Approaches to measuring the impact of nurse consultants on patient, professional and organisational outcomes

Final report submitted to the Burdett Trust for Nursing

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Executive summary

Approaches to measuring the impact of nurse consultants on patient, professional and organisational outcomes

Background

The NHS is experiencing a period of unprecedented change. Major reforms in the way healthcare is commissioned and healthcare services are organised, together with new models of healthcare delivery, require a nursing workforce which is equipped to respond to the many current and future challenges facing the NHS. The implementation of the healthcare reforms has been underpinned by a strategy to modernise nursing careers (DH 2006). This has included introducing a nursing career framework that enables nurses to progress through a clinical career from initial registration to more specialist roles leading ultimately to that of nurse consultant. As senior clinical leaders, nurse consultants have a unique role to play in ensuring the delivery of patient-focused healthcare reform. As part of this process, nurse consultants need to be able to articulate the contribution they make to improving patient outcomes, the patient experience and the quality of healthcare. In view of the limited research examining the impact of nurse consultants and lack of guidance available to assist nurse consultants to demonstrate the added value they bring to patients and to the healthcare organisations for which they work, this study set out to develop a framework for capturing impact and supporting guidance to be used by nurse consultants to demonstrate their important contribution.

Research aims and approach

The study, which was funded by the Burdett Trust for Nursing as part of its Building Nurse Leadership Capacity programme, set out to explore approaches to demonstrating the impact of nurse consultant roles on patient and professional outcomes. Following preliminary work, the focus was extended to include organisational outcomes. More specifically the study had the following aims:

- To identify a range of indicators to demonstrate the impact of nurse consultants on patient, professional and organisational outcomes.
- To develop a toolkit to help nurse consultants to demonstrate their impact on patient, professional and organisational outcomes.

The study built upon earlier research undertaken by the research team (Gerrish et al 2007) to develop a framework for capturing impact of nurses in advanced clinical roles. The original framework which focused on identifying impact on patients (clinical significance) and staff (professional significance) required further refinement through reviewing the literature and empirical testing.

A mixed methods approach was used which included a comprehensive systematic review of existing evidence, mapping the nurse consultant roles in the participating NHS trusts, and a series of case studies involving six nurse consultants. Each case study involved interviewing the nurse consultant, healthcare professionals and managers with whom the nurse consultant worked and where appropriate patients and family carers. Interviews focused on exploring the range of impacts that nurse consultants exerted on patients, healthcare professionals and the organisations in which they worked, together with developing an understanding of the challenges nurse consultants encountered in trying to capture their impact.

A specialist panel comprising key stakeholders was subsequently set up for each nurse consultant with the purpose of working with the nurse consultant to identify important areas of impact relevant to the role and the ways that this impact might be captured. The research team subsequently worked with each nurse consultant to develop and pilot individualised approaches to capturing impact. This
process informed the development of a toolkit (Gerrish et al 2011) designed to help nurse consultants to demonstrate their impact. The toolkit has undergone preliminary validation by a larger group of nurse consultants and other stakeholders including senior nurse managers and patient representatives.

**Key findings**
The main findings from the study that relate to the project aims are summarised below.

**Impact of nurse consultant roles**
The systematic review of the literature identified the limited evidence examining the impact of nurse consultant roles (Kennedy et al 2011). This was further reflected in the case studies as few of the nurse consultants had made attempts to capture their impact on patients, healthcare staff and the organisations in which they worked. Evidence relating to their impact on other staff (professional significance) was especially limited. The findings highlighted that demonstrating the impact of nurse consultants was influenced by a number of challenges. These included attributing impact to an individual nurse consultant who often worked as part of a team, the complexity of capturing the nurse consultants’ indirect, as opposed to direct impact, identifying suitable outcome measures and comparators, difficulties in gaining a patient perspective, limited time and resources, and a lack of expertise in measuring impact. However, through the development of the toolkit various approaches to capturing the impact of nurse consultant roles were identified and strategies were proposed for overcoming some of these challenges.

**Framework for capturing impact**
Both the literature review and the case studies identified different areas where nurse consultants could exert an impact. Through the case studies, the earlier framework for demonstrating impact was extended to capture the full range of impact related to the work of nurse consultants, namely to include a third domain that captured the nurse consultants’ impact on organisational outcomes (alongside the previously identified domains of clinical and professional significance). Each domain included a number of indicators of impact.

**Clinical significance**
- Symptomatology - impact on an individual’s return to normal functioning or experience of symptoms – i.e. physical or psychological outcomes for the patient and/or family carers.
- Quality of life and social wellbeing - impact on a patient’s quality of life and self-efficacy, specifically how the individual’s health needs affect activities of daily living and social wellbeing.
- Clinical social significance - clinically oriented outcomes that are important to society. Societal concerns are often translated into healthcare policy, e.g. health behaviour such as smoking cessation or the self-management of long term conditions.
- Clinical social validity - the social importance and acceptability of the patient or carer’s experience of health care.

**Professional significance**
- Professional competence - developing the knowledge, skills, behaviour and attitudes of the healthcare workforce.
• Quality of working life - the impact on the healthcare workforce's quality of working life such as enhanced job satisfaction, motivation and fulfilment.

• Professional social significance – professionally oriented outcomes that are important to society. Societal concerns are often incorporated into healthcare policy e.g. redistribution of workload across professional boundaries.

• Professional social validity - the social importance and acceptability of the nurse consultants’ activities for the healthcare workforce, such as promoting team working.

**Organisational significance**

• Organisational social significance - outcomes relating to the organisation and delivery of healthcare services and resources that are important to society. Societal concerns are often made explicit in healthcare policy.

  • Achievement of organisational priorities and targets, e.g. set by commissioners relating to hospital admission rates or length of stay.

  • Development of policy - influence on local, regional and national development of policy.

  • Generation of new knowledge - impact on the generation of new knowledge through involvement in research.

All of the nurse consultants showed some evidence of impact in all three domains although the primary focus varied across the different nurse consultants involved in the case studies. Patient, professional and organisational indicators of impact were identified in each of the three domains for each nurse consultant. Due to the wide diversity of the roles, there was little commonality in the specific indicators of impact across all nurse consultants. However, the wider evidence collected as part of the study suggested that the revised framework is meaningful and practical to a range of nurse consultant roles in identifying the outcomes that they influence through their work.

**Development of the toolkit**

The toolkit developed as a product of this study is designed to help nurse consultants to manage the quality of care more effectively by enabling them to demonstrate their impact on patient, professional and organisational outcomes.

It was developed by firstly drawing together the evidence gained from individual case studies on the impact of nurse consultant roles. The nurse consultants were then provided with advice and support to overcome the identified challenges of capturing impact while they tried out a number of approaches in practice. The lessons learned from this process informed the development of the final toolkit. This toolkit includes various activities, examples and tools to help nurse consultants consider how they might most appropriately demonstrate their impact in the three key domains (clinical/patient, professional/staff and organisational). It has received positive feedback from a larger group of nurse consultants, nurse managers and patient representatives.

Overall, the study clearly identified that there is not a ‘one size fits all’ approach to demonstrating the impact of nurse consultants and there is a need to be pragmatic in choosing an appropriate and feasible approach to the individual role. To our knowledge, this is the only practical guide on capturing impact that is aimed specifically at nurse consultants.
Key messages to arise from the study

Implications for practice

- Nurse consultants should be encouraged to use the framework and toolkit in order to help them reflect on their role and evaluate their impact. The three domains of impact can help nurse consultants to identify appropriate indicators to demonstrate their impact on patients, the healthcare workforce and the organisations in which they work.

- Nurse managers may find the framework and toolkit useful in supporting nurse consultants, especially those who are new in post, to develop their role. It may also be helpful in guiding job planning and the annual review process undertaken with nurse consultants.

- The framework may be useful to nurse managers when undertaking workforce planning. It can assist in identifying the unique contribution that nurse consultants make to patient outcomes, the patient experience and the quality of care and may therefore be helpful in developing proposals for new nurse consultant posts.

- Education programmes to prepare nurse consultants should equip them with the knowledge and skills to enable them to capture their impact. The framework for capturing impact could be used to inform curriculum development.

- The toolkit is designed to be a learning resource for nurse consultants to develop their knowledge and skills in capturing impact and can be used as part of their continuing professional development.

- The toolkit has the potential to be adapted for use in other advanced practice roles (e.g. clinical nurse specialists, nurse practitioners) or non-medical consultant roles (e.g. therapy consultants).

Implications for research

- The framework and toolkit would benefit from further validation with a wider group of nurse consultants in different specialities and who vary in their length of time in post.

- Future research should seek to demonstrate evidence of nurse consultants’ actual impact on the various indicators in the three domains of the framework. This work should be disseminated widely in order to contribute to the growing body of evidence on the impact of these roles and to inform nurse consultants’ attempts at capturing their impact.

References


Chapter 1: Context

1.1 Introduction
The NHS is experiencing a period of unprecedented change. Major reforms in the way healthcare is commissioned and healthcare services are organised, together with new models of healthcare delivery, require a nursing workforce which is equipped to respond to the many current and future challenges facing the NHS. The implementation of the healthcare reforms has been underpinned by a strategy to modernise nursing careers (DH 2006). This has included introducing a nursing career framework that enables nurses to progress through a clinical career from initial registration to more specialist roles leading ultimately to that of nurse consultant. As senior clinical leaders, nurse consultants have a unique role to play in ensuring the delivery of patient-focused healthcare reform. As part of this process, nurse consultants need to be able to articulate the contribution they make to improving patient outcomes, the patient experience and the quality of healthcare. In view of the limited research examining the impact of nurse consultants and lack of guidance available to assist nurse consultants to demonstrate the added value they bring to patients and to the healthcare organisations for which they work, this study set out to develop a framework for capturing impact, and guidance for nurse consultants to help them demonstrate their important contribution.

1.2 The health policy context
Improving the quality of healthcare services is a key priority within the NHS. The review of the NHS ‘High Quality Care for All’ published in 2008 emphasised the need for quality to be integral to the NHS. The review identified a number of initiatives intended to enhance the measurement and monitoring of quality within the NHS at a national level, however it was also recognised that in order for lasting improvements to be made, quality improvement initiatives needed to be patient-centred, clinically-driven and locally-led. Despite a change of government in 2010, health policy has continued to drive improvements in quality in terms of making healthcare safer, more clinically effective and patient-centred. The recent White Paper ‘Equity and excellence: liberating the NHS’ (DH 2010a) sets out the government’s intentions to put patients at the heart of NHS care, deliver improved healthcare outcomes and empower local organisations and healthcare professionals to enhance the quality of healthcare services. However, the recent economic downturn has meant that healthcare organisations no longer benefit from year on year financial increases: instead they are being challenged to drive up quality while at the same time making efficiency savings (DH 2011a). National initiatives such as Quality, Innovation, Productivity and Prevention (QIPP) have focused on ensuring that the money spent in the NHS brings maximum benefit and quality of care to patients and the Commissioning for Quality and Innovation (CQIN) payment framework has enabled commissioners to reward excellence, by linking a proportion of English healthcare providers’ income to the achievement of local quality improvement goals.
Several of the policy documents outlined above have highlighted the pivotal role of nurses in driving up quality within the NHS. Initiatives such as the introduction of the eight high impact actions for nursing (NHS Institute for Innovation and Improvement 2009) and the Energising for Excellence in Care initiative (DH 2010b) have reinforced nursing’s contribution in terms of improving the quality of care, the experiences of patients and health outcomes across a broad range of health services. In clinical areas where nurse consultants are in post, they are uniquely positioned to add significant value to this agenda and assist in achieving its ambitions.

The changes outlined above are enormously challenging for healthcare organisations and for the individuals who work in them. Within a framework of quality governance, NHS Provider Boards are required to assume greater responsibility for overseeing the quality of care being delivered across all
services within the organisation and assuring themselves that quality and good health outcomes are being achieved throughout the organisation (DH 2011a). Part of this process requires the collection of information to demonstrate improvements. As a result, nurses, together with other healthcare professionals are called upon to provide evidence of their contribution to improving patient outcomes, patient experiences and healthcare services (Griffiths et al 2008). The development of nurse sensitive indicators (DH 2011b), essence of care benchmarks (DH 2010c) and patient reported outcome measures (PROMS) (http://www.ic.nhs.uk/proms) provide a means of demonstrating improvements in quality for which nurses, in collaboration with professional colleagues, are responsible. However, at present, these indicators are not sufficiently comprehensive to capture the diversity and complexity of the nurse consultant’s contribution.

1.3 Development of nurse consultant roles

Nurse consultant roles were introduced in 2000 into the United Kingdom as part of the government’s modernisation agenda for the NHS (DH 2000). As part of the commitment to invest in new clinical leadership roles in nursing, the posts were intended to achieve better outcomes for patients by improving quality and services and provide an alternative career pathway for experienced practitioners to remain in clinical practice rather than move into management, education or research to progress their career (HSC 1999/217; DH 1999). Nurse consultant roles were initially introduced into England and were subsequently taken up in the other three countries within the United Kingdom. Since their inception in 2000, there has been a gradual increase in the number of nurse consultants leading to 1091 individuals in post by 2010 (NHS Information Centre www.ic.nhs.uk).

Department of Health guidance states that irrespective of the field of practice, setting or service in which a nurse consultant works, the post should be structured around four core functions, namely: expert practice; professional leadership and consultancy; education, training and development; and practice and service development, research and evaluation. The expert practice component of the role should form at least 50% of the time available (HSC 1999/217). It was anticipated that nurse consultants, through the different dimensions of their role, would have a significant impact on patient outcomes and the patient experience, as well influencing the practice of other healthcare staff.

In 2000, the Department of Health commissioned a research team at King’s College London to undertake a preliminary evaluation of the implementation of the nurse consultant role (Guest et al 2001) and this was subsequently followed up with a further study evaluating the impact of nurse consultants (Guest at al 2004). Whereas the studies provided valuable insight into how the role was being implemented, the contribution they made towards understanding the impact of nurse consultants was limited. Due to constraints on the research process, the research team were unable to gain the patient’s perspective of the role or look in any detail at the impact nurse consultants had on patient outcomes or the patient experience. Rather, the research highlighted the impact nurse consultants had on developing services and in providing clinical leadership for front-line staff. It was inferred that both these activities would impact indirectly on patient outcomes and the patient experience but the nature of their impact on patients remained unclear. The researchers concluded that further research was warranted to explore in more detail the direct impact that nurse consultants had on patient outcomes and the patient experience. Other early evaluations of nurse consultant roles in other UK countries have drawn similar conclusions, namely that there is general agreement amongst stakeholders that the roles have made a notable difference in clinical developments and service improvements but there is a lack of clear evidence of impact (McIntosh et al 2002; DHSSPS 2005).

In a recent systematic review evaluating nurse consultant posts (Humphreys et al 2007) (which did not include the King’s College studies) evidence of the clinical effectiveness of these posts was limited.
The 14 studies which were reviewed were small scale and focused primarily on the process of implementation rather than considering the impact of nurse consultants. Where impact was considered, it was assessed in terms of perceived impact rather than including any actual measures of impact. The review also included examples of self-reports by nurse consultants of specific service initiatives they had taken forward which generally highlighted a positive impact on practice. However, robust evidence that demonstrated the impact of nurse consultants on patient outcomes was lacking and the review concluded that it was not clear whether these roles are cost effective. One reason for this may be that it takes at least five years for a new post to develop fully, and therefore attempts to assess impact on patient outcomes before this time are premature (NNRU 2007). However, although evidence of positive impact of nurse consultants on patient outcomes is beginning to emerge, for example in critical care (Fairley & Closs 2006), there is clearly a need for further research in this area.

A recent study undertaken by members of the research team (Gerrish et al 2007) examined the contribution that nurses in advanced practice roles, including nurse consultants, made to empowering front-line staff to deliver evidence-based care. The study drew similar conclusions to the evaluation of nurse consultant roles (Guest et al 2004), namely that the impact of nurse consultants is multi-faceted and is inherently hard to capture. This is due to a number of factors including the diversity and complexity of the roles, the difficulty of attributing changes in outcomes to individuals who may work as a member of a multi-disciplinary team and the fact that many nurse consultants achieve change through influencing the practice of other staff (Coster et al 2006; Graham 2007).

Nevertheless, despite these difficulties there is a need to identify suitable indicators that can be used to demonstrate the impact of nurse consultants on patient outcomes and the patient experience. This is important for three reasons. First, it can enable nurse consultants to systematically and rigorously collect information on the effectiveness of their interventions and use this information to review and further develop their practice in order to enhance the quality of patient care. Second, in a National Health Service where cost effectiveness needs to be considered alongside clinical effectiveness, information on the impact of nurse consultants is needed in order demonstrate how and in what ways these roles ‘add value’ to patient care. Such information is essential to health service managers for effective workforce planning. Third, a greater understanding of the contribution of nurse consultants to improving patient outcomes and the patient experience can inform the educational preparation and on-going support of nurses taking up these leadership roles.

### 1.4 Framework for identifying outcome measures

It is important when considering the impact of nurse consultant roles to differentiate between process and outcome. Early evaluations of these posts have tended to focus on the process of providing clinical care, leadership, education etc., rather than examining the actual impact on patient outcomes and the patient experience, as well influencing the practice of other healthcare professionals.

As a product of our earlier study, (Gerrish et al 2007) we proposed a framework for identifying indicators to capture the impact of advanced practice roles (including nurse consultants), based on the work of Schulz et al (2002). As an alternative to viewing outcomes in terms of statistical significance, Schulz et al propose that it may be helpful to consider the clinical significance of outcomes. Clinical significance is concerned with the practical value of an intervention, in other words whether it makes a real difference to patients and encompasses the following indicators:

- Symptomatology – the extent to which individuals return to normal functioning or experience a change of symptoms in relation to physical and psychological wellbeing.
- Quality of life – the extent to which the intervention broadly improves an individual’s quality of life and self-efficacy.
Social significance – the extent to which the outcomes are important to society. Societal concerns are often translated into healthcare policy, for example relating to hospital admission rates or length of stay but may also include aspects of health behaviour and health status, for example self-management of chronic disease.

Social validity – the social importance and acceptability of the intervention procedures and outcomes. This includes identifying that the intervention addresses one or more meaningful or important problems in the patient’s/carer’s life.

In the light of our findings, we extended this framework to consider the professional significance of impact and proposed the following indicators:

- Professional competence – the extent to which the advanced practitioner enhances the competence of front-line staff by developing their knowledge, skills and confidence.
- Quality of working life – front-line staff’s perspective on improvements in the quality of their working life arising from the advanced practitioner’s intervention. This might include enhanced job satisfaction and fulfilment.
- Social significance – the extent to which advanced practitioners address the policy objectives of the organisation for which they work. This might include, for example, contributing towards achieving government targets, e.g. reducing MRSA rates through infection control activities with front-line staff.
- Social validity – the social importance and acceptability of the advanced practitioner’s intervention and outcomes for front-line staff. In other words, does the advanced practitioner address meaningful and important problems that front-line staff encounter?

Clinically significant outcomes affect patients directly, whereas professionally significant outcomes are likely to have an indirect impact on patients. It should be noted that our earlier study (Gerrish et al 2007) sought to examine the impact of advanced practice nurses in promoting evidence-based practice on front-line staff and did not seek to map all possible dimensions of impact that advanced practice nurses might have. Nevertheless, we concluded by proposing that the framework had the potential to capture the impact of nurse consultant roles but that it required further testing and refinement through cross-referencing with the literature and through empirical testing. In addition, there was a need to evaluate the utility and applicability of the framework in practice settings and to explore its potential to assist nurse consultants evaluate their impact on outcomes which are important to patients, healthcare professionals and managers. Furthermore, factors which may facilitate or hinder nurse consultants to demonstrate their impact on patient and professional outcomes should be identified.

If nurse consultants are to evaluate their impact in terms of outcomes which are meaningful to a range of stakeholders, including patients, it is likely that they will respond to practical guidance based on real life examples which have been tested and validated. Therefore, this study set out to generate such guidance through a mixed methods approach involving a comprehensive review of existing evidence, a mapping exercise of nurse consultant roles, a series of in-depth case studies of nurse consultants and an iterative collaboration with a specialist panel in order to identify a range of appropriate indicators to demonstrate quality outcomes for nurse consultant roles.
1.5 **Project aims and approach**

In order to address the gaps in knowledge identified above, the current study sought to:

- Identify a range of indicators to demonstrate the impact of nurse consultants on patient, professional and organisational outcomes.
- Develop a toolkit to help nurse consultants to demonstrate their impact on patient, professional and organisational outcomes.

A mixed methods approach was used which included a comprehensive systematic review of existing evidence, a mapping exercise of the nurse consultant roles in the two participating NHS trusts, and a series of case studies involving six nurse consultants. Each case study involved interviewing the nurse consultant, healthcare professionals and managers with whom the nurse consultant worked and, where appropriate, patients and family carers. Interviews focused on exploring the range of impacts that nurse consultants exerted on patients, healthcare professionals and the organisations in which they worked, together with developing an understanding of the challenges nurse consultants encountered in trying to capture their impact.

A specialist panel comprising key stakeholders was subsequently set up for each nurse consultant with the purpose of working with the nurse consultant to identify appropriate patient, professional and organisational indicators to demonstrate quality outcomes for nurse consultant roles. The research team subsequently worked with each nurse consultant to develop and pilot individualised approaches to capturing impact. This process informed the development of a toolkit (Gerrish et al 2011) designed to help nurse consultants to demonstrate their impact. The toolkit has undergone preliminary validation by a larger group of nurse consultants and other stakeholders including senior nurse managers and patient representatives.

1.6 **Organisation of the report**

The remainder of this report is divided into the following chapters.

Chapter 2 presents the findings of a two staged literature review examining evidence of the impact of nurse consultant roles on patient and professional outcomes and a selective review of the impact of advanced practice nursing (APN) roles. This chapter explores the extent to which the proposed framework for capturing impact comprehensively reflects the existing evidence on the impact of nurse consultant roles.

Chapter 3 outlines the methods used in the case studies, including a description of the research sites, sampling of participants, data collection phases, and data analysis.

Chapter 4 presents the findings relating to the impact of nurse consultant roles, which is presented according to the revised version of the framework for capturing impact. The extent to which the nurse consultants involved in the study had already gathered evidence to demonstrate their impact is also explored.

Chapter 5 presents the findings relating to the practicalities of capturing impact and the development of the toolkit designed to help nurse consultants demonstrate their impact.

Chapter 6 provides a discussion of the key findings in relation to the original aims of the study and considers the implications and recommendations for practice and research.
Chapter 2: Literature review of the impact of nurse consultants

2.1 Introduction

Nurse consultant roles are diverse and complex. Nurse consultants work in a wide variety of healthcare settings and often their roles span organisational and professional boundaries (Guest et al 2004). Despite widespread acknowledgement that these roles have the capacity to impact on the experiences of patients and front-line staff, evidence of their impact is unclear. The extent to which their impact has been assessed in terms of clinical significance (Schulz et al. 2002) or professional significance (Gerrish, et al. 2007) is unknown. To address this, a two staged literature review was undertaken. Firstly, a systematic literature review explored the current state of evidence about the impact of nurse consultants on areas of clinical and professional significance. However, given that it was anticipated that there would be little primary research evaluating the impact of nurse consultants specifically, a pragmatic and selective review of evidence about impact of advanced practice nursing (APN) roles was also undertaken to identify a range of indicators that may be useful for demonstrating the impact of nurse consultants and further refine the proposed framework.

Collectively the two stage review had the following objectives:

1. To explore the impact of nurse consultants on patient and professional outcomes within adult healthcare settings.
2. To identify the extent to which existing studies have used quantitative outcome measures which address aspects of clinical and/or professional significance.
3. To identify the extent to which existing studies have used qualitative dimensions of impact which address aspects of clinical and/or professional significance.
4. To identify a range of indicators which may be appropriate to demonstrating outcomes for nurse consultants
5. To further refine the proposed framework for assessing the impact of nurse consultant roles.

The first three objectives are explored in the nurse consultant systematic review, whereas the last two objectives are addressed in the selective review of APN literature. The methods and results from the nurse consultant review are presented first, followed by a summary overview of the selective literature on the impact of APN roles in section 2.3.

2.2 A systematic review of the impact of nurse consultant roles

Design

Systematic reviews have traditionally relied on evidence from quantitative studies, but the benefits of including qualitative research evidence is increasingly recognised (Centre for Reviews and Dissemination 2008). The inclusion of qualitative studies which reflect the experiences of the target groups of the intervention is likely to enhance the review (Thomas et al. 2004). This is particularly likely when the intervention is complex and multi-faceted, which reflects the nature of nurse consultants’ work. This review therefore integrated evidence from qualitative and quantitative research studies.

Search methods

A broad search plan was developed using population terms (e.g. 'nurse consultant') and terms to identify the focus of the study (e.g. 'impact'/'outcome*'). The search terms included quantitative (e.g. 'evaluation') and qualitative focused outcomes (e.g. 'satisfaction' and 'experience*') in order to identify both types of studies. The search was piloted in MEDLINE and CINAHL, but was individually adapted to each database.

The databases searched from January 2000 to July 2009 were MEDLINE, PUBMED, PsycINFO, CINAHL, British Nursing Index, Cochrane Library, SCOPUS and Web of Knowledge. Unpublished/grey literature was sought through the Internet (Google advanced search function), British Library, National Research Register, NIHR portfolio and the Current Controlled Trials Register. Authors of grey literature studies were contacted to obtain further details, if available. Hand searching of reference lists was also conducted.

Articles were assessed against the following general criteria: English language, UK-based and studies of nurse consultants defined by the Department of Health. Commentary, anecdotal and review articles were excluded. Papers that were exclusively in children or mental health settings were excluded. The following inclusion criteria were applied, according to study design:

Quantitative

- Population - nurse consultants, patients and/or staff in adult acute or primary healthcare settings.
- Intervention - the introduction of nurse consultant-led services or the addition/substitution of nurse consultants to existing services.
- Outcomes - patient, staff or service outcomes.
- Study design - evaluative study involving a comparison group (e.g. before and after, or comparing to another healthcare professional), or a descriptive survey of impact not including a comparison group.

Qualitative

- Population – nurse consultants, patients and/or staff in adult acute or primary healthcare settings.
- Study design - qualitative studies whose a priori purpose was to explore the experiences or perceptions of patients, staff and/or nurse consultants regarding the impact of nurse consultant-led care.

