National Council for the
Professional Development
of Nursing and Midwifery

An Chomhairle Náisiúnta d'Fhorbairt
Ghairmiúil an Altranais agus
an Chnáimhseachais

Evaluation of Clinical Nurse and Midwife Specialist and Advanced Nurse and Midwife Practitioner Roles in Ireland

(SCAPE)

SUMMARY REPORT

December 2010

Mission Statement of the National Council

The purpose of the Council is to promote and develop the professional roles of nurses and midwives in partnership with stakeholders in order to support the delivery of quality nursing and midwifery care to patients/clients in a changing healthcare environment.

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December 2010

TRINITY COLLEGE DUBLIN

University of Dublin
Trinity College Dublin
School of Nursing and Midwifery

School of Nursing and Midwifery

Prepared for the National Council for the Professional Development of Nursing and Midwifery in Ireland

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Research acknowledgments

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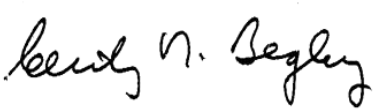


Professor Cecily Begley

Professor Kathy Murphy

Foreword

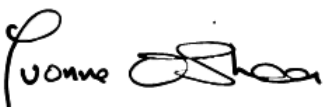
The Irish health system has moved towards a population health approach for the provision of health services and healthcare. Changing models of care delivery in tandem with the changing demographic and epidemiological profile of the population will signal the service requirements into the future. The Irish health service is driven by policy direction aiming to provide more services within primary, community and continuing care. The nursing and midwifery professions in Ireland have undergone significant change over the past decade, particularly in relation to the clinical role and responsibilities of nurses and midwives in order to provide responsive care delivery. Patient safety and risk controls necessitate on-going clinical audit, utilization of evidence-based practice, adherence to clinical guidelines, introduction of care pathways and peer review. *The Report of the Commission on Nursing* (Government of Ireland 1998) was the catalyst for the introduction of a clinical career pathway that would encompass progression from staff nurse or staff midwife to clinical nurse or midwife specialist to advanced nurse or midwife practitioner. The creation and development of this clinical career pathway has taken place against a background of health service reform, an integrated approach to health policy and service model implementation, and development of pre- and post-registration education and training programmes within the higher education sector and in local and regional centres of nurse and midwife education.

To this end the National Council for the Professional Development of Nursing and Midwifery commissioned a joint research team from the Schools of Nursing and Midwifery, Trinity College, Dublin and the National University of Ireland, Galway through an open tender process to evaluate the role of the Clinical Nurse/Midwife Specialist and Advanced Nurse/Midwife Practitioner, focusing on the clinical and economic impact of the roles.

This study, through extensive research methods, utilising a variety of data collection tools, has examined the clinical outcomes of clinical specialists and advanced practitioners in Ireland. This study has demonstrated conclusively that care provided by clinical specialists and advanced practitioners improves patient/client outcomes, is safe, acceptable and cost-neutral. Nursing and midwifery care is provided in a complex changing environment and it is critically important that resources are utilised in a cost-effective, strategic manner. The study shows the potential of clinical specialists and advanced practitioners to support implementation of health policy, meet the changing health needs of the population, address patient expectations, contribute to service reconfiguration and provide nursing and midwifery leadership for the introduction of care models and care programmes into the HSE and, potentially, other health services. Clinical specialists and advanced practitioners support a safe environment for patients by increasing the use of evidence-based clinical guidelines. Their overall positive effect on patient/client care, other staff and the health services in general is very apparent. Given these considerable benefits, and the fact that the economic analysis did not demonstrate a difference in costs between services with clinical specialists/advanced practitioners and the comparison sites, there is a strong case for introducing more clinical specialists and advanced practitioners.

This Summary Report and a Final Report are available to download from our website: www.ncnm.ie

I would like to thank the research teams led by Professor Cecily Begley from the School of Nursing and Midwifery, Trinity College, Dublin and Professor Kathy Murphy from the School of Nursing and Midwifery, National University of Ireland, Galway for their professionalism, hard work and dedication to the project. I would like to thank the Steering Committee, Valerie Small, Aveen Murray, Mary Duff and Professor Sally Redfern for their expert advice and support. Finally I would like to thank my colleagues Dr Kathleen Mac Lellan, Head of Professional Development, Dr Sarah Condell, Research Development Officer and Mary Farrelly, Professional Development Officer who continuously supported this project.



Yvonne O'Shea
Chief Executive Officer

Glossary & Acronyms

AMP	Advanced Midwife Practitioner
ANP	Advanced Nurse Practitioner
AP	Advanced Practitioner, referring to both Advanced Nurse Practitioner and Advanced Midwife Practitioner (when neither is being referred to distinctly).
APN	Advanced Practice Nursing. This is an umbrella term used to encompass the specific roles of nurses who practise at a more advanced level than that of traditional nurses.
CMS	Clinical Midwife Specialist
CNS	Clinical Nurse Specialist
CS	Clinical Specialist, referring to both Clinical Nurse Specialist and Clinical Midwife Specialist (when neither is being referred to distinctly).
DE	Documentary evidence
Delphi	The Delphi survey technique, which is used in the SCAPE Study, is a structured, group-interaction process that is directed in 'rounds' of collection of views and opinion, and feedback. This iterative, multistage process is designed to transform views and opinion into group consensus.
DNA	Did not attend
DoHC	Department of Health and Children
DoM	Director of Midwifery
DoN	Director of Nursing
EB	Evidence-based
EBP	Evidence-based practice
ED	Emergency Department
GP	General Practitioner
HIPE	Hospital In-Patient Enquiry
HIQA	Health Information and Quality Authority
HRB	Health Research Board
HSE	The Health Services Executive is responsible for providing health and personal social services for everyone living in Ireland, with public funds.
KPI	Key performance indicators
MDT	Multidisciplinary team
Midwife-led care	Midwife-led care has been defined by the Cochrane protocol as "the context of care where the midwife is the lead professional in the planning, organisation and control of the care given to a woman from initial booking to the postnatal period" (RCOG 2001). In these models, the midwife is, in partnership with the woman, the lead professional with responsibility for assessing her needs, planning her care, referring her to other health professionals as appropriate and ensuring provision of maternity services (Hatem et al 2008).
National Council	National Council for the Professional Development of Nursing and Midwifery, referred to as 'the National Council' in the text and as NCNM in references.

NCNM	National Council for the Professional Development of Nursing and Midwifery
NQAI	National Qualifications Authority of Ireland
Non-postholding	Clinical areas where Clinical Nurse Specialists, Clinical Midwife Specialists, Advanced Nurse Practitioners and Advanced Midwife Practitioners are not employed.
Nurse-led care	Nurse-led care is distinct from nurse-coordinated or nurse-managed services. It is provided by nurses responsible for case management, which includes comprehensive patient/client assessment, developing, implementing and managing a plan of care, clinical leadership, and decision to admit or discharge. Patients/clients will be referred to nurse-led services by nurses, midwives or other healthcare professionals, in accordance with collaboratively agreed protocols. Such care requires enhanced skills and knowledge and the nurse will need preparation in both the clinical and management aspects of the role. Such nurses will be practising at an advanced level and may be working in approved specialist or advanced practice roles (NCNM 2003).
NP	Nurse Practitioner
Postholder	A Clinical Nurse Specialist, Clinical Midwife Specialist, an Advanced Nurse Practitioner, or an Advanced Midwife Practitioner
Postholding	Clinical areas where Clinical Nurse Specialists, Clinical Midwife Specialists, Advanced Nurse Practitioners and Advanced Midwife Practitioners are employed.
SCAPE Study	This report, The *Evaluation of Clinical Nurse and Midwife Specialist and Advanced Nurse and Midwife Practitioner Roles in Ireland*, is referred to as the *SCAPE Study (Specialist Clinical and Advanced Practitioner Evaluation)* for the sake of brevity.
Specialist practice	Specialist practice indicates that a nurse or midwife is practising in a focused area of clinical practice, with additional education and experience in that clinical area.
SPO	Donabedian's structure-process-outcome framework
SU	Service user

Definition

Advanced Nurse/Midwife Practitioner (ANP/AMP)[1, 2]

ANPs/AMPs promote wellness, offer healthcare interventions and advocate healthy lifestyle choices for patients/clients, their families and carers in a wide variety of settings in collaboration with other healthcare professionals, according to agreed scope of practice guidelines. They utilise advanced clinical nursing/midwifery knowledge and critical thinking skills to independently provide optimum patient/client care through caseload management of acute and/or chronic illness. Advanced nursing/midwifery practice is grounded in the theory and practice of nursing/midwifery and incorporates nursing/midwifery and other related research, management and leadership theories and skills in order to encourage a collegiate, multidisciplinary approach to quality patient/client care.

Advanced nursing and midwifery practice is carried out by autonomous, experienced practitioners who are competent, accountable and responsible for their own practice. They are highly experienced in clinical practice and are educated to Master's degree level (or higher). The postgraduate programme must be in nursing/midwifery or an area which is highly relevant to the specialist field of practice (educational preparation must include substantial clinical modular component(s) pertaining to the relevant area of specialist practice).

ANP/AMP roles are developed in response to patient/client need and healthcare service requirements at local, national and international levels. ANPs/AMPs must have a vision of areas of nursing/midwifery practice that can be developed beyond the current scope of nursing/midwifery practice and a commitment to the development of these areas.

Core concepts

Autonomy in clinical practice

An autonomous ANP/AMP is accountable and responsible for advanced levels of decision making which occur through management of specific patient/client caseload. ANPs/AMPs may conduct comprehensive health assessment and demonstrate expert skill in the clinical diagnosis and treatment of acute and/or chronic illness from within a collaboratively agreed scope of practice framework alongside other healthcare professionals. The crucial factor in determining advanced nursing/midwifery practice, however, is the level of decision making and responsibility rather than the nature or difficulty of the task undertaken by the practitioner. Nursing or midwifery knowledge and experience should continuously inform the ANP's/AMP's decision making, even though some parts of the role may overlap the medical or other healthcare professional role.

Expert practice

Expert practitioners demonstrate practical and theoretical knowledge and critical thinking skills that are acknowledged by their peers as exemplary. They also demonstrate the ability to articulate and rationalise

[1]National Council for the Professional Development of Nursing and Midwifery (NCNM) (2008) *Framework for the Establishment of Advanced Nurse/Midwife Practitioners* (4th edn.) NCNM, Dublin.

[2]National Council for the Professional Development of Nursing and Midwifery (NCNM) (2008) *Accreditation of Advanced Nurse Practitioners and Advanced Midwife Practitioners* (2nd edn.) NCNM, Dublin.

the concept of advanced practice. Education must be at Master's degree level (or higher) in a programme relevant to the area of specialist practice and which encompasses a major clinical component. This postgraduate education will maximise pre- and post-registration nursing/midwifery curricula to enable the ANP/AMP to assimilate a wide range of knowledge and understanding which is applied to clinical practice.

Professional and clinical leadership

ANPs/AMPs are pioneers and clinical leaders in that they may initiate and implement changes in healthcare service in response to patient/client need and service demand. They must have a vision of areas of nursing/midwifery practice that can be developed beyond the current scope of nursing/midwifery practice and a commitment to the development of these areas. They provide new and additional health services to many communities in collaboration with other healthcare professionals to meet a growing need that is identified both locally and nationally by healthcare management and governmental organisations. ANPs/AMPs participate in educating nursing/midwifery staff, and other healthcare professionals through role-modelling, mentoring, sharing and facilitating the exchange of knowledge both in the classroom, the clinical area and the wider community.

Research

ANPs/AMPs are required to initiate and coordinate nursing/midwifery audit and research. They identify and integrate nursing/midwifery research in areas of the healthcare environment that can incorporate best evidence-based practice to meet patient/client and service need. They are required to carry out nursing/midwifery research which contributes to quality patient/client care and which advances nursing/midwifery and health policy development, implementation and evaluation. They demonstrate accountability by initiating and participating in audit of their practice. The application of evidence-based practice, audit and research will inform and evaluate practice and thus contribute to the professional body of nursing/midwifery knowledge both nationally and internationally.

The nurse/midwife must:

1. Be a registered nurse or midwife on An Bord Altranais' live register
2. Be registered in the division of An Bord Altranais' live register for which the application is being made

   or,

   in recognition of services which span several patient/client groups and/or registrations, provide evidence of validated competencies relevant to the context of practice
3. Be educated to Master's degree level (or higher). The postgraduate programme must be in nursing/midwifery or an area which reflects the specialist field of practice (educational preparation must include a substantial clinical modular component(s) pertaining to the relevant area of specialist practice)
4. Have a minimum of 7 years post-registration experience, which will include 5 years experience in the chosen area of specialist practice
5. Have substantive hours at supervised advanced practice level
6. Have the competence to exercise higher levels of judgement, discretion and decision making in the clinical area above that expected of the nurse/midwife working at primary practice level or of the clinical nurse/midwife specialist
7. Demonstrate competencies relevant to context of practice
8. Provide evidence of continuing professional development.

Definition

Clinical Nurse/Midwife Specialist (CNS/CMS)[3]

The area of specialty is a defined area of nursing or midwifery practice that requires application of specially focused knowledge and skills, which are both in demand and required to improve the quality of patient/client care. This specialist practice will encompass a major clinical focus, which comprises assessment, planning, delivery and evaluation of care given to patients/clients and their families in hospital, community and outpatient settings. The specialist nurse or midwife will work closely with medical and para-medical colleagues and may make alterations in prescribed clinical options along agreed protocol driven guidelines.

The specialist nurse or midwife will participate in and disseminate nursing/midwifery research and audit and provide consultancy in education and clinical practice to nursing/midwifery colleagues and the wider interdisciplinary team. A nurse or midwife specialist in clinical practice has undertaken formal recognised post-registration education relevant to his/her area of specialist practice at level 8 or above on the NQAI framework. Such formal education is underpinned by extensive experience and clinical expertise in the relevant specialist area. The level of practice of a CNS/CMS is higher than that expected of a staff nurse or midwife.

Clinical focus

The CNS/CMS's work must have a strong patient focus whereby the speciality defines itself as nursing or midwifery and subscribes to the overall purpose, functions and ethical standards of nursing or midwifery. The clinical practice role may be divided into direct and indirect care. Direct care comprises the assessment, planning, delivery and evaluation of care to patients and their families. Indirect care relates to activities that influence others in their provision of direct care.

Patient/client advocate

The CNS/CMS role involves communication, negotiation and representation of the patient/client values and decisions in collaboration with other health care workers and community resource providers.

Education and training

The CNS/CMS remit for education and training consists of structured and impromptu educational opportunities to facilitate staff development and patient/client education. Each CNS/CMS in tandem with his/her line manager is responsible for his/her continuing professional development, including participation in formal and informal educational activities, thereby ensuring sustained clinical credibility among nursing/midwifery, medical and paramedical colleagues.

Audit and research

Audit of current nursing/midwifery practice and evaluation of improvements in the quality of patient/client care are essential requirements of the CNS/CMS role. The CNS/CMS must keep up to date with relevant

[3]National Council for the Professional Development of Nursing and Midwifery (NCNM) (2008) *Framework for the Establishment of Clinical Nurse/Midwife Specialist Posts* (4th edn.) NCNM, Dublin.

current research to ensure evidence-based practice and research utilisation. The CNS/CMS must contribute to nursing/midwifery research which is relevant to his/her particular area of practice. Any outcomes of audit and/or research should contribute to the next service plan.

Consultant

Inter and intra-disciplinary consultations, across sites and services are recognised as key functions of the clinical nurse/midwife specialist. This consultative role also contributes to improved patient/client management.

1. The person must be a registered nurse/midwife.
2. The person must be registered in the division in which the application is being made. In exceptional circumstances, which must be individually appraised, this criterion may not apply.
3. The person must have extensive experience and clinical expertise, i.e. a minimum of five years post-registration experience (following registration either in midwifery or in the division of nursing in which the application is being made) including a minimum of two years experience in the specialist area.
4. The person must have the ability to practice safely and effectively, fulfilling his/her professional responsibility within his/her scope of practice (An Bord Altranais 2000).
5. The person must provide evidence that they engage in continuing professional development.
6. The person must have undertaken formal recognised level 8 NQAI post-registration education major award relevant to his/her area of specialist practice prior to their application.

