'difference I see between doctors and nurses is that doctors are the 'riskier of the two'...power base related to responsibility decision making. p. 13</td>
<td>GP example.. Vulnerable patient.. MH nurses lack basic physical vital signs assessment K&amp;S puts patients life at risk, ' poor lady was septic, dehydrated, temp 38.5, BP in her boots, tachycardic, had a massive cellulitis on her leg ..Needed IV antibiotics... NOT sectioning required good nursing care struggling to live physically.p7.</td>
<td>Nursing students are a taught differently... Taught not to blindly follow the doctor tells them to do. Think for themselves questioning things, and they are not uncomfortable in saying, hey this is not how it should be...consultant that seniority is there... maybe I respect that... or maybe not respect it.. But I follow it,.</td>
<td>Nurses appear to deal with uncertainty by seeking further advice from medical doctors. well what do you think about this? This uncertainty can be viewed by doctors as ' shifting the responsibility or 'handing over' where the situation is dubious. Especially when practicing PAS...</td>
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<td>Effective teamwork is necessary to protect vulnerable MH patients because ' quite at risk..and the main thing is that they are not able to report in the same way and a well mentally healthy person.. So nurses having physical assessment skills are utmost important amongst that cohort of patients to report abnormality p. 8</td>
<td>GP experienced sense of frustration with the lack of basic physical K&amp;S 'no one took the obs, no one interpreted the obs safely, to say, hang on this lady needs to have a decision made about her now by a doctor or whoever. It took.. hours.. delay..30 minutes ringing the nearest hospital, you cannot give IV's in a psychiatric hospital p.p.7</td>
<td>Trust &amp; respect appears to go hand in hand with confidence and competence ....you know, for example if I had to stand up in front peers and say why I did not do that.. well I would have a good reason for doing that and to be able to have that confidence to justify it... p. 16.</td>
<td>Physical assessment and decision making go hand in hand in medical practice doctors.. view that if nurses practice and use PAS .. they will need to make 'decisions related to findings and taking responsibility for that' .. that is one of the areas that may put doctors off .. if you can't make a decision then there's no point in having PAS..p.14</td>
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<tr>
<td>GP's keen to promote PAS foundational training for nursing ' to working more effectively across healthcare boundaries.. Safeguard</td>
<td>GP's are concerned as to the safe guarding of MH patients when MH nurses do not have basic assessment K&amp;S 'this is not just an isolated</td>
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vulnerable patient’s... PAS utmost importance MH cohort of patients. p8 and for long-term economic benefit in terms of resources. Patients. better clinical outcomes when we have better teamwork p.8

incident. Wonderful at MH nursing, anything physical was out of their remit. Uncomfortable with it and they were unable to interpret it.

GP’s are concerned as to the safe guarding of MH patients when MH nurses do not have basic assessment K& S ‘this is not just an isolated incident. Wonderful at MH nursing, anything physical was out of their remit. Uncomfortable with it and they were unable to interpret it.’

Nurses who sub-specialise are less able to work as generalists but competent in their areas, doing respiratory examination and immunisations, but they lack generalists ‘knowledge of bioscience and anatomy and physiology for example’ she will be giving the MMR, but lacked understanding of underlying pathology’ p. 19.
Table 14 Potential themes and sub-themes & categories

**Theme 1:**

<table>
<thead>
<tr>
<th>Theme:</th>
<th>Sub-themes</th>
<th>Categories</th>
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<tbody>
<tr>
<td>Negotiating Boundaries</td>
<td>Trust and respect &amp; role boundary perceptions</td>
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<td>Patient acceptance</td>
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<td>Doctors acceptance</td>
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<td>Nursing discipline acceptance</td>
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<td>Professionalisation (CN’s)</td>
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<td>Patient Trust &amp; respect</td>
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<td></td>
<td></td>
<td>Collegial (doctors) Trust &amp; respect</td>
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<td>Use of language</td>
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<td>Supervision process</td>
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<td>Nurses Learning agendas</td>
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<td>Patient negotiation</td>
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<td>Expert patient/ User group</td>
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<td>Contractual negotiation</td>
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**Theme 2:**