Quality assessment

Quantitative studies were appraised using Thomas et al’s (2003) framework. The CASP (2006) framework was used to appraise qualitative studies and Rees et al’s (2010) checklist was used for descriptive surveys. Two reviewers appraised each study and discrepancies were discussed with a third reviewer. For studies that were reported in multiple sources (e.g. published article and study report), the appraisal was based on the published article. No exclusions were made on the basis of a minimum quality threshold.

Overall, the study quality varied. Given the different study designs and mediums (e.g. study report, published article) meaningful comparisons cannot be made across studies, but it is worth noting the overall level of quality within the studies published to date.
Quantitative studies. Overall quality was weak: only 3 studies were rated as ‘moderate’. Most studies used uncontrolled before-and-after designs. Most did not describe details of confounding variables. The quality of study design in terms of selection bias, blinding, data collection methods and withdrawals/dropouts varied extensively based on the details provided, which at times were limited (e.g. inadequate detail about intervention participants or inclusion criteria).

Descriptive surveys. Studies varied across the items examined, but the objectives, design and sample were generally clear. It was sometimes unclear whether the sample was representative of the target population. Response rates varied between 36-100% (most over 60%), but sample sizes were small and no studies attempted to describe non-responders, raising questions about response bias. Studies often involved non-validated questionnaires or did not provide enough detail to appraise whether the measures were valid, reliable and reproducible. Overall, generalisibility was considered to be limited.

Qualitative studies. Overall quality was moderate; 10 of the 15 studies met the criteria for at least 6/10 quality categories. Most had clear aims and an appropriate research design. However, several studies did not provide an explicit sampling rationale or description of the data collection methods. Only one study included any consideration of reflexivity. Several studies did not explicitly consider ethical issues and data analysis methods were often unclear. However, most findings were presented clearly, were credible (e.g. more than one analyst or respondent validation) and the research was considered valuable.

Data synthesis
Data synthesis was initially conducted by one reviewer, but discussed regularly with a second reviewer. Quantitative and survey studies were synthesised by collating information on the study designs, settings, participants, sample sizes, nature of the interventions/surveys, outcome measures and results. Qualitative studies were synthesised using principles of thematic analysis (Ritchie & Spencer 1994), which were originally developed for analysing primary data but can be applied in the meta-synthesis of qualitative studies (Lloyd-Jones 2005).

The dimensions of impact were also cross-referenced with the proposed framework for assessing impact. This was an iterative process that initially mapped the areas to original definitions (presented on pages 3 & 4). Through this process the definitions were refined. Regular meetings of the research team clarified any uncertainties and consensus was reached about any changes. The dimensions of impact identified in the included studies were mapped to the emerging new framework.

Finally, an overarching synthesis combined the findings by constructing matrices to explore how the evidence from the qualitative/quantitative studies added to, challenged or identified gaps in the evidence from the quantitative/qualitative studies (Thomas et al. 2004).

2.3 Results of systematic review
From 2,313 initial citations retrieved, 132 were obtained for full review, of which 35 met the inclusion criteria. This included 28 published articles, 6 reports/dissertations (two of which also had a published article – Coster et al. 2006, McIntosh and Tolson, 2009), and one conference abstract. The papers presented 36 primary studies - 12 quantitative with a comparison group, 9 descriptive surveys (no comparison) and 15 qualitative. An overview of the included studies is presented in Appendix 1.

All quantitative (n=12) and survey (n=9) studies were set in England, whilst one qualitative study was conducted in Northern Ireland and one in Scotland. The studies covered various speciality areas, including cardiology (four quantitative, one qualitative, two surveys), critical care (three quantitative, one qualitative), pain (two quantitative), and urology (two surveys). Seven qualitative studies spanned more than one speciality and four did not disclose the speciality.
Quantitative studies often evaluated the introduction of a nurse consultant-led service (Ryan et al. 2007) or educational programme (Butler-Williams et al. 2005). The extent of the nurse consultant input into these initiatives ranged from running a whole procedure (Currie et al. 2004) to initiating/supporting a nurse-led process (Crocker 2002). Outcomes were often retrospectively compared to patient records during the previous doctor-led model of care, with little indication that patients were matched for case-mix. In contrast, two quasi-experimental studies set in critical care compared the intervention group to similar ward patients who were not exposed to the intervention, and two uncontrolled studies compared the same patients before and after attendance at the nurse consultant clinic (Ryan et al. 2007; Ryan et al. 2008). Several studies failed to adequately describe comparison groups (Ayers 2005; Crocker 2002; Currie et al. 2004; Kirk 2007; Mason 2009; Warner et al. 2005).

Survey studies explored the impact of nurse consultant posts or evaluated a consultant nurse-led initiative, for example a clinical nursing round (Jarman 2009), by asking stakeholders (hospital staff, GPs, patients) and/or nurse consultants to rate their impact. Five studies explored patients' views of the role or services (Porrett & McGrath 2003; Pottle 2005; James & Eastwood 2007; James & McPhail 2008; Tonkin 2007).

Qualitative studies often involved collecting data from nurse consultants (n=5), the nurse consultant plus their stakeholders (n=6), or only professional stakeholders (n=4) on the role of the nurse consultant. Only two studies involved patients, one exclusively (Tough 2006) and in another patients and staff were interviewed (Ryan et al. 2006).

**Clinical significance**

Improvements in symptomatic outcomes were evident in several quantitative and survey studies, including both physical outcomes (Pottle 2005; James & McPhail 2008; Mason, 2008), such as complications (Currie et al. 2004) or fatigue (Warner et al. 2005), and also psychological outcomes (e.g. Warner et al. 2005), such as reduced anxiety measured by the hospital anxiety and depression scale (HADS, Marshall et al. 2005). Only two qualitative studies proposed that nurse consultants made a difference to patients’ physical outcomes (Fairley & Closs 2006; Manley et al. 2008).

Several studies measured outcomes relating to QoL including improvement in quality of life (McIntosh et al 2002), improved understanding and confidence (Marshall et al. 2005), the extent to which patients felt prepared for treatment (James & McPhail 2008).

Clinical social significance outcomes were often captured quantitatively, including reduced mortality (Priestley et al. 2004), waiting times (Currie et al. 2004) and service/appointment utilisation (Ryan et al. 2007; Ryan et al. 2008). From a broad perspective this was also suggested qualitatively, for example developing services, improving care, reducing waiting times (Guest et al. 2004).

Within each study design there was some evidence of social validity in terms of the acceptability and value of the intervention or nurse consultant amongst patients (e.g. Porrett & McGrath 2003; Marshall et al. 2005; Ryan et al. 2006; Tonkin 2007) and aspects of patient satisfaction (Pottle 2005; Tonkin 2007). Similar broad positive outcomes in patient experiences and satisfaction with care were described qualitatively, although only two collected data directly from patients (Ryan et al. 2006; Tough 2006).

**Professional significance**

Only four quantitative studies assessed professional competence outcomes, which included positive improvements in recording respiratory rates (Butler-Williams et al. 2005), quality and frequency of recording observations (Ryan et al. 2004), and staff alcohol awareness (Mason 2009). However, Crocker (2002) identified on-going delays in the decision to wean. The survey by Kirk (2007)
indicated increased GP accuracy of diagnosis through the nurse consultant service. Similarly, Jarman (2009) reported that a nurse consultant-led clinical nursing round impacted on staff’s knowledge, decision-making and documentation skills. Influence on staff competence and practice also featured in several qualitative studies (Drennan et al. 2004; Guest et al. 2004; Fairley & Closs 2006).

Jarman’s (2009) survey suggested that attendees of the clinical nursing round felt supported, indicating a possible impact on staff’s work experience. A small amount of qualitative evidence indicated that nurse consultants impacted positively on staff’s quality of working life, particularly increasing staff/team/nursing morale (Guest et al. 2004; McIntosh et al. 2002; McIntosh & Tolson 2009). However, a few negative indicators were mentioned, such as staff feeling threatened (Fairley & Closs 2006) and inter-staff conflicts (Unsworth & Cook 2003).

Several qualitative studies suggested the impact of nurse consultants in the professional social significance category, such as contributing to role extension (Guest et al. 2004), the development of new nursing roles (McIntosh & Tolson 2009), recruitment and retention (Drennan et al. 2004), and reducing others’ workload (Drennan et al. 2004; Guest et al. 2004; Redwood et al. 2007).

In terms of professional social validity, several qualitative studies indicated that staff valued nurse consultants’ contribution (Guest et al. 2004; Abbott 2007) and three surveys illustrated the usefulness of nurse consultant-led services amongst GPs (Pottle 2005; Kirk 2007) and nursing staff (Jarman 2009).

**Synthesis of the findings across the quantitative and qualitative studies**

The cross-study synthesis excluded Coster et al’s (2006) study because the survey was developed from focus group research already included (Guest et al. 2004). The survey by Avery & Butler (2008) assessed various items relating to nurse consultant performance, some of which relate to indicators of impact, but due to the limited detail provided these have also been omitted. By their nature the qualitative studies identified broad indicators of impact and the matching of quantitative indicators to these required some interpretation.

Table 1 presents the synthesis of clinical significance indicators. This highlights that some indicators suggested in qualitative studies have been explored quantitatively (e.g. service outcomes; resolution of patient problems/symptoms), whereas others have had limited (e.g. patient satisfaction) or no exploration (e.g. QoL) in quantitative/intervention work.
### Table 1 - Clinical significance qualitative and quantitative synthesis

<table>
<thead>
<tr>
<th>Clinical indicators</th>
<th>Evidence of impact identified in the qualitative studies</th>
<th>Evidence of impact identified in the quantitative/survey studies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Symptomatology</strong></td>
<td>Resolution of patient problems/symptom control (SC), improved clinical outcomes (CO) and reduced risk (RR) (Fairley &amp; Closs 2006; Manley et al 2008)</td>
<td>Reduced alcohol consumption (Mason 2009; CO); Clinical recovery (e.g. fatigue – Fatigue Severity Scale; UK Disability Scale - Warner et al 2005; CO); Clinical outcomes (Pottle 2005; CO); Self-reported activity levels (Marshall et al 2005, survey; CO); Well/not well after procedure (James &amp; McPhail 2008, audit/survey; CO); Low complications (Currie et al 2004; James &amp; McPhail 2008, audit; CO); Reduced anxiety (HADS) (Marshall et al 2005, survey; CO); Reduced psychological impact (Warner et al 2005, MS Impact Scale – MSIS-29; CO); No/less pain than expected (James &amp; McPhail 2008, survey; SC)</td>
</tr>
<tr>
<td><strong>Quality of life</strong></td>
<td>Improve/impact on patient care (Guest et al 2004)</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Positive explanations/information (Tough 2006)</td>
<td>Patients satisfied with explanation of tests and cause of chest pain (Pottle 2005, survey); Well prepared for procedure, e.g. information provision (James &amp; McPhail 2008, survey)</td>
</tr>
<tr>
<td><strong>Social significance</strong></td>
<td>Service developments (Abbott 2007; DHSSPS 2005; Guest et al 2004; Manley et al 2008; Redwood et al 2007; Ryan et al 2006; Unsworth &amp; Cook 2003)</td>
<td>Reduced ventilator days (Crocker 2002); Increased medication rates (Ayers 2005); Reduced or equivocal results on length of stay (Kirk 2007; Mason 2009; Priestley et al 2004); Reduced hospital admission rates (Kirk 2007; Mason 2009); Reduced A&amp;E attendance (Mason 2009); Reduced GP attendance (Ryan et al 2008); Reduced no. of appointments (Ryan et al 2007); Reduced no. of specialities attended (Ryan et al 2007)</td>
</tr>
<tr>
<td></td>
<td>Improve standards of care / quality / performance / efficiency / practice (Drennan et al 2004; Guest et al 2004; Manley et al 2008; McIntosh et al; Redwood et al 2007)</td>
<td>Staff views that the NC role would improve range of services offered to patients and support/enhance medical services (Porrett &amp; McGrath 2003, survey)</td>
</tr>
<tr>
<td></td>
<td>Impact on care across boundaries (Drennan et al 2004)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Development/introduction of processes/procedures/guidelines/initiatives (Guest et al 2004; McIntosh et al)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Convert policy into practice (McIntosh et al)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Execute/progress trust-wide remits to improve standards of nursing to enhance patient care (Unsworth &amp; Cook 2003)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Raising profile of service (McIntosh et al 2002)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Supporting modernisation through facilitation of change (McSherry et al 2007)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Meeting targets (Guest et al 2004)</td>
<td></td>
</tr>
</tbody>
</table>

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11
### Social validity / quality of patient experience

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost effectiveness of clinic (Drennan et al 2004)</td>
<td>None</td>
</tr>
<tr>
<td>None</td>
<td>No clinical incidents and complaints (Ryan et al 2004)</td>
</tr>
<tr>
<td>Adherence to appointments (Tough 2006)</td>
<td>None</td>
</tr>
<tr>
<td>Developing networks (Manley et al 2008)</td>
<td>None</td>
</tr>
<tr>
<td>Patient satisfaction with care (including feeling cared for/important) (Drennan et al 2004; Ryan et al 2006; Tough 2006)</td>
<td>Patient satisfaction with service (Pottle 2005, survey); Patients happy with length of wait for appointment or results (James &amp; McPhail 2008, survey)</td>
</tr>
<tr>
<td>Holistic/patient centred care/services (Drennan et al 2004; Ryan et al 2006)</td>
<td>Patients view new clinic as convenient - e.g. saving time, travel, parking, waiting (Tonkin 2007, survey)</td>
</tr>
<tr>
<td>Patient experience of seeing NC - e.g. feeling reassured after attending/seeing (Tough 2006)</td>
<td>Various single item questions – e.g. able to discuss problem, given enough time, confidence in NC, felt listened to (Porrett &amp; McGrath 2003, survey)</td>
</tr>
</tbody>
</table>

Table 2 illustrates that most staff indicators captured qualitatively have not been evaluated in quantitative/intervention work, and also that limited work has explored nurse consultants’ impact on quantitative staff outcomes.
<table>
<thead>
<tr>
<th>Professional indicators</th>
<th>Evidence of impact identified in the qualitative studies</th>
<th>Evidence of impact identified in the quantitative/survey studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional competence</td>
<td>Develop clinical practice of staff (DHSSPS 2005)</td>
<td>Increased respiratory rate recording (Butler-Williams et al 2005, audit);</td>
</tr>
<tr>
<td></td>
<td>Enabling other nurses to deal directly with patient needs (Drennan et al 2004)</td>
<td>Increased quality and frequency of observation recording (Ryan et al 2004, audit);</td>
</tr>
<tr>
<td></td>
<td>Transferring/updating/guiding/developing skills (Drennan et al 2004; Guest et al 2004; McIntosh et al; Unsworth &amp; Cook 2003)</td>
<td>Delay in decision to wean (Crocker 2002, audit);</td>
</tr>
<tr>
<td></td>
<td>Nurses benefit from expertise of NC (Drennan et al 2004)</td>
<td>Improved GP accuracy of diagnosis (Kirk 2007, survey)</td>
</tr>
<tr>
<td></td>
<td>Teaching/explanations/instructions to health professionals to reduce risk - thus impact on competence of behaviour (Fairley &amp; Closs 2006)</td>
<td>Learning in various clinical tasks and positive change in practice (e.g. documentation, knowledge, decision-making and prioritisation skills – Jarman 2009, survey)</td>
</tr>
<tr>
<td></td>
<td>Helping team become self-sufficient in problem solving (Manley et al 2008)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Helping others to develop their practice/expertise (Manley et al 2008)</td>
<td>Single question on endangering doctor experience /roles (i.e. deskilling) (Porrett &amp; McGrath 2003, survey, but for most was not an issue)</td>
</tr>
<tr>
<td></td>
<td>Range and quality of services offered by other nurses (Drennan et al 2004; Guest et al 2004)</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Changing staff attitudes/behaviour (Guest et al 2004; McIntosh et al)</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Facilitate/encourage research engagement (Guest et al 2004; Woodward et al 2005/6)</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Increasing staff understanding/confidence-building (Drennan et al 2004; Guest et al 2004; McIntosh et al)</td>
<td>Improved staff alcohol awareness (Mason 2009)</td>
</tr>
<tr>
<td>Quality of working life</td>
<td>Enhanced/increased team/staff morale (Drennan et al 2004; Guest et al 2004; McIntosh et al)</td>
<td>Feeling supported during clinical nursing round (Jarman 2009, survey)</td>
</tr>
<tr>
<td></td>
<td>Other staff feeling threatened/unrecognised (Drennan et al 2004; Fairley &amp; Closs 2006)</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Greater involvement of all/healthy team working/relationships in team (doctors/nurse) (Drennan et al 2004; Redwood et al 2007)</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Improved communication (Redwood et al 2007)</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Inter-personal/inter-staff conflict (Unsworth &amp; Cook 2003)</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Job satisfaction among NCs (Drennan et al 2004)</td>
<td>None</td>
</tr>
<tr>
<td>Professional social significance</td>
<td>Implications for workload/remit of others (Drennan et al 2004; Guest et al 2004; Redwood et al 2007)</td>
<td>Single question on impact on medical colleagues’ roles or opportunities (Porrett &amp; McGrath 2003, survey)</td>
</tr>
<tr>
<td></td>
<td>Encourage extension to roles/influence and lead development of new posts/nursing roles (Guest et al 2004; McIntosh et al; Unsworth &amp; Cook 2003)</td>
<td>Single question on raising opportunities for further posts (Porrett &amp; McGrath 2003, survey)</td>
</tr>
</tbody>
</table>
Impact on caseload management (Drennan et al 2004) None
Retention/recruitment/sickness (Drennan et al 2004) None
Influencing training/education needs of others (Unsworth & Cook 2003) None

Professional social validity

- Value/acceptance of NC / service to staff (Abbott 2007; Guest et al 2004; McIntosh et al; Redwood et al 2007; Woodward et al 2005/6)
- GP satisfaction with service (Potte 2005, survey); GP usefulness of service (Kirk 2007, survey); Perceived value/impact & acceptance of CNR among staff (Jarman 2009, survey)

2.4 Overview of selective APN literature relating to capturing impact

This part of the review phase was selective, aiming to broadly explore the evidence on capturing impact amongst more established advanced nursing roles (e.g. nurse practitioners, clinical nurse specialists) and to identify patient and professional indicators which may be appropriate to demonstrating outcomes for nurse consultants. This was important because of the limited published evidence in this area amongst nurse consultant literature.

In view of the large volume of literature on APN roles, a pragmatic decision was taken to explore review papers (rather than primary studies). A search plan used population terms (e.g. ‘clinical nurse specialist’, ‘nurse practitioner’) and terms to identify the focus of the study (e.g. ‘impact’/’outcome’). Where available, the search was confined to review papers (indexed as such) in the advanced search options, but alternatively search terms were added to focus on reviews (e.g. ‘review’/’literature search’). Relevant databases were searched (e.g. MEDLINE, PUBMED, CINAHL, British Nursing Index, Web of Knowledge) from 1970 onwards.

The following criteria for including papers were applied:

- Review articles (systematic or narrative)
- Population – patients, staff or the APN themselves in acute or primary care settings
- Intervention – introduction of a new APN led service or the addition/substitution of an APN to an existing service
- Outcomes – any patient, staff or service outcome
- Study design – quantitative, qualitative or a mixture of both types of studies

Fifty-five review papers were obtained (see Appendix 2 for summary of included reviews), including reviews explicitly related to APN roles, but also some papers related to ‘nurse-led’ initiatives. Due to lack of clarity over titling in APN roles, it was not always clear whether these initiatives were undertaken by an APN. However, these reviews were included where they met all other criteria.

Data extraction focused on the identification of clinical areas/patient groups, the areas of impact (which were mapped to the proposed framework), and the indicators and outcome measures used (where described). These areas will be explored briefly in turn, prior to a discussion of the findings from both parts of the literature review examined in this chapter.

Clinical areas exploring APN impact

Several reviews explored a variety of both clinical areas and patient groups (e.g. Wilson-Barnett & Beech, 1994). Some focused on a variety of patient groups within a single setting e.g. primary care (Laurant et al. 2004). However, other reviews were more focused in terms of clinical speciality, including reviews relating to cardiac (Halcomb et al. 2007), critical care (Kleinpell et al. 2008), cancer
Areas of impact
The areas of impact identified and described in the APN review articles were mapped onto the proposed framework (Gerrish et al. 2007). At times this was difficult because some of the reviews did not always describe the impact or outcomes in detail. Through this iterative process (in this review and the systematic review) several minor amendments to the framework were made, which are considered in the overall discussion at the end of the chapter.

All of the reviews focused on some aspect of clinical significance. Many reviews explored outcomes relating to clinical social significance such as length of stay (LOS), waiting times, service utilisation, admission rates, rehospitalisation rates, referral rates, number of investigations or prescriptions. However, most of the reviews also included primary studies exploring the impact of APN roles on patients’ symptomatology or physical outcomes (e.g. pain, blood pressure, glycemic control) or psychological wellbeing (n = 42), quality of life/health status, patient satisfaction or knowledge/understanding (n = 49), and some (n = 22) explored patient acceptance of the role (i.e. social validity).

Limited work was identified exploring professional significance. Only 8 reviews mentioned primary studies exploring the competence of staff (e.g. pain knowledge, screening ability). Around 15 review articles described primary studies that explored aspects relating to quality of working life (e.g. job/staff satisfaction), whereas professional social significance aspects were evident in 14 reviews (e.g. workload, recruitment and retention). Finally, 10 reviews described other staff members’ acceptance or views of the service or nurse (i.e. professional social validity).

Indicators and outcome measures used
Given that most of the reviews included quantitative studies only, outcomes described were primarily quantitative. However, at times it was difficult to identify the specific outcome measures used in the primary studies due to lack of detail.

Where outcome measures were described or alluded to these ranged from objective clinical measures (e.g. forced expiratory volume tests), audits of patient records or hospital computerised information system, a variety of generic validated questionnaires (e.g. HADS, general health questionnaire, SF-36), a few condition-specific questionnaires (e.g. functional assessment of cancer therapy questionnaire, incontinence impact questionnaire, impact of epilepsy scale), bespoke and self-designed instruments or interviews (mainly described as structured).

2.5 Discussion of literature reviewed
Overall, both literature reviews confirmed the variety of areas that nurse consultants (and other advanced nursing roles) have the potential to influence. However, the reviews also prompted refinement of the proposed framework for evaluating impact. The findings will now be synthesised in relation to the compound objectives for the literature reviews.

Objective 1: To explore the impact of nurse consultants on patient and professional outcomes within adult healthcare settings.

The review findings provide little robust evidence of the impact of nurse consultants and therefore highlight the need for further work to be undertaken. Thirty-six studies were identified, which exceeds the number reported in previous reviews and reflects growing interest in this topic. However, methodological quality was often weak, especially in the quantitative studies, which were
predominantly uncontrolled before-and-after designs with different, unmatched patients. Only one study provided statistical evidence showing a significant change in outcome following the introduction of a nurse consultant service. Furthermore, no studies attempted to capture the cost-effectiveness of services provided by nurse consultants. This is a significant omission bearing in mind current emphasis on the need to demonstrate that new nursing roles add value to healthcare: without convincing evidence such roles may not be sustainable (NNRU 2007).

It is encouraging to see a number of qualitative studies exploring the impact of the nurse consultant role, which is especially beneficial in this under-researched area and in the light of the complexity of these roles. The cross-study synthesis illustrates that the qualitative studies often identified areas of impact that have yet to be explored in quantitative/intervention work (especially professional indicators). Given that many nurse consultants have a direct influence and at times work through the practice of the other staff it is important that this area is examined in future work. Furthermore, some of the areas suggested by qualitative work would be very amenable to quantitative measurement using standardised tools (e.g. QoL, job satisfaction, ward climate).

To date the studies conducted include several in cardiology and critical care, whereas other areas have largely yet to be explored. However, several qualitative studies used a variety of nurse consultants from different speciality areas or did not disclose details about the setting of the nurse consultant due to confidentiality and anonymity issues. This is justifiable, given the unique nature of many nurse consultant roles, and is an issue that needs careful and sensitive consideration when involving nurse consultants in future research.

Although the systematic review determined that there is insufficient evidence to confirm the impact of nurse consultants, the studies do suggest a largely positive influence of nurse consultants on patient, professional and service outcomes. Moreover, the overall inadequacy in the methodological quality of the included studies suggests the need for nurse consultants to have relevant support and guidance in how they might best demonstrate and measure their impact.

**Objective 2 and 3: To identify the extent to which existing studies have used quantitative outcome measures or qualitative dimensions of impact, which address aspects of clinical and/or professional significance.**

Both reviews demonstrate that existing studies have rarely explored the impact of advanced nurses on clinical or professional outcomes using qualitative methods. While a number of qualitative studies were identified in the nurse consultant search, many of these described the broad processes and activities of nurse consultants (e.g. leadership), rather than their impact. While these processes may well lead to impacts on patients, staff or services (e.g. providing clinical leadership to front-line staff could influence an improvement in their skills or an enhancement in their job satisfaction), the data provided did not capture this ultimate impact. Future evaluations using both qualitative and quantitative methods need to examine the actual impact of these processes, which would provide more conclusive and effective evidence of the impact and added value of nurse consultants to the NHS.

Furthermore, few of the nurse consultant studies explored patient’s views qualitatively. Some authors defended their decision not to involve patients because in the early stage of the nurse consultant development it was ‘unlikely that service improvements and benefits to patients would have reached their full impact’ (Redwood et al. 2007, p37). However, as posts become more established, it will be important to determine patients’ views on the difference nurse consultants make to their care and the outcomes they value.

The findings of both reviews illustrate the dearth of studies exploring the impact of advanced nursing roles (including nurse consultants) on professional outcomes. This was especially the case in the quantitative studies. A number of professional indicators were suggested in the qualitative studies,
but these were not always explored in detail (see above discussion relating to identification of processes). Therefore, the influence of nurse consultants on a variety of outcomes relating to professional significance (e.g. knowledge, skills and confidence of staff, job satisfaction of other staff, workload/work distribution and retention amongst other staff) requires further inspection.

**Objective 4: To identify a range of indicators which may be appropriate to demonstrating outcomes for nurse consultants.**

The nurse consultant review provided very few illustrations of patient or professional indicators that could be used by nurse consultants to demonstrate their impact. A small number of validated measures were used (e.g. HADS, Fatigue Severity Scale), but most of the survey tools were self-designed, non-validated measures.

The APN review articles did not always describe the actual outcome measures used in the primary studies. However, the available data provided a preliminary framework of possible outcomes measures, which was drawn upon further and expanded in the next phase of the research project.