Evaluation of CNS & CMS and ANP & AMP Roles in Ireland (SCAPE)

Summary Report

1 Background to the Study

1.1. Introduction

The National Council for the Professional Development of Nursing and Midwifery (National Council) commissioned the Schools of Nursing and Midwifery, Trinity College Dublin, and National University of Ireland, Galway through an open tender process, to evaluate the role of the Clinical Nurse/Midwife Specialist and Advanced Nurse/Midwife Practitioner, focusing on the clinical and economic impact of the roles. Two reports - a Final Report and a Summary Report are available. The Final Report outlines each stage of the evaluation in extensive detail. This Summary Report provides an overview of the entire study known as SCAPE (An Evaluation of Clinical Nurse and Midwife Specialist Roles in Ireland). Appendix 1 provides the evaluation tools utilised by the research team. The results and recommendations of SCAPE provide important information to inform the ongoing transformation of the Irish health services.

1.2. Study context

1.2.1. Clinical pathways for nurses and midwives

The nursing and midwifery professions in Ireland have undergone substantial change over the past decade, particularly in relation to the clinical role and responsibilities of nurses and midwives. *The Report of the Commission on Nursing* (Government of Ireland 1998) was the catalyst for the introduction of a clinical career pathway encompassing progression from staff nurse or staff midwife to clinical nurse or midwife specialist (CNS/CMS) to advanced nurse or midwife practitioner (ANP/AMP). The creation and development of this clinical career pathway has taken place against a background of health service reform, an integrated approach to health policy and service model implementation, and development of pre- and post-registration education and training programmes within the higher education sector and in local and regional centres of nurse and midwife education. It was recognised that specialist and advanced-practice skills would enhance service delivery, thereby building the capacity of the nursing and midwifery resource. Other factors contributing to the development of the clinical career pathway include the establishment of regional structures such as the Nursing and Midwifery Planning and Development Units and the provision of funding by the National Council for projects such as site preparation for ANP/AMP posts.

1.2.2. Frameworks for Clinical Specialist and Advanced Practitioner posts

The National Council for the Professional Development of Nursing and Midwifery was formed in November 1999 under a statutory instrument (SI No. 376 of 1999), on foot of a recommendation made by the Commission on Nursing (Government of Ireland 1998, para 6.12). As stated in the statutory instrument, two of its main statutory functions are to monitor the ongoing development of nursing and midwifery specialties (taking into account changes in practice and service need), and to support and assist the health boards[4] and other relevant bodies in the creation of specialist and advanced practice nursing and midwifery posts. The National Council determined the appropriate level of qualification and experience for entry into the posts. The frameworks for the clinical career pathway in nursing and midwifery were established by the National Council in 2000, using definitions and core concepts devised by the Commission on Nursing. In the immediate clinical career pathway, applications for CNS and CMS posts were processed by members of the National Council who were located at the Department of Health and Children. The intermediate pathway, launched the following year, involved the publication of the

[4]The health boards were subsequently subsumed within the Health Service Executive's administrative areas following the establishment of the executive in 2005.

first edition of the framework document, *CNS/CMS – Intermediate Pathway* (NCNM 2001a). Development of the definition, core concepts and framework for advanced nurse practitioners (ANPs) and advanced midwife practitioners (AMPs) was taking place simultaneously; the first edition of the document *Framework for the Establishment of Advanced Nurse Practitioner and Advanced Midwife Practitioner Posts* was published the same year (NCNM 2001b). The number of CNS/CMS and ANP/AMP posts grew from 2000 to 2010 and their respective frameworks were revised in response to developments taking place in the Irish health system and the higher-education sector.[5] Responsibility for accreditation of ANP/AMP posts and registration of ANPs and AMPs has been with An Bord Altranais (the Irish Nursing Board) since January 2010, in accordance with Statutory Instrument No. 3 of 2010 (DoHC 2010a).

The introduction of CNS and CMS posts and the effectiveness of associated roles were first evaluated by the National Council in 2004 (NCNM 2004). This evaluation demonstrated that, while the posts had been widely accepted, there was a need for guidance in demonstrating the outcomes of the roles. A preliminary evaluation of ANP roles showed similar results (NCNM 2005a). These evaluations were conducted against a background of health service reform and intensive restructuring of the Irish health system, and led to the publication by the National Council of position papers relating to specialised areas of nursing (NCNM 2005b, c, 2006 and 2007) and of guidance in establishing the need for clinical specialist and advanced practitioner roles (NCNM 2005d, NCNM 2010a).

1.2.3. Health service reform, 2001-2010

Changes to operation of the health system and its structures were signalled by the national health strategy, *Quality and Fairness – A Health System for You* (DoHC 2001a), and the primary care strategy, *Primary Care – A New Direction* (DoHC 2001b) and the Health Service Reform Programme (DoHC 2003a). These strategies underlined the importance of four guiding principles for the health system: equity, people centeredness, quality and accountability. In addition, they laid the groundwork for an integrated, population health approach to service provision by identifying specific population groups (e.g., children, Travellers, asylum seekers, people with mental health disorders, and older people) and specific diseases and causes of mortality (e.g., cardiovascular disease, cancer and lifestyle issues). The national health strategy set out four national goals: better health for everyone, fair access, responsive and appropriate care delivery, and high performance; and six frameworks for change aiming to strengthen primary care:

- reform the acute hospital system
- reform funding of the system
- develop the human resource within the system
- reform organisational structures
- improve performance through supporting quality, planning and evidence-based decision making.

The achievement of these goals and the successful implementation of the frameworks would require a "qualified, competent workforce" (DoHC 2001a, p.116), and would include the further development of CNS/CMS and ANP/AMP posts using the National Council's frameworks. Reports advocating role changes and a reduction in the working hours of junior doctors (DoHC 2003b) provided further stimuli for the expansion of nursing and midwifery roles and for the establishment of more nurse- and midwife-led clinics (NCNM 2005b, NCNM 2010b).

The Health Service Reform Programme was formally launched by the DoHC in 2003 (DoHC 2003a), in line with one of the many recommendations contained in the national health strategy (DoHC 2001a). The next seven years would see the publication of other policy documents, all aiming to consolidate the themes

[5]More detailed accounts of the developments that took place within the clinical career pathway can be found in the subsequent editions of the CNS/CMS and ANP/AMP framework documents and the NCNM's annual reports.

of quality and value for money within the health system to ensure that patients and service users receive healthcare that is not only of a high standard, but is based on the efficient use of resources. The integration of the health system envisaged in the national health strategy (DoHC 2001a) and the national primary care strategy (DoHC 2001b) has been carried forward within policy/strategy documents relating to, *inter alia,* cancer care (*A Strategy for Cancer Control in Ireland*, DoHC 2006a), mental health (*A Vision for Change – Report of the Expert Group on Mental Health Policy,* DoHC 2006b) and chronic disease (*Tackling Chronic Disease – A Policy Framework for the Management of Chronic Diseases,* DoHC 2008). Policy direction has consistently aimed to reduce reliance on acute hospitals and provide more services within primary, community and continuing care. Most recently, the national cardiovascular health policy, *Changing Cardiovascular Health: National Cardiovascular Health Policy 2010-2019* (DoHC 2010b), has distinctly advocated an integrated approach to service provision in relation to cardiovascular disease, stroke care, obesity and diabetes, thus building on earlier policy documents (DoHC 2005, 2006b, 2008). Nursing roles referred to specifically in the cardiovascular strategy include CNSs and ANPs, especially in relation to cardiovascular nursing. It is envisaged that nursing roles will evolve in line with the implementation of the policy. Specific areas of practice and roles mentioned include:

- anticoagulation services in acute hospitals
- specialist heart failure nurses working in primary care
- specialist nurses working in stroke units
- nurses working in the area of in-patient stroke rehabilitation
- nurses working in the community in early supported discharge (following stroke care)
- cardiovascular clinical nurse specialists in community liaison roles
- stroke liaison nurses in general and comprehensive stroke centres.

Patient safety has become a major concern in the health system, and this is reflected in international policy developments (WHO 2002), with the launch of the World Alliance for Patient Safety in 2004 and the publication of a series of reports on investigations into patient safety failures in Ireland. Established in 2007, the Commission on Patient Safety and Quality Assurance identified the many factors that could help to prevent adverse incidents in healthcare provision and service delivery (Government of Ireland 2008). The commission's report *Building a Culture of Patient Safety* (Government of Ireland 2008) provides a clear insight into the ways in which nurses and midwives with the right skills, knowledge and expertise can contribute to the prevailing safety and quality agenda.[6]

The establishment of the Mental Health Commission and the Health Information and Quality Authority (HIQA) are key in the progression of the quality and safety agenda.[7] The national health strategy and subsequent DoHC publications had acknowledged the importance of good health information in ensuring the quality of healthcare provision and delivery through evidence-based practice (DoHC 2001a, 2001b, 2003a, 2004). Use of and reference to evidence-based guidelines and standards are fast becoming the norm within the Irish health service today.

1.2.4. HSE: models of care delivery

A key outcome of the Health Service Reform Programme was the establishment of the Health Service

[6]The DoHC has established an Implementation Steering Group charged with implementing the recommendations of the Commission on Patient Safety and Quality Assurance.

[7]The Mental Health Commission was established under the *Mental Health Act, 2001* and its remit includes the promotion of high standards in the delivery of mental health services. The Health Information and Quality Authority is responsible for setting standards for health and social care services and for monitoring the quality of these services.

Executive (HSE) in 2005. It was the first body with legal responsibility for managing the operation of the health services in Ireland as a unified system. It brought together the roles of many agencies that had previously operated as separate entities. In keeping with the *Health Act, 2004*, the objective of the HSE is to use the resources available to it in the most beneficial, effective and efficient manner to improve, promote and protect the health and welfare of the public. Its vision and its national goals and objectives have been set out in its various corporate and national service plans (HSE 2008).

A number of the HSE's plans and policy documents have delineated clear roles for CNSs and ANPs, particularly in the areas of cancer care and chronic disease management. The HSE's National Cancer Forum (HSE 2006a) sets out its strategy for cancer control in Ireland, including plans for an enhanced role for nurses within the multidisciplinary team. For example, ANPs are identified as key team members in the National Cancer Screening Service's (NCSS) plan for a colorectal cancer screening programme (NCSS 2009). The HSE's national chronic disease prevention and management programme presents clear roles and opportunities for CNSs and ANPs in the future (HSE 2006b, c).

National policy direction in relation to patient safety and quality of care has been outlined above, and its implementation is evident in the structures and programmes of the HSE. The HSE's Quality and Clinical Care Directorate has the threefold task of improving the quality of care delivered to all users of HSE services, access to all services and cost-effectiveness. This directorate also aims to improve and standardise patient care throughout the organisation by bringing together clinical disciplines and enabling them to share innovative solutions to deliver greater benefits to every user of HSE services. This will be delivered through the HSE's programmes, in line with national standards. These clinical programmes, led by a frontline multidisciplinary team of clinicians, have been established with the purpose of focusing on programmes relating to chronic disease management, outpatient management, emergency function-related programmes, and others, including obstetrics and gynaecology. There is a Lead Clinical Nurse on each national clinical programme working group. A Director of Nursing/Midwifery Strategic Reference Group has been convened to support the programme development (ONMSD 2010).

1.2.5. Summary

As first signalled in the national health strategy (DoHC 2001a), the Irish health system has moved towards a population health approach to the provision of health services and healthcare. Changing models of care delivery in tandem with the changing demographic and epidemiological profile of the population will signal the service requirements for specialist and advanced practice nursing and midwifery posts into the future. To this end the National Council commissioned the Schools of Nursing and Midwifery, Trinity College Dublin, and National University of Ireland, Galway through an open tender process, to evaluate the role of the Clinical Nurse/Midwife Specialist and Advanced Nurse/Midwife Practitioner, focusing on the clinical and economic impact of the roles.

1.3. Introduction to the study

Prior to the commencement of this study, referred to as the SCAPE study (Evaluation of Clinical Nurse and Midwife Specialist and Advanced Nurse and Midwife Practitioner Roles in Ireland), there were 69 accredited advanced practitioners (APs): 68 in nursing and one in midwifery (NCNM 2008a). The total number of clinical specialists (CSs) in approved positions was 2,032: 1,966 in nursing and 66 in midwifery (NCNM 2008a).

Considerable research has already been undertaken, both nationally and internationally, evaluating the effectiveness of advanced practice in the many nursing specialties:

- emergency department (Small 1999, Timoney 2002)
- oncology (Ritz et al 2000)

- haematology (Taylor et al 1997)
- mental health (Reasor and Farrell 2005)
- neonatology (Woods 2006)
- HIV (Aiken et al 1993)
- paediatrics (Niemes et al 1992)
- gerontology (Evans et al 1997, Naylor et al 1999)
- primary care (Mundinger et al 2000a)
- heart failure (McCauley et al 2006)
- cardiac rehabilitation (Burgess et al 1987)
- cardiac surgery (Lombness 1994)
- critical care (Burns and Earven 2002, Fairley and Closs 2006).

In contrast, there has only been limited evaluation of advanced midwifery practice (Alexander et al 2002, Watson et al 2002), perhaps because fewer such posts exist.

In the Irish context, evaluation of the AP role is in its infancy. Nevertheless, the positive impact of the role is revealed in the areas of sexual health (Delamere 2000, 2003) and emergency department care (Small 1999, Keenan 2002). Moreover, a preliminary evaluation of the advanced nurse practitioner role has revealed that ANPs consider the main benefit of their role is to service users, with the provision of continuity of care (NCNM 2005a). It is timely, given the growth in the numbers of specialist and advanced-practice roles, that a major national objective evaluation of the posts is being undertaken in Ireland.

A number of structures to evaluate specialist and advanced roles have been developed, many of which are based on Donabedian's structure-process-outcome (SPO) framework. In the context of specialist and advanced nursing and midwifery practice, structure includes the components necessary to facilitate care delivery, such as the characteristics of the practitioner, and resources and support in the practice setting. Process refers to the care provided by the practitioner and the appropriateness of that care. Outcome refers to practitioner-sensitive outcomes, which are complex and involve interventions undertaken based on the knowledge the nurse or midwife has, including theoretical, practical and scientific knowledge.

Advanced nursing practice "is more than being an expert by experience in a speciality" (Por 2008, p. 85). It is crucial that valid nursing and midwifery sensitive outcome measures be selected in any evaluation of specialist and advanced practice in order to identify the distinctive focus of advanced practice and to explain the complexity of specialist interventions. In addition, the 'hidden' aspects of the advanced and specialist roles need to be captured. Failure to develop suitable measurement tools could lead to improvements in care attributable to advanced and specialist roles being missed.

The tension between the need to identify quantifiable outcome measures and the challenge of capturing the indeterminate, qualitative aspects of specialist and advanced practitioners requires a flexible evaluation model. The model chosen for this project is that proposed by Schulz et al (2002), adapted by Gerrish et al (2007), which has a "broad inclusive approach" (p. 590) addressing symptomatology, quality of life, social significance and social validity. The model is concerned with the practical value of an intervention and whether or not it makes a real difference to patients (Gerrish et al 2007) and is thus ideal to evaluate the clinical significance of specialist and advanced practice roles in Ireland, because it addresses multiple outcomes related to clinical significance, a key consideration in this project. The value of this framework

is that it can be used flexibly to identify reliable and clinically relevant outcomes from the perspective of both the client group and the practitioner.

1.4. Terms of reference

The terms of reference for the project, as set out by the call for tender by the National Council, are to:

- Review the literature on the evaluation of healthcare interventions, with specific reference to the study aim,
- Undertake original data collection to evaluate the clinical outcomes, service delivery (i.e., the service process) and economic implications of the CNS/CMS and the ANP/AMP – the team will relate the research outcomes to the clinical services of the CNS/CMS and the ANP/AMP, standardising for patient characteristics, morbidity data, etc,
- Compare a number of sites with CNS/CMS and ANP/AMP services to those that do not have such services – this may be a retrospective or prospective data collection process; service users' well-being and satisfaction with the services should be included in the evaluation,
- Develop, as part of the deliverables, a validated tool which can be used in future studies to determine outcomes for clinical services of CNSs/CMSs and ANPs/AMPs – this will aid future monitoring and evaluation of such services,
- Provide an interim and final report – the latter should clearly identify clinical outcomes, service delivery (i.e., the service process), economic implications in terms of efficiency (outputs relative to cost) and effectiveness (outcomes relative to inputs) of services.