<table>
<thead>
<tr>
<th>Theme:</th>
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<td>Drivers for PAS in Primary Care</td>
<td>Policy perspectives</td>
<td>Managing Multiple Agendas</td>
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<td>Personalising Care &amp; Knowing the Patient</td>
<td>Patient Centeredness</td>
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<td>Decision Making</td>
<td>Lack of patient centeredness</td>
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<td>Keeping Patient in the Organisation</td>
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<td>Consistency &amp; Continuity</td>
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<td>Time</td>
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<tr>
<td>Theme:</td>
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<tr>
<td>Professional Preparation</td>
<td>Competence &amp; Confidence</td>
<td>• Foundational Knowledge - lack of</td>
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<td>Attitudes &amp; Values</td>
<td>• Patient knowledge</td>
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<td></td>
<td>Barriers and Facilitators</td>
<td>• Domain knowledge</td>
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<td>• Sub-specialist knowledge</td>
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<td>• Skills acquisition</td>
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<td>• Supervision processes</td>
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<td>• Motivation</td>
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<td>• Taking Responsibility (professional &amp; patients)</td>
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<td>• Time &amp; competing interests</td>
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<td>• Educational preparation</td>
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<td>• Role expectations</td>
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Research Log

Introduction

This research log describes the different phases of the research journey I undertook to complete the thesis. It will outline how taught elements of the DCLINPRAC (Faculty of Health and Medical Science) (FHMS) 2010) enabled me to develop core competencies and skills necessary to structure the thesis. The following table will provide an overview of the different stages of the research process throughout the thesis development.

<table>
<thead>
<tr>
<th>Year</th>
<th>Thesis Planning and course of action</th>
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<tbody>
<tr>
<td>January 2010</td>
<td>Introduction to doctoral studies</td>
</tr>
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<tr>
<td>September 2010</td>
<td>Politics, Policy and Power module completion</td>
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<td>December 2010</td>
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<td>Service Development Project &amp; Leadership completion</td>
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<td>Writing Proposal</td>
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<td>April 2012</td>
<td>Ethics Application - Surrey University</td>
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<td>November 2012</td>
<td>Ethics re-application – Brighton University</td>
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<td>Ethics approval - Brighton University</td>
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<td>January – March</td>
<td>Participant Recruitment</td>
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<td>2013</td>
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<tr>
<td>March – August</td>
<td>Data collection</td>
</tr>
<tr>
<td>2013</td>
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<td>January 2014</td>
<td>Completion data analysis</td>
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<tr>
<td>July 2014</td>
<td>Completion Findings</td>
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<table>
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<tr>
<th>Date</th>
<th>Event Description</th>
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<tbody>
<tr>
<td>September 2014</td>
<td>Presentation of early results at Surrey University post-graduate conference</td>
</tr>
<tr>
<td>November 2014</td>
<td>Completion discussion chapter &amp; first draft</td>
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<tr>
<td>December 2014</td>
<td>Completion 2nd draft</td>
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<tr>
<td>February 2015</td>
<td>Submit thesis</td>
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<td>April 2015</td>
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**Planning of research project**

As stated in Chapter one, the decision to undertake a doctoral study was based on my interests in my dual roles as a nurse educator and practitioner, specifically around the field of medical physical assessment (PAS) for nursing work. I lead on this aspect of nurse education within CPE professional education programmes for RNs'.

As this area of practice was new to nursing work in the UK at that time, I made contact with other University tutors involved in this area of education. They were positive about the use of medical PAS, but felt that the use of these skills merited exploration, to inform registered nurses’ education. However they expressed concerns for underinvestment of resources at strategic levels with universities, despite the demands of services for this educational component. As the educational lead for this area of assessment at the University, I experienced similar constraints.

Nevertheless, whilst working/supervising students during practice/liaison visits, particularly in the community, I was inspired as to how some used medical PAS in different ways, depending on the patient groups, to enhance decisions for patients/carers and challenge decisions of others. Therefore, I was inspired by how students to undertake this research; purely on the basis that the majority
indicated that it enhanced their personal and professional practice, and enjoyed learning about and using medical PAS. Therefore, I set out to establish ‘how’ and ‘why’, within the primary care context.

I was firstly required to underpin this area of interest with a review of the existing literature to identify a particular gap in the research field. Therefore the following section will give a brief overview of the review process, followed by a description of the research project.