**Objective 5: To further refine the proposed framework for use in assessing the impact of nurse consultant roles.**

Although the nurse consultant review illustrated somewhat limited evidence relating to the impact of these roles, the indicators of impact identified readily mapped onto the proposed framework of clinical and professional significance, which appeared to be generally comprehensive in capturing the range of outcomes reported in the literature to date.

The broad process-type concepts that were often identified in the qualitative studies could not be incorporated into the impact framework. The frequent description of the impact of nurse consultants in this way may reflect the methodological complexity of evaluating the impact of these roles, because they are often diverse, undefined in terms of goals and boundaries, and involved in work that can be subtle, incorporated within a multi-disciplinary team (MDT) and impact may occur indirectly through the work of other professionals. Therefore, while the activities may be readily identified (e.g. providing support, leadership) the eventual impact of those processes may be more hidden and discreet or it may not be attributable to an individual nurse consultant. Furthermore, some of the most important and valued ways that nurse consultants make a difference and impact on patients, professionals or their service/organisation may be difficult to capture in a measurable form.

Minor amendments were made to the framework definitions during the two stage literature review, resulting in the following revised framework for capturing clinical and professional significance:

- **Symptomatology** - the extent to which individuals return to normal functioning or experience a change of symptoms. It is concerned with the physical or psychological outcomes of the intervention to patient, and/or carer.

- **Quality of life (QoL)** - whether the intervention broadly improves an individual's quality of life and self-efficacy.

- **Social significance** - clinically oriented outcomes relating to the service organisation, delivery and resources, and that are important to society. Societal concerns are often translated into healthcare policy, e.g. relating to hospital admission rates or length of stay but may also include aspects of health behaviour and health status, e.g. self-management of chronic illness.

- **Social validity** - the social importance and acceptability of the intervention, whether the intervention addresses one or more important problems in the patient's/carer's life, and whether the outcomes are meaningful to patients/carers/others.
• Professional competence - the extent to which the nurse consultant has an impact on the competence and confidence of the healthcare workforce (e.g. effecting knowledge, skills, behaviour, attitudes).

• Quality of working life - the healthcare workforce's perspective on the impact on their QWL arising from the nurse consultant intervention. This might include enhanced job satisfaction and fulfilment.

• Professional social significance - the extent to which the nurse consultant interventions are important to societal outcomes relevant to staff. Staff social significance can refer to outcomes linked to policy objectives relating to the staff within the organisation. This might include, for example, reducing workload of GPs or reducing the turnover rates of junior nurses.

• Professional social validity - the social importance and acceptability of the intervention for the healthcare workforce, whether the intervention addresses one or more important problems that healthcare staff encounter, and whether the outcomes are meaningful to the workforce/others.

The case studies which are described in Chapters 3-5 test this framework empirically.
Chapter 3: Methods

3.1 Overview of the research process

A mixed methods approach was used to achieve the research aims. This began with mapping nurse consultant roles across the research sites, followed by a series of case studies of six nurse consultants to examine perceived impact, and an iterative collaboration involving nurse consultants working with a specialist panel to identify appropriate areas and methods to demonstrate evidence of impact for their roles. A description of the methods used is presented below.

3.2 The research sites

Two research sites were selected. Both were acute NHS foundation trusts purposively selected to represent variations in terms of location, populations served, size and service configuration. One hospital was a large multi-site teaching hospital in a large city, whereas the other was a smaller single site district general hospital in a regional town.

Although both sites were acute trusts, several of the nurse consultant roles examined involved cross boundary work into primary care and community services.

3.3 Mapping nurse consultant roles

In order to purposively select nurse consultants for the case studies, a mapping exercise was carried out to identify the range and responsibilities of nurse consultant roles across the participating organisations. This initially involved a meeting with the two Chief Nurses in order to identify the nurse consultants in their organisation, the impetus for the posts, whether the roles involved cross boundary work, and the extent to which the nurse consultants were engaged in activities across all four dimensions of the role (expert practice, leadership, education, research and service development). A total of 16 nurse consultants were in post across the two organisations at the time the study commenced. The Chief Nurses made an initial approach to their nurse consultants to ascertain their interest in participating in the study and the details of those who expressed an interest were forwarded to the research team.

A member of the research team then met individually with interested nurse consultants in the participating organisations to further explore their roles and collate information to inform the sampling frame for the selection of the case studies.

3.4 Sampling strategy for case studies

Nurse consultants

The nurse consultants were sampled to ensure maximum variation across a range of dimensions that have been shown to influence the complexity of demonstrating impact of the roles (Gerrish et al. 2007). This included whether the nurse consultant managed his/her own caseload, acted as a specialist advisor to front-line staff, the extent to which the role crossed organisational and professional boundaries, and the extent to which the nurse consultant worked independently or as part of a multi-disciplinary team (MDT). Nurse consultants who were not considered to be engaged in activities across all four dimensions of the role or were very new in post were not included in the sampling frame.

Based on the information gathered in the mapping exercise, six nurse consultants were purposively sampled from the participating organisations. The six nurse consultants were from diverse clinical backgrounds and most worked across acute and primary care sectors. The selected roles involved two roles that were primarily clinically focused, two that were department focused and two that were
broad roles involving extensive external and cross boundary work (organisationally and professionally).

**Stakeholders**

The participating nurse consultants identified a range of stakeholders with whom they had worked closely. The nurse consultants then made an initial approach to these stakeholders to ascertain whether they were willing to be interviewed as part of the study. Stakeholders included front-line staff, matrons, nurse directors, medical consultants, clinical directors, business managers, line managers, external contacts (e.g. nurse specialist at another national centre), charity representatives (e.g. manager of regional office or trustee), patients and family carers. The nurse consultants were guided by the research team to purposively select a variety of stakeholders from different groups and contexts, and to include individuals who were able to provide insights into the impact of the nurse consultant on patients, staff and/or the organisation, and issues associated with attempts to demonstrate this. It was especially important in selecting patient and family carers that the nurse consultants considered individuals who they felt would be able to offer an insight to the focus of the study. Throughout this sampling phase and subsequent stakeholder recruitment, it was emphasised to the nurse consultant and the stakeholders that the purpose of the study was not to evaluate the performance of the individual nurse consultant but rather to explore the different dimensions of impact and identify means whereby their impact might be captured.

### 3.5 Ethical and research governance approval

Ethical approval to undertake the study was obtained from an NHS Research Ethics Committee. Research governance approval and access was then sought from each participating organisation.

### 3.6 Data collection – case study interviews

Data collection for the case studies took place between December 2009 and October 2010. The six case studies were conducted consecutively in pairs by 2-3 members of the research team to allow in-depth immersion into each nurse consultant’s role. A variety of data collection strategies were undertaken during the case studies, which are outlined in Figure 1.

**Interviews with nurse consultants**

Initial in-depth interviews were undertaken with the nurse consultants to explore their perceptions of impact relating to their role (based on the dimensions of clinical and professional significance identified in the revised framework presented at the end of Chapter 2). The topic areas covered in the interviews included: the importance of capturing impact, impact on patients, impact on other staff, impact on the organisation, most important areas of impact to capture and the reasons for this, any attempts to date to capture their impact, ideas of how to capture impact relating to the different areas, and the barriers and facilitators to capturing impact. The interviews also identified any additional indicators of impact which were not currently captured by the framework.

A follow-up interview with the nurse consultant was also conducted at the end of each case study to clarify issues that arose during the interviews with other stakeholders.
Interviews with healthcare professionals and external professional stakeholders

In each case study, 6 to 8 semi-structured interviews were conducted with a range of healthcare professionals and external professionals in the NHS and relevant organisations (e.g. charities) that the nurse consultant identified. This included junior and senior nursing staff, matrons, nurse directors, medical consultants, clinical directors, business managers, line managers and external stakeholders (e.g. committee colleagues or charity workers). The interviews explored the participant’s role, contact with the nurse consultant, the participants’ perceptions on the importance/relevance of capturing impact, their views on the nurse consultant’s impact on patients, their own practice, other staff and the organisation, the most important areas of impact to capture, attempts by the nurse consultant to capture their impact to date, any ideas for capturing impact, and the barriers and facilitators to capturing impact. The majority of interviews were conducted face-to-face, but a few telephone
Interviews were undertaken at the participant’s request or if the individual was located in a distant geographical area.

The Chief Nurses of the participating organisations were also interviewed. These interviews had a broad focus in terms of exploring their views of the impact of nurse consultants and they drew on examples from all nurse consultants within their trust to illustrate their points.

**Interviews with patients and/or family carers**

Where possible and appropriate in the context and speciality of the individual nurse consultant’s role, semi-structured interviews were conducted with patients and/or family carers with whom the nurse consultant had contact. The nurse consultants identified these individuals and initially approached them about the study. It was originally intended to interview up to 10 patients or family carers for each nurse consultant. However, through the course of discussions with the nurse consultants and attempts to identify suitable patients, for a variety of reasons, it proved challenging to identify appropriate patients to interview. For some case studies it was difficult to identify patients with whom the nurse consultant had close contact in order for patients to be able to contribute to the focus of the study. This was due to the fact that some nurse consultants worked primarily at organisational level or through developing the practice of other staff, rather than having direct one-to-one patient contact. In other case studies, recruitment was difficult due to the sensitive nature of the speciality and particular client group that the nurse consultant was involved with.

The research team held meetings with the patient representatives of the project advisory group and also consulted with the project advisory group as a whole (which included senior nursing managers, senior clinical nurses, and academics involved in related research) to identify strategies to try to overcome these challenges. These included designing posters to be displayed in clinical areas to encourage patients to come forward, rephrasing patient information sheets and offering to conduct telephone rather than face to face interviews. In two of the case studies it was not possible to identify suitable patients or family carers on ethical grounds. In the remaining four case studies up to five patients or family carers were interviewed. This included two nurse consultants who had short term episodic contact with patients or family carers during a vulnerable time, which also made seeking their views for the current study challenging and meant that only limited patient involvement was obtained. In contrast, two case studies were set within long term conditions where the nurse consultant had built up a relationship with the patients and family carers. In these cases it was easier to identify suitable patients or family carers to interview, although there were other complexities to consider as the research team often had to visit these participants at home because travelling was difficult for them.

These interviews explored participants’ involvement with the nurse consultant, what had been important during their experience, whether the nurse consultant had made a difference to their experience in a variety of dimensions (e.g. quality of life, symptoms, care received by others), the most important aspect of impact for them, and ideas they had on how nurse consultants could show what difference they make to the patients who receive care and support from them. All interviews for the case studies took place at a time and place convenient to the participant and lasted between 20 and 80 minutes. One telephone interview was conducted at the participant’s request.

**3.7 Data collection – case study specialist panels**

For each case study a specialist panel was convened in order to work with the nurse consultants to identify the most important areas of impact in relation to their role and develop initial ideas on the feasibility of capturing this impact in practice.

The research team discussed with the nurse consultant whom it might be appropriate and beneficial to
involve in the specialist panels, based on a number of considerations including availability, insight into the practicalities of capturing impact and the need to include a range of perspectives. The resulting specialist panels involved the nurse consultant, two to three individuals from their service, and the research team. While attempts were made to include patients of the nurse consultants on the specialist panels, this was not possible due to the practical difficulties discussed earlier. However, where possible the research team or the nurse consultant consulted with appropriate patients and/or carers about the proposed tools or strategies developed following the specialist panel meetings to ensure that the patient perspective was included. Furthermore, the research team also met with the patient representatives of the Project Advisory Group who provided advice and suggestions on the methods that might be used by nurse consultants to capture patients’ views and experiences.

In advance of the specialist panel meetings, attendees were sent a summary of the areas of impact relating to the nurse consultant that had been identified during the interviews and asked to prioritise those they considered were most important for the nurse consultant to capture. During the panel meetings these priority areas were discussed and compared and consensus was reached on the most important areas of impact (up to 5) for the nurse consultant to consider. Following the panel meetings, the research team worked closely with each nurse consultant to devise an individual toolkit, including relevant instruments, strategies or methods and advice on capturing impact in relation to the identified areas. This involved drawing on appropriate validated tools or methods in the wider literature, but also where more appropriate developing bespoke measures or data collection tools for each nurse consultant.

Following this development stage, the nurse consultants piloted some of the tools and methods in practice to see whether they were feasible and useful in the context of their day to day work. During this period (usually 6-8 weeks) the research team was on hand to help, answer any queries and revise any aspects of the tools and methods if required by the nurse consultant. A follow-up meeting was subsequently held with the nurse consultants to explore the utility of the tools and methods, whether any further modifications were required, and to identify any difficulties or barriers to the process of using the tools in practice.

All of the information gathered in this stage informed the development of an initial draft of a comprehensive toolkit that included examples from the six case studies.

### 3.8 Data analysis

All interviews were digitally recorded and transcribed verbatim. Data analysis was undertaken using the ‘framework approach’ to qualitative analysis outlined by Ritchie & Spencer (1994). This approach uses a thematic framework shaped by the study’s aims and the issues identified during the data collection. The following five stages were undertaken:

- Familiarisation with the content of the interviews
- Identification of a thematic framework for coding data
- Systematic coding of interviews by applying the thematic frame
- Organising the coded data into major themes
- Mapping the relationships between themes by interpreting the data set as a whole in order to demonstrate the dynamics of the phenomena under investigation

The computer package NVivo was used to organise and code the data. At the end of each case study interview phase, individual cases were analysed (within-case analysis) to ensure a detailed understanding of each case study. Cross-case analysis was also undertaken in order to identify common themes evident across the different case studies.
3.9 Economic impact
Several nurse consultants and their respective stakeholders identified the need in some instances for nurse consultants to demonstrate that the services they provided represented money well spent. Although, it was acknowledged that nurse consultants would not be in a position to undertake a detailed economic evaluation of their services, the potential for nurse consultants to consider their economic impact was recognised. In order to explore this dimension further, three workshops facilitated by experts in health economics or the costing of specialist nursing services were arranged with the intention to inform the information to be included in the toolkit. In order to ensure that a broad range of issues were considered all nurse consultants within the participating organisations were invited to attend, irrespective of whether they had been involved in the earlier case studies. The workshops focused on developing and refining a framework that nurse consultants could use to examine their impact in economic terms by analysing specific examples from individual nurse consultant’s practice.

3.10 Wider consultation and validation of the framework and toolkit
The wider utility of the draft toolkit was assessed by sending the toolkit to the 18 nurse and midwife consultants who were employed in the participating organisations at the time of the validation (including those involved in the case studies) with a list of questions to consider (e.g. face and content validity, readability, and potential utility of the toolkit in practice). At one site the nurse consultants provided individual comments on these questions and some attended a focus group to discuss the toolkit feedback in more detail. At the other site nurse consultants fed back individually.

In addition, throughout the project, the research team engaged with the Project Advisory Group. All members of the advisory group reviewed the draft toolkit, and provided individual feedback and/or comments during a meeting that was convened specifically to discuss the draft toolkit.

This validation informed the further refinement of the toolkit prior to its publication.

3.11 Presentation of the findings
The findings from the data collected during the case studies are presented in Chapters 4 and 5. The issues relating to the importance of capturing impact and the dimensions of impact identified as relevant and most important to nurse consultants (including the extent to which nurse consultants had assessed their impact to date) is presented in Chapter 4. In Chapter 5, the practicalities of capturing the impact of nurse consultant roles are explored.

The chapters presenting the findings draw upon data from across the different case study participants and data collection methods (e.g. individual interviews with nurse consultants, other stakeholders, and the discussions at the specialist panel meetings). Quotes are provided to illustrate and verify the interpretation of the data, but information which could easily identify an individual or organisation has been removed. Each case study has been given a code, for example case study 1 (CS1) in order to link the subsequent quotes to the relevant case study.
Chapter 4: Impact of nurse consultant roles

4.1 Introduction
The case studies provided the opportunity to explore the nurse consultants’ impact in detail, from the perspective of different stakeholders, and to further refine the proposed framework for capturing impact. However, in a similar iterative process to that undertaken during the literature review, the framework was further revised based on the interview data, in particular to include a specific dimension that focused on the impact of nurse consultants on the organisation. The revised framework which included this additional dimension will be used to present the findings.

The findings presented in this chapter explore the various drivers for demonstrating the impact of nurse consultants, the areas of impact identified in relation to the proposed framework, the extent to which the case study nurse consultants had captured evidence of their impact, and the most important areas of impact identified by the nurse consultants and their stakeholders.

4.2 Overview of nurse consultants
A brief summary of the six nurse consultants is presented in order to outline the impetus for the development of their posts and their key roles and responsibilities.

Case study 1 (CS1) - Gynaecology nurse consultant
The gynaecology nurse consultant post focused on early pregnancy and had been developed with a specific remit to improve patient outcomes. The nurse consultant had been in post for 5 years. The role was based in an acute trust but she also worked in the community at a clinic that the Trust subcontracted part of the service to. The nurse consultant was a trained sonographer and provided direct clinical care to a range of patients, including women undergoing a miscarriage, those experiencing severe morning sickness, and those undergoing abortion. Through this clinical work she was involved in delivering training in clinical skills (e.g. scanning) to medical and nursing staff. The service had a strong focus on encouraging nurse-led care and providing continuity for patients. The nurse consultant provided clinical supervision to the nursing staff on the unit and dealt with complex cases when required. She had redesigned, developed and evaluated several patient-focused services. She was actively involved in local and national committees, external education and training, and had recently contributed to supervising a student undertaking a PhD.

Case study 2 (CS2) - Neonatal nurse consultant
The development of the neonatal nurse consultant post was influenced by a number of factors; to provide nursing leadership in neonatal care, to facilitate discharge planning and discharge support and also in response to policy drivers for the development of transitional care units for pre-term infants. At the start of the project the nurse consultant had been in post for 6 years. The nurse consultant was based in the neonatal unit, but she also worked on the postnatal wards and with community midwives. She was the lead for developmental care, an approach to promoting a conducive care environment for preterm babies and parents, and she undertook autonomous assessments of babies and then planned their care accordingly. She provided professional leadership to a team of advanced neonatal nurse practitioners. During the course of the project she completed a professional doctorate. She was also actively involved in local and national committees (including a patient charity), providing education and training, supporting research within the unit and presenting at national and international conferences.
**Case study 3 (CS3) - Pulmonary hypertension nurse consultant**
The development of the pulmonary hypertension nurse consultant post was influenced by the need for service development but also to provide a career structure for the nursing staff in the service. The nurse consultant had been in post 4 years at the start of the project. The post was based in the acute trust, which was one of only a few specialist centres for pulmonary hypertension in the country, but the nurse consultant was seconded to a national pulmonary hypertension charity for one day a week. The nurse consultant ran his own patient clinics and provided clinical leadership to the clinical nurse specialist (CNS) team in the service. He worked closely with commissioners at local and national level and influenced policy on the provision of treatment for pulmonary hypertension. At the time of the project he was undertaking a doctorate and as part of this was completing a qualitative research study.

**Case study 4 (CS4) - Nurse consultant Sexual Health Adviser**
The sexual health adviser nurse consultant post was developed in response to a national strategy that called for a change in sexual health services. At the start of the project the nurse consultant had been in post for 5 years. The role focused specifically on the public health aspects of sexual health, in particular partner notification and risk reduction. Although the nurse consultant was based in an acute trust, she also worked with the local primary care and mental health trusts. The nurse consultant worked closely with a team of health advisers for whom she provided clinical and professional leadership. She dealt with complex clinical cases which were referred to her by the health advisers and other members of the multi-disciplinary team when required. She had developed several new services, many of which were community based, which she had evaluated and subsequently passed onto others to deliver. She was actively involved in local and national committees, education and training, and research.

**Case study 5 (CS5) - Stroke nurse consultant**
The stroke nurse consultant post was developed following national policy directives in stroke to create nurse consultant posts. At the start of the project the nurse consultant had been in post for 9 years and during the past 3 years had taken on the role of clinical lead for stroke services (a role usually undertaken by a medical consultant). The post was based in an acute trust but the nurse consultant also worked closely with primary care, social care and the community services. She ran six week follow-up clinics for patients, saw in-patients with complex needs and provided support groups for patients and carers. She provided leadership and joint clinical supervision to the team of clinical nurse specialists in stroke. She was actively involved in developing the care pathway for stroke and during the project she led a major reconfiguration of the stroke services within the Trust. She had informed the development of the stroke clinical nurse specialist service, developed new stroke service initiatives, and was actively involved in local and national committees and networks, education and training initiatives and research. At the time of the project she was undertaking a professional doctorate.

**Case study 6 (CS6) - Urology nurse consultant**
The urology nurse consultant post evolved from an existing senior clinical nurse specialist post in the organisation. The post had developed over time from a largely management role into one which included the delivery of a specialist nurse-led service. The postholder had been working as a nurse consultant for a few months at the start of the project. The role was based in an acute trust but she visited patients in the community and received referrals from across the region. The post had a specialist focus on male sexual dysfunction. The nurse consultant had a complex caseload and ran one-to-one patient clinics in this area. She was also the line manager for the clinical nurse specialist within the service. She was actively involved in several national committees and delivered education and training both locally and nationally.
4.3 Importance of demonstrating nurse consultants’ impact

The case study interviews were undertaken at a time of substantial uncertainty in the NHS because of concurrent political changes and the introduction of a new coalition government. This was reflected in the interviews as participants often commented on forthcoming or recent announcements about the government’s spending review and its effect on the NHS budget. During this uncertain and financially focused climate both nurse consultants and their stakeholders felt that the importance of capturing impact had increased:

I think since we started the study the importance has probably grown, given the financial climate in which we find ourselves, things have shifted with a new Secretary State for Health and his focus on outcomes. And it is clearly on outcomes rather than processes, and so I think the importance has grown exponentially. (chief nurse)

The importance of capturing impact was often emphasised by nurse consultants and various stakeholders to show that investment in the post presented good value for money. It was recognised that nurse consultant posts were relatively expensive in nursing terms and therefore there was a need to present evidence of benefits to the service and to patients, and that the role was financially viable:

From the nurse consultant perspective I’d see it as being very important to have some quantifiable measure that they’re actually making a difference. We feel instinctively it makes a difference, but if we want these posts to continue in the current climate, understandably we need to show some sort of benefit and impact. (CS3, medical consultant)

Some participants expressed a sense of vulnerability concerning the nurse consultant role in general terms, often due to how the role was not always fully understood by others and the costs associated with the posts: thus they stressed the need to demonstrate impact. However, this perspective was not evident among the senior managers interviewed who expressed ongoing commitment to the roles.

Capturing impact of their posts was also seen as important by individual nurse consultants in order to assess their effectiveness. This was beneficial for personal fulfilment in the role and in continuing to develop professionally:

It’s helping nurse consultants to look across the spectrum of their role to say where they’re strong already and where they may need to improve. (chief nurse)

I think it’s difficult as an individual to believe that you’re actually making a difference unless you can see progress. If you can capture your impact then you can develop more, if you feel you’re doing a good job then you continue to do a good job don’t you, and develop things further. (CS2, advanced nurse practitioner)

From an individual and organisational perspective, it was considered important to determine the added value of a nurse consultant in comparison to other posts in order to clarify role boundaries. This was discussed in relation to differentiating the nurse consultant role from other specialist nurses (e.g. clinical nurse specialist, nurse practitioner) and medical consultant colleagues:

There needs to be a distinction between what they could have done as nurse specialists and then what they would be doing as nurse consultants. So, is it a different type of patient, is it more patients, are they more complex patients, are they particularly sick in that we can often access the nurse consultant clinic more quickly. (CS3, pharmacist)

[NC] needs to be able to say ‘this is what my role is’, and we need to make it clear why the role is different from a medical consultant. (CS4, medical consultant)

Capturing impact was also identified as contributing to the continued development and improvement in the service as a whole:
I think it’s important because it enables us to see whether something’s actually worked, or if something is actually improving a particular service. (CS4, health adviser)

The relevance of capturing impact from an external perspective was also identified. Firstly, there was recognition of the external public responsibility to justify that the money invested in healthcare was used effectively. However, this was often raised as being important for all roles within the NHS, rather than anything specific to a nurse consultant:

I think in these days of constraints we all need to be able to demonstrate that we’re effective in the role we’ve got and that it’s useful for the Trust. (CS5, clinical auditor)

Secondly, demonstrating impact was considered important in order to continue to establish the role of the nurse consultant nationally:

It’s important to capture the impact so that more nurse consultants can come on board because I really do think they can make a difference and can offer a different way of working. (CS5, nurse consultant)

Overall, a variety of drivers for capturing impact of nurse consultants were highlighted relating to the individual, the organisation and broad external factors. However, despite acknowledgement of the need to capture nurse consultants’ impact, there was little evidence that their impact had been captured to date. This will be discussed in the next section alongside the different areas of impact that were considered to be relevant to nurse consultant roles.

4.4 Areas of impact relating to nurse consultant roles

Through the discussions with the nurse consultants and their stakeholders various dimensions of impact were identified that were considered to be relevant to nurse consultant roles. The data gathered at this stage built on the proposed framework of clinical and professional significance presented in Chapter 2, which prompted a revision to some of the specific indicators in the clinical and professional domains and also an extension to the framework of a third domain that specifically captured the nurse consultant’s impact organisationally. Each of the three overarching domains has several indicators, which are illustrated in Figure 2 and are explored in the narrative below.

Figure 2 - The framework for capturing the impact of nurse consultant roles
**Clinical significance**

This domain comprises four indicators and is focused on the impact of the nurse consultant on patients and family carers.

**Symptomatology**

The impact on symptomatology relates to how nurse consultants make a difference to the physical and/or psychological outcomes for their patients, and in some cases this impact was seen to extend to family members or family carers.

Physically this impact varied according to the speciality but could involve demonstrating the individual returning to normal functioning (e.g. relieving symptoms of severe morning sickness) or experiencing a change in symptoms (e.g. reducing pain). However, because the nurse consultants often saw patients with complex health needs or with long term, progressive conditions, at times this impact centred more on maintaining a patient’s current wellbeing, detecting, controlling or preventing a decline in physical condition, rather than any major improvement in symptoms.