2 Methodology

2.1. Aim

To produce a focused evaluation of the clinical services provided by clinical nurse and midwife specialists and advanced nurse and midwife practitioners in Ireland.

2.2. Objectives

- To review the literature on the evaluation of healthcare interventions offered by similar postholders internationally.
- To develop and validate a tool to determine outcomes for clinical services of specialists and advanced practitioners.
- To use the validated instrument to compare clinical outcomes in care environments with and without the clinical input of specialists and advanced practitioners as part of the care team.
- To examine the impact of the clinical specialists' and advanced practitioners' clinical interventions/care on service users' (i.e., patients or clients) experience of care.
- To explore service users' well-being and satisfaction with care received from approved clinical specialist and accredited advanced practitioner postholders.
- To explore the financial implications of clinical specialist and advanced practitioner posts for the Irish health services, in terms of efficiency and effectiveness.

- To provide an interim and final report, the latter of which clearly identifies the clinical outcomes, service delivery and economic implications of clinical specialist and advanced practitioner posts in terms of efficiency and effectiveness of services.

2.3. Literature review

2.3.1. Concept analysis

A detailed concept analysis of *advanced practice* was undertaken; this identified many different articulations of clinical specialist (CS) and advanced practice (AP) roles. There was also much consensus that specialist and advanced nursing and midwifery brings added value to practice. The challenge facing nursing and midwifery today is to provide the evidence that specialist and advanced practice nurses and midwives bring a unique aspect of care to the healthcare community or service provision.

Of all the specialist or advanced practice roles in nursing and midwifery, the role of CS is the most unclear in the international literature. However, clarity about the CS role is evident in Ireland, due to the clear guidelines and approval criteria laid down by the National Council (NCNM 2008b, c, d, e, f). The future of the CS role internationally depends upon "a clear definition and delineation of the role" (Henderson 2004, p. 40). Their role is most at risk in the US, where numbers graduating between 1996 and 2000 increased by only 12.9% as compared to a 45% increase in the number of NP graduates (Henderson 2004).

This issue is also evident in the UK, where Hill (2000) raises concerns about the proliferation of 'site-specific' cancer clinical nurse specialists which may result in a fragmented service to patients. However, the recent effort in the US to curb the proliferation of multiple narrow sub-specialisations in advanced practice roles is intended to regulate advanced practice more consistently and assure public safety and provision of quality care (APRN Joint Dialogue Group 2008).

Wiedenbach (1963), in her seminal work, urged nurses to capture both the art and the science of high-level caring. In the ensuing years, the task has become more daunting due to the development of multileveled nursing practice. However, the literature continues to urge that the blended art and science of nursing not be left behind despite advances in nursing practice. We suggest therefore, that the work of Ingersoll et al (2000) requires special mention. Ingersoll et al (2000) began to uncover the unique layer of advanced practice nursing when she identified two unusual indicators in her Delphi study of nurse-sensitive outcomes. These two indicators, 'perception of being well cared for' and 'the sense of trust in the provider', may be the beginnings of deciphering the 'added value' that nursing offers to patient care.

Cunningham (2004) questions how "to measure, as Benner (1984) suggests, the exquisite skill in clinical judgment that comes from 'knowledge embedded in practice' which may be a deciding variable in APN care" (p.228). Perhaps this is the Holy Grail referred to by Callaghan (2008). However, Bourbonniere and Evans's (2002) work, which uses the term 'contextual thinking' to denote the APN's high level of data synthesis, reveals evidence to show that this quest may be achievable.

The tension mentioned above – between identifying quantifiable outcome measures and capturing the indeterminate, qualitative aspects of advanced practitioners (and by implication specialist practitioners) – is documented (Gerrish et al 2007). The SPO method of evaluation is best set within the framework of an evaluation model of advanced practice. The development of an evaluation model of specialist and advanced practice was viewed as essential to this project and addressed the criticisms of Sidani and Irvine (1999) in relation to the inconsistent findings in research evaluating the impact of the AP, which they attribute to not using a conceptual framework to guide the identification of the specific nurse sensitive outcomes (Sidani and Irvine 1999).

The approach proposed by Schulz et al (2002) was identified by Gerrish et al (2007) as a possible framework for evaluating the impact of advanced practice roles. This model encompasses: (i)

symptomatology, (ii) quality of life, (iii) social significance and (iv) social validity and therefore addresses the multiple outcomes related to clinical significance, which was a key consideration in this project. The value of this framework is that it can be used flexibly to identify reliable and clinically relevant outcomes from the perspective of both the client group and the practitioner.

The following points summarise the concept analysis:

- Confusion surrounding the terminology used to describe specialist and advanced practice nursing and midwifery roles is evident internationally. However, clarity on these roles is evident in Ireland.
- Nurse-led care is considered practice at a higher level, and nurses in these roles may be working in approved specialist or advanced practice roles. Midwife-led care is also regarded as a feature of advanced midwifery practice.
- There is clarity internationally on the core roles distinguishing specialist and advanced practice in nursing. There is less clarity internationally on the core roles distinguishing specialist and advanced midwifery practice. However, a recent report in the UK (Department of Health 2010) has clearly distinguished between the two roles.
- *Role expansion and role development* are the terms of choice to use when discussing advanced nursing and midwifery practice.
- The CNS role in the US is under threat. There are now considerably more nurses in NP roles than CNS roles. The decline in CNS posts may be related to their indirect care role, as US CNSs spend minimal time on direct patient care, whereas the principal focus of NP practice in the US is on direct patient care, with a defined patient caseload.
- The opposition of the medical profession has been identified as one of the main barriers to the development of more advanced nursing roles, although considerable support is also noted from medical personnel who work with CSs/APs.
- Three essential antecedents to advanced practice have been identified, one external and two internal. The external antecedent is the changes in medical practice internationally. The internal antecedents are higher education and clinical expertise.
- Identifying the outcomes of specialist and advanced practice is complex. Research evidence evaluating outcomes of advanced practice can be grouped into:
  - The effectiveness of advanced practice roles
  - Comparing advanced practice nurses and midwives and medical/other healthcare counterparts
  - Satisfaction with advanced practice roles
  - Advanced practice skills and functions
  - 'Value-added' contributions of advanced practice
  - Advanced practice sensitive indicators.

2.3.2. Systematic review of systematic reviews

Research studies have indicated that the introduction of CS and AP roles has contributed to positive patient/client outcomes; however, many of these studies are descriptive in nature, are small scale, and do not involve comparisons. For the purposes of this research, a systematic review of systematic reviews of randomised trials was also undertaken to identify the effects of nurse- and midwife-led interventions on clinical outcomes and establish if such interventions are effective. Following a comprehensive search, 20 systematic reviews were selected from 818 unique citations using the AMSTAR quality-assessment tool. This was undertaken in the absence of a sufficient body of literature reporting on randomised trials of

specialist or advanced practice care, and in the knowledge that nurse-led clinics are viewed by some international authors on a par with advanced practice (Loftus 2001, Hatchett 2003). In addition, the National Council has indicated that those working in nurse and midwife-led clinics may require some skills and knowledge that reflect practice at an advanced level (NCNM 2003).

There was significant variability in the outcomes reported in which the effectiveness of nurse-led interventions was measured. This suggests a lack of agreement on core outcomes that should be reported when evaluating nurse-led interventions. It might also suggest that outcome measures chosen are not sensitive to the impact of nurse-led interventions. Challenges in identifying outcomes sensitive to the role of nurses are recognised in the literature (Resnick 2006, Kleinpell 2007) although attempts to do so are evident (Ingersoll et al 2000, Mundinger et al 2000b).

The reviews included ranged from those with minimal quality concerns to those that raised significant concerns. Trials included in the reviews were generally not of high quality; many used methods that could have introduced bias (for example, poor allocation concealment, or publication bias not addressed). The evidence from this systematic review suggests that nurse-led interventions have a similar impact on clinical outcomes to that of usual care (defined as the care that is normally provided by the various members of the multidisciplinary team), across various client groups and clinical conditions, with the exception of psychological outcomes of satisfaction, anxiety and depressive symptoms, all of which are improved by nurse-led care. Midwife-led models of care were found to have significant benefit, including cost benefits, across clinical and psychological outcomes. Importantly, there is no evidence of harm associated with nurse or midwife-led interventions. There is conflicting evidence in the literature on the cost-effectiveness of nurse-led interventions, which is exacerbated by a lack of high quality economic data.

The outcomes identified by this systematic review of systematic reviews were used in the development of the Round 1 Delphi instruments.

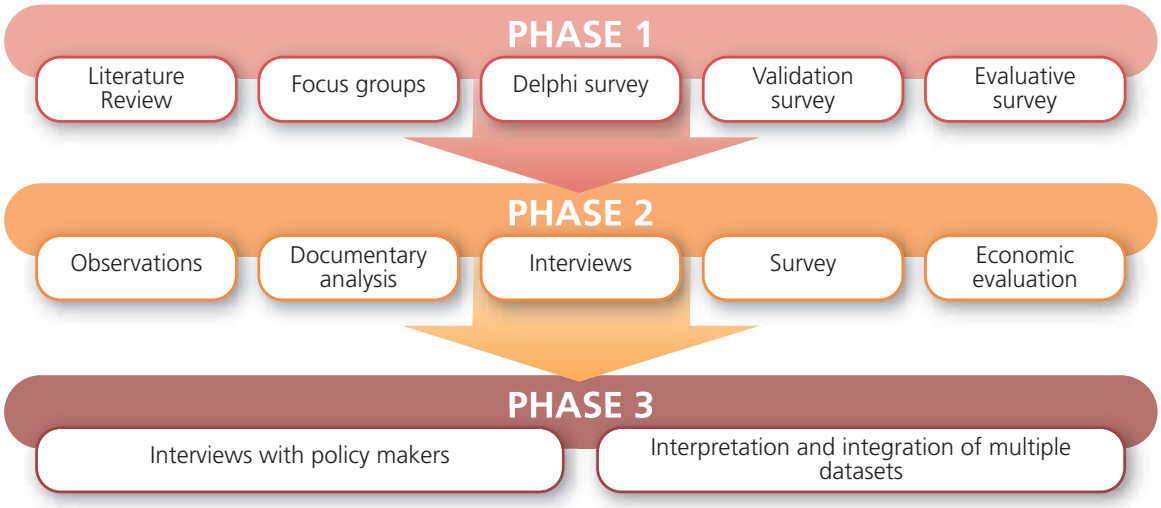
2.4. Design and sample

2.4.1. Design

A three-phase mixed-method, explanatory sequential design was used for the evaluation, in keeping with the aim of the study:

- The initial literature review and focus group interviews with key stakeholders led into the quantitative Phase 1 of data collection (Delphi and evaluative studies).
- This was followed by the Phase 2 case study, where the aim was to explore in greater depth the results generated from the quantitative studies, by contrasting the work of CSs/APs in 'postholding' areas with that of other clinicians in matched 'non-postholding' areas, where no CS or AP (or 'postholder') was employed. An economic evaluation was also included in this phase.
- A third, interpretive phase followed which sought new information from policy makers and incorporated data from all phases (Figure 1).

Figure 1: Sequential Explanatory Design (adapted from Plano-Clarke & Creswell, 2008)



2.4.2. Phase 1 – focus groups

In the qualitative part of Phase 1, the draft findings of the review and concept analysis provided the basis for interview schedules for focus group and individual interviews with key stakeholders. Seven focus groups with five health professional groups were undertaken (Table 2.1):

- two with Clinical Nurse and Midwife Specialists
- one with Advanced Nurse and Midwife Practitioners
- one with Directors of Nursing or Midwifery and Medical Consultants
- one with Assistant Directors of Nursing or Midwifery and Clinical Nurse or Midwife Manager 3s
- two with Staff Nurses and Midwives.

Individual interviews (n=9) were conducted with some stakeholders when it was not possible for them to attend a focus group. In addition, one focus group was undertaken with service user advocates from mental health (n=4), and individual interviews (n=5) were undertaken with people experiencing mental health issues or chronic health problems (Table 2.1).

There were a total of 63 stakeholder attendees across the focus groups and individual interviews (Table 2.1). The interviews addressed five key areas:

- elements of the CS/AP role
- perception of outcomes
- impact on services
- differences between CS and AP outcomes
- policy issues.

Data analysis was guided by the constant comparative technique (Corbin and Strauss 2008), using a coding framework based on the Schulz model. Perceived outcomes were identified at the level of the individual practitioner, staff, and the hospital/healthcare service, and an analysis grid was developed to compare outcomes identified across stakeholder groups. These outcomes were merged with the findings of the literature review and concept analysis to create the Round 1 Delphi tool.

Table 2.1: Distribution of focus group participants

Focus group/ interviews	Location	Participants	Attendance
FG1	East	ANP/AMP	11
FG2	East	CNS/CMS	6
FG3	East	DoNs/Medical Consultants	3
FG4	West	CNS/CMS	6
FG did not run	West	ANP/AMP	replaced with individual interviews
FG5	West	ADoNs/CNM3s	6
FG6	West	Service User Advocates	4
FG7	East	Staff Nurse	8
FG8	West	Staff Nurse	5
Individual interviews	East and West	DoNs/DoMs	4
Individual interviews	East and West	Consultants	3
Individual interviews	West	ANPs	2
Individual interviews	East and West	Service Users	5
Total participants			63

2.4.3. Phase 1 – Delphi, validation and evaluative surveys

The quantitative part of Phase 1 comprised two parallel, three-round, online Delphi surveys involving 47 APs and 620 CSs. The purpose of the Delphi surveys was to develop a minimum generic data set of indicators for clinical specialists and advanced practitioners to evaluate specialists' and advanced practitioners' perceptions of the impact of their role on service users, health services and other health professionals.

A validation survey was then undertaken with a sample of 299 other health professional groups who work with CSs and APs, including medical personnel, physiotherapists, occupational therapists and speech and language therapists. The purpose of this survey was to evaluate other stakeholders' perceptions of the relevance of the outcomes identified in the Delphi study in measuring key distinctive contributions to patient/client outcomes made by CSs and APs.

An evaluation survey involving 602 CSs and 48 APs was then undertaken to identify the impact of CSs' and APs' perceptions of the impact of their role on outcomes experienced by service users and other health professionals, and on outcomes for healthcare services. Participants used the tools developed through the Delphi process and were also asked to identify outcomes specific to their specialist role so that the survey instruments could be adapted to a specific role for future use.

2.4.4. Phase 2

In Phase 2 case study, the aim was to explore in greater depth the results generated from the quantitative studies. Observations of 23 CSs/APs in postholding areas and 23 clinicians providing a service in similar care contexts in matched non-postholding areas were conducted (four hours with each person). Field notes comprising 'pen-pictures' were completed to provide narrative descriptions of observations made. In addition, researchers completed a scoresheet of key behaviours such as good communication skills, safety aspects, use of research evidence and education of patients/clients, in both postholding and non-postholding sites. Documentary evidence such as audits, copies of publications, guidelines, information

leaflets and postholders' work diaries were also collected and a quantitative summary made of them.

In-depth interviews based on semi-structured interview schedules developed from the Delphi Round 2 instrument were used to gather data from 41 service users/family members/carers, 41 healthcare professionals and 23 Directors of Nursing or Midwifery who oversaw care in eight health-service provider sites with APs or CSs, 10 matched sites without any postholders and five sites which had postholders in the hospital/service, but not in the particular area under study. In addition, 279 service users returned completed questionnaires, also based on the Delphi Round 2 instrument. The economic evaluation included 10 matched pairs of postholding and non-postholding sites, and compared salary costs across the sites. An evaluation tool was derived from those used in the literature, and developed using comments and suggestions from the Delphi Round 2 phase.