The literature review chapter was by far the most challenging in the thesis. The concept of medical PAS was in its infancy in nurse education and practice in the UK. A survey of existing research, mainly from the US and Australia, revealed a distinct lack of empirical evidence that contributed to the body of knowledge on the use of medical PAS for RNs’ work. Much of the reports about medical PAS use were verbal from nurse educators, and nurse clinicians. The main emphasis on research was on evaluation of assessment skills for nurse education in undergraduate nursing programmes. The finding in the review did not identify and particular area of controversy, other than nurse educators continued to teach more PAS that nurses used in practice, particularly in hospitals. The research approaches used in international studies were mainly quantitative, using survey approaches. Using existing survey designs for this study would not have added to the existing body of knowledge in the UK. The rationale been that the context of UK healthcare differs to the US and Australia. Therefore, from the review findings I formulated the research questions, for further research, using a qualitative approach.
Research project

I faced significant challenges when writing and submitting forms for ethical approval. The main reasons were that I applied to undertake the research within my area of work. My intention was to sample previous students who had undertaken medical PAS education, but not known to me. The ethics review board at Surrey University provided a favourable approach, but will several recommendations. A change in supervisors advised that ethical recommendations would be difficult to achieve, as I was working within this field at the University, which posed significant risks related to student/tutor relationships. A decision was made to approach Brighton University, and following approval, I commenced the recruitment process (chapter 4).

One of the fundamental personal debates I had whilst planning the research, was defining my role as researcher. I initially struggled in my dual role as an experienced PAS teacher/nurse practitioner. I had no single strategy in mind in defining my role as a researcher, when I first set out to do the data collection. I eventually learned to deconstruct my researcher position, by developing the skills of reciprocity, and reflexive listening. How I achieved this has been explained in chapter 4 section 4.19.

I was aware of the ethical principles that underpin qualitative research, particularly the voluntary dimension of autonomy, because it not always easy to fully inform participants about the nature of the research from the outset. Therefore, throughout the data collection phase, I was mindful of the ethical principles of beneficence and justice when managing relationships with participants. Despite some initial difficulties experienced in separating my dual roles as researcher/tutor, I eventually learned the importance of not losing sight as to the real reason for my
presence. I managed this by ensuring that I explained the purpose of the research and my role as a researcher at the beginning of each interview. The student participants were unknown to me, and the research was conducted outside the researcher's workplace. Therefore, I did not have opportunities to exploit the tutor/student relationship, and successfully managed to balance the risks and benefits associated with undertaking this research.

The methodological gap identified in the literature review, guided the chosen paradigm needed to meet the aims of the study. Establishing differences in philosophical positions that underpin research paradigms was a challenge initially, because it took some time to understand the various frameworks. Once I had defined and understood my epistemological position, I was able to reason an appropriate strategy of enquiry, and justify the exclusion of others. On reflection, I should have given more thought to the use of case study as a strategy of enquiry, in the proposal stages of the research. Ultimately, I experienced some difficulties in defining the case boundaries, which is a requirement of a single case study approaches. Nevertheless, all the other methodological approaches used were applicable to case study method, because the findings provide the reader with an in-depth account of the complexities of medical PAS use for CNPs in different practice contexts in primary care.

I really enjoyed the data collection phase, despite some initial difficulties with interview process. It was throughout this phase that I questioned my role as a nurse educator at the University. I thoroughly enjoyed listening to the participants’ account of the patients they cared for. I recognised this passion, and felt quite forlorn and unsettled in my nurse education role towards the end of the data collection phase. I reconciled my differences by remembering how difficult it was to
achieve sustainable change in practice, without the knowledge of research. I made a decision to stay in my education role, on the basis that I needed to be knowledgeable and competent as a researcher, to inform education for practice, at strategic levels.

I found the findings chapter really interesting, and enjoyed interpreting the views of different participants, with a view to taking forward main areas for exploration in the discussion chapter. The findings from the data have broadened my understanding of how different practice context govern medical PAS use for RNs' in primary care.

Writing the discussion chapter provided opportunities to get to know the main concepts that related to the use of PAS for RNs in primary care practice. Despite reluctance to progress with this chapter, in hindsight I found it the least challenging chapter to write. This may have been related to the fact that I gave significant thought to the main areas for discussion, using a concept map. Through discussion with other students undertaking research, I became aware that the most significant problem students face in writing the discussion chapter, relates to repeating aspects of findings chapter. Therefore, I made the decision not to refer to this chapter until near completion of discussion.

Finally, this research project would not have been possible without the advice, knowledge, and problem-solving skills of supervisors. Their experiences in the research field, sustained encouragement, and ability to challenge my assumptions in a positive light, made this journey a positive experience all round. I had a range of supervisors throughout the research project, and although this was unsettling, I welcomed the challenges and fresh perspectives that each brought to the supervision process, and to them, I’m very grateful. An important lesson I learned is owning one's thesis, and taking personal responsibility for my decisions.
Conclusion

This description of the research process demonstrates the different actions and some personal thought processes of my research project. It took me five years to undertake this work on a part-time basis. The final year was the most intensive, but for me the most enjoyable, because I was able to see, and understand the vision of this research journey.
Overview of integration of knowledge, research and practice

This paper will summarise my professional development and the influence of the doctoral programme of studies, in my development as a researcher. It provides the reader with an understanding of the researchers’ journey and implications for professional practice.