However, impact on anxiety and general wellbeing were common psychological outcomes associated with nurse consultant posts. For example, one patient with pulmonary hypertension described the psychological benefits she experienced when attending the nurse consultant-led clinic:

> Well, I’m less frightened when things happen because I know now this is the kind of path it will go down. It’ll be a deteriorating path, and it is! (CS3, patient)

Some nurse consultants had a significant role with family carers and subsequently impacted heavily on their psychological wellbeing. This was particularly apparent with the stroke nurse consultant and the neonatal nurse consultant. For example, an advanced neonatal nurse practitioner explained how the developmental care initiative in the neonatal unit, led by the nurse consultant, had an impact on parents:

> It makes them (parents) feel worthwhile, it makes them feel useful. It’s very daunting to have a premature baby, for instance at 24, 25 weeks, they’re wired up to all sorts of tubes and monitors and the parents feel they can’t do anything for their baby. By integrating them into caring for their baby, even if it’s just a nappy change or just holding their hands, it makes them feel like they can do some good. (CS2, advanced nurse practitioner)

This impact on both physical and psychological symptoms was evident in the patients that nurse consultants saw directly, for example in one-to-one consultations, but it was also apparent indirectly through the patient-focused services or initiatives which were developed by the nurse consultants, and through the influence of the nurse consultants on the clinical practice of other staff or establishing referral pathways to other healthcare professionals to help with physical or psychological problems. For example, the nurse consultant in stroke had influenced the provision of community stroke services for patients and carers after they were discharged from hospital:

> I’ve really fought to get community stroke services high on the agenda so that patients get continuing therapy and treatment. So I think that’s made an impact on patient care, and I think ultimately that will make an impact on patient outcomes and reduce the disability because they’re having that continuing therapy. (CS5, nurse consultant)

**Quality of life & social wellbeing**

In addition to influencing symptoms, impacting on patient or family members’ quality of life and social wellbeing was seen as crucially important to a variety of stakeholders:
You sit with a patient in front of you and you’re asking ‘well, how are you, are you responding to treatment?’ And they’re thinking ‘when I get home I’ve got to go and deal with the mortgage people because husband now is not working’. The drugs, the outcomes, improved survival is important, but it’s not what happens when a patient walks out of the room. (CS3, nurse consultant)

There could be other things as well - psychological, social, can they work, are we re-enabling them to get back to work. It moves away from a medical model to a social model of medicine. And I’d expect nurse consultants to be embracing that social model. (chief nurse)

Examples of impact included influencing patient and family activities of daily living, ability to work or engage in hobbies. However, one of the most frequently mentioned impacts was on financial wellbeing (e.g. obtaining benefits), as a carer and patient of stroke explained:

(Carer)The worst part of it for me was sorting all the forms out, because apart from looking after the person who’s had the stroke you’ve got all these forms to fill in to do with your benefits, which are reams deep. You need help with it because unless you get these questions answered correctly and in the right fashion you will not get the benefits. (Patient) But (NC) did help us, she put us on to [name] didn’t she, the social worker. (CS5, carer and patient)

The nurse consultants impacted on quality of life through their direct holistic care and support of individual patients or family carers, but also by influencing the development of patient-focused, holistic services and policies or by developing relationships with other agencies to help:

(As a result of the work of the nurse consultant) It’s now very much focused, and when we have tiny babies I would like to think that the nursing staff think ‘oh, we must involve the dietician’. (CS2, governance coordinator)

We’ve now got excellent support from social workers who we would bring in if there’s any issues around benefits or housing issues or immigration issues. (CS4, nurse consultant)

Clinical social significance

When analysing data in relation clinical social significance it became apparent that some of the outcomes we had previously included in this category from our review of the literature, appeared to focus on organisational outcomes in relation to policy initiatives rather than just patient focused outcomes. For example, discussions about nurse consultant interventions impacting on organisational aspects such as length of stay or waiting times were couched in terms of meeting organisational targets for more effective service delivery, although it was recognised that they also had an impact on patient outcomes. However, clinically focused outcomes relating to policy which focused on nurse consultants’ impact on patient behaviour were identified, such as breastfeeding rates, smoking cessation targets. Our revised interpretation of social significance in the clinically focused domain therefore focuses on patient behaviour. We recognise that this differentiation is not clear cut, but we were guided by the emphasis that interviewees placed on whether the impact identified was raised primarily in relation to the patient (clinical significance) or the organisation (organisational significance).

Although not evident in all case studies, several nurse consultants influenced behavioural outcomes such as breastfeeding, smoking cessation, and the effective use of contraception. However, it was emphasised by the nurse consultants and stakeholders that this impact was often achieved indirectly, by working through other staff and may not be attributable solely to the nurse consultant. For example, the neonatal nurse consultant reflected on how she impacted on the rates of breastfeeding within the unit:
I think our breastfeeding figures are very good on transitional care, but then it couldn’t be measured according to my role because I couldn’t take all the credit for that. But it’s one of lots of things that I have an input to. (CS2, nurse consultant)

Furthermore, the pulmonary hypertension nurse consultant and the urology nurse consultant were seen to impact on patients’ concordance with treatment through ensuring that their patients understood their condition and its treatment:

Concordance with therapy, because patients will ring you up and say ‘I’m ever so sorry but I did come and see you and you explained about this medication but I can’t remember what you said, can you just tell me again?’ You know, rather than thinking ‘oh well that’s it, I’ve forgotten everything, I don’t understand and I’ll have to wait until next time I see them’. (CS6, nurse consultant)

Clinical social validity

In relation to clinical social validity, one of the aspects that consistently emerged in the interviews that was valued highly by patients and their families was the nurse consultant’s impact on their experience of healthcare, for example providing a positive patient-focused journey. This was reported by the patients and family carers interviewed, and also by the other stakeholders who worked alongside the nurse consultant and observed their interactions with patients:

I just think the patients have a degree of confidence in (NC), they feel that there is a drop-in service, they can ring up and they can ask to see her and they can make appointments. (NC) can assess what the patients’ needs are and say ‘right I can only see six patients in this clinic because I need to do an assessment, I need to do some counselling so I’ll see six patients, and they’ll have 40 minute slots’. It means that the service that she gives to the patients matches their needs. (CS6, business manager)

Outcomes relating to this indicator included satisfaction with the quality of the consultation with the nurse consultant (e.g. more time, holistic and patient-focused, positive communication) or increased satisfaction with the service in general, better understanding about their condition and enhanced involvement in treatment decision-making. Often reference was made to the positive interpersonal interactions between the nurse consultant and patients, as one patient with pulmonary hypertension explained:

You see, I think it’s the quality. He probably does the same overall coverage of interaction, but it’s what he brings to the moment of relating to you, that he doesn’t isolate the condition from the person. He says to me ‘now you asked a straight question and I’m going to give you a straight answer’, and I appreciate that. (CS3, patient)

In parallel with the other clinical indicators described above, this impact was evident in two ways. Firstly, directly through the nurse consultant led clinics or other one-to-one encounters that the nurse consultants had with patients. Secondly, indirectly through the care patients received within the service as a whole, especially if the nurse consultant worked largely through influencing other staff’s clinical practice, by developing and introducing new services or working with charity organisations on projects:

(The impact varies) from the very individual where you might pick a group of patients who have a relatively rare condition, and they’d be able to say ‘oh, my nurse consultant is so and so.’ To a much larger group of patients where the nurse consultant could have influenced the care delivered to those patient but they may not know that the nurse consultant exists. (chief nurse)

I met (NC) five years ago...So I immediately became involved with (NC) as a key worker in the programme board for [location], the stakeholder board, and I’ve been working alongside her ever since. We managed to influence the local council to provide family and carer support when the ring
Fenced money was released from the stroke strategy. So we now provide a family and carer support service in [current city]. (CS5, regional manager of charity)

Extent to which indicators of clinical significance had been captured

Many interviewees discussed the attempts that had been made to capture patient feedback within the service that the nurse consultant worked in. At times this focused on patient satisfaction with a specific service initiative that the nurse consultant was part of or had been instrumental in developing or implementing. For example, the neonatal nurse consultant who led the introduction of a change in practice regarding the care of neonates in the unit (i.e. developmental care approach) had developed a questionnaire to evaluate parents’ views of their experience of being on the unit:

*The questionnaire we’ve been giving out, it’s all about family centred care and communication between medical staff and parents, and also nurses. (NC) has done a lot of work on that, she came up with a questionnaire. (CS2, ward sister)*

These evaluations often reflected the indirect impact of the nurse consultant on patient experience through helping to develop the new service and at times were seen to lead to further improvements to meet patient needs:

*We did the same thing to patients that had come to the transient ischemic attack nurse-led clinic undertaken by the CNS team, sent letters out to say ‘what was your experience of coming’, and we’ve used that audit to improve the service. One of the things was they couldn’t find their way around where the CT scanner was so we got a porter attached to the clinic to take the patient. (CS5, nurse consultant)*

However, much of the work relating to assessing patient outcomes to date centred on the broad patient satisfaction surveys to explore patient experience that were undertaken on a regular or ad hoc basis in the service as a whole. As such, there was little robust evidence of impact on patients which could be attributed specifically to nurse consultants. Furthermore, there was limited evidence of structured attempts to capture impact on the other aspects of clinical significance such as symptomatology, or quality of life, although in regard to clinical social significance, some behavioural outcomes such as breast feeding rates were captured within CQINs data.

**Professional significance**

This domain comprises four indicators and is focused on the impact of the nurse consultant on the other healthcare professionals with whom they work.

**Professional competence**

The nurse consultants often influenced the practice of other staff within the healthcare workforce through developing their competence. This included improvements in staff knowledge, skills and attitudes and awareness, or changes in behaviour, including encouraging a questioning approach to their practice through developing critical thinking. This impact was seen in a variety of ways, both direct and indirect.

Firstly, nurse consultant’s direct impact was evident through formal education and training sessions. For example, the sexual health advisor nurse consultant provided training to the clinical nurse specialists in another part of the directorate to discuss partner notification and risk reduction with the HIV patients that they saw. This was important to ensure that patients attending either section of the service would receive the same standard of care:
We decided that I would train clinical nurse specialists to do these interviews and to do the risk reduction work. So we had a year of transition where I was training them but I was still there and then the arrangement now is that they will routinely address this. They have done such a good job, they’re obviously doing the interviews very well and so I am getting enough information to do the contact tracing. (CS4, nurse consultant)

Furthermore, the nurse consultant in gynaecology provided on-the-job training and role modelling to other staff:

I do a lot of training in amongst the time that I’m working clinically. So for example, I work clinically in our Assisted Conception Unit, but my clinical input there is to train other people to scan. (CS1, nurse consultant)

All of these activities influenced the knowledge and skills of other staff. Another aspect that was frequently discussed was the clinical advice or consultancy that the nurse consultants provided to colleagues. This was sometimes in the form of internal clinical supervision, such as the nurse consultant in pulmonary hypertension who provided regular advice to the clinical nurse specialist team who had queries after their telephone follow-up clinics with patients in the service:

(the CNS team) do lots of support with our patient groups by telephone. Now that will generate a significant number of clinical questions, issues and things like that. What do you then do, do you go to the medics with that or I can screen a lot of that out. But I also use that opportunity with the CNS to up their skill level. (CS3, nurse consultant)

However, often this consultancy activity was ad hoc and unplanned with either internal colleagues or external health professionals with whom the nurse consultants had built up working relationships:

GP’s will ring me up if they’ve got a problem and say ‘I’ve seen this man and he says this, this and this, and I’ve tried X, Y and Z, what would you do?’ I say ‘I’d actually try this next’. ‘Oh yes that’s a good idea.’ And I say ‘but if you’re still not happy give me a ring again’. (CS6, nurse consultant)

Additionally, the nurse consultants were often involved in giving talks and conference presentations both internally and externally, which could have an impact on other professionals’ knowledge.

Secondly, the nurse consultants’ indirect impact on other staff’s knowledge and skills was evident through their involvement in developing guidelines and protocols that others subsequently followed (i.e. impact on behaviour), encouraging or supporting other staff to engage in professional development (e.g. completing an academic course) or through their involvement in planning or delivering educational courses or projects that inform practice:

(NC) is doing a lot of planning of education and training. She doesn’t spend huge amounts of time with staff groups delivering education, but she’s influencing the agenda very heavily. (CS5, commissioner)

Developmental care is an alteration of the whole approach to the management of babies. It is keeping up a continual attempt to slowly but surely improve or alter practice. That’s certainly has been what (NC) has done. (CS2, medical consultant)

Although these aspects did not involve the nurse consultant directly and overtly in providing knowledge or increasing skills amongst other staff, this is likely to be the eventual outcome of this activity. The indirect impact of the gynaecology nurse consultant was also cascaded down when the nurses in the unit, originally trained by the nurse consultant to undertake advanced and extended skills, now supported and undertook some of the on-the-job training for the medical students:
The majority of my training would be with nurses, to upskill the nursing workforce. They're not replacing the junior medical staff; they're working with them, and often they actually teach the junior medical staff, so I wouldn't directly teach every single junior medical staff; the nurses that I've trained would take them under their wing and train them. (CS1, nurse consultant).

Quality of working life

Evidence collected during the interviews from both junior and senior clinical staff indicated the positive impact of working alongside a nurse consultant in terms of enhancing their work experience. This often related to improvements in morale, confidence, motivation, job satisfaction, and a positive ethos and atmosphere in the clinical team. This was evident to varying degrees for different nurse consultants, but was especially apparent in those who worked primarily through influencing other staff. For example, the gynaecology nurse consultant had initiated an extensive programme of training for ward staff to undertake advanced practice skills to extend their scope of practice in order to improve continuity of care for their patients. This had a clear impact on the staff's job satisfaction and morale (and proposed additional effects on reduced turnover and staff sickness in the unit, which also relates to the next category of workload and work distribution):

What I found frustrating on [ward] before I did all my scope of practice roles was that I'd start off really well, I'd look after a patient and someone else would come in and examine that patient, then I'd pick up the pieces at the end. It was a bit disjointed, and the idea of doing your scope of practice roles was that you look after that patient from beginning to end, which makes the patient journey a lot better and for me it's a bit of satisfaction. You want to go away feeling you've done a good day's work. So (NC) is really eager to get staff through the scope of practice roles to provide a good service. (CS1, ward sister)

This illustrates the indirect impact of the nurse consultant on the work experience of other staff, through providing training to up-skill them. Additionally, the innovative service developments that many nurse consultants engaged in enhanced staff satisfaction through the improvements in care that they were now able to offer patients.

Some nurse consultants had a more direct role on positively influencing how other staff experienced their work, for example the sexual health advisor nurse consultant strived to actively involve other team members in service development projects or help them to develop their own ideas about possible new initiatives for the service:

She (NC) recognises attributes or experience that people have that they might not be putting their hand up and running forward to do, but actually with the right support are really good at undertaking, so she has a good take on all of us within the team and she just guides us in the direction that is going to benefit our clients but she also gives us areas to stretch our wings. (CS4, health adviser)

This impact was also evident through the ad hoc consultancy advice and support that the nurse consultants provided to other staff when dealing with complex patients. The advice provided or the nurse consultant's ability to take on complex cases gave staff reassurance and confidence, in addition to improving knowledge.

Professional social significance

In relation to professional social significance which focuses on staff societal outcomes and policy objectives relating to staff, it was clear that the nurse consultants impacted on workload and distribution of work across the workforce – an area that was considered important to the effective deployment of the healthcare workforce. This impact was evident both directly, for example through the nurse consultant taking over an aspect of the service that would have ordinarily required medical
staff input such as running a clinic and indirectly, for example through staff training or service initiatives introduced by the nurse consultant. By way of illustration, the nurse consultant in stroke influenced the training of nurses to undertake the prompt assessment of a patient’s swallowing ability following stroke, which had previously been part of the speech and language therapists’ remit:

The swallowing work is the speech therapist’s role, but we don’t do the screening of patients anymore. Screening for swallowing has to be done within 24 hours to adhere to the guidance and the speech therapists are a very small group. We were inundated with the swallowing work at the expense of the communication work, so we’ve developed, together with (NC), having the nurses come on our swallowing course. (CS5, speech & language therapist)

Changes in the distribution of workload were also identified as the nurse consultants were regularly consulted by other members of staff with queries about complex cases (i.e. linked to their impact on professional competence, such as the nurse consultant in pulmonary hypertension advising the CNSs). This was often because they were seen as more accessible than medical consultants. Importantly, this reduced the need for referral to medical staff or managers.

There was some evidence that the work nurse consultants engaged with could increase workload for some members of staff (e.g. new initiatives that needed input from the clinical lead before implementation), but this was generally viewed positively because it led to an improvement and development of the service. However, the redistribution of work was not always viewed entirely positively, and some interviewees indicated the need to recognise that redistribution of work could lead to deskilling of staff or other negative outcomes. For example, the gynaecology nurse consultant was involved in putting a case together to delay the redistribution of workload in relation to a plan to send surgical termination patients through the general theatre admissions unit, because without due consideration of staff training needs this move could impact detrimentally on patient care. Therefore, impact on workload and work distribution was often linked to the other professional indicators.

Professional social validity

Professional social validity relates to impacts that were important and meaningful to staff in addition to those included in the indicators of professional significance identified above. Nurse consultants’ positive impact on team working emerged as a particularly strong concern among stakeholders. In this context effective team working was an outcome in its own right, but it could also impact on other professional outcomes such as improving professional competence, enhancing the quality of working life through increasing morale and job satisfaction, which in turn leads to high quality patient care.

Firstly, the impact on team working was seen within the nurse consultant’s immediate team by providing clinical and professional leadership. For example, the sexual health adviser nurse consultant was considered to significantly influence how the health adviser team, for whom she provided leadership, worked together:

I think within a team when you’re all the same band we can have ideas but it’s not necessarily easy to work it all out in terms of who takes leadership. It’s not that (NC) oversees our work but she definitely has that take and says ‘I think that’d be really beneficial’ or ‘let’s think about it in this way’. So it’s given us room to grow in different directions, without that affecting the team gelling together. (CS4, health adviser)

Importantly, this impact was seen to influence the provision of high quality patient care, for example, implementing an improved care pathway that is seamless for the patient. Often this involved the nurse consultant working across boundaries, therefore the impact on team working was also seen across different organisational boundaries (e.g. acute services and primary care) and professional (e.g. nursing and medical) disciplines. This was achieved through the setting up of networks or multi-
disciplinary groups, meetings and initiatives (e.g. production of guidelines for primary care or improving the referral process). Often the nurse consultant was specifically seen as the conduit or interface that knitted together the different areas of the care pathway. This was especially evident in the neonatal nurse consultant and the stroke nurse consultant as the following two quotes illustrate. Both of these nurse consultants were seen to have successfully united the different disciplines along the patient pathway to work together more effectively:

*She’s been able to harness the skills of the allied health professionals. She’s had one foot in their camp. And she’s been able to show that these people (allied health professionals) will benefit the nursing staff and they’ll benefit the medical staff. Now the dietician is so busy because the (medical) consultants will always come to her, they won’t make the decision on their own anymore, they want the knowledge of the dietician.* (CS2, governance coordinator)

*There are lots of different disciplines inputting into the stroke pathway and I think there’s a big part of (NC)’s role which is about holding all the strings with the various services, so that’s various therapists - they all see her as holding the strings. And so they all defer to her if there’s a cross professional issue, she’s seen as a conduit to sorting those things out.* (CS5, nurse director)

**Extent to which indicators of professional significance had been captured**

There were only a few examples of attempts to capture evidence relating to professional significance. Many of the nurse consultants had undertaken audits and service evaluations but the data captured was often focused on organisational outcomes rather than the impact on staff, which will be explored during the next section on organisational impacts.

Some nurse consultants had conducted audits assessing whether staff were following guidelines or putting learning into practice following training provided by the nurse consultant. For example, the nurse consultant in sexual health who had trained the team of health advisers to use a motivational interviewing approach in their consultations with patients, as recommended by NICE guidance, subsequently reviewed the case notes to determine the extent that they were using these new skills:

*I did an audit with (NC) around the outcome of the motivational interviewing. We audited case notes. It was to review after we’d been trained around motivational interviewing. were we actually using it. It wasn’t necessarily the effectiveness for the individual involved, it was whether as a team there was any sign that we were introducing it as an aspect of our care and there was some qualitative evidence, you could see how people had worked.* (CS4, health adviser)

The nurse consultant in stroke had undertaken several evaluations with GPs to obtain their views and satisfaction with aspects of the service (e.g. the nurse-led transient ischemic attack clinic) and also whether they were following the guidelines the nurse consultant had developed on following up stroke patients four weeks after being discharged from hospital.

The gynaecology nurse consultant incorporated evaluation and assessment of professional competence (i.e. staff knowledge and skills) as part of the training packages she was involved in developing, which could provide indirect evidence of the impact of the nurse consultant:

*Our clinical nurse educator and (NC) spend a long time deciding what’s important and what evaluations need to take place, when they assess a staff member as competent.* (CS1, nurse consultant)

Other nurse consultants formally evaluated their teaching and training sessions, but often only captured participants’ evaluations immediately after the training, with no follow-up of participants in terms of the subsequent impact of the training on their clinical practice or how the training influenced their knowledge, skills and confidence.
Overall, a small amount of evaluation had been undertaken that captured the nurse consultant’s direct or indirect impact on developing the competence of other staff. However, there was little evidence that attempted to capture impact on any of the other aspects of the professional significance domain, i.e. quality of working life, social significance (workload) and social validity (team working).

**Organisational significance**

The impact that nurse consultants exerted on the organisation, in contrast to clinically or professionally significant outcomes, emerged as important during the case study interviews. The framework was therefore extended to incorporate an additional domain of organisational significance. It was also apparent that nurse consultants exerted an impact outside their organisation in terms of the wider regional or national work they engaged in. Such activity was justified by many stakeholders in terms of the contribution it made to the organisation – in other words what the nurse consultant ‘brought back’ to the organisation from their external work. As external activity was largely justified in terms of its contribution to the organisation, a decision was made to include the impact that nurse consultants exerted through their external work within the category of organisational significance.

Nurse consultants were seen to exert an impact on the organisation and the wider healthcare system by achieving organisational priorities and targets, through the development of policy and generating new knowledge through research activity. All three of these aspects could be grouped under an umbrella heading of organisational social significance in that they were all outcomes relating to the organisation and delivery of healthcare services and use of resources that could be considered important to society. As mentioned in the opening chapter, healthcare organisations are required to demonstrate effective and efficient use of resources in providing high quality care through addressing the priorities and targets set as part of the commissioning process. The development of nursing and healthcare policy underpins high quality, safe and effective care delivery and the generation of new knowledge through research is essential to ensuring evidence-based healthcare policy and practice. Each of these is considered in turn.

**Achievement of organisational priorities and targets**

Achievement of targets and priorities integrates some of the outcomes which following the literature review were categorised as clinical social significance. As mentioned previously, when analysing interview data in relation to clinical social significance, it became apparent that some of the outcomes we had previously included in this category appeared to focus on organisational outcomes in relation to organisational targets and policy initiatives rather than solely patient focused outcomes. We therefore developed a new category.

Many nurse consultants had an impact on the targets set by commissioners, such as waiting times and length of stay, national targets (e.g. CQINs) or other priorities identified by the organisation. Some of these outcomes were seen as increasingly important because they raised the reputation and profile of the trust. Similar to many of the outcomes discussed above, impact could be direct or indirect. Direct impact was commonly associated with the nurse consultant providing a specific procedure such as the gynaecology nurse consultant scanning in early pregnancy, or undertaking a regular clinic. For example, the urology nurse consultant provided a nurse-led andrology clinic that had significantly influenced the waiting times for patients:

*When you cast your mind back to four years ago the waiting time for andrology could have easily been 10 to 12 weeks. The waiting times now for andrology are 1-2 weeks, because (NC) is able to concentrate on a sector within urology, i.e. andrology, remember she’s doing 70% of that work. And as a result our waiting times have come down dramatically. (CS6, clinical director)*

Another key activity was the nurse consultant’s involvement with new referrals. Some nurse
consultants actively managed waiting lists to ensure that patients were prioritised according to clinical need or to filter out inappropriate referrals, as the pharmacist in the pulmonary hypertension service explained:

(NC) sees the new referrals when they come in and will try to weight their need and urgency. As such, he has an impact with people who make and book the appointments because he has to make decisions about what’s an appropriate time for this person to wait. (CS3, pharmacist)

However, much of the impact on organisational targets was indirect through the service developments that nurse consultants had initiated and which were then implemented or delivered by other staff, or through their strategic work in reconfiguration of services. For example, the gynaecology nurse consultant had reorganised the service for termination of pregnancy in order that the service met the national target for waiting times:

The PCT, as commissioners, two years ago said ‘you’re not seeing patients quick enough’. NC worked massively hard - a measure of her impact is that actually what we did was change the systems we worked, changed the beds. We now see 75% of women having their terminations under 10 weeks, which is a national standard that we’ve met. That’s because of the impact she’s had in the role, not her directly, but working with the people in [community clinic] who work with us and how we’ve managed lists. (CS1, clinical director)

However, it was emphasised that meeting organisational targets and priorities was often the result of a team effort and therefore it may be difficult to pinpoint the nurse consultant’s individual contribution and impact on achieving the outcomes. Furthermore, some of the ‘hard’ organisational outcomes were not straightforward to assess, for example in the previously described role that the pulmonary hypertension nurse consultant had in assessing new referrals it was acknowledged that this prioritisation of appointments on the basis of clinical need had reduced waiting times for appointments but only for the sickest patients (i.e. overall the waiting times remained relatively stable). Similarly, it was suggested that the neonatal nurse consultant impacted on the length of stay for babies through honing the discharge process, but on discussion it was evident that the outcome was more about the timeliness of appropriate discharge (i.e. taking into consideration the needs of the family as a whole), rather than simply reducing length of stay per se. Furthermore, some nurse consultants were involved in important preventive outcomes, which again were more difficult to assess, for example preventing infections, readmissions, and emergency admissions. The nurse consultant in stroke conducted 6 week review clinics post discharge, which her line manager suggested could help to maintain patients at home rather than being readmitted:

(NC) carries a large case load of patients of her own that she sees at her clinics, and maintains patients with stroke at home longer than if they weren’t seeing her. (CS5, nurse director)

There was also discussion about the impact on costs, which in the economic climate when the case studies were undertaken was identified as a priority for the organisation. Nurse consultants generated activity and income for the trust in a number of ways, for example, initiating a new service that brought new referrals and money into the trust, or external training that generated income. However, the impact on costs was also seen indirectly in that many nurse consultants enabled others to deliver services more efficiently (e.g. the pulmonary hypertension nurse consultant who supervised a CNS telephone service) but this work was not always reflected in the nurse consultants’ activity. Other discussions centred on how the nurse consultants influenced cost savings to the trust or in the wider healthcare system, such as the sexual health adviser nurse consultant’s public health preventative work to reduce the transmission of HIV and other sexual transmitted diseases:
It’s HIV that drives everything in terms of cost nowadays. To prevent one case of HIV per year on the basis that the benefits to the health service are a million bucks. She’s (NC) got the capacity to generate income, which she may not do in struggling times, she’s going to have to think about other innovative ways to show her cost-effectiveness, the fact that she’s cost saving. I do believe that the job that she and her colleagues do is cost saving. (CS4, medical consultant)

Development of policy

As senior clinicians, the nurse consultants had a key role in contributing to, developing or even leading policy initiatives, internally, locally, regionally and nationally. This involved membership of and input into business meetings, committees responsible for settings standards, developing care pathways, clinical guidelines or protocols and implementing these locally, or responding to external consultations. The nurse consultant in stroke explained how her involvement in policy development influenced the care available to patients:

*I’m part of the Royal College of Physicians guidelines committee; I’m the nurse involvement in that work. I actually got a sentence inserted in the guidelines about palliative care, so just by getting a word in the guidelines we’ve actually done quite a lot of research and now it’s in a lot of people’s pathways.* (CS5, nurse consultant)

The external work was identified by senior professionals as important because this provided a channel to influence the development of national policy but also promptly brought back intelligence on the future strategic direction of the speciality in order to help shape services within the nurse consultant’s own organisation. However, senior managers emphasised that it was important to unpick the outcomes of this work, for example where a nurse consultant was a member of a national committee what did that committee develop (e.g. guidelines, policy), what was the nurse consultant’s contribution, how had it changed practice as a result?