2.4.5. Phase 3

A third interpretive phase then followed, which sought new information from 12 key policy makers, and incorporated data from all phases. The policy makers were interviewed by telephone or face-to-face, to provide background context for the Phase 2 findings. Respondents included representatives of the DoHC, the HSE and a number of relevant organisations that govern or shape health policy in Ireland. An outline of the draft findings formed the basis for the interview schedule and was discussed with each policy maker in relation to the wider health service context. Interpretation of all data sets was then undertaken, and results were determined to be very strongly, strongly, moderately or weakly supported, based on the number of data sources providing evidence.

2.5. Ethical issues

Ethical approval was granted by the Research Ethics Committee of the Faculty of Health Sciences in Trinity College Dublin and all local research ethics committees. All participants gave informed consent and data were kept confidential and, where possible, anonymous.

3 Results

3.1. Findings from focus group interviews (phase 1)

Perceived outcomes for the patient/client, staff and service/healthcare were identified. In all there were 17 patient/client outcomes identified, including patient satisfaction, reduction of morbidity, and promotion of self management. There were nine staff related outcomes, including increased knowledge, empowerment, retention and work satisfaction. There were also 27 service/healthcare outcomes, including waiting times, continuity, research, leadership and collaboration. Concern was raised in focus groups with managers about the potential of the CS role to de-skill staff nurses, as some participants reported that CSs could work in ways that limited staff development. Facilitators of focus groups with SNs/SMs, therefore, included an additional question in relation to this. Participant SNs/SMs in these groups were clear that de-skilling did not occur and, furthermore, suggested that the CS/AP educational function contributed to the knowledge development of staff.

3.2. Results of Delphi study (phase 1)

Round 1 of the Delphi survey had a response rate for the CS survey of 45% (n=282) and for the AP group

of 64% (n=30). Round 2's response rate for the CS survey was 76% (n=215) and for the AP group was 93% (n=28). The response rate for the final (Round 3) survey was 94% (n=202) for the CS group and 96% (n=27) for the APs.

In the CS Delphi, 47 items achieved the consensus criteria for inclusion as core outcomes identified. Of these, individual and personal outcomes experienced by patients and service users were predominant, highlighting the impact of specialist practice on direct patient care. Personal status and clinical status were the key outcomes in this category, alongside outcomes relevant to patients' and clients' health care treatment. The next most featured category was 'outcomes for nurses, midwives and other professionals'. This second category of outcomes focused on the impact of specialist nurses and midwives on the clinical environment. These outcomes referred to knowledge and attitudes of other nurses, peers, other professions and patients, along with research based initiatives and indicators of good practice and development. The third category of outcomes on health care services and settings highlighted quality of care in the work group and organisation. The items that achieved core status were included in the tool to establish a resource of CS sensitive outcomes.

In the AP three-round Delphi survey, 52 items achieved the consensus criteria for inclusion as core outcomes. Again, individual and personal outcomes experienced by patients and service users were predominantly identified. Direct care outcomes, patient safety, research and leadership were core, highlighting the impact on services and practice. The findings place consensus outcomes of advanced practice most strongly in the clinical domain, with a focus on personal outcomes in relation to patient engagement, satisfaction and comprehension, quality of life, physical health status, healthcare provision and patient safety. This represents a comprehensive clinical perspective that encompasses the quality of care provided, and well-being across all three bio-psycho-social domains. The respondents also had a strong sense of working in organisations and with other professionals. Outcomes concerning practice development and research based practice were strongly represented. The respondents identified an impact on knowledge and attitudes, especially in relation to other nurses and midwives. The APs in the survey were less concerned with costs than with the quality of care delivered to patients and service users.

3.3. Validation survey with key stakeholders (phase 1)

The validation survey of 299 stakeholders was conducted with a response rate of 23% (n=69). Across all sections, most outcomes were rated highly and similarly for CSs and APs. However, APs received a higher mean average on most outcomes. Some participants commented that, although they had often rated the answers to outcomes similarly for both CSs and APs, they believed that the depth of knowledge and the scope of practice are distinct for each category. They suggested that they would rate the AP as having more in-depth knowledge, being more research focused, and supporting not only nursing staff but also junior doctors and others in the multidisciplinary team.

3.4. Evaluative survey with APs and CSs (phase 1)

The evaluative survey had a response rate of 43% (n=261) for the CS group and 56% (n=27) for the AP group. Clinical specialists and advanced practitioners perceived their role as having an important impact on outcomes experienced by service users and other health professionals, and on outcomes for healthcare services. All outcomes in both evaluative surveys achieved high mean ratings with narrow confidence intervals, confirming the importance of and providing evidence of validity for the core outcome data sets. The evaluative survey also identified 290 role specific outcomes across 48 clinical specialist roles and 29 outcomes across six advanced practitioner roles.

3.5. Results of case study (phase 2)

The analysis of qualitative data in this study revealed four themes – clinical practice, clinical leadership, professional leadership, and research – that applied to both CSs and APs. 'Professional leadership' and 'research', however, occurred more frequently in conversations about APs than CSs, and more data emerged about APs' involvement in these two areas. Quantitative data collected from service users supported mainly the clinical practice theme. Quantitative data from the 'key behaviours' scoresheet and from collation of all types of documentary evidence substantiated these four themes.

Postholders appeared to differ from members of the clinical team in non-postholding sites in the areas of assessment and diagnosis, and referral. They had a positive impact on readmission rates, collaborative decision making, continuity of care, waiting lists/waiting times and workload management, and ensured a smoother transition of patients/clients through the healthcare system. Postholders also developed good relationships with patients/clients because they gave people time, listened to concerns and showed empathy. The areas where postholders were identified as having more of a positive impact, related to developing therapeutic communication, health promotion, education of service user and family, the use of physical and psychosocial interventions, and increased patient/client satisfaction.

There were many similarities between the roles of AP and CS in the clinical practice area, as both roles were very clinically focused. APs and CSs were both seen as having the autonomy to manage their caseloads, which ensured smoother transition of patients/clients through the healthcare system. The quantitative results, however, showed APs working at a higher level than CNSs. CMSs appeared to work usually at a level equivalent to CNSs, but one that was sometimes equal to, or higher than, APs, in particular in respect of their client education and health promotion role, and continuity of care. It should be noted, however, that these results were based on responses from clients attending just three CMSs. APs appeared to be engaging in autonomous decision making to a much greater degree than were CNSs or CMSs.

A key distinction was that APs appeared to be able to both refer and accept referrals, in contrast to CSs, whose ability to make referrals was not evidenced in the fieldnote observations. In particular, there was fieldnote evidence that some healthcare professionals (e.g. physiotherapist, occupational therapist) would not accept referrals from them. The APs were also seen as performing an assessment, screening and diagnostic role, which helped to reduce total visit times and ensure faster throughput of patients or clients. Therefore, the autonomous role of the APs was linked to their success in reducing waiting time as the service user could be seen by one person rather than waiting to be referred to other members of the team.

Postholders, in particular APs, provided effective clinical leadership and influenced practice through formal and informal education, guideline development and service development; through role modelling, mentoring, coaching, motivating, inspiring and empowering team members, and through their active membership of the multidisciplinary team and various committees. This resulted in improved continuity of patient/client care, prompt referral of patients/clients to a relevant specialist, reduced admission rates, and reduced workload of doctors; enhanced the use of evidence-based assessments and interventions by multidisciplinary teams; improved family/carer satisfaction with information, and motivated other healthcare staff to advance their professional knowledge and skills.

APs demonstrated autonomous clinical decision making more often than CSs, and were more frequently sought for their clinical expertise by the multidisciplinary team. They also mentored a wide range of healthcare staff within their own area of clinical practice, including new staff nurses or midwives, undergraduate student nurses or midwives, medical registrars, other therapists and CSs. APs were highly valued for their leadership in developing and benchmarking policy and guidelines against national and international standards. Many of the CSs were developing and strengthening their clinical leadership

roles and demonstrated a number of the activities identified as part of the role of the Advanced Nurse Practitioner (NCNM 2005a), such as teaching, consultancy, and practice development.

Postholders, particularly APs, demonstrated professional leadership through leading initiatives in developing education programmes that were accredited by third-level institutions and professional bodies, and shaped and influenced policy through membership of national committees. They advanced practice and service provision through their contribution to national guideline development. The data indicated, however, that they lacked sufficient administrative support and protected research time to achieve within their working day all the specific competencies as outlined by the National Council (NCNM 2008b). For example, all six APs in the study were undertaking research, but all except one were supporting or leading on projects in their own time. In addition to two CNSs and one CMS conducting research and working at an advanced practice level while awaiting accreditation as APs, six other CSs were also involved in research, while the remainder were more heavily involved in leading or supporting audit activities, in line with their role remit.

Both CSs and APs were active in teaching and developing new educational modules locally and nationally. Where APs differed was in their contribution to education in national masterclasses and on occasions at international level. Both CSs and APs contributed to national and international guideline development. In addition, APs set up national fora for networking and sat on high level national committees and some international groups. Overall, advanced practice roles provided a number of strategic advantages such as improved service delivery, faster throughput, reduced costs and a clear governance and accreditation structure.

The results of the economic analysis did not show a difference in costs between CS/AP care compared with usual care given by a multidisciplinary team, when only salaries were used in the comparison. This suggests that the higher salaries payable to CSs/APs may be partially or completely offset by an increase in activity levels. Since no difference in costs was seen, there is a case for introducing more CSs/APs, as the qualitative data and quantitative service user surveys showed clinical, professional and health service benefits.

3.6. Results of interviews with policy makers – contextualising Phase 2 findings

Most of the 12 participant policy makers spoke favourably about CS and AP roles and praised them for their greater organisational skills, and better continuity of care and follow-up, which were perceived to lead to improved care and compliance. They believed that CSs/APs were often leaders in their field who should receive recognition from managers and colleagues for this role. These participants praised the auditing skills of CSs/APs and expressed a wish for more research activity. There was considerable acknowledgement that lack of resources – including budget cuts, a government applied moratorium on recruitment, and budget holders' interest in immediate monetary savings – hampered development of the CS/AP roles. The important contribution CSs/APs could make to the HSE transformation agenda in the future was emphasised.

4 Limitations and strengths of the study

4.1. Limitations

The research in this study was restricted by the extent of available information both from published research and data within the Irish healthcare system. The limitations outlined below are drawn from the Final Report and provide detail of specific challenges that emerged for the research team:

- There was a lack of good information available from published work, so that the systematic review of reviews was unable to reach a definite conclusion.
- There were a number of challenges encountered in matching some of the postholding sites with comparable clinical sites that cared for similar patients/clients, where no CSs/APs were employed . This occurred particularly in the field of intellectual disability, and recruiting sufficient numbers of service users from that area to complete the survey was also difficult.
- Although 279 service users completed surveys, the numbers were not always sufficient to demonstrate statistically significant results, even though apparent differences were seen.
- There were not always hard data such as service audits to corroborate what was observed in practice or what was discussed in the interviews. However, this is perhaps more of a limitation in how data are collected and recorded within the health service than a limitation in this precise methodology.
- It was unfortunate, but unavoidable, that no Advanced Midwife Practitioner could be included in the study as the criterion of "at least 1 year in post" could not be met by any potential participants.
- For the economic analysis, suitable and sufficient data were only available in 20 sites, or 10 matched pairs, whilst this is a limitation it is, however, notably greater in quantity than in many other similar studies across the world.

4.2. Strengths

4.2.1. Phase 1

- The complex mixed-method design chosen for this study lent strength and integrity to all phases of the project.
- The Delphi instrument developed was firmly grounded in:
  - the findings from two comprehensive and detailed reviews
  - the views of key stakeholders (health professionals, CSs/APs and service users) collected in focus groups
  - consensus from three rounds of a Delphi study with the main contributors (the CSs/APs)
  - a comprehensive validation exercise by a group of key stakeholders (other health professionals)
  - a final evaluation by CSs/APs.
- The Delphi method itself provided consensus of expert opinion without the bias that can occur in situations where panel members can be intimidated or inhibited.
- The response rates in the Delphi study of 45% and 64% in Round 1, with higher rates of 76% and 93% in Round 2, and 94% and 96% in Round 3, were excellent.

4.2.2. Phase 2

- Simultaneous triangulation of quantitative and qualitative data improved the credibility and validity of the findings.
- Multiple data sources (literature, focus groups, Delphi results, documentary evidence, interviews with clinicians, service users, Directors of Nursing and Midwifery and policy makers, and service user surveys) increased the reliability of the findings.
- The extensive observation periods allowed the research assistants time to add factual and interpretative data to the context in which care was being delivered in both postholding and non-postholding sites.

4.2.3. Phase 3

- Interviews with policy makers enabled contextualisation of the data, which helped to ground the findings in the real world.
- All sources of data were combined and integrated – a key outcome of mixed-methods designs.
- The integration of so many types of data, from both the qualitative and quantitative paradigms, increases the validity of the work and strengthens the final conclusion.

5 Analysis and synthesis of findings from all data

5.1. Introduction

Five main sources of data were used in this study; other sources were gathered within them as necessary. These five sources were:

- focus groups with 63 key stakeholders
- Delphi survey with 312 CSs/APs (evaluated and validated after completion by 288 CSs/APs and 69 key stakeholders)
- case study observation (184 hours) and interviews (41 service users/family members/carers, 41 healthcare professionals and 23 Directors of Nursing or Midwifery). Observation included quantitative data in the form of recorded 'key behaviour indicators' and quantified documentary evidence
- case study service user survey (279 surveys).
- interviews with 12 policy makers

In addition, an economic evaluation was conducted in 20 sites (10 matched pairs).

5.2. Outline of synthesis of findings from all data sets

Six tables are used in this section to present outcomes on CSs/APs across the different data sets, with contrasting data given on non-postholding areas where appropriate.

Column one in each table identifies the outcomes from focus groups. The terms used by participants were used as descriptors for each outcome examined. Other comparable descriptors were used by other sections of the study; for example, 'provides more timely care' from the focus groups (Table 5.1, no. 13) was linked with 'speed of access to care/treatment delay/waiting for appointment' from the Delphi survey, and with 'reduced waiting lists' and 'prompt treatment' from the case study.

Column two identifies the outcomes from the Delphi, validation and evaluative surveys.

Column three presents the evidence from interviews in practice, the case study observations as recorded in field notes and documents, and the quantitative 'key behaviours' scoresheet.

Column four presents evidence from service user questionnaires and, for the cost section only, economic analysis. This is for the purpose of clarity, and to present all data together in tabular form, but it should be noted that the economic analysis is an extra source of data for that one outcome alone.

Column five presents evidence from policy maker interviews.

Column six identifies the extent of evidence across the data sets. As service user surveys were applicable only for certain outcomes (e.g., they were not asked about research output, audit, teaching other staff, using evidence based guidelines), there are five sources of data for these outcomes and four for the remainder. Evidence is thus considered very strong if evident in 5/5 or 4/4 sources, strong if 4/5 or 3/4 sources, moderate if 3/5 or 2/4 sources, weak if 2/5 sources. One piece of evidence alone is considered an unsubstantiated outcome.

There were key differences in outcomes between the CS and AP data sets in the first two columns, with more outcomes identified for APs. When an outcome is exclusive to one group, this is indicated by *(AP)* or *(CS)* in the tables. When differences are seen between CS and AP outcomes, these are highlighted in bold in the text.

The integration of data sets resulted in four discrete areas of outcomes:

- individual patient/client outcomes
- outcomes specific to other healthcare staff
- outcomes specific to the health services
- barriers to implementing the CS/AP role.

Abbreviations for multidisciplinary team (MDT), documentary evidence (DE), evidence-based (EB) and service user (SU) are used throughout the tables and are explained on the first occasion only.

5.3. Patient/client outcomes

There were 20 individual patient/client outcomes; of these, there was very strong evidence to support 15, strong evidence for four and no evidence for one (Table 5.1). The outcome for which there was no evidence was *'decreases mortality'*. This was identified initially in the focus groups but there were no data to support it in the Delphi study or case study work. However, it is difficult to provide observational or case study data in relation to this outcome and further work may be required comparing mortality rates of services to determine if this is, or is not, an outcome related to CS or AP practice.