Professional development

The taught elements of the DCLINPRAC (Faculty of Health and Medical Science (FHMS) 2010) enhanced my knowledge of policy, research strategies and service development. In summary, these modules assisted with developing core competencies and skills necessary to develop the research proposal. The policy review module enhanced my understanding of the strategic influence of health and social care policy, and its distributed influences across health care practices and education.

The service evaluation module enhanced my understanding of the different methods that can be used to evaluate a service, or a complex intervention. I used the learning outcomes of this module to guide the structure of my initial research proposal, to evaluate medical PAS as a complex intervention for nurse practitioners. On reflection, the vision of this was too far-reaching, complex and difficult to achieve as a single researcher within the timeframe of the thesis. The advanced research methods module enhanced my critical reasoning skills, and an understanding of a range of theoretical, methodological and ethical issues involved in undertaking research.

On a personal level, an important module of the DCLINPRACT programme was Communities of Practice. I enjoyed the online discussion on the various research papers presented, which were very well facilitated by an experienced researcher,
who challenged assumptions on how knowledge was utilised by healthcare professionals, and transferred in organisations. I remember finding it difficult to understand a specific paper on how 'knowledge is contextualised' in practice, at the beginning of the DCLINPRACT. Towards the end of the thesis, these theoretical concepts made a significant contribution to understanding aspects of the findings in my research. This literature enhanced understanding of the challenges students face in transferring theory into the 'live world' of practice. Hence, I now look much more critically at module learning outcomes and assessment strategies, as to how well they 'fit' to the context of different practice environments.

On reflection, I would have liked to have more time to know and understand the theoretical concepts which underpin 'knowledge transfer' and how this develops communities of good practice. This module made me question how knowledge and good ideas were transferred in my work environment, at this time. I noted in my diary, and from notes I have made from review of papers, the lack of core stable groups within the division to take good ideas forward. I noted how faculty members worked in silos, and there was a reluctance to engage or assist with competence and professional knowledge transfer across teams. I noted how interactions were at low level, and on a one to one basis between module team members. Knowledge development in this was subsequently lost through impersonal academic processes and procedures. These approaches to knowledge transfer created rigid competence development and a reluctance to learn from others. On a personal level it impeded my ability to absorb new competencies, and develop professionally.
Personal development

An essential element of the programme was improving my critical thinking and theoretical skills through appraisal of the research literature. In my reflective diary I noted, that I had declined to present a chapter at a thesis writing group meetings, with other PhD student discipline groups, for fear of reprisal on my ability to write critically. To manage this, I enrolled on thesis writing group workshops and academic writing weekends, facilitated by experienced library and professional researchers, outside work hours. As my confidence grew, I began to embrace the importance of critical feedback and appraisal form PhD writing groups and post-graduate research seminar facilitators. On reflection, I found critical feedback invaluable, in subtly enhancing the reliability and rigour of research, as I adopted a more critical approach to evaluating evidence. I will be able to use these research skills in the long-term, to work collaboratively with colleagues, to consider research based approaches for direct clinical patient care, or for service improvements projects. The skills gained have enabled me to present work at conferences, and at post-graduate research seminar groups within my work faculty, and subsequently network with colleagues across the University in other disciplinary fields. This demonstrates that I am achieving my competencies as a researcher. I intend to use this research knowledge, by working collaboratively on projects within and outside my present work environment.

Conclusion

In conclusion, the DCLINPRACT has develop my existing knowledge and skills and adopt a more open and critical approach to my role as a nurse educator and researcher. This programme has been crucial to my professional development, and not availing of this opportunity, it is most likely that I would have not continued to work in the academic field.
It has been an intensive but rewarding journey, but no more than I expected. I have thoroughly enjoyed the literature, thinking creatively and reflecting on my actions. Working full time, whilst undertaking this research was often challenging with workload and personal commitments. Nevertheless, motivation, self-discipline and my tenacious qualities have helped me thus far.

As a consequence of my learning and development I feel better able to develop high quality research projects and to articulate research approaches more widely within education and clinical practice. I intend to develop my confidence and write and publish more widely. As a nurse educator, I really look forward to supporting and challenging students in their research endeavours. I anticipate that the skills I have developed will enable me to influence research approaches to healthcare education and practice, at national and international levels.