Furthermore, some nurse consultants had been involved in developing local policy, which was then adopted and taken up nationally, therefore impacting on practice in other organisations. This was illustrated by the business manager who worked with the pulmonary hypertension nurse consultant and together they had developed a commissioning policy for the treatment of patients without prior approval:

*We developed that whole policy (commissioning policy for treatment of pulmonary hypertension), which meant that we didn’t have to seek individual approval. In the past I’ve been to panels in PCTs in years gone by where they’ve refused to treat a patient and I’ve gone with [medical consultant] or [NC] and we’ve pleaded for funding. But this made such a difference, what happened with that regional policy was, they adopted it for a national one.* (CS3, business manager)

Interestingly, one aspect where the nurse consultants were not seen to have a prominent influence was on the wider nursing policy and strategy within their organisations (e.g. contributing to Nursing & Midwifery Council consultations). Several nurse consultants and senior managers commented that this was an aspect where they should exert a greater impact, but that in most cases this had yet to be realised and the nurse consultants were not generally utilised as a collective voice of senior clinical nurses in their organisation.

Generation of new knowledge

The nurse consultants impacted on the generation of new knowledge through their involvement in research. This impact was evident to varying degrees for the different nurse consultants. For some it was limited, but others had acted as a primary researcher (often whilst completing a doctorate), as a co-applicant on a research grant with medical or external colleagues, as an advisor on internal or external research projects (e.g. member of an advisory group or clinical supervisor), had encouraged
and supported others to conduct research in their organisations (e.g. staff completing research as part of an academic course or through facilitating external research) or contributed to knowledge transfer and translating research findings into clinical practice:

*I think for a nurse consultant, it’s about more than doing research, but actually making sure that research happens, knowing what research is out there, knowing what the evidence base is and making sure that you transfer that into practice and making it a stronger research culture.* (CS6, nurse consultant)

Audit and service evaluation were often discussed. These activities were recognised as different from research but important to inform practice and add quality to the service. However, it was emphasised by senior managers that the research component of the role distinguished nurse consultants from clinical nurse specialists, and therefore there was an expectation that nurse consultants would be more engaged in research.

**Extent to which indicators of organisational significance had been captured**

There was often evidence of audits being undertaken to capture data on national standards (e.g. Stroke Sentinel Audit, CQINs) or the routine data that were collected on organisational targets such as length of stay and waiting times. The extent to which the services that the nurse consultants worked in had engaged with these activities differed and depended on whether it was a mandatory requirement or part of national guidelines. This type of evaluation provided evidence on the extent to which organisational targets had been met by the service. While the nurse consultant was part of the team who had contributed to these targets, their individual impact on targets could not always be teased out, which was commented on by interviewees:

*The development work that (NC) does is measured because the service is measured all the time. So every two years we are measured with the (Stroke) Sentinel Audit. Now she will drive up those standards. But it’s not just about her work and it doesn’t just directly come back to her as a reflection of what she’s done.* (CS5, clinical psychologist)

Several nurse consultants had undertaken audits or service evaluations relating to services that they had developed and delivered or trained others to implement. Outcome measures which were evaluated included activity, waiting times, length of stay and reduction of admissions. For example, the gynaecology nurse consultant had evaluated the new day case service for the treatment of hyperemesis (severe morning sickness), which illustrated a significant reduction in length of stay for these patients. These specific evaluations provided evidence of the indirect impact of the nurse consultant through the initiatives and service developments they drove forward.

In terms of other indicators in the organisational domain, no evidence was gathered during the interviews that illustrated the impact of the nurse consultants through their policy or research involvement.

**4.5 Indicators of patient, professional and organisational impact**

As the preceding sections of this Chapter have illustrated, data from the case studies were used to further develop the framework for capturing the impact of nurse consultant roles. The three domains of clinical, professional and organisational significance and the related indicators provide a means of mapping the breadth of impact that nurse consultants may exert on patients and family carers, healthcare staff and the organisations in which they work.

Once the interviews for each case study had been completed, the transcripts were analysed to identify specific outcomes that participants had identified as relevant to the nurse consultant role. A matrix for each nurse consultant was drawn up which identified outcomes in the three domains (clinical,
professional and organisational) and their respective indicators.

The number of outcomes identified in relation to each domain varied between nurse consultants. For example, nurse consultants who had a strong clinical focus to their role had fewer outcomes in the professional significance domain, in contrast to those whose role involved a significant responsibility for developing other staff. An example of the impact of the nurse consultant in gynaecology when mapped to the three domains of the framework is shown in Figure 3. Each of the outcomes identified could be measured in order to assess the impact of the gynaecology nurse consultant although it is recognised that this would be an extremely onerous task. However, as outlined in the section that follows, having captured the breadth of outcomes in the three domains, it is then possible to identify those that are considered most important to capture.

In comparing the outcomes in the three domains, there were a number that were shared across several if not all nurse consultants. For example, for organisational significance, outcomes relating to achieving organisational priorities and targets, development of policy and generating new knowledge featured for all nurse consultants. However, for other indicators such as professional social significance some outcomes, such as changes in workload and the workforce, were not so relevant for all nurse consultants.

As detailed in the following Chapter, during the specialist panel stage of the study approaches to capturing impact were identified, and subsequently piloted by nurse consultants. Several common approaches were identified which were relevant to all nurse consultants, for example a tool to capture aspects of organisational significance. However, other outcomes such as improvements in patient experience could be measured in different ways depending on the nature of the nurse consultant interaction with patients. Where nurse consultants provided a consultant–led clinic patient satisfaction with the consultation could be measured using a validated questionnaire. However, where the nurse consultants’ impact on the patient experience was indirect through influencing the practice of other staff, a different approach was required.

Likewise, approaches to capturing changes in symptomatology varied depending on the clinical focus of the nurse consultant’s role. For example, the impact of the nurse consultant in stroke could be captured through measuring improvement in physical functioning of stroke patients, whereas the impact of the nurse consultant in sexual health could be captured by measuring a reduction in the anxiety caused to patients arising from the need for partner notification.
**Figure 3 Summary of the impact of the gynaecology nurse consultant**

<table>
<thead>
<tr>
<th>Domain / indicator</th>
<th>Direct (D)</th>
<th>Indirect (I)</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Clinical significance</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Symptomatology (physical /psychological symptoms)</td>
<td>D &amp; I</td>
<td></td>
<td>Improved physiological outcomes through one-to-one work to improve symptoms such as bleeding in pregnancy or hyperemesis (i.e. severe morning sickness) or provide care to women experiencing miscarriage or termination</td>
</tr>
<tr>
<td></td>
<td>D &amp; I</td>
<td></td>
<td>Reduced anxiety / stress for patients through timely and appropriate care</td>
</tr>
<tr>
<td></td>
<td>D</td>
<td></td>
<td>Improved patient decision-making through providing effective counselling</td>
</tr>
<tr>
<td>Quality of life &amp; social wellbeing</td>
<td>I</td>
<td></td>
<td>Improved social wellbeing of patients through day case and telephone clinic services causing less disruption to day-to-day life</td>
</tr>
<tr>
<td>Social validity (behaviour)</td>
<td>D &amp; I</td>
<td></td>
<td>More effective use of contraception</td>
</tr>
<tr>
<td>Social validity (experience of healthcare)</td>
<td>D &amp; I</td>
<td></td>
<td>Influence on positive patient journey/satisfaction of various services - through continuity, positive information/communication, consistency in treatment/care (through guidelines/protocols), patient choice, reduced waiting &amp; influence smooth-flowing process of patient pathway (e.g. patient group directives, referral processes, staff accessing/actioning patient results daily)</td>
</tr>
<tr>
<td></td>
<td>I</td>
<td></td>
<td>Enhanced positive patient journey through the clinical supervision the NC provides to nurses – e.g. less desensitisation</td>
</tr>
<tr>
<td><strong>Professional significance</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professional competence</td>
<td>D &amp; I</td>
<td></td>
<td>Increased skill of nurses/midwives/junior doctors in various aspects of the services (e.g. scanning, examining women, taking swabs, administering treatments) - including recent initiative to up-skill night staff</td>
</tr>
<tr>
<td></td>
<td>D</td>
<td></td>
<td>Increased staff knowledge of safeguarding/child protection/chaperoning</td>
</tr>
<tr>
<td></td>
<td>D</td>
<td></td>
<td>Increased staff knowledge early pregnancy issues and services (local / national)</td>
</tr>
<tr>
<td></td>
<td>D</td>
<td></td>
<td>Improved consistency of care provided by staff (e.g. nurse discharge protocol; night staff training)</td>
</tr>
<tr>
<td></td>
<td>D</td>
<td></td>
<td>Increased staff knowledge via ad hoc troubleshooting re complex cases or service reorganisation issues</td>
</tr>
<tr>
<td></td>
<td>D</td>
<td></td>
<td>Increased skill in other organisations through providing training (e.g. coaching/education at community clinic &amp; national body)</td>
</tr>
<tr>
<td>Quality of working life</td>
<td>D &amp; I</td>
<td></td>
<td>Improved job satisfaction and ethos of department – through autonomy staff have by being up-skilled &amp; NC leadership</td>
</tr>
<tr>
<td></td>
<td>D</td>
<td></td>
<td>Improved confidence of staff in meeting patient needs via ad hoc troubleshooting re complex cases &amp; clinical supervision</td>
</tr>
<tr>
<td>Social significance (workload)</td>
<td>D &amp; I</td>
<td></td>
<td>Positive impact on work distribution / workload in department (e.g. reduced referrals to medics, ability to cover/substitute for others, up-skill nurses on patient group directives), but note possible negative impact on skills/competencies of junior doctors</td>
</tr>
<tr>
<td></td>
<td>I</td>
<td></td>
<td>Retention of staff (low turnover / sickness) through enhancing job satisfaction</td>
</tr>
<tr>
<td></td>
<td>D</td>
<td></td>
<td>Improved workload/work distribution between the NC and medical consultant through the forthcoming role for NC to undertake local anaesthetic management of patients with retained products following miscarriage or termination (currently only carried out by doctors)</td>
</tr>
<tr>
<td>Social validity (team working)</td>
<td>D &amp; I</td>
<td></td>
<td>Improved team working to give high quality care across department and in other ward areas through training / advice given / protocols and information leaflets developed by nurse consultant</td>
</tr>
<tr>
<td></td>
<td>D</td>
<td></td>
<td>Enhanced communication with other departments in hospital/directorate and external services (e.g. community clinic) to provide effective referral pathways / meet targets</td>
</tr>
<tr>
<td><strong>Organisational significance</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(social significance)</td>
<td>I</td>
<td></td>
<td>Reduced admissions / length of stay and meeting waiting time target</td>
</tr>
<tr>
<td></td>
<td>I</td>
<td></td>
<td>Reduced do not attend (DNA) rates in patients resulting from telephone clinic</td>
</tr>
<tr>
<td>Organisational priorities &amp; targets</td>
<td>D</td>
<td></td>
<td>Influenced reconfiguration / redesign of service - e.g. number of beds / contribute towards effective running of service</td>
</tr>
<tr>
<td></td>
<td>I</td>
<td></td>
<td>Achieved cost savings via service redesign &amp; income generated</td>
</tr>
<tr>
<td>Development of policy</td>
<td>D</td>
<td></td>
<td>Contributed to local (e.g. nurse discharge) and national (e.g. NICE working group) clinical protocols / guidelines</td>
</tr>
<tr>
<td></td>
<td>D</td>
<td></td>
<td>Influenced national agenda through representing RCN on gynaecology issues – lobby government re patient’s rights / services offered</td>
</tr>
<tr>
<td>Generation of new knowledge</td>
<td>D &amp; I</td>
<td></td>
<td>Advanced knowledge in field via research involvement / activities / publications</td>
</tr>
</tbody>
</table>

* Note: The specialist panel members were asked to identify whether the items were low or high in importance for capturing, and also to prioritise the top five areas of impact for the nurse consultant to capture in their role.
4.6 **Most important areas of impact**

During both the case study interviews and specialist panels, perceptions about the most important areas of impact to capture were explored. Within the individual interviews participants often discussed their general views about the relative importance of the different domains of impact they had identified in relation to the nurse consultant they had contact with. Their views were inevitably influenced by their understanding of the individual nurse consultant’s role in relation to their own. So for example, senior staff might refer to the benefits of a national impact, whereas front-line staff might talk more about their impact on the clinical team.

However, most participants highlighted the central importance of the nurse consultant’s impact on patients, both direct and indirect, and at a local, regional and national level. The patients that we interviewed agreed that the most important impact of the nurse consultant related to their interactions with the nurse consultant, for example through patient-focused clinics or initiatives such as support groups they provided, and the reassurance they had knowing they could contact the nurse consultant if they experienced problems. As the number of patients interviewed was limited, we also asked other stakeholders about what they felt patients valued most; they identified similar indicators relating to the quality of patient services and patient experience. However, the stakeholders emphasised that where a nurse consultant’s direct contact with patients was limited, patients might not be aware of the role and therefore what indirect impact the nurse consultant had on their care.

Some stakeholders found it difficult to identify a single important indicator of impact but instead discussed how the areas of impact were interconnected, for example unless a nurse consultant had a positive impact on staff, it would be difficult to impact on the organisation and provide services that were of benefit to patients:

> It's very difficult to say whether it’s the direct impact on our team or the service development, because there's a knock-on effect for clients' benefit - the end result generally is that we can provide better care. (CS4, Health adviser)

Overall, nurse consultants’ impact on patients was seen as the most important. However, stakeholders also identified how the nurse consultant impacted on their own day-to-day work. For example, a staff nurse identified that for her, the most important impact was on staff through the training she received from the nurse consultant, and a matron identified the importance to her of the nurse consultant’s professional leadership of a group of advanced practice nurses.

In the specialist panel phase, the groups discussed more specific ideas relating to the most important indicators of impact for the nurse consultant to capture, which was informed by the summary of impact that the research team had drawn up from the earlier interviews (for an example see Figure 3). The specialist panel discussions often focused on the current priorities for the nurse consultant within the local and national context of the service. For example if a new initiative, such as the opening of a new unit, was on the horizon the nurse consultant’s impact on this was emphasised as a specific priority:

> It's about ‘what is the focus of her role at this moment in time?’ If you’d said to me a month ago ‘what was important?', it would be different to what’s important now. (CS2, governance coordinator)

Therefore, this stage highlighted that the priorities for nurse consultants shifted over time, which in turn influenced the areas of impact that might be considered the most important to capture evidence on. Identifying specific priority areas of impact for nurse consultants across each of the four components of their role (e.g. clinical practice, education, leadership and research) was also recognised. This was important in order to demonstrate the value of the nurse consultant engaging in
all of these areas. The resulting indicators of impact that were taken forward by each nurse consultant are presented in Chapter 5

4.7 Conclusion

Overall, the findings presented in this chapter illustrate the broad range of indicators of impact relevant to the case study nurse consultants. While all nurse consultants were seen to have some impact in relation to the three domains in the framework, outcomes were not always identified in relation to each of the indicators within the domains.

The evidence gathered during this empirical stage resulted in further refinement and expansion of the framework for capturing impact, namely into three domains of clinical, professional and organisational significance and their respective indicators of impact. The revised framework definitions are as follows:

Clinical significance

- Symptomatology (physical and psychological wellbeing) - Impact on individuals’ return to normal functioning, experience a change of symptoms or maintain current wellbeing – i.e. physical or psychological outcomes of the patient and/or family members.

- Quality of life and social wellbeing - Impact on an individual’s QoL and self-efficacy, specifically on the impact the disease has on activities of daily living (e.g. health-related QoL), but also any influence on social wellbeing (e.g. ability to work, engage in hobbies).

- Clinical social significance - clinically oriented outcomes that are important to society. Societal concerns are often translated into healthcare policy, e.g. health behaviour such as smoking cessation or the self-management of long term conditions.

- Clinical social validity - the social importance and acceptability of the patient or carer’s experience of health care, whether the intervention addresses important problems in the patient's/carer's life, and whether the outcomes are meaningful to patients / family carers i.e. the impact on patient experience of healthcare services such as satisfaction with consultation.

Professional significance

- Professional competence - the extent to which the nurse consultant has an impact on the competence and confidence of the healthcare workforce (e.g. effecting knowledge, skills, behaviour, attitudes).

- Quality of working life - the healthcare workforce's perspective of the impact on the quality of their working life arising from the nurse consultant intervention. This might include enhanced job satisfaction and motivation.

- Professional social significance - the extent to which the nurse consultant interventions are important to staff societal outcomes. Staff social significance can refer to outcomes relating to the policy objectives relating to the staff within the organisation. This might include issues such as workload, work distribution and turnover across the workforce.

- Professional social validity - the social importance of the nurse consultants' activities for the healthcare workforce. This was manifest through influencing team working across organisational (e.g. internal / external) and professional boundaries (both uni- and multi-professional) leading to provision of high quality care.
Organisational significance

- Organisational social significance - organisationally oriented outcomes relating to the organisation and delivery of healthcare services and resources, and that are important to society.
  - Achievement of organisational priorities and targets, e.g. targets set by commissioners relating to hospital admission rates or length of stay.
  - Development of policy - Influencing the development of local, regional and national policy (e.g. protocols, guidelines, care pathways).
  - Generation of new knowledge - Impact on the generation of new knowledge through involvement in research activities such as leading research, acting as a co-investigator, membership of a research advisory group, or facilitating research.

Despite the wide ranging indicators of impact identified, there was limited evidence that the nurse consultants had captured evidence to date to demonstrate their specific impact. Although many nurse consultants had evaluated initiatives in which they were actively involved, it was extremely difficult to identify their actual impact in terms of specific outcomes. Where attempts had been made by some nurse consultants these were often ad hoc or linked to specific mandatory requirements for the service.

The discussions in the specialist panels relating to the most important indicators of impact to capture informed how the research team subsequently worked with the nurse consultants to devise an individual toolkit that incorporated relevant and appropriate tools, strategies and methods to capture the nurse consultant’s impact. These individual toolkits were then brought together to develop a composite toolkit. The framework for capturing impact identified above was used in the toolkit to guide nurse consultants to consider the full breadth of their impact. In order to ensure that the toolkit was easy to understand and apply in practice, the more complex definitions outlined above were replaced with short phrases which summarised the different domains and indicators. The relationship between the terms used in the toolkit and the framework domains and indicators is shown in Table 3. The practicalities of using these individual toolkits and the general factors influencing whether the nurse consultants had captured evidence to demonstrate their impact are explored in Chapter 5.
<table>
<thead>
<tr>
<th>Areas of impact identified in toolkit</th>
<th>Indicators of impact identified in toolkit</th>
<th>Domain of impact from framework</th>
<th>Indicators of impact from framework</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients</td>
<td></td>
<td>Clinical significance</td>
<td>Symptomatology</td>
</tr>
<tr>
<td>Physical and psychological well-being</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quality of life and social well-being</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patient behaviour</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experience of healthcare</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staff</td>
<td></td>
<td>Professional significance</td>
<td>Professional competence</td>
</tr>
<tr>
<td>Competence</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quality of working life</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work distribution workload</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Team working</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organisation</td>
<td></td>
<td>Organisational significance</td>
<td>Organisational social significance</td>
</tr>
<tr>
<td>Organisation priorities and targets</td>
<td></td>
<td></td>
<td>Organisation priorities and targets</td>
</tr>
<tr>
<td>Development of policy</td>
<td></td>
<td></td>
<td>Development of policy</td>
</tr>
<tr>
<td>Generation of new knowledge</td>
<td></td>
<td></td>
<td>Generation of new knowledge</td>
</tr>
</tbody>
</table>
Chapter 5: Practicalities of capturing impact

5.1 Introduction

Throughout the different stages of the case studies (interviews, specialist panels, follow-up meetings with nurse consultants) several practical issues associated with capturing the impact of the nurse consultants were highlighted. Although very few concrete ideas of barriers or facilitators to capturing impact were identified in the initial interviews, the specialist panels (which included some of the original interviewees) pointed out a number of practical issues. This may be because the study moved from general questions about capturing impact in the interviews, to focus on more specific indicators of impact in the specialist panels and this promoted more detailed discussion as to how a particular indicator of impact might be measured. Further lessons on the practicalities of capturing impact were gained from the nurse consultants as they piloted the tools which formed part of their ‘individual’ toolkits.

The findings presented in this chapter explore practicalities associated with capturing impact identified across the study. The evidence presented in Chapter 4 on the different domains of nurse consultants’ impact (incorporated in the revised framework) and the evidence on the practicalities of capturing impact and lessons learned during the piloting of tools (current chapter) informed the development of the final toolkit.

Each nurse consultant piloted between two and six tools or approaches to capturing their impact. Table 4 illustrates the different indicators of impact prioritised by the specialist panels and which were considered feasible to capture by nurse consultants. It should be noted that some of the indicators of impact identified in Table 4 address more than one domain in the framework. We have grouped them in this way as these indicators of impact were captured using a single tool. Interestingly, all nurse consultants chose to capture the impact of their external activities although this had not been identified as an important area of impact in the initial case study interviews.

Following the piloting by nurse consultants of the tools to capture different aspects of their impact a composite toolkit was developed which brought together the various tools and approaches that nurse consultants had found useful. In addition, key elements of the findings from the case studies and learning from the specialist panels shaped the written guidance contained within the toolkit about how to identify and capture areas of impact.

The composite toolkit is available as a separate document (Gerrish et al 2011). However, in summary, the toolkit aims to be a practical resource for nurse consultants. It introduces the reader to what is meant by impact, and why and how nurse consultants might think about capturing their impact. Throughout the toolkit a variety of activities and examples from the case studies and the wider published literature on advanced practice nursing are used to illustrate how a nurse consultant might identify relevant indicators of impact, prioritise which of these should be captured and then identify ways to demonstrate that impact in practice. The framework for capturing impact developed in the current study is introduced and used to structure the examples that relate to patients, staff and the organisation. Generic guidance on the barriers to capturing impact and tips on how to overcome some of these are also presented. Finally, several exemplar tools are provided within the toolkit that can be used or adapted to help nurse consultants to capture their impact on patients, staff and the organisation.
<table>
<thead>
<tr>
<th>Outcomes assessed</th>
<th>Indicator of impact</th>
<th>Tool utilised</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS1 Junior doctors knowledge, skills, competence</td>
<td>Professional competence</td>
<td>Bespoke questionnaire developed by research team</td>
</tr>
<tr>
<td>Staff knowledge of safeguarding policy</td>
<td>Professional competence</td>
<td>Bespoke questionnaire adapted from one identified in literature</td>
</tr>
<tr>
<td>External impact (including policy, teaching &amp; research work)</td>
<td>Professional competence, Organisational social significance - development of policy/new knowledge</td>
<td>External impact proforma developed by the research team</td>
</tr>
<tr>
<td>CS2 Parent experience and staff work experience and knowledge</td>
<td>Clinical social validity, Professional competence, Professional social validity</td>
<td>Questionnaires devised by charity</td>
</tr>
<tr>
<td>External impact (including policy, teaching &amp; research work)</td>
<td>Professional competence, Organisational social significance - development of policy/new knowledge</td>
<td>External impact proforma developed by the research team</td>
</tr>
<tr>
<td>CS3 Patient experience of NC consultation</td>
<td>Clinical social validity</td>
<td>Adapted questionnaire devised by Yorkshire Cancer Network</td>
</tr>
<tr>
<td>Consultancy activity with CNS team &amp; associated outcomes</td>
<td>Professional competence</td>
<td>Proforma developed by the research team</td>
</tr>
<tr>
<td>CS4 Patient experience of consultations of team NC provides leadership</td>
<td>Clinical social validity</td>
<td>Adapted questionnaire devised by Yorkshire Cancer Network</td>
</tr>
<tr>
<td>Staff knowledge, skills &amp; competence</td>
<td>Professional competence</td>
<td>Bespoke questionnaire adapted from previous version used by NC</td>
</tr>
<tr>
<td>Consultancy activity &amp; associated outcomes</td>
<td>Symptomatology Professional competence</td>
<td>Proforma developed by the research team</td>
</tr>
<tr>
<td>Team leadership skills</td>
<td>Professional social validity</td>
<td>Team leadership questionnaire (Carless et al 1998)</td>
</tr>
<tr>
<td>External impact (including policy, teaching &amp; research work)</td>
<td>Professional competence, Organisational social significance - development of policy/new knowledge</td>
<td>External impact proforma developed by the research team</td>
</tr>
<tr>
<td>CS5 Patient experience of NC consultations</td>
<td>Clinical social validity</td>
<td>Adapted Consultation Satisfaction Questionnaire (Baker, 1990)</td>
</tr>
<tr>
<td>Carer experience of support group</td>
<td>Clinical social validity</td>
<td>Bespoke questionnaire adapted from one identified in the literature</td>
</tr>
<tr>
<td>Project leadership skills</td>
<td>Organisational social significance</td>
<td>Bespoke questionnaire developed by the research team</td>
</tr>
<tr>
<td>Team leadership skills</td>
<td>Professional social validity</td>
<td>Team leadership questionnaire (Carless et al 1998)</td>
</tr>
<tr>
<td>General consultancy activity &amp; associated outcomes</td>
<td>Symptomatology Professional competence</td>
<td>Proforma developed by the research team</td>
</tr>
<tr>
<td>External impact (including policy, teaching &amp; research work)</td>
<td>Professional competence, Organisational social significance - development of policy/new knowledge</td>
<td>External impact proforma developed by the research team</td>
</tr>
<tr>
<td>CS6 Patient experience of NC consultations</td>
<td>Clinical social validity</td>
<td>Adapted Consultation Satisfaction Questionnaire (Baker, 1990)</td>
</tr>
<tr>
<td>Staff knowledge, skills &amp; competence</td>
<td>Professional competence</td>
<td>Bespoke questionnaire developed by research team</td>
</tr>
<tr>
<td>External impact (including policy, teaching &amp; research work)</td>
<td>Professional competence, Organisational social significance - development of policy/new knowledge</td>
<td>External impact proforma developed by the research team</td>
</tr>
</tbody>
</table>
5.2 Influential factors related to capturing the impact of nurse consultants

A variety of factors were identified that influenced the process of capturing impact amongst the nurse consultants who contributed to our case studies.