There was strong evidence to support the two outcomes *'increases advocacy'* and *'promotes self-management skills';* there is evidence across all data sets of this second activity, with higher level working seen in the AP Delphi results. Policy makers emphasised the importance of this outcome to the HSE transformation agenda and the need to re-orientate services in the direction of chronic disease management.

Strong evidence also supported *'preparedness for treatment/intervention'*. Evidence from postholding sites in the case study found that patients/clients were prepared for interventions, and service users were given more information and practical advice. Strong evidence was also evident for *'reduces exacerbations of condition'*. The Delphi results supported this outcome and postholding sites in the case study provided evidence of reduced readmission rates. This is an important finding that should result in cost savings for the HSE; hence it would be important to explore this further.

Very strong evidence was presented to support *'earlier diagnosis and intervention',* and there were data from the case study work showing that CSs/APs did perform assessments, diagnose and provide interventions. There was some evidence from the service users' quantitative survey that **waiting times at the first visit in CS services were less than in CMS or AP services,** but, in the service users' comments on the survey, **APs appeared to have the shortest waiting times.** The waiting time for treatment appeared very much lower in AP (12 hours) and CMS (1 hour) sites than in non-postholding sites (239 hours). This may be due to the level of autonomy in the AP and CMS services, which may be facilitating swifter throughput. These data may all depend much on the service specialty, which could explain the differing results.

Very strong evidence supports *'conducts holistic assessment',* which was identified in focus groups and in case study sites where there was evidence of holistic assessment being undertaken. Service users also felt they had more time to discuss problems in postholding sites. There was very strong evidence for the outcome *'decreases morbidity'*. This was divided by the Delphi into a number of outcomes, including symptom management, physical comfort, **pain (AP only)** and *'promotes patient safety'*. Policy makers identified direct care as a key part of the role for CSs and APs. However, they felt that some CS roles had moved from direct care to a more consultative function, where they advised others.

Very strong evidence supports *'increases knowledge'* and *'promotes self-efficacy'* as outcomes for APs and CSs. In the case study, the perception of respondents in postholding sites was that CSs/APs educated

service users and families. The survey results showed that service users were given more information in postholding sites, and this difference was significant. *'Adherence to treatment'* was also very strongly supported by a range of evidence, with more service users stating that they followed advice in postholding sites. Very strong evidence of *'preventing complications'* was also presented; observational data provided corroboration of the provision of interventions that prevent complications. Another outcome supported across data sets was *'promotes wellness';* well-being includes all bio-psycho-social domains. *'Promoting health'* was also very strongly supported, with a significant difference in the proportion of service users who had information about healthy lifestyles in postholding and non-postholding sites. Very strong evidence also exists for *'conduit to other services';* this was supported in Delphi and there was evidence in postholding sites in the case study of referral to other health professionals.

'Patient/client satisfaction' was also very strongly supported across data sets. Service users in postholding sites were significantly more satisfied with their care. This is an important outcome in a client focused health service that aims to match services more closely to patient/client expressed needs. *'Patient/client perception of being well cared for'* was very strongly supported across data sets. Observational work in case study postholding sites revealed that CSs/APs provided emotional support and personalised care. There was a difference in service users' perceptions of time given to discuss problems between postholding and non-postholding sites. *'Trust in the practitioner'* was translated in the Delphi work as *'therapeutic relationships'*. Evidence of good relationships was seen across data sets but perceptions of the extent to which practitioners were viewed by service users as open and honest varied; 100% agreed that this was the case with ANP or CMS and 86-87% in CNS and non-postholding sites. *'Family support'* was also very strongly supported across data sets, with more positive findings in postholding sites.

The last outcome for which there was very strong evidence was *'provides more timely care'*. No difference was seen in overall waiting times between postholding and non-postholding sites, in the service users' survey. However, there were significant data from interviews with service users and clinicians stating that waiting times were reduced, in particular with APs. Some policy makers also highlighted that access to care had increased because of AP services.There was also documentary evidence from two sites of audits of waiting times having demonstrated a reduction due to CS/AP presence.

There was a significant difference between waiting times for CNS, CMS and AP services. **Waiting times to be seen at the first visit in CNS services were significantly shorter.** This may be because the CNSs appeared to be running a more scheduled service, with appointments, whereas the CMSs and APs were caring for more acute or emergency patients and clients. The service users' comments on the survey gave evidence of shorter waiting times for AP services in the ED, compared with EDs in the non-postholding sites.

Table 5.1: An illustration of the integrated findings across data sets regarding the effects of CS/AP services on individual patient/client outcomes

	Evidence from focus group out-comes	Evidence from Delphi outcomes, validation and evaluative surveys	Evidence from case study: interviews, field notes and documentary evidence (DE)	Evidence from case study: service users' (SUs) questionnaires/ economic analysis	Evidence from policy maker interviews	Evidence rating
1	Decreases morbidity	Symptom management (e.g. relief from symptoms such as pain, agitation, inflammation) Physical comfort (e.g. nausea, physical discomfort, being settled) **Pain (severity, pain relief) (AP)** Appropriateness of medication regime (e.g. degree to which dosage, type of medications is appropriate) Promotes patient/client safety. Potentially avoidable adverse events are prevented (e.g. misdiagnosis, medication errors, inappropriate treatment)	Uses physical interventions to decrease symptoms	78% of SUs said they received enough treatment to help improve their symptoms (20% said 'not applicable') 76% of SUs attending CSs/APs were very satisfied with the physical care received, compared with 66% of those attending non-postholders 100% of SUs had confidence in the CS/AP to provide the care they needed	Direct care identified as key part of role for CSs/APs Some concerns in relation to CS and the focus of working through others only (indirect rather than direct care) CSs/APs identified as very safe practitioners	Very strong evidence (5/5 sources)
2	Decreases mortality	Appropriate data not available to study	Appropriate data not available to study	Appropriate data not available to study	Appropriate data not available to study	No evidence
3	Increased knowledge of service users/family	Communication (non-verbal/verbal skills, SU's expression of preferences) The SU's knowledge (possessing relevant information, understanding of medical condition/treatment, making sense of personal experience) Family/carer adjustment **(family ability to support SU's physical needs, acceptance of illness) (AP)**	Educates SUs and family Carer's satisfaction with information increased Tailored information resources developed by CSs/APs	CSs/APs gave SUs and their families more information, completely revealed all the danger signals to look out for (64% in postholding sites vs. 44% in non-postholding sites)	Policy makers were clear that knowledge is enhanced and this makes a difference. Also comments made on the increased safety of care due to continuity	Very strong evidence (5/5 sources)
4	Promotes self management	The person's knowledge (e.g. possessing relevant information, understanding of medical condition/treatment, making sense of personal experience) **Physical self care capacity** (e.g. ability to manage general needs or illness-specific needs) **(AP)** **Personal independence in society** (e.g. ability to manage daily affairs, everyday functioning in home/community) **(AP)**	Teaches self-management	CSs/APs gave SUs more information about self help and support groups (38% vs. 33%) and how to maintain a healthy lifestyle (51% vs. 44%) Significantly more SUs in postholding sites said the clinician supported them to manage their own condition (77% vs. 64%); more said they did not need information (40% vs. 30%)	Policy makers want an increased focus on community and chronic disease management in line with HSE transformation agenda. No mention of CSs/APs promoting self-management, although that could be due to lack of practical experience of CS/AP work	Strong evidence (4/5 sources), with higher level working seen in the AP Delphi results

Table 5.1: (continued)

	Evidence from focus group out-comes	Evidence from Delphi outcomes, validation and evaluative surveys	Evidence from case study: interviews, field notes and documentary evidence (DE)	Evidence from case study: service users' (SUs) questionnaires/ economic analysis	Evidence from policy maker interviews	Evidence rating
5	Adherence to treatment	Adherence (e.g. following medical treatment, medication compliance, taking up dietary or exercise advice)	Evidence of improved medication compliance and adherence to treatment	No difference seen between sites in SUs views of following the advice given to them, but 98% attending a CS/AP said they did follow the advice given to them	Some mention of patient compliance due to continuity of care	Very strong evidence (5/5 sources)
6	Earlier diagnosis and intervention	Access to care (e.g. speed of access to appropriate care, assessment/treatment delay, waiting for appointment)	Assessment and diagnosis conducted by CSs/APs **Waiting time for treatment appeared lower in AP and CMS sites than in CNS or non-postholding sites**	Waiting times in CS/AP services were said to be significantly less **Waiting times for first appointment less for CS than AP**	Some evidence that earlier diagnosis contributes to swifter access to services Policy makers suggest that links within community would make this more likely	Very strong evidence (5/5 sources)
7	Reduces exacerbations of condition	Relapse (e.g. flare up in chronic condition, re-emergence of acute symptoms, frequency/severity of relapse)	Reduced readmission rates and re-emergence of acute symptoms	82% said the CS/AP made a positive difference to their health and well-being	No evidence stated, but raised the need to have integrated care, hospital and community functioning together. Funding mechanism at present makes this difficult	Strong evidence (4/5 sources)
8	Prevents complications	Maintenance of safe environment (e.g. risks in the clinical environment to patient/client and others, safe home environment)	Provides education and interventions that prevent complications	More CSs/APs told SUs about medication side-effects (44% vs. 40%)	Evidence and knowledge-based care used, which improves safety	Very strong evidence (5/5 sources)
9	Conducts holistic assessment, identifies problems beyond those with which client presented	Appropriateness of assessments (e.g. degree to which clinical investigations, tests, etc, are appropriate)	Evidence of holistic assessment Evidence of extra problems identified Holistic assessment not so clear in non-postholding sites	More SUs in postholding sites were given health information and extra advice More SUs had sufficient time to discuss their problems in postholding sites (83% vs 69%)	Policy makers note this as a key element of advanced practice	Very strong evidence (5/5 sources)

Table 5.1: (continued)

	Evidence from focus group out-comes	Evidence from Delphi outcomes, validation and evaluative surveys	Evidence from case study: interviews, field notes and documentary evidence (DE)	Evidence from case study: service users' (SUs) questionnaires/ economic analysis	Evidence from policy maker interviews	Evidence rating
10	Conduit to other services/ referral	Appropriateness of referral (e.g. degree to which appropriate referral to other nurses, midwives, doctors, professionals, etc, takes place)	Referral to other healthcare professionals Referral from other professionals, **mainly to APs** Co-ordination of multidisciplinary team	Data not collected	Some evidence of referral by CSs/APs to other services	Very strong evidence (4/4 sources)
11	Promotes wellness (averting problems)	Quality of life – Psychological (psychological well-being inclusive of emotional stability and adjustment, self-esteem, body image) – Physical (physical well-being: pain, mobility, physical comfort) **greater knowledge (validation survey) (AP)** Well-being across different domains (e.g. bio-psycho-social domains, person's needs in multiple areas of functioning) Patient/client anxiety (e.g. worry, stress reactions, restlessness and agitation)	Provides information, support and education of service users, and clinics	CSs/APs gave all the information SUs needed, including extra information, and more frequently gave information on danger signals	Some evidence	Very strong evidence (5/5 sources)
12	Promotes health	Health promotion beliefs (e.g. beliefs about healthy lifestyle, acceptance of behaviour change advice, self directed on health promotion needs)	Provides information, support and education of SUs, and clinics Tailored information resources developed by CSs/APs	CSs/APs gave information on danger signals (64% vs. 44%) Significantly more SUs in postholding sites said the CS/AP gave them information on how to maintain a healthy lifestyle (51% vs. 44%)	Some evidence of this	Very strong evidence (5/5 sources)
13	Provides more timely care	Access to care (e.g. speed of access to appropriate care, assessment/treatment delay, waiting for appointment)	Reduced waiting lists Prompt treatment Waiting time reduced by CS/AP, some believe **APs reduced it more** DE of decreased waiting time in 2 sites	Waiting times in CS/AP services were said to be significantly less Waiting times **for CS services were less than for CMS or AP**	Policy makers gave some evidence in some services that waiting lists reduced and access increased	Very strong evidence (5/5 sources)

Table 5.1: (continued)

	Evidence from focus group out-comes	Evidence from Delphi outcomes, validation and evaluative surveys	Evidence from case study: interviews, field notes and documentary evidence (DE)	Evidence from case study: service users' (SUs) questionnaires/ economic analysis	Evidence from policy maker interviews	Evidence rating
14	Patient/client preparedness for intervention	Appropriateness of interventions (degree that medical/nursing/ midwifery procedures, interventions and treatments are appropriate) Preparedness for treatment (SU expectations for surgery, awareness of treatment side-effects)	Prepared for interventions	SUs were given more information and practical advice in postholding sites SUs said CSs/APs gave more explanation of why they needed assessments (66% vs. 50%)	No evidence	Strong evidence (4/5 sources)
15	Patient/ client satisfaction	Patient/client satisfaction with information (e.g. satisfaction with professional advice) Patient/client satisfaction with technical aspects of care (e.g. patient/client evaluation of service delivery)	Good relationships, better knowledge and health Decreased litigation More SU satisfaction surveys used by CSs/APs	CSs/APs spent longer with clients Higher rates of satisfaction in postholding sites (75.5% vs. 65.8%) 40% of SUs answering the survey saw a positive difference in care given by CS/AP compared with care given by other members of MDT	Policy makers believed there was an impact on patient/client satisfaction, and made comments on decreased litigation	Very strong evidence (5/5 sources)
16	Increases patient/client perception of being well cared for	Patient/client satisfaction with interpersonal aspects of care (e.g. patient/client evaluation of emotional support and communication)	CSs/APs provided emotional support and personalised care	Satisfaction increased in postholding sites More SUs had sufficient time to discuss their problems (83% vs. 69%)	Some evidence of client satisfaction	Very strong evidence (5/5 sources)
17	Increases advocacy – SU wishes are known, respected	Personal preferences respected (e.g. patient/client perspective taken on board by MDT, degree to which the person's voice is heard)	Evidence of acting as an advocate	More SUs had sufficient time to discuss their problems, particularly when attending CMSs	Policy makers noted the improvement in services, but no mention of advocacy	Strong evidence (4/5 sources)
18	Added value outcome: trust in practitioner, feeling known	Therapeutic relationship (e.g. trust, openness, nurse's/midwife's credibility) Personal preferences respected (e.g. patient/client perspective taken on board by MDT, degree to which person's voice is heard)	Develops good relationships with SUs Clients trust them, feel comfortable with them	CSs/APs spent longer with clients (33% for >31 minutes vs. 14% in non-postholding sites) CSs/APs included service users in all communications (93% vs. 76%) 100% attending an AP or CMS said "Yes, definitely, the clinician was honest and open with me" vs 86% attending a CNS and 87% a non-postholding site	Some positive comments re added value	Very strong evidence (5/5 sources)

Table 5.1: (continued)

	Evidence from focus group outcomes	Evidence from Delphi outcomes, validation and evaluative surveys	Evidence from case study: interviews, field notes and documentary evidence (DE)	Evidence from case study: service users' (SUs) questionnaires/ economic analysis	Evidence from policy maker interviews	Evidence rating
19	Promotes self-efficacy/self-esteem	Shared decision making (e.g. patient/client involvement in decision-making, involvement of family) Self-esteem (e.g. person's opinion of self, body image, positive/negative self beliefs) Mood (e.g. postnatal depression, feeling down, depression) Personal independence – personal beliefs (e.g. beliefs about recovery, self-efficacy, institutionalisation)	Provides education, self-help groups	SUs and families were given all information needed in postholding sites (50% vs. 46%)	Many policy makers believed that expansion into chronic disease management was difficult because of structures	Very strong evidence (5/5 sources)
20	Provides family support	Family knowledge (e.g. possessing relevant information, understanding of medical condition/treatment) Family/carer quality of life (e.g. degree of carer strain, impact of illness on family well-being) **(AP)**	Carer's satisfaction with information increased	Fewer family members required information or support in postholding sites (51% vs. 36%), and families were given more information	Policy makers agreed this was an important element and there was some evidence of it occurring	Very strong evidence (5/5 sources)

5.4. Outcomes specific to other healthcare staff

There were 11 outcomes specific to other healthcare staff: very strong evidence for nine, strong evidence for one, and moderate evidence for one (Table 5.2). *'Provides career advice'* was supported by the case study work where advice on career opportunities was noted, but the evidence is moderate only. *'Increases work satisfaction and retention'* was supported by strong evidence but related to the AP role only, and would need to be explored further.