**Complexity of the role and capturing impact**

It was evident from the case studies that capturing the nurse consultant’s impact was a complex task. The multi-faceted nature of these roles which in many cases straddled organisational boundaries meant that the impact of nurse consultants was multi-faceted and whereas some indicators of impact might be relatively easy to capture others were more difficult. The nature of nurse consultants’ work meant that in addition to influencing outcomes in the short-term, their influence was often more gradual over a sustained period. For example, the neonatal nurse consultant who over a number of years had introduced several changes associated to caring for babies on the neonatal unit:

> Projects reinvent themselves and they’re very slow moving. It’s evolved over a long period of time and therefore it’s quite difficult to identify any definitive change. I could stand back and I’d say ‘well 20 years ago we nursed a baby like that, now we nurse a baby like this’, and that has been the impact of [NC], but actually to say the defining moment when that started to happen, I couldn’t. (CS2, governance coordinator)

It was also highlighted that some of the impact of the nurse consultants may not be visible within the organisation. This ‘hidden impact’ may be through the advice and guidance nurse consultants gave to others locally, regionally and nationally. In essence, this illustrated the nurse consultant’s ‘consultancy’ activity, for example dealing with complex cases, problem-solving in relation to patient or staff issues, or the reorganisation or setting up of new services. It was apparent that while this consultancy activity had the potential to be demonstrated through measurable outcomes, such as the knowledge, skills of other staff, which in turn could impact on patient care and in some cases formed a large part of the nurse consultant’s daily work, the activity was often ad hoc and provided on a one-to-one basis. As such, it could often go unnoticed and the outcomes unrecognised.

As part of the toolkit, we developed a proforma that could be used by nurse consultants to capture the complex, high level decision-making and problem solving activities they undertook. The proforma also captured outcomes relating to the consultation they provided to other staff members. Three nurse consultants used this form over several weeks to capture a snapshot of the problems they were approached about that demonstrated a level of consultancy commensurate with their role as nurse consultant. Feedback on using the form was positive and the examples nurse consultants provided illustrated the complex nature of the consultancy activity that nurse consultants provide, as the quotes from the stroke nurse consultant and gynaecology nurse consultant illustrate:

> I have email and telephone conversations every day about lots of things, but these were some of the examples which I feel are quite high level as a nurse consultant - one was a cardiology registrar concerned about patients who attend his clinic, he saw a patient the same time I was running my clinic that had cardiac problems and a stroke, so I examined the patient, referred them for specific investigations, so that was a joint consultation. I think for people to prove in their IPR s [annual review] this is the sort of level of advice I’m doing, I think the proforma is really useful. (CS5, nurse consultant)

> I was doing a clinic at the beginning of last week and just happened to overhear one of the medical consultants having a word with one of the nurses to say that they were going to rush this patient who was query ectopic pregnancy to theatre. I said ‘well I’ll scan her if you want me to’. She wasn’t an ectopic, she was in the middle of a miscarriage. So that actually averted somebody from needing to go to theatre. (CS1, nurse consultant)
Concerns were raised about remembering to complete the form and possibly the time-consuming nature of using it on a regular basis, but overall it was felt that it provided a useful tool to capture examples of the complex decision making during a fixed period of time and with a specific purpose in mind, such as before an annual review with their manager.

Similarly, the outcomes arising from the nurse consultant’s engagement in external activities such as committee membership could be difficult to capture. Senior managers emphasised the value of this work to the organisation, but that it was important to identify indicators of impact arising from their involvement including what was brought back to the Trust. A proforma was developed by the research team to capture these important details across the breadth of the nurse consultant’s external activity. All nurse consultants chose to pilot this tool and feedback on using it was very positive:

*I found it really useful to get my head round what I’ve been doing externally, where I’ve been doing it and who has benefitted from my doing it, because at the end of the day we’re here to prove that there’s been a benefit from doing something.* (CS1, nurse consultant)

Overall, the methods outlined above for capturing the consultancy activities that the nurse consultants engaged in highlight the importance of adopting pragmatic approaches to assessing impact. Documenting the nature of the advice given to others and involvement in external activities may be important, even when the evidence of actual impact and outcomes may be speculative or difficult to demonstrate by providing rigorous evidence. In addition, some stakeholders emphasised the importance of capturing process measures in order to explain the outcomes, for example through demonstrating how the nurse consultant had kept the service on track:

*I think some of the process things [are important. What it is that you’ve tried that works, what have you tried that hasn’t worked, and making quite sure that it is captured. Yes, at the end of the year the percentage of people that we get in and successfully contact trace will either have gone up or gone done, but you will have done various things over that period of time that will influence it.* (CS4, medical consultant)

Some process measures are important in reaching the outcome. So for example in stroke, you might say what percentage of patients were scanned and treated within the timeframe, and how quickly did they get to hyper acute services and then into rehab. But ultimately there’s also going to be an outcome measure at the end of that, which says what level of functionality have you regained following your stroke, having accessed all those process measures and scored green on them all, how well have you done? It would be difficult because those patients might have gone from being previously fit and well to relatively disabled. (Chief nurse)

This is important especially where nurse consultant roles focus on maintaining quality or the avoidance and prevention of negative outcomes, which might be difficult to measure.

**Immediate versus delayed impact**

A further issue identified was the immediacy of capturing the impact. In some circumstances the impact that nurse consultants were interested in capturing could be measured immediately (e.g. patient satisfaction with the consultation) or in the short-term (e.g. concordance with medication at a follow up clinic appointment). However, some nurse consultants were involved in initiatives where impact related to longer term outcomes and could not be shown in the short-term to have a positive benefit. This was especially apparent for the nurse consultants who worked in public health, for example, the nurse consultant in the field of sexual health who sought to reduce future infection rates, but it could apply to other health conditions where patients took a considerable time to recover and regain functionality (e.g. long term impact of stroke) or if the nurse consultant sought to prevent future negative patient outcomes. For example, it was anticipated that the neonatal nurse consultant’s
promotion of developmental care would have a long-term impact upon the babies who stayed on intensive care.

These delayed outcomes were often an overarching indicator of the entire service rather than specific to the individual nurse consultant, but the importance of capturing immediate outcomes relating specifically to the individual nurse consultant was emphasised.

**Direct versus indirect impact**

Nurse consultants often had an impact that was direct - i.e. where the impact was focused on the recipient of the activity. For example, the stroke nurse consultant who ran follow-up clinics for stroke patients exerted an impact on the psychological adjustment and reduction in anxiety amongst the patients or carers who attended. In general capturing the direct impact of nurse consultants was relatively straightforward.

In addition, nurse consultants exerted an indirect impact. This was particularly evident amongst the nurse consultants who worked through influencing the practice of other members of staff - for example, the nurse consultant in gynaecology indirectly influenced patient experience through the training she provided to front-line nurses to enable them to provide high quality, individualised care (e.g. training on administering medication). Therefore, in addition to directly influencing the competence of staff, this training could impact indirectly on the experiences of patients (e.g. reduce symptoms, provide more timely care, increase satisfaction). In this example, the nurses subsequently trained and supported junior doctors on placement in the ward. During the testing phase this nurse consultant was supported by the medical training programme lead who highlighted that an evaluation might capture both the nurse consultant’s indirect impact on the junior doctors’ knowledge and skills, as well as providing useful information to inform the junior doctors’ future training:

*(The questionnaire) will help us try to work out what they [junior doctors] think is good, what they think they’ve learnt, and hopefully somewhere along the line if it says they get most of their training from the nurses, I will at least be able to take some credit for that - the fact that I’ve trained most of the nurses in what to do. (CS1, nurse consultant)*

This example illustrates the need for nurse consultants to gain the support of other key stakeholders when evaluating impact and also the potential for evaluations to provide information for more than one purpose.

Indirect impact was often evident through the strategic and service development work that the nurse consultants drove forward. For example, the stroke nurse consultant was actively involved in influencing the strategic direction of the service for patients and therefore was considered to have an indirect impact on patient outcomes through this work:

*The indirect impact would be large because for some time now she has heavily influenced the strategic planning, both from the acute trust point of view and to some extent, further along the pathway and outside of [trust], and you would hope that that had positively affected patient outcomes and experience. (CS5, commissioner)*

The resulting service development initiatives often influenced a variety of outcomes (including patients, staff and organisational priorities) both directly and indirectly. Indirect impact through these types of complex interventions was perceived to be more difficult to capture in relation to an individual, as highlighted by the commissioner for stroke:

*I suppose the first difficulty is that she’s not the only person that’s involved in any of those projects and actually teasing out what she uniquely brings to that project would be quite difficult. I suppose she would have to define how she felt she’d impacted on it and then validate that by asking people. (CS5, commissioner)*
However, despite the difficulties of capturing indirect impact, it was still considered important to obtain evidence in relation to key initiatives, especially those which formed a large component of the nurse consultant’s role lest they go unnoticed or unrecognised.

**Attributing an impact to an individual**

As introduced in the previous section, a difficulty when exploring indirect impact is that these outcomes are often achieved through teamwork. In the context of multidisciplinary working it is difficult to identify an individual’s specific contribution to an outcome, as the neonatal nurse consultant pointed out:

*When I get involved with something I try to take someone else with me. I try to do it as a joint project rather than a one man show, which means that it’s difficult to unpick the effect’s that I’ve had.* (CS2, nurse consultant)

During the case studies and the development of the individual toolkits, it was recognised that in some situations it might be possible to identify what part the nurse consultant played in contributing to an overall outcome. For example, the stroke nurse consultant had developed a set of guidelines on the prompt assessment of patients after discharge that other staff (e.g. GPs, district nurses) now followed. The extent to which the staff followed the guidelines was a direct impact of the nurse consultant, which is auditable. In contrast, the above illustration could also lead indirectly to the service meeting a national target, but it would be difficult to link the individual nurse consultant to that overall outcome because other individuals or factors may have contributed as well.

During the process of developing the individual toolkits, the nurse consultants sought especially to capture their direct impact which could be attributed to their individual role. Capturing their indirect impact was more difficult and was restricted to those outcomes which were seen as particularly important, such as patient satisfaction with the service or achieving organisational targets.

**Gaining a patient perspective**

Obtaining the views of patients was considered important by all nurse consultants because the role was set up with the intention to achieve better outcomes for patients (HSC 1999/217). However, in our case studies this proved challenging for several reasons.

Firstly, engaging with vulnerable patient groups to gain their views of the service was not always easy. This was especially challenging for nurse consultants whose roles were set up to respond to the needs of patient groups with complex needs, for example women attending the gynaecology service following a miscarriage, as the gynaecology nurse consultant explained:

*I do think it’s quite difficult to get our patients to share their thoughts and feelings about something that’s so very, very personal.* (CS1, nurse consultant)

It became evident during testing methods to capture the patient perspective that it was important to consider the most appropriate time to ask patients for their feedback, whilst also recognising the value of obtaining real-time feedback in order to enable improvements to be made promptly. For example, the regional manager of a stroke charity emphasised the difficulty of sending patient questionnaires following discharge from hospital:

*A lot of Trusts give people questionnaires about their experience when they leave hospital, and return tends to be extremely low. Everybody focuses on getting the person who has had the stroke home from hospital. When they get home it’s like people start ‘bouncing off the walls’ because there’s too much to do in terms of coping with someone who needs care, and things like filling in forms takes very little priority.* (CS5, regional manager of charity)
Concern was also raised that patients may feel uncomfortable providing feedback about an individual with whom they had a very close or ongoing contact and that they may provide overly positive responses, resulting in a social desirability bias.

*I’m sceptical about [patient surveys]. You’ve just had a mum or dad who’ve had a baby whose life has been threatened. The baby is brought back from that point and the parents have an overwhelming depth of gratitude to people who’ve done it, and it stops them being critical. And quite a few of the things that they’ve actually experienced could have been dealt with by doing things in a different way.* (CS2, medical consultant)

Obtaining verbal feedback from patients was piloted by two nurse consultants to varying success. The urology nurse consultant initially asked her patients for feedback directly but resorted to asking for written comments because this ensured patient confidentiality and hopefully obtained more honest responses.

One strategy that some nurse consultants used to ensure that patients were aware that their comments were confidential was to use a third party to ask patients to provide feedback (e.g. admin staff linked to the clinic). Patients were also provided with the opportunity to return written feedback anonymously (e.g. in a sealed envelope into a secure box or addressed to somebody else in the service). Furthermore, some nurse consultants who had long-term relationships with their patients or carers (e.g. stroke, pulmonary hypertension) emphasised to them the value of receiving constructive criticism and suggestions on the areas where the service could be improved.

Several nurse consultants piloted a short questionnaire to evaluate patient satisfaction with their one-to-one consultations. Whereas some nurse consultants used it with patients they had seen on several occasions, the urology nurse consultant felt it was particularly beneficial to use this with new patients because it would help them build these relationships. Overall, it was felt the responses would help to inform the consultations they provide and needs of these patients:

*You don’t notice what your consultation skills are like because you’ve developed them over time. Sometimes you can get into a routine of a very scripted approach whereas this actually makes you focus, because if they put something down then you’re going to think ‘I need to actually think about that part of the consultation and how can I change it’.* (CS6, nurse consultant)

**Time and resources**

Lack of time and resources were repeatedly identified as a barrier to capturing impact by the nurse consultants and their stakeholders. It was also evident that lack of time influenced the choice of how evaluation had taken place in the service to date (e.g. using patient surveys rather than talking to patients to get qualitative feedback). Resource limitations included financial constraints preventing the release of individuals from clinical duties to undertake evaluation or audit work, or the lack of experience and training to obtain the skills required to undertake the data collection:

*We haven’t done any proper qualitative evaluation, we’ve tended to use surveys but with some capacity for people to say what they think. It’s down to resources. I think you’d have to get outside people in for face-to-face interviews and that would have to be funded.* (CS4, nurse consultant)

During the piloting of the individual toolkits the need for strategies which took these constraints into account was evident. Practical support from the research team to help several nurse consultants to devise a questionnaire to evaluate patient or staff outcomes involved the drafting of the questionnaire and a database to make the collation of the data as straightforward as possible for the nurse consultant. For example, with the support of the research team, the sexual health advisor nurse consultant used an online survey tool called ‘Survey Gizmo’ to administer and collate the responses to a short survey before and after a training session. Without this assistance undertaking these activities
would not have been easy:

*In the past we’ve intended to do follow-up surveys and they haven’t always been done because the plan was to do them by telephone and the person who was going to do it didn’t. So it means this survey will be the first time we’ve had a follow-up. Using survey gizmo does cut down admin time, just being able to put it on an excel spreadsheet and the follow-up is going to be possible and much quicker.* *(CS4, nurse consultant)*

Several additional facilitators were identified that might help overcome the time and resource challenges. Firstly, that the use of existing data, or adapted existing data collection methods, was considered to save the time involved in collecting new information. Some of the key areas of impact presented in Chapter 4 were seen to lend themselves to auditing routine data on organisational targets (e.g. waiting times, length of stay) or reviewing the case notes of a subset of patients in order to assess whether guidelines were being followed by staff.

Secondly, it was considered worthwhile to identify ways to capture data during everyday practice. For example, the pulmonary hypertension nurse consultant who provided consultancy advice to a team of clinical nurse specialists made it a requirement that these nurses recorded the issues they raised with him on a proforma which was routinely brought to meetings, in order to provide him with the evidence to illustrate his impact.

Finally, it was emphasised that there may be other resources and individuals in the organisation or externally that could support nurse consultants to assess their impact. For example, the Clinical Audit and Effectiveness Department had expertise in undertaking service evaluation and audit, or administrative staff who may be able to collate survey responses, enter the data into a spreadsheet or help with analysis. Moreover, other professional colleagues might help, for example, the nurse consultant in gynaecology was being assisted by a junior doctor to undertake a survey:

*One of the registrars is going to help do the analysis and she’s going to help write up anything that we need to do, so that’s been useful.* *(CS1, nurse consultant)*

Other useful strategies which were highlighted included using hospital volunteers, patient advice and liaison service (PALS) staff or support groups to help administer a patient survey, or accessing specialist networks or patient charities who may have tools or resources to help undertake patient or staff surveys. In addition, it was suggested that colleagues undertaking educational projects might be willing to collect and analyse relevant data, or local universities could be approached with ideas for projects for medical or nursing students.

**Expertise in capturing impact**

While the nurse consultants generally felt competent in undertaking audit, service and educational evaluations, they often focused on processes (e.g. perceived quality of materials in a training session) rather than outcomes (e.g. impact of training on staff’s knowledge/skills and application of learning to patient care). Moreover, as mentioned earlier, the evaluation often focused on an initiative which had involved a multi-disciplinary team and they found it difficult to disaggregate their specific contribution.

Several nurse consultants felt that they did not have the specific expertise to measure the impact of their role even though they had some form of research training. Part of the problem related to uncertainty about how best to go about identifying impacts that they might usefully be able to capture and then identifying appropriate methods and tools to capture data. Yet, when the case study nurse consultants worked with the research team to identify outcomes important to their role, develop specific tools, collect and analyse data it was clear that they had a breadth of expertise that they could bring to bear. Moreover, several drew upon other resources in the organisation to assist in piloting the
tools. Although some nurse consultants reported initially feeling daunted by the prospect of assessing their impact as it seemed an enormous task which could not easily be accommodated within the demands of their role, the pragmatic approach adopted in developing the toolkit was well received. Importantly they were encouraged to concentrate on a small number of outcomes which would capture information that could help them further develop their role, for example, looking at patient satisfaction with consultation.

All nurse consultants involved in the case studies and the additional nurse consultants who reviewed the toolkit were positive about the potential for the toolkit to help them to identify and subsequently capture their impact. Moreover several nurse consultants who piloted particular tools indicated that they would continue to use them on a regular basis as part of an ongoing assessment of their impact. This suggests that although nurse consultants may feel that they lack expertise in measuring impact, it was relatively easy for them to engage in this activity when given sufficient prompts.

**Identifying suitable outcome measures**

There were very few ‘off the shelf’ tools that were speciality specific which could be used by nurse consultants to capture their impact, for example their impact on patient outcomes or the patient experience in relation to specific medical conditions. Where such tools existed, they were not generally focused sufficiently on capturing the impact of the nurse consultant, although they could provide valuable information about an overall service that the nurse consultant contributed to.

As part of the development of the individual toolkits for the nurse consultants, the research team identified generic measures (e.g. patient satisfaction with consultation, team leadership questionnaire) or existing tools in different speciality areas that appeared to be relevant. Where necessary these were adapted for the nurse consultant’s speciality or specific purpose. Although adaptation raised concerns about the reliability and validity of the revised measures, the toolkit was intended to provide nurse consultants with some practical tools which could assist them in capturing useful data to demonstrate their impact and develop their practice. It was acknowledged that adapted tools could subsequently be tested for reliability and validity but this was likely to be beyond the scope of many nurse consultants.

For some indicators of impact identified there were no suitable tools available, and so bespoke measures were developed by the research team in collaboration with the nurse consultants (e.g. external activity and consultancy proforma).

**Identifying suitable comparators**

Nurse consultants and the other stakeholders often questioned the usefulness of data collected without a comparison group and also identified that because of the uniqueness of the nurse consultant role, it may not be possible to identify a suitable comparator.

In research evaluating new services or new nursing roles, comparisons have often been made to standard care (e.g. medical doctor versus nurse-led clinics). This was identified as a possible strategy for some nurse consultants who substituted for a medical doctor. In other situations it was not appropriate because the care provided was notably different and complementary to that provided by a doctor:

*One of our medics will see eight patients in two hours, now I will see three patients in two hours. It’s a different clinic and that’s not a criticism of him, I think when you’ve got a team approach there are benefits of somebody being exposed to [doctor’s] clinic rather than mine, because it’s the overall package (of the service) that’s important.* (CS3, nurse consultant)
An alternative approach when a new service was being developed by a nurse consultant was to collect data before and then after the new service was established. Given the constraints on time and resources within the busy working environments of the nurse consultants, they considered it unlikely that they would have time to undertake detailed comparison studies and more pragmatic approaches may need to be adopted.

For many nurse consultants neither of the approaches outlined above were feasible because of lack of suitable comparators or 'before' data had not been collected – although this could be addressed with future initiatives. In such cases the use of benchmarking was explored. Firstly, benchmarking was suggested when it was possible to compare outcomes and standards in the nurse consultant’s service to relevant standards set in national strategy documents, professional bodies or patient/medical charities. Secondly, where no such standards existed, it was suggested that local standards to benchmark against over time could be developed. Indeed, some of the tools included in the toolkit could be used to produce repeat measures to enable a nurse consultant to benchmark performance over time.

Overall, the importance of benchmarking and capturing information at regular consecutive time points was recognised as important by the nurse consultants to ensure that positive outcomes were maintained or improved where appropriate:

> It’s my responsibility to make sure that we don’t assume that because we were good two years ago we’re always going to be good at something. You need to keep going back and checking that everything is still working okay. I just want our standards to always be as good as they can be. (CS4, nurse consultant)

### 5.3 Validation of the toolkit

The lessons learned in response to these practicalities were incorporated into the composite toolkit developed to help nurse consultants capture their impact. An initial validation of the draft composite toolkit was achieved by consulting with a wide range of nurse consultants (both those involved in the case studies and others, including two midwife consultants, in the participating organisations) and the Project Advisory Group members. A summary of this feedback is provided in Appendix 3. The feedback confirmed that the toolkit was viewed positively and as a useful resource for nurse consultants. The feedback received was incorporated into the final version of the toolkit (Gerrish et al 2011).

### 5.4 Conclusion

The findings presented in this chapter highlight various challenges for nurse consultants seeking to capture the impact of their role. In summary, the key challenges were the complexity of the role and capturing impact, the issue of direct versus indirect impact, immediate versus delayed impact, attributing an impact to an individual, gaining a patient perspective, time and resource implications, expertise in measuring impact, identifying suitable outcome measures, and identifying suitable comparators. However, during the detailed work the research team undertook with each nurse consultant to develop a toolkit to capture key outcomes relevant to their individual roles, there were often pragmatic approaches that could be adopted and a number of key lessons that helped to address some of these issues. These practical lessons are shown in Table 5.
Table 5: Tips for developing approaches to demonstrate impact

<table>
<thead>
<tr>
<th>Tips for developing strategies to demonstrate impact</th>
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<tr>
<td>Focus on capturing evidence which relates to the current priority areas for the role and service.</td>
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<tr>
<td>Involve and gain the perspective of other stakeholders (e.g. in identifying impact areas, priority areas to consider capturing evidence, and to validate the attribution of impact).</td>
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<tr>
<td>Ensure procedures for capturing patient feedback are considered carefully.</td>
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<td>Think about both direct and indirect impact in relation to the three domains of the framework.</td>
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<tr>
<td>Be realistic in terms of the time available.</td>
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<tr>
<td>Try to identify impact that is directly attributable to the individual under study or the service that is led by the individual.</td>
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<tr>
<td>Where direct impact cannot be captured, evidence of indirect impact should be sought and validated through asking others to highlight what difference the individual has made to obtaining the outcomes.</td>
</tr>
<tr>
<td>Use existing data where available.</td>
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<tr>
<td>Adapt existing data collection mechanisms or tools.</td>
</tr>
<tr>
<td>Seek out additional advice, support or resources that might help - in terms of expertise within the organisation and externally (e.g. collaboration with academic departments).</td>
</tr>
<tr>
<td>Consider benchmarking impact over time to review outcomes.</td>
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Chapter 6: Discussion of the findings and conclusions

6.1 Introduction

This final chapter outlines the key findings from the study in relation to the original aims:

- To identify a range of indicators to demonstrate the impact of nurse consultants on patient, professional and organisational outcomes.
- To develop a toolkit to help nurse consultants to demonstrate their impact on patient, professional and organisational outcomes.

The recommendations for practice and research arising from the study will also be examined. However, it is important to first explore the methodological limitations of the study that may have influenced both the data collected and the subsequent interpretations of this data.

6.2 Methodological appraisal of the study

This study used a multiple case study design involving six nurse consultants in two settings. The six posts were explored in-depth by interviewing the nurse consultants and a range of stakeholders for their posts, which provided a wealth of rich data. As outlined in section 3.4, the six nurse consultants were chosen to reflect variation across a range of issues known to influence the complexity of demonstrating impact. The data obtained therefore provided a comprehensive overview of the different areas of impact relating to nurse consultant roles and the practicalities of capturing evidence to illustrate such impact in practice. However, a more extensive study with a larger number of posts across more settings, may have provided additional insights into capturing impact.

The sample of nurse consultants was weighted towards experienced nurse consultants. This was purposeful in order to gather evidence of the impact of nurse consultants who had had time to fully establish their posts and were working across the four dimensions of the role. It was intended that the toolkit would be applicable to all nurse consultants, including those new in post. This objective appears to have been met as some nurse consultants who reviewed the toolkit were relatively new in post and felt it would be very useful for them, as well as more experienced individuals.

Given that all of the nurse consultants were based in adult acute healthcare settings, consideration needs to be given to the transferability of the findings to nurse consultant posts in primary care, mental health, learning disabilities and children’s services. Most nurse consultants who took part in the study were involved in cross boundary work into primary care and community settings, so it is reasonable to assume that the findings are transferable to these settings. However, further work is required to validate the framework for capturing the impact across all settings in which nurse consultants work. Some indication of the transferability of the findings was received from a midwifery consultant who, when reviewing the toolkit, provided very positive feedback on the applicability of the framework indicators of impact and toolkit to midwifery consultants.