Very strong evidence was found to support the following outcomes:

- reduces potential to de-skill junior staff
- increases knowledge and skill of other care providers
- development of services
- makes staff feel well supported
- promotes positive attitudes **(very strong for AP, strong for CS)**
- provides role model
- motivates staff
- contributes to more competent staff
- empowerment of other staff **(very strong for AP, strong for CS).**

Case study data from postholding sites revealed evidence of CSs and APs educating staff and developing new services, and policy makers gave many examples of service developments led by APs or CSs. The concerns expressed by a few participants regarding CSs/APs de-skilling junior staff were not borne out by the data. Across data sets there was very strong evidence of APs and CSs engaging in staff education, and being a resource. Policy makers differentiated between CS and AP roles, suggesting that, although both roles provided clinical leadership, **APs provided more leadership, and at a higher level.**

Table 5.2: An illustration of the integrated findings across data sets regarding the effects of CS/AP services on outcomes specific to other healthcare staff

	Evidence from focus group outcomes	Evidence from Delphi outcomes, validation and evaluative surveys	Evidence from case study: interviews, field notes and documentary evidence (DE)	Evidence from policy maker interviews	Evidence rating
1	Increases knowledge and skill of other care providers	Achievement of new educational intervention for staff nurses/ midwives/other professionals Other nurses' or midwives' knowledge level (e.g. staff nurses' or midwives' understanding of clinical issues, patient/client needs, family experience). Other professionals' knowledge level (e.g. understanding of clinical issues, patient/client needs, family experience, junior doctors, occupational therapists, etc)	Educates and motivates staff More education of MDT by CSs/APs (20 CS/AP sites compared with 5 non-postholding sites)	Some policy makers were clear that CS/AP roles do contribute to better knowledge across services, and that they educate many other healthcare staff	Very strong evidence (4/4 sources)
2	Empowerment of other staff	Achievement of new educational intervention – peers (e.g. education on assessment, treatment or management of a condition)	Educates staff to empower them for role expansion, brings staff along with them (CS/AP but **AP appears to act at a higher level)**	Leadership and teamwork noted by policy makers as **AP outcome**	**Very strong evidence** (4/4 sources) **for AP** **Strong evidence** (3/4 sources) **for CS**
3	Makes staff feel supported	Clinical leadership of nurses/midwives (e.g. staff feeling well supported, influence on decisions affecting patient/client care)	Seen as a resource by the MDT	Evidence of their usefulness as a resource for staff	Very strong evidence (4/4 sources)
4	Development of services	Achievement of new educational intervention – staff nurses or midwives/other professionals (e.g. in-service education on assessment/treatment)	Evidence of developing new patient/client services 11 CS/AP sites had developed new initiatives vs. 1 non-postholding site	All policy makers gave examples of service development led by APs and some by CSs	Very strong evidence (4/4 sources)
5	Promotes positive attitudes	Attitude to practice development among nurses/midwives (e.g. involvement of staff in developing guidelines, openness to practice development) Openness to innovation – Healthcare unit (e.g. attitude to innovative solutions, treatments and initiatives in your unit/team) Other nurses' or midwives' attitudes to their work (e.g. staff nurses' or midwives' attitudes to safety, infection control, patient rights) **(AP)**	Evidence of contribution to staff development and motivating staff to develop themselves	**Difference between AP and CS roles,** evidence of CS contribution not as clear, but examples were given of teaching and encouraging staff	**Very strong evidence** (4/4 sources) **for AP** **Strong evidence** (3/4 sources) **for CS**
6	Increases work satisfaction and retention **(ANP only)**	Nurses'/midwives' satisfaction with clinical role (e.g. staff nurse or midwife perception of increased restriction/expansion of clinical role)	Some evidence of AP's effect on other staff's retention	No evidence	**Strong evidence** (3/4 sources) **for AP only**

Table 5.2: (continued)

	Evidence from focus group outcomes	Evidence from Delphi outcomes, validation and evaluative surveys	Evidence from case study: interviews, field notes and documentary evidence (DE)	Evidence from policy maker interviews	Evidence rating
7	Provides role model	Clinical leadership of nurses/midwives (e.g. staff feeling well supported, influence on decisions affecting patient/client care) Attitude to practice development among nurses/midwives (e.g. involvement of staff in developing guidelines, openness to practice development)	CSs/APs led guideline or policy development. Acted as role models in autonomous clinical decision making **(APs more often)**	Policy makers suggested this was very important for younger staff and provided evidence of strong clinical leadership and work on guideline development	Very strong evidence (4/4 sources)
8	Contributes to more competent staff	Use of clinical guidelines (e.g. staff nurse or midwife awareness and take up of guidelines, staff access to EB guidelines). Integration of research in clinical practice (e.g. use of research findings among clinical team, attitude to EB practice) Achievement of new educational intervention for peers (e.g. education on assessment, or management, of a condition) Clinical leadership of nurses/midwives (e.g. staff feeling well supported, influence on decisions affecting patient/client care) Other nurses' or midwives' knowledge level (e.g. staff nurses' or midwives' understanding of clinical issues, patient/client needs, family experience) Other professionals' knowledge level (e.g. understanding of clinical issues, patient/client needs, family experience, among junior doctors, occupational therapists, etc)	Educates staff. Demonstrated clinical leadership More education of MDT by CSs/APs (20 CS/AP sites compared with 5 non-postholding sites) Guidelines and updating of guidelines seen in almost all CS/AP sites	Policy makers clear that this is an outcome	Very strong evidence (4/4 sources)
9	Provides career advice	No evidence	Advises other staff on further education	No evidence	Moderate evidence (2/4 sources)
10	Reduces potential to de-skill junior staff (medical & nursing)	Other nurses' or midwives' knowledge level (e.g. staff nurses' or midwives' understanding of clinical issues, patient/client needs, family experience) Other professionals' knowledge level (e.g. understanding of clinical issues, patient/client needs, family experience, among junior doctors, occupational therapists, etc)	Some concern re de-skilling of other staff but strong acknowledgment also of their staff education input	Some policy makers concerned that there is the potential to de-skill staff nurses, related to CS role only, but no proof. Evidence given of teaching junior medical and nursing/midwifery staff	Very strong evidence (4/4 sources) that they educate and develop staff
11	Motivates staff	Attitude to practice development among nurses/midwives (e.g. involvement of staff in developing guidelines, openness to practice development) Nurses'/midwives' satisfaction with clinical role (e.g. staff nurse or midwife perception of increased restriction/expansion of clinical role)	Motivated and empowered staff	Some evidence that CSs/APs brought other staff along with them and stimulated developments	Very strong evidence (4/4 sources)

5.5. Outcomes specific to the health services

5.5.1. Introduction

There were 21 outcomes specific to the health services, with very strong evidence for 13, strong for six, moderate for one, and no evidence for one. The outcomes are grouped into three main areas: service delivery, service development and service quality. Those that relate to service delivery (Table 5.3) are:

- waiting times
- throughput
- accessibility
- length of stay
- continuity of care
- readmission rates
- reduces costs
- reduces criminality
- improves communication across the MDT
- collaboration.

Those that relate to service development (Table 5.4) are:

- policy development
- strategic planning
- service expansion
- potential to work across hospital and community
- community knowledge/support/advocacy groups
- leadership.

Those that relate to service quality (Table 5.5) are:

- conducts audit
- expert advice
- implements research evidence
- promotes evidence based practice
- conducts research.

5.5.2. Service delivery

'Reduces criminality' was the outcome with no evidence, which had come from the initial focus groups. It is possible that this outcome may be seen from CS/AP practice in the mental health or intellectual disability areas, but it was not seen as a generic finding. Moderate evidence supported *'leads to shorter*

length of stay'. Strong evidence supported:

- reduced readmissions
- reduced costs.

There was very strong evidence to support:

- decreased waiting times
- increased throughput
- increased continuity of care
- increased accessibility
- increased communication with the MDT
- increased collaboration.

These outcomes were associated with the AP role and demonstrate the potential of APs to impact on service delivery targets. There was some evidence, however, from the service users' survey that **waiting times were less in CS services when compared to AP services.** In the service users' comments on the survey, **APs appeared to have the shortest waiting times,** however. The waiting time for treatment appeared very much lower in AP (12 hours) and CMS (1 hour) sites than in non-postholding sites (239 hours). This may be due to the level of autonomy in the AP and CMS services, which may be facilitating swifter throughput.

Table 5.3: An illustration of the integrated findings across data sets regarding the effects of CS/AP services on outcomes specific to the health services: service delivery

	Evidence from focus group out-comes	Evidence from Delphi outcomes, validation and evaluative surveys	Evidence from case study: interviews, field notes and documentary evidence (DE)	Evidence from case study: service users' (SUs) questionnaires/ economic analysis	Evidence from policy maker interviews	Evidence rating
1	Decreases waiting times	Waiting times (e.g. prompt appointments, waiting times for triage) **(AP)**	Reduces waiting times and waiting lists	**Waiting times within CS** services were **significantly less than AP/CMS** services but **waiting times reduced more in AP services,** according to SU comments	Policy makers gave some evidence in some services that access increased and waiting lists reduced	Very strong evidence (5/5 sources) for both CS and AP
2	Increases throughput	Waiting times (e.g. prompt appointments, waiting times for triage) **(AP)**	Increases throughput	Data not collected	**Policy makers identify this within AP role**	**Very strong evidence** (4/4 sources) for **AP** **Strong evidence** (3/4 sources) for **CS**
3	Decreases readmission rates	Appropriateness of initiating/ending healthcare episodes (e.g. degree to which appropriate admission, discharge, etc, takes place)	Reduced readmission rates	Data not collected	No evidence	Strong evidence (3/4 sources)
4	Reduces criminality (CNS only)	Appropriate data not available to study	Appropriate data not available to study	Appropriate data not available to study	Appropriate data not available to study	No evidence
5	Leads to shorter length of stay	No evidence	Some evidence of shorter lengths of stay	Data not collected	No evidence	Moderate evidence (2/4 sources)
6	Improves continuity of care/carer	Continuity of care (e.g. consistency in patient/client interactions with same staff member)	Continuity of care and carer	No difference seen in continuity of care but more SUs attending CSs/APs were given sufficient time to discuss their problems and other measures of continuity were high. **CMS spent more time with SUs than AP or CS**	Policy makers clear that this is an outcome	Very strong evidence (5/5 sources)
7	Increases accessibility	Access to care (e.g. speed of access to appropriate care, assessment/treatment delay, waiting for appointment)	Reduced waiting times Improved access to specialised health services	**Waiting times for first visit in CS** services were **significantly less than in AP/CMS services**	Swifter access in some services	Very strong evidence (5/5 sources)
8	Improves communi-cation across MDT	Multidisciplinary work – communication (e.g. communication practices and mutual understanding between health professions and team members)	Improving communication in the MDT. In 7 sites, CSs/APs coordinated the MDT	Data not collected	Policy makers clear that there is evidence of this	Very strong evidence (4/4 sources)

Table 5.3: (continued)

	Evidence from focus group out-comes	Evidence from Delphi outcomes, validation and evaluative surveys	Evidence from case study: interviews, field notes and documentary evidence (DE)	Evidence from case study: service users' (SUs) questionnaires/ economic analysis	Evidence from policy maker interviews	Evidence rating
9	Increases collaboration among care providers	Multidisciplinary work – team performance (e.g. effectiveness in healthcare team addressing patient/client needs)	Collaborative decision making in MDT, co-ordination of MDT. Referral to other professionals (CS/AP) and from other professionals, **mainly to APs**	No difference seen in collaborative decision making but 96% said care was delivered in a planned and coordinated manner	Policy makers clear that there is evidence of this	Very strong evidence (5/5 sources)
10	Reduces costs	Appropriateness of assessments (e.g. degree to which clinical investigations, tests, etc, are appropriate)	Efficient use of resources	Overall, no difference found in costs between postholding and non-postholding matched sites, when comparing staff costs only	Some evidence that policy-makers believe CS/AP services to be cost-effective due to increased clinical effectiveness	Strong evidence (4/5 sources) on the cost-effectiveness of roles. Evidence from 1 source for no differences in salary costs

5.5.3. Service development

Strong or very strong evidence was gathered for outcomes related to service development. Contribution to service development, strategic planning and guideline development was evident across data sets.

There was very strong evidence for:

- contributes to policy development, guidelines
- contributes to strategic planning of services
- potential for service expansion e.g. nurse-/midwife-led clinics
- increases community knowledge/support/advocacy groups
- practises leadership.

Strong evidence was available for:

- potential to work across hospital and community.

There was very strong evidence that CSs and, in particular, ANPs *'practise leadership'*. The ANPs led initiatives in developing education programmes that were accredited by third-level institutions and professional bodies; shaped and influenced policy through their membership of national committees and through written submissions; and further advanced practice and service provision through their contribution to national guideline development (Table 5.4).

5.5.4. Service quality

There was very strong evidence for:

- promotes evidence-based practice
- implements research evidence.

Strong evidence was seen for:

- provides expert clinical advice
- conducts audit
- conducts research.

The standard of evidence for these last two outcomes is particularly high, as it was gathered from case study sites and includes examples of actual audits and of research and publications. **The outcome '*conducts research*' was associated with APs mainly** but it was also noted that the volume of research was limited (perhaps understandably, given that only six APs were included in the case study). Issues such as support, team research and links with higher education were raised as suggestions to improve research output. It is clear from the data that **leadership and research were outcomes most associated with AP roles,** but there was also strong evidence that the amount of, and barriers to, research output was an area of concern (Table 5.5).

Table 5.4: An illustration of the integrated findings across data sets regarding the effects of CS/AP services on outcomes specific to the health services: service development

	Evidence from focus group outcomes	Evidence from Delphi outcomes, validation and evaluative surveys	Evidence from case study: interviews, field notes and documentary evidence (DE)	Evidence from policy maker interviews	Evidence rating
1	Contributes to policy development, guidelines	Use of clinical guidelines (e.g. staff nurse or midwife awareness and uptake of guidelines, staff access to evidence-based guidelines) Best practice in clinical service delivery – regionally or nationally (e.g. regional or national adoption and implementation of evidence-based guidelines)	Develops guidelines at national/international level DE of guidelines in 21/23 CS/AP sites. DE of policy development in 6 CS/AP sites, compared with 1 non-postholding site	Policy makers clear that this is a key element of both roles and gave clear examples of how CSs/APs were leading this development	Very strong evidence (4/4 sources)
2	Contributes to strategic planning of services	Achievement of new educational intervention – patient/SU (e.g. information leaflets on condition, education on self monitoring of condition) Openness to innovation – healthcare unit (e.g. attitude to innovative solutions, treatments and initiatives in your unit/team)	Involved in national committees/advisory groups. Sets up national fora Evidence of service planning in 11 CS/AP sites (1 in non-postholding site) CSs/APs contributed to 41 committees (4 in non-postholding sites)	Policy makers clear about this as a key outcome although evidence not clear in all services	Very strong evidence (4/4 sources)
3	Potential for service expansion e.g. nurse-/ midwife-led clinics	Nursing/midwifery staff understanding of CS role (e.g. knowledge about specialist role, integration of specialist role in unit) Openness to innovation – healthcare unit (e.g. attitude to innovative solutions, treatments and initiatives in your unit/team)	Takes on medical workload. Runs clinics	Policy makers clear – many opportunities for expansion, nurse-/midwife-led clinics, chronic disease, new hospital structures and midwifery practice	Very strong evidence (4/4 sources)
4	Increases community knowledge/ support/advocacy groups	Quality of life – social (social well-being inclusive of relationships with social network, friends and family)	Some evidence of representing healthcare issues within the public arena, visiting support groups and teaching in schools	Evidence in some services only	Very strong evidence (4/4 sources)
5	Potential to work across hospital/ community	Openness to innovation – healthcare unit (e.g. attitude to innovative solutions, treatments and initiatives in your unit/team)	No evidence	Policy makers deemed this essential, want an increased focus on community and chronic disease management in line with HSE transformation agenda	Strong evidence (3/4 sources)
6	**Practises leadership (AP mainly)**	Clinical leadership of nurses/midwives (e.g. staff feeling well supported, influence on decisions affecting patient/client care)	Mentors and supports staff, advice sought on clinical decisions, encourages networking. Educates at national and international level **(AP mainly)**. Enhances the profile of nursing and midwifery	**Evidence of this in AP role** and evidence of education at national level	Very strong evidence (4/4 sources)

Table 5.5: An illustration of the integrated findings across data sets regarding the effects of CS/AP services on outcomes specific to the health services: service quality

	Evidence from focus group out-comes	Evidence from Delphi outcomes, validation and evaluative surveys	Evidence from case study: interviews, field notes and documentary evidence (DE)	Evidence from policy maker interviews	Evidence rating
1	Implements research evidence	Research awareness in clinical practice (e.g. knowledge of research process in your unit, team or ward) Integration of research in clinical practice (e.g. use of research findings among clinical team, attitude to evidence-based practice) Achievement of new clinical initiatives (e.g. implementation of new wound dressing, new assessment procedure)	Uses evidence-based tools. Implements research-based practice	Policy makers identify this as essential, and provide good evidence of implementation occurring	Very strong evidence (4/4 sources)
2	Promotes evidence-based practice	Integration of research in clinical practice (e.g. use of research findings among clinical team, attitude to evidence-based practice) Best practice in clinical service delivery – locally (e.g. hospital or unit adoption of evidence-based care guidelines, implementation of national health policy or clinical guidelines)	Uses best practice and evidence-based assessment tools. Clear evidence of use of research-based practice Evidence-based guidelines in 21/23 CS/AP sites	Clear evidence of this	Very strong evidence (4/4 sources)
3	No evidence	Provides expert clinical advice	Clearly seen as an expert resource, educator and mentor	Clear evidence that CSs/APs are seen as expert resource personnel and educators	Strong evidence (3/4 sources)
4	Conducts audit	No evidence	Clear evidence of the conduct of audits, especially by CSs All CS/AP sites had documented audits (12/23 non-postholding sites)	Evidence in many services of this	Strong evidence (3/4 sources)
5	Conducts research	Research activity level in clinical practice (e.g., involvement of your unit in research, research collaboration with other units, developing a research project) **(AP)**	Research conducted **by all 6 APs and 9 CSs** (even though it is not expected of them) DE showed 15 CSs/APs conducting research compared with 7 clinicians in non-postholding sites (5 were medically-led projects)	Many policy makers raised concern re low output of research, but cited some publications by CSs/APs. Perhaps not aware that this was not part of the CS role. Suggested the need for protected time, collaborative research and links with higher education	Very strong evidence (4/4 sources) **that research is conducted by APs, and a small amount of research is conducted by 9 CSs (53%)**

5.6. Barriers to implementing the role

There was moderate evidence to show that CSs/APs lacked administrative support, resources and protected time for research (Table 5.6), which prevented them from fulfilling all aspects of their role. In the field of maternity care, a previous study had shown some division in the midwifery and obstetric professions regarding the appropriateness or otherwise of the introduction of CMSs and, in particular, AMPs (NCNM 2004). The arguments against such roles are aired in section 9.5 Final Report and also outlined by one of the 12 policy maker participants (Table 5.6).

In other countries, the medical profession is seen to have raised some barriers to the introduction of CS/AP posts. The policy makers in this study warned that good communication was necessary in the preparation period. This study, however, shows unanimous support for such posts from consultants and senior doctors in the AP postholding sites, who highly valued the APs with whom they were working. This may be as a result of the National Council's approval and accreditation process whereby the hospital site has to prepare for the introduction of CS/AP roles, with the involvement of all clinicians (2008b, c).

Table 5.6: Barriers to implementation of the role

	Evidence from case study: interviews, field notes and documentary evidence	Evidence from policy maker interviews	Evidence rating
1	Needs administrative support	Policy makers noted the lack of resources to support CSs/APs	Moderate evidence (2/4 sources)
2	Lack of time and resources, particularly to conduct research	Policy makers noted the lack of protected time for CSs/APs to conduct research	Moderate evidence (2/4 sources)
3	Strong support was seen from doctors and other clinicians for CS/AP roles	Challenges to the introduction of the roles were outlined and remedies suggested	Moderate evidence (2/4 sources)
4	Divided opinions on the benefits/need for advanced midwifery practice as midwives described as already at that level	Similar opinions expressed by one policy maker	Moderate evidence (2/4 sources)

5.7. Differences between ANP and CNS/CMS roles

Throughout the study, a number of differences were seen between the roles of the AP, CNS and CMS, which is understandable due to the specific core concepts and expectations for each role. Many of these differences are related to the 'autonomy' concept of the AP role, which would, for example, facilitate a higher level of case management and physical care and treatment. The sources of these data have been integrated in Table 5.7, and show differences in eight main areas.

Of these, APs rated very highly on:

- physical care and treatment
- case management (diagnosis, intervention, referral)
- leadership and empowerment of other staff
- conducting research.

In addition, they were the only ones who rated *'job satisfaction'* as an important outcome.

APs and CMSs both rated very highly in:

- communication and interpersonal relations
- increasing self management of patients/clients.

CMSs rated very highly in:

- improving continuity of care and carer.

There were contradictory data as to whether CSs or APs reduced waiting times the most. Waiting time is a good example of an outcome that would be very susceptible to change, depending on the specialty area. For instance, there was good documentary evidence in the postholding emergency department that the ANP had reduced waiting times for patients, but this finding did not occur in some other settings. In the mental health field, the item asked in the service users' survey regarding how well postholders or clinicians had explained tests, x-rays and assessments to them would not have received a high rating as they usually need few, if any, such tests. Similar variations can be seen in many other clinical areas and, for this reason, caution must be exercised in interpreting and using these data. However, it is apparent that, overall, APs do rate very highly in the areas of leadership and research, and in higher level physical and psychological care compared with CSs. CMSs rate very highly in increasing the self management of patients/clients and in communication, clinical and practice based areas, and particularly highly in improving continuity of care and carer.

Table 5.7: Integrated data sources showing differences between ANP, CMS and CNS roles

Role	Evidence of differences from focus-group outcomes	Evidence of differences from Delphi outcomes/ validation and evaluative surveys	Evidence of differences from case study: interviews, observation	Evidence of differences from service users' (SUs) questionnaires	Evidence of differences from policy maker interviews
Communication and interpersonal relations				**APs scored more highly than CSs in some aspects of communication,** being open and honest, explaining medicines, treating SUs with respect **CMSs (92%) and APs (77%) explained more completely** why SUs needed tests than **CNSs (51%).** Similar results re danger signals and time to discuss problems	
Physical care, treatment		Pain (severity, pain relief) **(AP only)** Quality of life – physical and best practice in clinical service delivery, greater knowledge (validation survey) **(AP only)**		**APs scored more highly than CSs in some aspects of giving sufficient treatment to improve symptoms**	
Improves continuity of care/carer				**CMSs spent more time with SUs than AP or CS. More SUs attending CMS noticed a difference in care given**	
Improves access, efficiency		**Waiting times** (e.g. prompt appointments, waiting times for triage) **(AP only)**	Waiting time reduced by both CSs/APs, some of the opinion that **APs reduced it more**	Waiting times for first visit to **CS services were significantly less than in AP/CMS services,** but **waiting times reduced more in AP services,** according to SU comments Waiting time for treatment appeared lower in **AP and CMS sites than in CNS or non-postholding sites**	
Increases self-management of patients/clients		Assisting SUs to develop physical self care capacity **(AP only).** Increasing SUs' personal independence in society (e.g. ability to manage, everyday functioning) functioning in home/community) (AP)		**CMSs scored more highly than APs and CNSs in explaining why SUs needed specific tests, and explaining the results to them and in teaching, advising, being easy to understand**	
Case management, diagnosis intervention, referral			Referral from MDT **(mainly APs).** Demonstrated autonomous clinical decision-making **(APs more often)**		Policy makers identify that **APs increase throughput**

Table 5.7: (continued)

Role	Evidence of differences from focus-group outcomes	Evidence of differences from Delphi outcomes/ validation and evaluative surveys	Evidence of differences from case study: interviews, observation	Evidence of differences from service users' (SUs) questionnaires	Evidence of differences from policy maker interviews
Leadership, empowerment of other staff, promotes positive attitudes	**Practises leadership (ANP mainly)**	**Other nurses' or midwives' attitudes to their work** (e.g. staff nurses' or midwives' attitudes to safety, infection control, patient rights) **(AP)** **Supports junior doctors as well as nurses/midwives (validation survey) (AP)**	Educates at national and international level **(AP mainly)**. Educates staff to empower them (CS/AP, **but AP appears to act at a higher level**). Clinical expertise sought by MDT, **APs particularly**		**Evidence of this in AP role** and evidence of education at national level. Leadership and teamwork noted by policy makers as **AP outcome, evidence of CS contribution not as clear**
Conducts research		**Research activity** in clinical practice (e.g., involvement in research, research collaboration, publishing, developing a research project) **(AP)**	Research conducted **by all 6 APs and 9 CSs (53%)**		
Job satisfaction	Increases work satisfaction and retention **(ANP only)**		Some evidence of **AP's effect** on other staff's retention		

6 Discussion of findings

6.1. Patient/client outcomes

Fifteen patient/client outcomes were clearly identified as part of the role of CSs/APs, with very strong support from the various types of data. Strong support was evident for a further four outcomes also. The number of outcomes, and number of tasks and behaviours included under each patient/client outcome heading, illustrates the broad clinical focus ascribed to the CS/AP roles in Ireland (NCNM 2008b, c, d), in line with some (but not all) other countries (Woods 1997, Henderson 2004).

Care of service users through physical and psychosocial interventions, with early diagnosis and holistic assessment and appropriate referral to other clinicians, featured strongly. These findings concur with those of other studies, notably Bourbonniere and Evans (2002), who describe APs demonstrating high levels of expertise in the assessment, diagnosis and treatment of complex health problems of individuals, groups and communities. Kring (2008) and Carryer et al (2007) speak of CSs/APs as "expert" practitioners and "dynamic" practitioners, respectively; based on the SCAPE data, these titles could be applied to the CSs/APs of Ireland. It is clear that these practitioners provide added value, and that their contribution is vital to support the chronic disease, patient-centric model of care proposed by the HSE (HSE 2006b).

Evidence in the SCAPE study points towards positive outcomes as a result of CS/AP interventions, such as decreases in morbidity, reduced exacerbation of symptoms, and reduced complications. Laurant et al's (2005) systematic review of substitution of doctors by nurses in primary care showed similarly that appropriately trained nurses could produce as high quality care as primary care doctors, with similar good health outcomes for patients. Bonsall and Cheater's (2008) overview of the impact of advanced practice roles also found that nurses working in advanced primary care roles provided safe and effective care, and that patient satisfaction was generally high. Although the literature reports some evidence of decreased mortality in certain client groups (McCorkle et al 2000), there were no data apparent from the SCAPE study to show this effect.

The evidence from the systematic reviews included in the SCAPE study suggests that, in agreement with these findings, nurse-led interventions have a similar impact to usual care on the majority of clinical outcomes across various client groups and clinical conditions. The review found that psychological outcomes of satisfaction, anxiety and depressive symptoms were all improved for nurse-led care, and the SCAPE findings concur with that. Such findings are particularly important in the mental health field, where the care provided by CSs/APs has been shown to make a difference (NCNM 2004, 2005a). Midwife-led models of care were found, in the review, to have significant benefit across both clinical and psychological outcomes. Importantly, there is no evidence of harm associated in the international literature with nurse or midwife-led interventions. The SCAPE study, similarly, found no instances of negative influences of CS/AP care on patient/client outcomes in any of the data sources. In addition, there was evidence of decreased litigation, a finding previously noted in other evaluations (NCNM 2005a).

Education of patients/clients has been previously noted as an important function of the CS role (NCNM 2004), and an important part of the AP role also (NCNM 2005a). The special health promotion and education skills of the CSs/APs in the SCAPE study led to increased knowledge of service users, resulting in improved adherence to treatment, increased wellness and a greater level of self-efficacy and support, similar to the findings of comparable studies in the UK (Gerrish et al 2007). Considerable patient/client satisfaction and an impression of being well cared for was part of the CSs/APs 'added value' (Mundinger et al 2000b), with service users in postholding sites expressing themselves significantly more satisfied with their care. This is an important outcome in a client focused health service that aims to match services more closely to patient/client needs. In particular, the emphasis on health promotion and increased self-

management is very much in line with the vision expressed in the HSE's National Service Plan that will have 530 primary care teams in operation by the end of 2011 (HSE 2010a).

Observational work in case study sites revealed that CSs/APs provided emotional support and personalised care, which may have resulted in the improved therapeutic relationships and trust noted among service users attending CSs/APs. Such findings of increased satisfaction have been noted in other studies (Sakr et al 1999, Kinnersley et al 2000, Bryant and Graham 2002, Douglas et al 2003, Bonsall and Cheater 2008), particularly in relation to emotional care, health promotion and education.

It should be noted that care given in both postholding and non-postholding sites was good, and much of it excellent, but there were indications of the extra 'added value' for the individual patient or client that was present in the postholding sites. Previous researchers have drawn attention to the need to design methods that successfully identify the distinctive focus of advanced practice (Bryant-Lukosius and DiCenso 2004, Kleinpell and Gawlinski 2005). The SCAPE study, by using a comprehensive mixed methodology, including extensive study of international literature, has succeeded in isolating a number of key differences between CS/AP care and care given by other clinicians. Some of these (reduced readmission rates, increased adherence to best-practice guidelines, reduced complications, increased continuity of care, increased patient access to care, increased patient satisfaction, increased patient education/health education, increased education of patients' family, teaching/counselling/listening, coordination of care, community resource access and holistic care) had been identified in other work also (Kleinpell and Gawlinski 2005, Plager and Conger 2007). These key attributes of the CSs/APs are of prime importance in fulfilling the targets of the HSE's Transformation Programme, of providing easy access to services and ensuring that people have confidence in the services (HSE 2006c).

Ingersoll et al's (2000) two indicators, 'perception of being well cared for' and 'the sense of trust in the provider' came through clearly as two outcomes very strongly supported by the SCAPE study data. Overall, it was clear from the findings that CSs/APs in Ireland are contributing strongly to patient and client satisfaction and positive health outcomes. As well as providing a high standard of care, these practitioners provide 'added value' for service users and their families.

6.2. Outcomes specific to other healthcare staff

Nine outcomes specific to other healthcare staff were clearly identified as functions of the role of CSs/APs, with very strong support from the various types of data. Strong support was evident for one outcome and moderate support for one further outcome. The outcomes illustrate the importance of the positive effect these roles have on the health services in Ireland, findings comparable with the international literature (Kleinpell and Gawlinski 2005).

Education of other staff is seen universally as an advanced practice role (Kring 2008, NCNM 2008d). As part of their role, these Irish CSs/APs were seen to act as role models, and motivated, empowered and supported staff to advance their careers, increasing their knowledge and skill and promoting positive attitudes, particularly in relation to evidence-based guidelines, thus contributing towards more competent staff. Although a few participants expressed the concern that CSs/APs could possibly 'de-skill' other staff, no proof was seen of this. The overwhelming amount of data demonstrating the CSs/APs' immense educative role undoubtedly refutes this idea. The literature also is clear that the role of CNSs is more to do with disseminating knowledge and empowering generalist nurses to take on new roles, rather than the clinical specialist taking over patent/client care themselves (Jack et al 2002, NCNM 2004).

These findings concur with much of the work on specialist nurses and midwives in Ireland and other countries, which demonstrated empowerment of generalist nurses to care for patients in their absence, through education and support (Ling 2005), role modelling to manage disruptive patient behaviours and improve morale, and acting as a nurse advocate and resource (Linck and Phillips 2005, NCNM 2004).

APs, in particular, have been found previously to educate all members of the multidisciplinary team (NCNM 2005a), and this was clearly shown in the SCAPE findings also. 'Added value' is seen here once more, in terms of two criteria noted in previous work: 'increased adherence to best-practice guidelines' and 'increased staff education' (Kleinpell and Gawlinski 2005).