The nurse consultants were relied upon to identify appropriate stakeholders. Inevitably this may have led to a degree of bias if the nurse consultants chose stakeholders who would give a positive view of their role and impact. However, it was emphasised repeatedly during the early discussions with the nurse consultants that the study did not seek to evaluate their performance in the post, but rather to gather evidence of the means by which their impact might be captured. Therefore, it was stressed that they should identify stakeholders from a range of different areas who would be able to provide insights into the impact they had and the issues associated with attempts to demonstrate this. As it was, this did not seem to have influenced the data collection because a broad range of views from different stakeholders were gathered.
It is also acknowledged that despite the extensive strategies that were pursued, the case studies had a limited input from patients and family carers. In most case studies some patients were interviewed, but overall the numbers involved were small, and in two cases it was not possible to interview any patients. However, in both of these case studies, the nurse consultants were able to involve their patients in the piloting of the tools for capturing the patient perspective. The limited patient input in the interview phase means that it may be that not all aspects important to patients have been captured fully.

Finally, the process of developing the toolkit involved some piloting of tools. However, within the timescale of the study there was limited opportunity for extensive piloting, especially as the nurse consultants were busy professionals who had already dedicated a significant amount of their time to the study. Therefore, further validation and testing of the tools that were generated as part of the study is required.

### 6.3 Impact of nurse consultants on patient and professional outcomes

The study set out to identify patient and professional indicators to demonstrate the impact of nurse consultants on patient and professional outcomes. As the study progressed it became apparent that the original framework proposed at the start of the study needed to be extended to include consideration of organisational outcomes.

At a national level, the identification of robust set of nurse sensitive indicators is in the early stages of development. As the current study was underway, work commissioned by the Department of Health was published which identified a number of possible outcome measures for nursing quality in the areas of safety, effectiveness and compassion (Griffiths et al 2008). Following a comprehensive review of the evidence-base to support nursing outcome measures, Griffiths et al (2008) identified the following nurse sensitive indicators as having the strongest evidence base.

<table>
<thead>
<tr>
<th>Safety</th>
<th>Effectiveness</th>
<th>Compassion</th>
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<tbody>
<tr>
<td>• Failure to rescue</td>
<td>• Staffing levels and patterns</td>
<td>• Experience of patient care</td>
</tr>
<tr>
<td>• Healthcare associated infections</td>
<td>• Staff satisfaction</td>
<td>(patient reported)</td>
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<tr>
<td>• Healthcare associated pneumonia</td>
<td>• Staff perception of the practice environment</td>
<td>• Communication (patient reported)</td>
</tr>
<tr>
<td>• Pressure ulcers</td>
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<tr>
<td>• Falls</td>
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However, as Griffiths et al point out, there is huge diversity of phenomena that have been considered as possible nurse sensitive indicators and further work is required to develop a robust set of indicators relevant to nursing.

Whereas the indicators identified above are considered relevant to nursing as a whole, they are not applicable in all circumstances (Griffiths & Rafferty 2010). With regard to the nurse consultants participating in the current study, some of the generic indicators for compassion and effectiveness appear relevant to the role of nurse consultants, for example the patient experience, communication and staff satisfaction were identified as areas of impact by all nurse consultants. Although the generic indicators of patient safety identified above were not seen as priorities for capturing impact by the nurse consultants in the current study, they may be relevant to other nurse consultants working in other clinical settings. Moreover, several of the outcomes identified as relevant to nurse consultants in
the current study related to safety, for example as Figure 3 illustrates, the nurse consultant in gynaecology had an impact on improving symptoms such as bleeding in pregnancy or hyperemesis and increasing staff knowledge on safeguarding children – outcomes which clearly focus on patient safety.

Due to the wide diversity in the clinical focus of nurse consultant roles in the current study it was not appropriate to attempt to identify generic outcome measures to demonstrate the impact of nurse consultants as a whole. Rather the framework for capturing impact arising from this project identifies the key areas through which nurse consultants exert an impact on patient, professional and organisational outcomes. Through working with the specialist panels linked to individual nurse consultants, role specific indicators of impact were identified for each nurse consultant and tools developed to capture this impact. Feedback from nurse consultants who reviewed the toolkit for capturing impact indicated that the framework will prove useful to nurse consultants in helping them to identify patient, professional and organisational indicators of impact.

As demonstrated in the systematic review of the literature in Chapter 2, at the outset of the current study there were few studies, either published or in the grey literature, exploring the impact of nurse consultant roles. The empirical data collected as part of the case studies, reflected this picture as few of the nurse consultants had made attempts to capture the impact of their role.

Interestingly, evidence relating to the area of professional significance (the impact on staff) was especially limited in both the existing literature and in the work undertaken by the nurse consultants prior to taking part in the current study. This is important because in the case studies it was evident that influencing the practice of other staff members often took up a large proportion of the nurse consultant’s time and could sometimes be the predominant way that the nurse consultants had a direct impact (which led in turn to an indirect impact on patient or organisational outcomes). Therefore, in terms of attempts to capture evidence, the impact on professional outcomes appears to be an under-researched and possibly an undervalued area. This may be because higher priority is given to evaluate and provide evidence of impact on patient or organisational outcomes in contrast to outcomes on staff, as reflected in the areas of impact seen to be important by case study participants. Moreover, existing measures to capture impact on patient outcomes (e.g. patient satisfaction, quality of life) and organisational outcomes (e.g. length of stay, waiting times) were more readily available than tools to capture the diverse ways that nurse consultants may impact on staff. However, some measures for assessing leadership and team working outcomes which could be adapted for nurse consultant roles were identified when developing the toolkit.

However, attempts to capture evidence illustrating the nurse consultant’s impact on patient or organisational outcomes were also quite sparse. Overall, the study highlighted that demonstrating the impact of nurse consultants was influenced by a range of challenges. Alongside the challenge of limited time and resources, the complexity of capturing indirect impact, attributing impact to an individual, and the multifaceted and complex nature of the roles were highlighted as contributing to the difficulty in demonstrating impact. These practicalities reflect much of the previous research in this field (Guest et al. 2004; Gerrish et al. 2007; Coster et al. 2006).

Nevertheless, building on the work of Gerrish et al (2007), the literature review and the data gathered from the case studies highlighted a wide variety of different areas of impact related to the work of nurse consultants. However, it became evident that the framework for capturing impact identified in the earlier work and which focused on clinical and professional significance was not sufficiently comprehensive. The framework was therefore extended, through the empirical data, to include a third domain that captured the nurse consultants’ impact on organisational outcomes, including their external and national impact.
The current study also builds on the work of Guest et al. (2004) who proposed a conceptual framework for exploring the impact of nurse, midwife and health visitor consultants. However, Guest et al.'s framework predominantly emphasised their indirect impact on patients through the development of services, protocols and influencing other staff members. In contrast, the current study presents a framework that is clearly focused on nurse consultants' direct and indirect impact in three overarching domains: namely, clinical (i.e. patients), professional (i.e. staff) and organisational. All nurse consultants showed at least some evidence of impact in all three domains and in most cases had some impact across the various indicators identified within these domains. However, the nurse consultants did vary in terms of their main focus; some had a predominantly clinically focused role and therefore had the potential to generate significant evidence of their direct impact on patients, whereas others worked through influencing the practice of other staff and therefore had a greater direct impact on professional outcomes. It was also evident that the nurse consultants could have direct or indirect impact on each of the domains of impact, but again this depended on the predominant focus of the role.

In particular, this new framework helps with defining and disentangling the complexity between process and outcome, which was identified as a shortcoming of the previous literature (see Chapter 2). For example, some of the literature described the broad processes and activities of nurse consultants such as their leadership, but did not identify what impact this had. The current study's new framework is clearly focused on the impact of nurse consultant roles. Overall, the evidence collected as part of this study suggests that the revised framework is meaningful and practical to a range of nurse consultant roles and comprehensively covers the variety of outcomes that nurse consultants might influence. The framework has the potential to be beneficial for nurse consultants to use in practice and also in future research studies exploring the impact of these roles.

6.4 Development of the toolkit

The study also sought to develop a toolkit to help nurse consultants to manage the quality of care more effectively through demonstrating their impact on patient outcomes and the patient experience. This was achieved by drawing together the evidence on the impact of nurse consultants (as per the framework domains) and by incorporating advice relating to the practicalities and challenges of capturing impact for nurse consultants gained from the case studies. Through the course of undertaking the case studies, the research team worked with the nurse consultants to consider, generate and try out appropriate and feasible ways to overcome some of these challenges and capture evidence demonstrating their impact on a range of outcomes.

Clearly, the impact on patient outcomes and the patient experience was important, hence the focus on this aspect in the original study aim. However, the findings highlight the importance of considering the impact of nurse consultants on both professional and organisational outcomes, each of which are likely to have an eventual impact on patients. The final toolkit includes various examples and tools to help nurse consultants demonstrate their impact in all three areas.

Importantly, the discussions with the nurse consultants and the subsequent advice provided in the toolkit highlight the need to explore various avenues to capture evidence of impact. For example, routinely collected data can be used, existing tools or methods can be adapted, or new pragmatic quantitative or qualitative approaches can be developed. Some outcomes can be easily and effectively captured using measurable quantitative outcomes, either through the collection of new data or from existing data, whereas in other areas qualitative methods may be better suited. Overall, there is clearly not a 'one size fits all' approach to demonstrating the impact that nurse consultants have, but instead it is important to choose the tool or approach that is relevant and most appropriate to individual nurse consultants, the setting in which they work and their particular patient group.
The final composite toolkit was developed through synthesising the evidence and lessons learned from the six case studies and therefore it is strongly grounded in the real life experiences of nurse consultants thinking about collecting data and presenting evidence on their impact. To our knowledge, this is the only practical guide and resource on capturing impact that is aimed specifically at nurse consultant roles. The toolkit has received positive feedback from a larger group of nurse consultants and nurse managers, who are keen to use and share it with other colleagues (and those in other advanced nursing roles) and professional networks.

6.5 Implications and recommendations arising from the study

The findings from this study prompt the consideration of several implications, both in terms of practice and future research.

Implications for practice

The continuing drive within the NHS to improve quality in terms of achieving safer, more effective and patient centred healthcare means that demonstrating performance in terms of outcome measures is increasingly important for healthcare organisations as a whole and for individual practitioners. As senior clinicians, nurse consultants need to be able to demonstrate the added value they contribute to enhancing the quality of healthcare and improving patient outcomes. The framework for capturing impact in terms of clinical, professional and organisational outcomes identifies the key domains where nurse consultants can make a significant contribution to enhancing quality.

The practical implications of the study centre on encouraging the use of the framework and toolkit amongst nurse consultants in practice in order to help them reflect on their role and evaluate their impact. Through collating evidence of their impact, nurse consultants will be well placed to use this information to further develop the quality of care they provide patients, and strengthen their impact on colleagues and the organisations in which they work.

It was suggested during the case studies and wider consultations that the toolkit could be beneficial for new and experienced nurse consultants and also for managers in supporting their nurse consultants. For example, several individuals felt it would be a particularly useful resource to structure or present evidence to a line manager at an annual review. This might be especially helpful for new nurse consultants who are still developing their roles.

The framework for capturing impact and the toolkit may also be helpful for nurse managers. It can assist when developing proposals for new nurse consultant posts, for example in distinguishing the higher level and complex nature of a nurse consultant role compared to that of a clinical nurse specialist, or when succession planning. Although the study did not seek to differentiate between nurse consultants and clinical nurse specialists in terms of areas of impact, it was apparent that nurse consultants, in contrast to clinical nurse specialists, were perceived to engage in more complex decision making in relation to patient care, be more involved in leading service development locally, providing strategic leadership locally and nationally and to engage in research. The framework for capturing impact together with the tools identified in the toolkit, provide a means of capturing these differences in advanced practice roles.

Managers may also find the framework for capturing impact and the toolkit helpful in guiding the annual review process with nurse consultants for whom they are responsible. The three domains of impact help to focus on outcomes of benefit to patients, other healthcare professionals and the organisation that the nurse consultant achieves, rather than processes such as clinical care, providing education, undertaking service development or research and providing leadership. Clearly, understanding the processes that nurse consultants undertake within the four components of their role is valuable, but this study has highlighted the benefits of taking a comprehensive overview of
different domains of impact.

The educational implications arising from the study also merit consideration. The findings have highlighted the importance that nurse consultants and their stakeholders place on demonstrating impact. It is important therefore, that education courses intended to prepare future nurse consultants equip them with the knowledge and skills to capture impact. Bearing in mind that some of the nurse consultants in the current study lacked initial confidence in capturing their impact, continuing professional development for nurse consultants should include some consideration of capturing impact. The toolkit is designed as a learning resource for nurse consultants to develop their understanding of capturing impact and could usefully be promoted through professional forums.

The toolkit could also be adapted for use in other advanced nursing roles (e.g. CNS, nurse practitioners) or non-medical consultant roles (e.g. therapy consultant, midwife consultants). Indeed, the research team have been approached by advanced practice nurse forums who are interested in using the framework to capture their impact. As the initial framework arose from our earlier study of advanced practice nurses (Gerrish et al 2007), the extended version of the framework arising from this study is highly likely to be of use to other advanced practice nurses. However, the use of the toolkit amongst other groups of advanced practitioners should be evaluated in practice.

**Implications for research**

Clearly there is a need to evaluate the framework and the composite toolkit in more depth with a wider group of nurse consultants and those from specialities who did not contribute to the current study. Furthermore, as it has been indicated, the usefulness of the toolkit might differ between new and experienced nurse consultants, it would therefore be beneficial to explore its use amongst each in order to determine the perceived benefits for both groups.

Future research should also aim to capture and present evidence of nurse consultant’s actual impact on the various indicators in all three domains of the framework. In the current study the nurse consultants piloted some data collection tools or methods that captured evidence in this respect, but this was mainly undertaken in order to inform the development of the toolkit, whereas a more comprehensive evaluation of the impact of a range of nurse consultant roles would be fruitful. This work should also be disseminated widely in order to contribute to the growing body of evidence on the impact of nurse consultant roles and inform nurse consultants’ attempts at capturing their impact.

6.6 **Conclusion**

Nurse consultant roles were originally introduced with the intention of achieving better patient outcomes by improving quality and services and to provide an alternative career pathway for experienced nurses to remain in clinical practice. Overall, this study has shown that although there had been little empirical work to date examining the impact of these roles in practice, nurse consultant roles have the potential to impact on a variety of outcomes relating to patients, healthcare professionals and the organisations in which they work. However, this study has also shown that capturing impact is fraught with practical and methodological difficulties. The toolkit which has been developed as part of the study is intended to act as a practical resource to help nurse consultants to address these challenges.

In spite of the real challenges involved, if nurse consultants engage in the process of systematically generating evidence to demonstrate the impact of their roles in practice, they stand to reap a number of rewards including opportunities to develop and extend nursing practice in their organisations and to demonstrate the contribution that expert nursing leadership can make to improving the health and wellbeing of the population in the context of an increasingly challenging economic climate.
References


CASP (2006) *10 questions to help you make sense of qualitative research*. Milton Keynes Primary Care Trust, Milton Keynes.


66


The Health Foundation (2011) *Quality improvement made simple: what every board should know about healthcare quality improvement.*


The NHS Information Centre (2011). *Patient reported outcome measures (PROMs).*


### Appendix 1: Overview of studies included in nurse consultant systematic review

<table>
<thead>
<tr>
<th>Study design</th>
<th>Speciality</th>
<th>Aim</th>
<th>Study participants</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ayers (2005)</td>
<td>Heart Failure (HF)</td>
<td>To evaluate the effect of setting up a nurse-led HF service led by a NC.</td>
<td>450 HF patients</td>
<td>Medication rates were higher following the introduction of the nurse-led service (approx 425 versus 280 for angiotensin converting enzyme inhibitors, 20 versus 5 for alpha blockers, 380 versus 90 for beta blockers). Patients were previously on suboptimal dose (no figures presented).</td>
</tr>
<tr>
<td>Butler-Williams, Cantrill &amp; Maton (2005)</td>
<td>Critical Care</td>
<td>To audit the recording of respiratory rate on observation charts following hospital wide education/initiatives by outreach service (NC and staff nurse).</td>
<td>Mixed in-patients on single day: 341 pre-intervention/325 post-intervention</td>
<td>Respiratory rate recording was higher (61.2%; 199/325), compared with previous audit (7.03%; 24/341).</td>
</tr>
<tr>
<td>Crocker (2002)</td>
<td>Critical Care</td>
<td>To explore whether nurse-led weaning (initiated and supported by NC) protocol reduced the no. of ventilator days and the delay in initiating weaning decision.</td>
<td>500 patients ventilated for 7 or more days in one intensive care unit (before); no detail of any comparison group.</td>
<td>Number of ventilator days in the monthly audits following the initiative (range 7-32 days, Sept 01 = 11.3, Oct = 13.6, Dec =13.8, Jan 02 = 13.6, Feb = 8) were lower compared to the previous annual audit (range 7 and 50 days, Mean = 16.8). Crude ICU mortality lower: 28% compared to 35%. Delay in weaning decision was still evident in some (no detail of if this was improved or not).</td>
</tr>
<tr>
<td>Currie et al. (2004)</td>
<td>Cardiology</td>
<td>To audit the introduction of a single point of contact NC led direct current (DC) cardioversion service.</td>
<td>143 patients needing DC cardioversion; no detail of comparison group.</td>
<td>No serious complications (3 admitted to hospital - 2 hypertensive discharged within 6 hours, and 1 sinus bradycardia discharged the next day. 8 week waiting time, compared to 27 wks previously.</td>
</tr>
<tr>
<td>Kirk (2007)</td>
<td>Community HF Service</td>
<td>To explore effect of Medway Community HF Project (led by the NC) on hospital admissions.</td>
<td>Not described</td>
<td>No specific figures presented but states that: - ‘admission prevention saved more than 530 hospital bed days’. - Length of stay (LOS) reduced in first year, but stabilised at around 12 days’.</td>
</tr>
<tr>
<td>Marshall, Nelson &amp; Sykes (2005)</td>
<td>Rapid access chest pain clinic (RACPC)/Angina</td>
<td>To pilot / evaluate the Angina Plan (a brief cognitive behaviour intervention introduced by a NC) with patients in a RACPC</td>
<td>24 patients with stable angina.</td>
<td>All those who scored ≥8 HADS had reduced anxiety. All had at least 1 positive behavioural, psychological or physiological outcome. 88% reported being active after (only 12% reported being active before). Other areas indicated by the patient evaluation include: understanding (fewer misconceptions), confidence, easier to relax, positive communication and positively valued by patients.</td>
</tr>
<tr>
<td>Mason (2009)</td>
<td>Alcohol-related problem service</td>
<td>To explore the effectiveness of interventions (run by NC alcohol specialist) to meet the needs of people with alcohol-related problems.</td>
<td>Hospital in-patients, A&amp;E patients and users of primary care clinic; no detail of sample numbers.</td>
<td>LOS, hospital admission (necessity for and actual) and A&amp;E attendance were reported reduced (no further detail/figures provided). Alcohol consumption was reportedly reduced (no further detail/figures). 96% patients perceived benefit from service; 99% preferred seeing a nurse.</td>
</tr>
<tr>
<td>Priestley et al. (2004)</td>
<td>Critical care outreach team (CCOT)</td>
<td>To explore the impact of introducing a CCOT service and training led by NC on in-hospital mortality and LOS.</td>
<td>Hospital in-patients: 1475 intervention/1428 control</td>
<td>Reduction in hospital mortality at patient level (Odds ratio 0.56, 95% CI 0.38-0.82) and cluster level (Odds ratio 0.52, 95% CI 0.32-0.85). Findings on LOS equivocal.</td>
</tr>
<tr>
<td>Ryan, S et al. (2008)</td>
<td>Pain service (fibromyalgia)</td>
<td>To identify any change in primary care appointments for symptoms</td>
<td>49 fibromyalgia patients who had previously</td>
<td>Patients had 295 GP consultations. 196 (66%) in year prior to the NC-led clinic, whilst 99 (33%) in the 12 months after attendance at NC led clinic.</td>
</tr>
<tr>
<td>Study / Year</td>
<td>Design</td>
<td>Patient Group</td>
<td>Study Focus</td>
<td>Findings</td>
</tr>
<tr>
<td>--------------</td>
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</tr>
<tr>
<td>Hann &amp; Ryan 2004</td>
<td>Quasi-experimental study</td>
<td>Uncontrolled before and after (same patients)</td>
<td>CCOT</td>
<td>To evaluate the 'Amber Project' (education and new 'amber' tool introduced by NC), aiming to identify at-risk of deterioration patients. Orthopaedic ward versus surgical &amp; medical wards not in the project - no detail of sample numbers. Approximately 3 observations in 24 hours and 80% patients had a modified early warning score (MEWS) in the last 24 hours, in control wards 2.3-2.5 observations and 10-15% patients had MEWS. No clinical incidents or complaints.</td>
</tr>
<tr>
<td>Martin &amp; Warner 2005</td>
<td>Uncontrolled before and after (although unclear)</td>
<td>Chronic musculoskeletal pain patients</td>
<td>Multiple Sclerosis (MS)</td>
<td>To evaluate and improve the service delivery for relapse management in MS. A new day case nurse-led service introduced and facilitated by NC. 100 MS day case patients, compared to 33 patients prior to the new service (although unclear). 85% treatment within 10 days of reporting symptoms, compared to 24 days (range 4-64) in control group and only 15.2% having treatment within 10 days. Patients reported symptoms to nurse sooner (within 10 days onset, comp to 51 days to GP). Neurologist appointment in mean 6 days and treatment commence from appointment in 4.78 days, compared to GP equivalent of 13.8 and 5.16 days. Both access routes (nurse/GP) saw 30% reduction in psychological impact of MS following treatment. Nurse route had greater range of MSIS-29 (MS impact) scores, 25% in highest score range (whereas no GP patients were high), which reduced to 6.7% following treatment.</td>
</tr>
<tr>
<td>Guest et al. 2004</td>
<td>Survey</td>
<td>Various</td>
<td>Evaluation of diabetes NC role from a individual and national perspective using a 360-degree feedback evaluation tool (web-based survey).</td>
<td>9 diabetes NCs (in various hospitals, in post for 2+ years), 12 managers, 40 colleagues, 35 team members and 9 other individuals. - Expert practice - positive patient/carer/user outcomes; develops pathways that are patient focused; identifying opportunities and effecting change. - Practice/service development - promotes and disseminates new ways of working; facilitates/supports monitoring of service. - Professional leadership/consultancy - clinical leader; strategic planning; local, regional &amp; national consultative role; develops/encourages inter-disciplinary and interagency collaboration. - Education and development - educate others; close theory/practice gap; contribute to training strategy; monitors/acts on effectiveness of education. - Self-leadership - manages workload effectively; sustainable life/work balance for self/others.</td>
</tr>
<tr>
<td>Coster et al. 2006 – relates to Guest et al. 2004 survey sub-study</td>
<td>Survey</td>
<td>Various</td>
<td>To explore NCs perceived impact from the indicators that were previously identified in the focus groups (see Guest et al. 2004 focus groups).</td>
<td>153 nurse, midwife or health visitor consultants in Feb 2001; 370 consultants 6 months later and 419 in Sept 2003. - Staff access to advice/support - identifying areas for change/ improvement - services better meeting patient needs - more protocols/guidance in place - patients better informed - increasing consultation time - impacting financial resources</td>
</tr>
<tr>
<td>Author(s)</td>
<td>Methodology</td>
<td>Department</td>
<td>Study Objectives</td>
<td>Findings</td>
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<tr>
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</table>
| James & Eastwood (2007)   | Survey      | Prostate Cancer             | To evaluate patients views of a new weekly evening clinic (5-7pm) run by a NC in a urology department.                                                                                                                                                                                                    | 157 male follow-up prostate cancer patients who attended the clinic in the urology department at one hospital.  
- 83% happy to attend clinic (easier to park, less busy, less waiting, not requiring time off work, outpatients more relaxed/ quieter in evening)  
- 90% felt availability of evening clinics should be increased for patients.  
- 17% not happy to attend (difficulties attending in evening e.g. travel, carers unable to attend and general preference to attend during the day). |
| James & McPhail (2008)    | Audit and survey | Prostate Cancer              | To explore the development and evaluation of a NC-led, one-stop evening clinic for suspected prostate cancer.                                                                                                                                                                                               | Suspected prostate cancer (PC) clinic at urology department at one hospital  
- safety audit 147 patients  
- patient experience survey 33 patients  
Excellent cancer detection rates (43%), high end of doctor published data. Quality of tissue sampled 'excellent', and prostatic tissue found in 100%.  
3% (4/147) were admitted post-biopsy for minor complications. Patients reported being well prepared 96%, no pain 87% /less pain than expected 88%, being well afterwards 88.5%.  
Most patients were happy with length of wait for appointment and results, 10% would have preferred to see medic, all given adequate information, well-prepared for biopy, happy for NC to give results and reported good communication of results. |
| Jarman (2009)             | Survey and records of the clinical nursing round (CNR) | Emergency Department        | To evaluate the impact of participation in the CNR on nurses’ individual practice                                                                                                                                                                                                                       | 24 nursing staff who had participated in the CNR during the review period, based in one emergency department.  
- Most staff were adequately informed of the purpose of the CNR (92%), were able to discuss their patient (96%) and own learning needs (92%).  
- 83% felt the CNR had changed their practice – e.g. improved documentation, knowledge of condition, decision-making and prioritisation skills. 23 of 24 felt the CNR had a positive impact on their practice.  
- All staff felt the facilitators had the necessary skills to meet their learning needs and 96% felt supported during the CNR.  
Most frequent learning (CNR records) included documentation, pathophysiology of shock, significance of observations, dependency scoring, appropriate use of oxygen therapy/devices. |
| Kirk (2007)               | Survey      | Community Heart Failure (HF) Service | To establish how GPs used the community HF service (including request of new test) and benefits                                                                                                                                                                                                         | 36 GPs who had used the HF service.  
Most GPs (90%) indicated that the test had helped to improve the accuracy of diagnosis and 80% rated the test’s usefulness in managing patients as at least 7 out of 10. |
| Porrett & McGrath (2003)  | Survey      | Gastroenterology department; NC in coloproctology | To assess both patient and staff understanding of the role of the NC in coloproctology in gastroenterology department, to establish if the current service provided by the NC met the needs of patients and staff, and to elicit suggestions for future service development. | 19 patients who had seen the NC in previous 3 months  
- Only 15% of patients knew of NC role; after seeing 89% felt they understood the role  
- 95% felt to discuss their medical problem  
- 95% given enough information; 89% had enough time with the NC  
- 100% found the NC attentive and felt listened to  
- 100% felt NC was competent, 95% felt confident about seeing the NC and 95% would be happy to see again  
- Most staff felt the NC post was a positive move for nursing profession  
- 90% felt it improved professional status of nursing and would increase career pathway (100%)  
- 83% felt it raised opportunities for further posts; 95% raised profile of nursing at the hospital  
- 90% felt the NC would improve the range of services offered to patients, and this would support & enhance medical services (95%). |
<table>
<thead>
<tr>
<th>Reference</th>
<th>Methodology</th>
<th>Setting</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Only study report (2004) Levenson Goodman &amp; Drennan, only study report 2005 (DHSSPS Safety Services &amp; Social Department, 2007) Abbott (2007) Pottle (2005)</td>
<td>Rapid access chest pain clinic (RACPC)</td>
<td>To establish patients clinical outcomes and satisfaction with the new RACPC service. To explore GPs satisfaction with the new RACPC service.</td>
<td>173 angina patients who had attended the clinic and were 6 months post-attendance 13 GPs who used the service in first 6 months. 99.4% were very satisfied/satisfied with service; over 95% were happy with explanation of test (2.3% no response); 83.2% were happy with explanation for the cause of chest pain (3.5% no respond). No patients had any further cardiac outcomes (except 1 diagnosed with angina). Ease of referral (5 very good, 5 good, 2 satisfactory); speed of report (3 very good, 2 good, 6 satisfactory); quality of information (3 very good, 6 good, 2 satisfactory); overall satisfaction (4 very good, 4 good, 2 satisfactory). No services were reported as poor.</td>
</tr>
<tr>
<td>Tonkin (2007)</td>
<td>Survey Haematology</td>
<td>To evaluate the new NC-led follow-up telephone service</td>
<td>65 patients with stable haematological disease in one hospital 90% preferred new telephone clinic. Most found clinic convenient (e.g. save transport/time/parking/waiting) and viewed the information provision positively. Some were concerned about obtaining tests/precriptions from their GP.</td>
</tr>
<tr>
<td>Department of Health, Social Services &amp; Public Safety (DHSSPS 2005) – study report only</td>
<td>Qualitative interviews Various primary care disciplines</td>
<td>To elicit stakeholders views of the establishment and early progress of the new NC posts, and lessons learnt. Paper focuses on theme: ‘leadership across boundaries’.</td>
<td>4 NCs, 5 directors, 1 project director, 1 clinical director, 3 assistant directors, 2 managers, 3 joint commissioning officers. Child Protection Post – Consultancy, advice and support to other staff; supervision of other staff; training programme for organisation. Learning Disabilities Post – Improving mainstream capacity; advice to other staff; service development; value of NC to healthcare professionals. Public Health Post (most narrowly defined and had least impact) – Help/advice/facilitate other staff; no evidence of leadership; educational programme for staff. Intermediate Care Post – General staff training; service development.</td>
</tr>
<tr>
<td>Drennan, Goodman &amp; Levenson (2004) – study report only</td>
<td>Multiple methods (e.g. structured interviews, diaries, focus groups) Not specified</td>
<td>To determine how the NC posts were being developed and supported, and clarify any issues about the future development of the NC role in Northern Ireland.</td>
<td>5 NCs and up to 30 key stakeholders and 1 chief nursing officer. Role modelling/support/advice in clinical practice to other professionals Education of staff Maintaining and developing networks in their area of interest Development of services/practice Leadership Developing national policy Encouraging staff own professional development Promoting evidence-based care Strategic initiative involvement</td>
</tr>
<tr>
<td>Drennan, Goodman &amp; Levenson (2004) – study report only</td>
<td>Interviews (most on telephone) Various primary care settings</td>
<td>To evaluate the cohort of primary care NCs over 3 years, including the views/perceptions of senior managers/medical consultants.</td>
<td>2 chief executives, 2 directors of nursing, 2 senior managers, 1 medical director and 5 medical consultants Perception of remit/role of NC - Direct clinical work/improving care; directly deal with patient needs and enabling other nurses; services focus on patient experience; clinical leadership; transferring skills; developing quality standards/services; support senior nurse retention; motivate/guide other nurses in research; taking on new roles/substitution of medical roles Benefits of NC - transfer skills/morale boosting; improve standards of care Relationships of NC with other professionals - positive relationship with doctors (but juniors can feel threatened); remit/workload of others; little data re impact on other nurses Education implications of NCs - benefits to other nurses of NC expertise Resource implications of NCs - cost-effective/value of NCs; quality as important as cost; patients more satisfied as longer appointments; recruitment and retention (indirect saving) Criteria for evaluating the success of NCs - improving standards/outcomes/performance;</td>
</tr>
<tr>
<td>Study</td>
<td>Method</td>
<td>Setting</td>
<td>Description</td>
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<tr>
<td>Tolson et al. (2006)</td>
<td>Diary and field notes</td>
<td>Critical care</td>
<td>To describe the actual clinical activities undertaken by a critical care NC in a blood transfusion unit (BDHU)</td>
</tr>
<tr>
<td>Manley et al. (2008)</td>
<td>Action research using a 6 month co-operative inquiry approach</td>
<td>Older people</td>
<td>Explore how the leadership function of the NC role was reflected in day-to-day working, identify strategies, factors that enable and trigger the need for leadership strategies, and the outcomes.</td>
</tr>
<tr>
<td>Guest et al. (2004)</td>
<td>Four face-to-face focus groups</td>
<td>Various</td>
<td>To explore the impact of the nurse/midwife or health visitor (NMHV) consultants on patient care.</td>
</tr>
<tr>
<td>Closs et al. (2006)</td>
<td>Multiple methods (e.g. interviews, focus groups)</td>
<td>Not specified</td>
<td>To evaluate the extent to which the overall aims of the posts were achieved and to assess the contribution made by the NCs. Furthermore, the Directors of Nursing wished to explore whether a NC brought added value.</td>
</tr>
</tbody>
</table>

**Study report - 3 NCs, their directors of nursing and 13 stakeholders**

**Publication - 4 NCs (but)**

**Case load management/demands on junior doctors; care across boundaries (e.g. referral pathways); improving patient satisfaction; teaching others; evidence-based policies/procedures adoption; value for money; improving career options for nurses; increased job satisfaction of NCs; better support by NCs to junior nurses leading to greater confidence.**

- Clinical instruction – deliberate teaching/explaining to other staff; improve outcomes for, or reduce risk to, patients; clinical supervision/support/education.
- In validation of findings, ward sisters indicated potential role overlap/feeling threatened among ward staff.

**Achievements – Development of processes/performance; leadership to improve efficiency/quality/practice; networking and engaging others; improving patient care; research/presentations and sharing knowledge.**

- View of impact – service development/ improvement; reduction in mortality/morbidity; meet targets; reduce patient waiting time; patients acceptance of NC.  
- Training and professional impact – staff skills training; provision of supervision; contribute to staff morale; valued role model.
| (2009), publication | McSherry, Mudd & Campbell (2007) | Qualitative semi-structured interviews. | Various | To evaluate the perceived impact of the NC role using a 360-degree feedback evaluation approach through the lived experience of the staff. | 3 NCs and 27 stakeholders (e.g. managers, medical & nursing colleagues) | Many of themes were more focused on expectations rather than actual impact/achievements: | - Leadership activity of NCs - implementing new initiatives; developing practice; guiding practitioners; contributing to local/national/policy groups | - Leadership processes within NC activity - transformational leadership; providing vision and identifying steps to pursue vision; concern for wellbeing/reactions of staff | - Value of the NC leadership to the service - service delivery; valuable professional role model; developing skills and confidence; converting policy into reality |
| | Redwood et al. (2007) – relates to McSherry et al 2007 | Qualitative semi-structured interviews. | Various | To evaluate the impact of the NC role. | 14 NCs (9 acute, 5 mental health) and undisclosed number of stakeholders (e.g. clinical/academic colleagues, managers) | - Role aspirations and lived reality - lead, promote and develop services for patients and staff; positive contribution to nursing profession; well respected/credible/valued; good working relationships and communication; influencing policy at national level; political influence | - Challenging boundaries - practice development; implications for workload | - Impact and outcomes - service improvements; develop communications/inter-agency working/processes; strategic/policy initiatives at a national level |
| | Ryan et al. (2006) | Qualitative semi-structured interviews. | Rheumatology | To identify the perceptions of peers and patients regarding the role and impact of one NC in rheumatology. | 5 rheumatoid arthritis patients | - Holistic person-centred care (including physical and social concerns) | - Valued by the patient/preference to see NC | - Feeling cared for/important | - Positive consultation with NC | - Satisfaction with care | - Service development/new model of care | - Patients taking ownership of symptoms | - Cultural change | - Leadership (clinical/political) | - Education | - Clinical mentorship role |
| | Tough (2006) – dissertation only | Qualitative semi-structured ‘discovery’ interviews. | Rapid access chest pain clinic (RACPC) | To evaluate the development of NC-led RACPC and compare from a patient’s perspective their perceptions and satisfaction with both nurse & doctor-led clinics. | 10 RACPC attendees in each group (NC vs doctor led) who did not require secondary or tertiary care (i.e. discharged back to GP) | - Waiting times | - Acceptance - preference/happy to see either doctor or nurse | - Positive explanations/experiences | - Cost effectiveness | - Reassured after attending | - Satisfied with care (slightly higher in NC group) | - Adherence to follow-up appointment | - Understanding among patients |
| | Unsworth & Cook (2003) – study | Multiple methods (e.g. focus groups, interviews) | Not specified | To evaluate the impact NCs have on clinical practice, particularly how the NC conceptualised clinical | Focus groups: 7 NCs Interviews: 10 NCs (but only 9 completed) | - Changing, developing or extending practice (e.g. identifying best practice/gaps) | - Role modelling/shadowing/supervision/giving advice & knowledge to others/supporting others |
| Woodward, Webb & Prowse (2005, 2006) – two articles | Qualitative unstructured interviews. | Various | To explore the work of the NCs, with particular reference to research aspects and NCs characteristics and achievements in the role | 10 NCs from various hospitals in one region | - Developing new services  
- Consultant on nursing matters within organisation  
- Skill development and identifying education/training needs of others  
- Inter-organisational/multi-agency activities  
- Take forward trust-wide remits to improve nursing and enhance patient care  
- Clinical leadership  
- Move nursing forward and raise standards of nursing  
- Inter-staff conflict  
- Resource for development of healthcare team  
- Empowerment of front-line staff  
- Support provided to others  
- Raising awareness and taking nursing forward  
- Encourage/nurture cultural change  
- Facilitating other nurses undertaking research |
# Appendix 2: Summary of review articles included in advanced practice nursing (APN) review

<table>
<thead>
<tr>
<th>Included study</th>
<th>Clinical significance</th>
<th>Professional significance</th>
<th>Clinical area/patient group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bolton et al (2007)</td>
<td>✓ e.g. symptom distress</td>
<td>✓ work satisfaction</td>
<td>Various</td>
</tr>
<tr>
<td>Bonsall &amp; Cheater (2008)</td>
<td>✓ e.g. glycemic control</td>
<td>✓ e.g. acceptance on nurses’ referral/requests</td>
<td>Various – primary care</td>
</tr>
<tr>
<td>Brooten et al (2002)</td>
<td>✓ e.g. infant morbidity</td>
<td>✓ refusal to act on nurses’ referral/requests</td>
<td>Various</td>
</tr>
<tr>
<td>Brown &amp; Grimes (1995)</td>
<td>✓ resolution of BP</td>
<td>✓ e.g. acceptance of other HPs</td>
<td>Various</td>
</tr>
<tr>
<td>Carey &amp; Courtenay (2007)</td>
<td>✓ e.g. weight</td>
<td>✓ e.g. acceptance of other HPs</td>
<td>Various</td>
</tr>
<tr>
<td>Carter &amp; Chochinov (2007)</td>
<td>✓ patient satisfaction</td>
<td>✓ e.g. laboratory tests</td>
<td>ED patients</td>
</tr>
<tr>
<td>Chapman et al (2004)</td>
<td>✓ e.g. asthma morbidity</td>
<td>✓ e.g. views of service</td>
<td>Various – primary care/GP</td>
</tr>
<tr>
<td>Charlton et al (2008)</td>
<td>✓ e.g. patient satisfaction</td>
<td>✓ adherence to txt plans</td>
<td>Not specified</td>
</tr>
<tr>
<td>Coddington &amp; Sands (2008)</td>
<td>✓ e.g. satisfaction</td>
<td>✓ e.g. ER visits/use</td>
<td>Various – mostly primary care</td>
</tr>
<tr>
<td>Corner (2003)</td>
<td>✓ e.g. anxiety</td>
<td>✓ e.g. ability to self care</td>
<td>Cancer (various)</td>
</tr>
<tr>
<td>Courtenay &amp; Carey (2006)</td>
<td>✓ severity of atopic eczema</td>
<td>✓ e.g. views of nurse visit</td>
<td>Dermatology</td>
</tr>
<tr>
<td>Courtenay &amp; Carey (2008)</td>
<td>✓ e.g. pain intensity</td>
<td>✓ e.g. change in drug txs</td>
<td>Acute and chronic pain</td>
</tr>
<tr>
<td>Cox &amp; Wilson (2003)</td>
<td>✓ depression</td>
<td>✓ e.g. preference for telephone nurse-led</td>
<td>Cancer</td>
</tr>
<tr>
<td>Craig (2005)</td>
<td>✓ cancellations</td>
<td>✓ reduction in medical outpatient workload</td>
<td>Surgical in-</td>
</tr>
<tr>
<td>Authors (Year)</td>
<td>Measures</td>
<td>Settings</td>
<td></td>
</tr>
<tr>
<td>----------------------------</td>
<td>---------------------------------------------------------------------------</td>
<td>----------</td>
<td></td>
</tr>
<tr>
<td>Cruickshank et al (2009)</td>
<td>e.g. physical/soc. recovery, e.g. mood, e.g. self care</td>
<td>Breast cancer</td>
<td></td>
</tr>
<tr>
<td>Cunningham (2004)</td>
<td>e.g. symptoms, e.g. provision of support, e.g. time to readmission, malpositioned endotracheal tubes</td>
<td>General and Cancer specific</td>
<td></td>
</tr>
<tr>
<td>De Bröe et al (2001)</td>
<td>mobility, e.g. carer’s QoL, rates of referrals to other agencies, GP knowledge of MS</td>
<td>MS</td>
<td></td>
</tr>
<tr>
<td>Dealey (2001)</td>
<td>return to usual activity, patient satisfaction, e.g. x-ray requests, e.g. preference for Dr/NP</td>
<td>A&amp;E</td>
<td></td>
</tr>
<tr>
<td>Delagado-Passler &amp; McCaffrey (2006)</td>
<td>e.g. anxiety, e.g. self efficacy, e.g. no. of ED visits</td>
<td>Heart failure</td>
<td></td>
</tr>
<tr>
<td>Dierick-van Daele et al (2008)</td>
<td>e.g. disease activity, e.g. health-related QoL, e.g. return visits</td>
<td>Various</td>
<td></td>
</tr>
<tr>
<td>Douglas et al (2003)</td>
<td>e.g. recurrence of morbidity, e.g. confidence, e.g. complications, GP satisfaction</td>
<td>Various/ several cancer focused</td>
<td></td>
</tr>
<tr>
<td>Du Moulin et al (2005)</td>
<td>e.g. incontinence episodes, e.g. patient satisfaction, cost</td>
<td>Incontinence</td>
<td></td>
</tr>
<tr>
<td>Eicher et al (2006)</td>
<td>e.g. arm functioning, e.g. perceived control over health, e.g. costs, patient intention of future care</td>
<td>Breast cancer</td>
<td></td>
</tr>
<tr>
<td>Forbes et al (2003)</td>
<td>e.g. neurological status, e.g. functional status, e.g. emergency hospitalisation, e.g. patients view re MS CNS, improved care by nurses/carers, GP workload, GP view re usefulness of nurse</td>
<td>MS</td>
<td></td>
</tr>
<tr>
<td>Free et al (2009)</td>
<td>e.g. ability to accurately interpret x-rays</td>
<td>X-ray/emergency</td>
<td></td>
</tr>
<tr>
<td>French et al (2009)</td>
<td>e.g. lung function, health-related QoL, e.g. hospital admissions</td>
<td>Bronchiectatis</td>
<td></td>
</tr>
<tr>
<td>Hagell (2007)</td>
<td>PD specific outcomes, e.g. health status, e.g. no. of bone fractures, usefulness of service</td>
<td>Parkinson's</td>
<td></td>
</tr>
<tr>
<td>Halcomb et al (2007)</td>
<td>e.g. coronary events, health and wellbeing, e.g. cost-effectiveness, acceptance by patients</td>
<td>Mixed but focus on cardiac</td>
<td></td>
</tr>
<tr>
<td>Horrocks et al</td>
<td>communication, e.g. return</td>
<td>Mixed</td>
<td></td>
</tr>
<tr>
<td>Year</td>
<td>Study Authors</td>
<td>Keywords</td>
<td>Setting</td>
</tr>
<tr>
<td>------------</td>
<td>--------------------------------</td>
<td>--------------------------------------------------------------------------</td>
<td>----------------------------------------------</td>
</tr>
<tr>
<td>2002</td>
<td>Ingersoll et al (2005)</td>
<td>e.g. lipid levels, e.g. psychosocial factors, e.g. in-patient bed days,</td>
<td>Health care, Emergency, Hypertension</td>
</tr>
<tr>
<td></td>
<td>Keleher et al (2009)</td>
<td>e.g. knowledge, e.g. resource use, e.g. nurses knowledge, e.g. staff</td>
<td>Mixed primary care</td>
</tr>
<tr>
<td>2005</td>
<td>Kleinpell (2009)</td>
<td>depression, e.g. patient satisfaction, e.g. emergency visits, e.g. nurses’</td>
<td>Mixed primary care</td>
</tr>
<tr>
<td>2008</td>
<td>Kleinpell et al (2008)</td>
<td>symptoms, e.g. parent satisfaction, e.g. ventilator time, NP job</td>
<td>Acute/critical care settings</td>
</tr>
<tr>
<td></td>
<td>LaRochelle (1987)</td>
<td>e.g. weight reduction, e.g. knowledge, compliance</td>
<td>Emergency hypertension patients</td>
</tr>
<tr>
<td>2004</td>
<td>Laurant et al (2004)</td>
<td>e.g. resolution of symptoms, e.g. QoL, e.g. attendance at appointments,</td>
<td>Mixed primary care</td>
</tr>
<tr>
<td></td>
<td>Lawrence (1978)</td>
<td>e.g. BP, e.g. knowledge of condition, e.g. return-visit rate, e.g. refusal</td>
<td>Mixed</td>
</tr>
<tr>
<td>2009</td>
<td>Lewis et al (2009)</td>
<td>depression, e.g. patient satisfaction, e.g. costs of follow-up, e.g.</td>
<td>Cancer</td>
</tr>
<tr>
<td>2003</td>
<td>Loveman et al (2003)</td>
<td>e.g. HbA1c, QoL, e.g. emergency room visits</td>
<td>Diabetes</td>
</tr>
<tr>
<td>2002</td>
<td>Meads et al (2002)</td>
<td>e.g. seizures, e.g. impact of epilepsy, e.g. admissions, preference of</td>
<td>Epilepsy</td>
</tr>
<tr>
<td>2005</td>
<td>Page et al (2005)</td>
<td>e.g. episodes of angina, e.g. general health status, e.g. follow-up</td>
<td>Coronary heart disease</td>
</tr>
<tr>
<td></td>
<td>Phillips et al (2005)</td>
<td>QoL, readmission rate, e.g. adverse events, e.g. improved working lives</td>
<td>Heart failure</td>
</tr>
<tr>
<td></td>
<td>Smith et al (2004)</td>
<td>e.g. symptom relief, e.g. functional status, e.g. use of appropriate</td>
<td>Surgery/anaesthetic patients</td>
</tr>
<tr>
<td></td>
<td>Sox (1979)</td>
<td>e.g. symptom relief, e.g. functional status, e.g. use of appropriate</td>
<td>Mixed</td>
</tr>
<tr>
<td></td>
<td>Spilsbury &amp; Meyer</td>
<td>e.g. pain, e.g. self-esteem, e.g. recovery</td>
<td>Mixed (not specified)</td>
</tr>
<tr>
<td>Year</td>
<td>Authors</td>
<td>Intensity</td>
<td>Rates</td>
</tr>
<tr>
<td>------</td>
<td>---------</td>
<td>-----------</td>
<td>-------</td>
</tr>
<tr>
<td>2001</td>
<td>Srivastava et al (2008)</td>
<td>✓ e.g. intensity</td>
<td>✓ e.g. rate of intubation</td>
</tr>
<tr>
<td>2009</td>
<td>Sutherland &amp; Hayter (2009)</td>
<td>✓ e.g. BP</td>
<td>✓ e.g. health status</td>
</tr>
<tr>
<td>2005</td>
<td>Taylor et al (2005)</td>
<td>✓ e.g. psychological wellbeing</td>
<td>✓ e.g. health-related behaviour</td>
</tr>
<tr>
<td>2000</td>
<td>Temmink et al (2000)</td>
<td>✓ e.g. pain</td>
<td>✓ e.g. coping strategies</td>
</tr>
<tr>
<td>2007</td>
<td>Thompson &amp; Dykeman (2007)</td>
<td>✓ physical endurance</td>
<td>✓ e.g. QoL</td>
</tr>
<tr>
<td>2008</td>
<td>Van Ruth et al (2008)</td>
<td>✓ e.g. symptom relief</td>
<td>✓ e.g. patient enablement</td>
</tr>
<tr>
<td>2000</td>
<td>Vrijhoef et al (2000)</td>
<td>✓ e.g. Forced expiratory volume</td>
<td>✓ e.g. QoL</td>
</tr>
<tr>
<td>2009</td>
<td>Wilson et al (2009)</td>
<td>✓ e.g. patient satisfaction</td>
<td>✓ e.g. waiting times</td>
</tr>
<tr>
<td>1994</td>
<td>Wilson-Barnett &amp; Beech (1994)</td>
<td>✓ psychological adjustment</td>
<td>✓ e.g. satisfaction with information</td>
</tr>
</tbody>
</table>
Appendix 3: Feedback on the draft toolkit

The feedback received from the individuals who reviewed the draft version of the toolkit was extremely positive. There were several areas that the reviewers were asked to comment on, which are outlined in the sections below.

Readability, language and tone

Overall, the reviewers indicated that the toolkit was easy to read, and the language and tone was pitched at the right level.

The language is interactive, friendly, simple.

Content

The content of the toolkit was considered to be very relevant to nurses at consultant level and also potentially for other healthcare professionals (e.g. consultant midwives, allied health professional consultants). A few suggestions were made on areas where details could be enhanced or additional points added to strengthen the content. The level of detail included was considered to be appropriate for both new and experienced nurse consultants:

We are so early on in terms of systematically providing evidence of our input that I do think this amount of detail needs to be retained.

Some suggestions were made on improving the navigation so that nurse consultants could easily identify the sections that were relevant to them and to allow the toolkit to be used sporadically by all nurse consultants as and when they needed to refer to it for advice.

The outline of the framework (patients, staff, organisation) for capturing impact and using this framework to structure the toolkit was viewed very positively:

I particularly like the recognition of the need to record impact external to the organisation. I feel this level of post requires influencing skills that are vital to bringing about change and developing new services. One means of assessing effectiveness of influencing the national agenda could be through external commitments.

Some nurse consultants queried why the toolkit had not focused on the four core dimensions of the role (e.g. expert practice, leadership, education, research and service development), but during the discussion many positive comments were made about the approach taken in terms of using the framework of impact:

I think it makes much more sense in terms of explaining yourself to others, rather than saying I provide leadership!

Furthermore, the senior managers who were part of the project advisory group felt that the framework offered nurse consultants a very helpful way to explore the impact of their role:

I wanted to use that framework now!

Helpful - there will be aspects that haven’t been considered before. The explanation of direct and indirect impact is particularly helpful.

Activities

The activities/exercises included in the toolkit were regarded as very useful. Several reviewers considered that they could be used flexibly, rather than working through each and all activities in their entirety:
I think with activities like these once you have got the hang of the first one you will probably cut corners on any future ones e.g. I’d probably want to merge activities 2 and 3 together, and also possibly with activity 5 & 6.

Although some reviewers felt the activities would be time-consuming, most indicated that they would use them as they would be helpful to reflect on their practice and impact.

**Structure**

The structure (including the example tools, case study scenarios/published literature and quotes) were generally viewed positively:

*I liked the structure – it’s logical and ‘tells the story’. The tools are practical and usable and examples help to illustrate the points.*

Some improvements to the presentation were proposed. Several reviewers suggested that it would be useful for the tools to be available as Word documents to enable nurse consultants to adapt them as appropriate. One of the PPI representatives felt that in time nurse consultants would be able to incorporate the data collection with these tools into everyday practice:

*Once you’ve got the mindset, they’ll be able to collect the data as part of day-to-day practice.*

Overall reviewers liked the use of the real life examples from the case studies.

**Applicability**

Overwhelmingly, the toolkit was seen as applicable to the nurse consultants who were involved in this review and the managers who felt it was relevant to the nurse consultants in their Trust. Overall, it was considered to be applicable to a wide variety of different nurse consultant posts because many of the themes identified in the toolkit were generic:

*It is reassuring there are such common themes in what seem from the outside, such disparate posts.*

Various suggestions to help enhance the utility of the toolkit were made, in particular electronic availability of the toolkit and access to the additional resources (e.g. databases that link to some of the example tools) that were developed as part of the case studies.

Several people commented on the usefulness of the toolkit to inform the annual review process and as a resource for new nurse consultant posts. The toolkit was also considered to be useful in facilitating reflective practice and continuing professional development for all nurse consultants:

*Yes, I could see it forming part of performance review and own portfolio/record of progress. It enables you to say ‘actually I am doing OK.*

*It should be in the induction pack for new nurse consultants.*

*If new to post I would find the toolkit very useful but also it is useful for any nurse consultant to reflect on their practice and provide evidence to support and improve practice.*

Reviewers identified the benefit of undertaking a future evaluation of the toolkit with those that use it in practice to provide a more comprehensive validation of its usefulness and application. Published case studies were suggested as a way to illustrate the real life experiences of nurse consultants and the practicality of actually using the toolkit.

This preliminary validation of the toolkit provided some very positive feedback and suggestions that informed the development of the final version of the toolkit. These findings suggest that the toolkit will provide nurse consultants with a useful and practical resource to help them to capture the impact of their roles.