Job satisfaction came through clearly in a previous study of APs in Ireland (NCNM 2005a), as a prime motivator of all the APs included. The SCAPE study, similarly, noted this finding in the Delphi section.

It is clear from these findings that CSs/APs in Ireland are making a strong contribution to the education, support and development of nurses, midwives and other healthcare staff. As well as acting as a key resource and providing a high standard of support and education, these practitioners provide added value for all other healthcare professionals through their educative actions.

6.3. Outcomes specific to the health services

6.3.1. Service delivery

Six service delivery outcomes were clearly identified as part of the role of CSs/APs, with very strong support from diverse types of data. Strong support was evident for a further two outcomes and moderate support for one. The number of tasks and behaviours included under each service delivery outcome heading shows clearly the strategic importance of CS/AP roles in Irish health services (HSE 2006c).

CSs/APs were responsible for increased collaboration and improved communication within the multidisciplinary team. Working individually with, in the case of APs and some CMSs, autonomy and decision making powers, they decreased waiting times and increased patient/client throughput in their services. As a result, readmission rates were decreased and resource costs fell, similar to findings from other areas (Kleinpell and Gawlinski 2005). Previous evaluations and reviews of the effects of CS/AP care also found improvements in, for example, child and adolescent mental health services (NCNM 2009), where waiting lists reduced from over one year to seven weeks following the introduction of an ANP service. Similarly, audits of CS/AP care in Ireland have found a 36% reduction in bed occupancy rates and a 22% decrease in length of stay (NCNM 2010c). The ability of APs to embrace professional leadership through active engagement in policy development suggests they are well positioned to act as clinical advisors to the National Clinical Care Programmes currently being established by the Quality and Clinical Care Directorate.

The systematic review of reviews in this study found conflicting evidence on the cost effectiveness of nurse-led interventions, which is exacerbated by a lack of high quality economic data. Midwife-led models of care are, however, associated with cost savings compared with medical-led models of care. The findings from the SCAPE study, while not detecting any overall decrease or increase in costs due to CS/AP posts being implemented, did provide evidence that resource usage was decreased. Some concerns expressed by participants on the high cost of AP posts can be dispelled by examining the salary scales. The ANP's salary as set by the Department of Health and Children[8] would not equate to even twice a junior staff nurse's salary, is very little above a senior dual qualified nurse's salary and much less than a senior registrar's.

The economic findings of SCAPE did tend to show that, when nurses or midwives were substituted for doctors, salary costs fell, similar to the position in the US where nurse practitioners are widely recognised as a more cost-effective alternative to physicians (Dunn 1997). When CSs/APs are replacing staff nurses or midwives, then salary costs are, naturally, going to increase; however, there was evidence from SCAPE that CSs/APs were more cost-effective due to their enhanced and expanded role. The effectiveness of both

[8]From 1st January 2010, an AP salary (1st year) is €54,870. Staff nurse salary (1st year) is €30,234. A senior dual qualified nurse's salary is €45,271. A senior medical registrar's salary (1st year) is €65,347 (http://www.dohc.ie/publications/pdf/salary_scales_jan10.pdf?direct=1)

CS and AP roles had been previously demonstrated (NCNM 2004, 2005a) and strong evidence was shown by SCAPE to support these findings. Increasing the numbers of CSs and APs as currently modelled, therefore, would assist the HSE to deliver optimal and cost-effective primary, secondary and tertiary care, as planned in the national chronic disease management programme (HSE 2006b).

The continuity and holism of care seen in this study, and noted previously (NCNM 2005a), did provide enhanced care and increased service user satisfaction. Role expansion, such as was found in a number of areas in this study, occurs when additional skills and responsibilities are integrated into the specialist role, thus expanding the sphere of nursing or midwifery practice and influence. It is seen as central to advanced practice (Mac Lellan 2007). The implementation of the European Working Time Directive will require a major contribution from nurses and midwives, through expansion of roles, which, within the framework of advanced practice as set out by the National Council, will be of inestimable value (NCNM 2010b). The HSE's National Service Plan in the area of chronic disease management (HSE 2010a) includes development and expansion of the role of CNSs and ANPs, as does the recent report on plans for the reconfiguration of acute hospital services in Cork and Kerry (Higgins 2010). ANPs are also listed as key team members in the National Cancer Screening Service (NCSS) plan for a colorectal cancer screening programme (NCSS 2009).

Role extension also occurred in this study, which can lead to fragmentation of care (Mantzoukas and Watkinson 2007), or a decrease in nursing or midwifery philosophy as a more medical focus becomes dominant (Arslanian-Engoren et al 2005). The ideal situation is said to be a blend of nursing (or midwifery) and medicine (Brown and Draye 2003). This was found in the roles examined in this study as patient/client satisfaction and other measures showed high levels of advanced nursing and midwifery practice in tandem with the conduct of some tasks previously deemed to be medical only. Autonomy, which is also considered central to effective performance of advanced practice roles (Mac Lellan 2007, Srivastava et al 2008) was evident in the practice of the ANPs and some CSs. Patient/client outcomes appeared to be at least the same as those for usual care, as measured by all sources of data, findings similar to Laurant et al's (2005) systematic review of substitution of doctors by nurses in primary care, and the systematic review of reviews in this study. In some areas – for example, pain management – patient/client outcomes were improved and, in previous audits of CS/AP care across the country (NCNM 2010c), results included breastfeeding rates increasing from 42% to 49%, MRSA rates falling by 19% and pressure ulcers rates from 7.6% to 1.5%.

6.3.2. Service development

Five service development outcomes were clearly identified as part of the role of CSs/APs, with very strong support from diverse types of data. Strong support was evident for a further one outcome. The tasks and exemplars of achievement given under each service development outcome heading are at a strategic level, showing the importance of advanced and specialist practice roles for the future health services in Ireland (HSE 2006c).

Postholders were shown to be involved in policy development, strategic planning, and service expansion and development. They also increased community knowledge and support and had the potential to work across hospital and community, which is essential for future healthcare plans (HSE 2010a). APs, in particular, were found to demonstrate leadership in their roles, through developing accredited education programmes, their membership of national committees and their contribution to national guideline development. Very little of the international literature dwells on these aspects of the CS/AP role, apart from noting that leadership is one part of the AP's role (Carryer et al 2007, Mantzoukas and Watkinson 2007, Spross and Lawson 2009).

Professional leadership as a dimension of the CS/AP role was perhaps not as well developed when compared to the outstanding clinical leadership aspects of their practice. However, in comparison to the

2005 evaluation of the role of advanced practitioner in Ireland (NCNM 2005a), APs appear to be more involved in professional leadership activities at both national and international level. The ability of APs to embrace professional leadership through active engagement in policy development suggests that they are well positioned to act as clinical advisors to the National Clinical Care Programmes currently being established by the Quality and Clinical Care Directorate (ONMSD 2010).

The HSE has recently committed to investing in clinical leadership development, which it believes should be part of ongoing professional and organisational development rather than being implemented on a once off basis (HSE 2010b). Given the CSs/APs' experience in this area, their expertise should be used to help fulfil this aspiration, by mentoring and developing others.

6.3.3. Service quality

Two service quality outcomes were clearly identified as part of the role of CSs/APs, with very strong support from diverse types of data. Strong support was evident for a further three outcomes. The fact that *'conducts audit'* did not come through clearly as a finding in the Delphi survey of CSs and APs is interesting, as there was clear and practical evidence of audits being conducted throughout all postholding sites and managers were profuse in their appreciation of the role of CSs/APs in their conduct. Audits by CSs/APs have been used to illustrate the effectiveness of specialist and advanced practice care in a number of previous evaluations (NCNM 2009, 2010a), and the numbers of audits performed in the SCAPE study were higher in postholding sites. These skills are essential since continuing commitment to audit and the measurement and recording of key performance indicators are part of future healthcare plans (HSE 2010a).

Two other outcomes, *'implementing research'* and *'promotes evidence-based practice'* were very strongly supported by diverse types of data and demonstrate the fulfilment by CSs/APs of the National Council's accreditation criteria (NCNM 2008d). These key elements of the role are found across countries in the majority of studies on specialist and advanced practice (Kleinpell and Gawlinski 2005). When practised with clinical expertise and in line with clients' preferences, they demonstrate 'best practice' (Haynes et al 1996).

Conducting research, an expectation of APs only, was found to be an output of all six APs in the study, as well as of nine CSs, in common with expectations worldwide for advanced practice roles (Manley 1997, Mantzoukas and Watkinson 2007, Kring 2008, Spross and Lawson 2009). A number of the CSs who were undertaking research were preparing to be accredited as APs, and were either undertaking a Master's degree (with the obligation to conduct a research thesis), or preparing a portfolio of activities for submission to the National Council.

Although the output of some APs was considerable, most found it hard to find the time to conduct research, and had to spend personal time on their research activities. These individuals were high achievers and demonstrated strong personal initiative that drove them to succeed. They all presented their work at conferences and five of the six APs had research publications. The National Council's *Review of Achievements* contains examples of CSs/APs' initiatives and research; the 2009 version lists a sample of 14 publications stemming from APs' research (NCNM 2009). Similarly, 29 examples of APs' research projects were presented five years ago (NCNM 2005a). It is obvious that research skill and motivation is present, but is in its infancy and is occurring against all the odds, with little support. Formal links between CSs/APs and clinical and academic research networks should be instituted where appropriate and feasible, to ensure that patient centred, multidisciplinary research develops alongside clinical and technical research within clinical specialties. Funding for research, and dedicated time to pursue research actively in their specialist areas, as envisaged by the HRB (HRB 2009) and DoHC (DoHC 2009), are essential and will bring benefits in terms of improvements in patient/client care.

6.4. Differences between AP and CS roles

Internationally, many reports present CSs and APs together as though they were performing the same function. Roles described as specific to the AP include the provision of holistic care and health promotion and engaging in research (Arslanian-Engoren et al 2005), engaging in complex reasoning and skills of analysis (Bourbonniere and Evans 2002), and applying comprehensive skills in patient assessment (Carryer et al 2007). In addition, advanced practice nurses are described as nurses who have an expert knowledge base, complex decision making skills and clinical competencies that allow for expanded practice (Sheer and Wong 2008).

In Ireland, a clear distinction between the core concepts of advanced practice and clinical nurse specialist/clinical midwife specialist is made (Furlong and Smith 2005). The core concepts of clinical practice, patient advocacy, education and training, research and audit, and consultation, are outlined by the National Council for the clinical nurse or midwife specialist in Ireland (NCNM 2008c). Four core concepts of advanced nurse practitioners and advanced midwife practitioners are given as: autonomy in clinical practice, expert practice, professional and clinical leadership, and research (NCNM 2008d).

The SCAPE study has substantiated these concepts, commencing with the focus group interviews, which, while agreeing that CSs and APs had many outcomes in common, identified decision making, autonomy, research and leadership as differentiating characteristics of advanced practice. The Delphi survey delineated nine additional advanced practice outcomes, many of which were corroborated by the case-study data. Some policy makers and DoN/DoMs raised a concern about consistency of practice across clinical specialist areas, particularly in relation to CSs who may have been approved in the early days of the initiative, and about lack of governance that led to individualist developments. These seemed to be isolated experiences that were not borne out by data from other sources. Advanced practice, in contrast, was unanimously endorsed. A recent report on the development of CNS and ANP roles in Canada, based on over 60 stakeholder interviews and a review of over 500 articles, found growing consensus related to the purpose of ANP roles, but identified inconsistencies in perceptions and practice related to the roles of ANPs, patterns of deployment, and integration (DiCenso and Bryant-Lukosius 2010).

We in Ireland have the benefit of clarity around the two roles, given the National Council's frameworks and accreditation processes. Data in the case study confirmed that the role of advanced practitioners was strongly influenced by having national standards and requirements, and an accreditation process as published by the National Council (NCNM 2008d). The document, *Framework for the Establishment of Advanced Nurse Practitioner and Advanced Midwife Practitioner Posts* (4th Edition) (NCNM 2008b) provides for a standardised development of AP roles. The proactive development of AP posts to meet population and service needs, and site preparation undertaken, enhanced role clarity, ensured consistencies in practice, and reduced barriers to AP integration within the healthcare team. Participants in the case study, particularly Directors of Nursing or Midwifery, valued highly the support and guidance they received from the National Council in the development of AP posts and roles. It is now important to identify and implement strategies to ensure continued support of CS and AP roles as currently structured. In particular, CS roles need clarity, and CSs need encouragement for continued development.

In summary, then, there is a clear difference in the two posts. Advanced practice roles provide a number of strategic advantages such as improved service delivery, faster throughput, reduced costs and a clear governance and accreditation structure. This is understandable, as the posts are at different levels on the same clinical career pathway. The fact that CMSs work, and are rated in this study, at a similar level to APs for certain aspects is also understandable, as midwives start from a position of autonomy even at point of registration, and presumably develop that skill even more at clinical specialist level. In addition, CMSs rated more highly in continuity of care and carer, an area in which midwives would be trying to excel, even prior to undertaking clinical specialist roles.

At present in Ireland there are large numbers of CSs and comparatively few APs. Benefits in outputs from APs are considerable, including a higher level of patient/client care, increased leadership and greater research output. The feasibility, therefore, of supporting a number of the current CSs to develop their skills and education in order to become APs should be considered. This should be a key focus of the HSE for the future in line with its transformation plans for increased community care and support for managing chronic illness.

6.5. Barriers to implementing the role

There was moderate evidence, from the case study data and policy makers' interviews, to show that CSs/APs lacked administrative support, resources and protected time for research (Table 5.6), which prevented them from fulfilling all aspects of their role. Barriers may also be seen in the introduction of new CS/AP posts in Ireland. O'Shea (2008) describes the evolution of advanced practice nursing in Ireland and details, in addition to the absence of physicians in some areas, other influential changes in medical practice such as technological advances, the transfer of tasks from medicine to nursing, the expansion of healthcare coverage through community nursing, and the reorientation of healthcare systems to primary care (p. 4). In particular, the transfer of medical tasks to nursing has been seen internationally as a competing demand that acts as a constraint to implementing fully the nursing roles of research, leadership and education in the practice setting (Plager and Conger 2007).

Opposition from organised medicine to the role has been seen internationally. In Sweden, Lindblad et al (2010) report some opposition from GPs to the new role of ANP in primary care. In the US, this opposition is seen especially with regard to prescribing roles (Norris and Melby 2006). Some resistance by doctors to the NP role also occurred in New Zealand, but the view more recently is that doctors have "mellowed" in their attitude to the NP role (O'Connor 2008, p.13). Similarly, in Northern Ireland, Griffin and Melby (2006) report GPs being less positive than emergency doctors and nurses towards the development of advanced practice roles in emergency nursing. British CNSs report the importance of physician support to their role (Boyle 1997).

However, the SCAPE study showed clear support for CSs/APs from doctors, other clinicians and policy-makers, which may be a result of the National Council's accreditation process whereby the hospital site has to prepare for the introduction of AP roles, with the involvement of all clinicians. Strong support has also been seen in another Irish study of views of key stakeholders in the healthcare field (O'Shea 2008), which showed that the medical profession had a positive view of the CSs/APs, believed they were good coordinators of care and welcomed the idea of more nurse- and midwife-led services. Similar endorsement from Irish health policy documents (ONMSD 2010, HSE 2010a) clearly shows the esteem in which these practitioners are held.

Recommendations from the policy makers in the SCAPE study for the development of CS/AP posts included the need for extensive dialogue with all clinicians, strong clinical governance and guidelines on collaborative decision making. Previous work has demonstrated that good communication with all key parties was essential in the preparation for AP roles (NCNM 2005a). Ireland is unique in having established frameworks and standards for the expansion of nursing and midwifery roles (NCNM 2010b), which include all these points, and this strength should be maintained.

Opposing points of view were raised as to the appropriateness or otherwise of the introduction of CMSs and, in particular, AMPs, findings similar to previous work (NCNM 2004). However, the outstanding success of the CMS roles portrayed in this study, in addition to previous audits and evaluations of CMSs (NCNM 2004, 2010a, 2010c), would suggest that more CMSs and AMPs should be encouraged. The National Council strongly supports this view, maintaining that such enhanced midwifery roles are of the greatest importance to support future plans to develop more community based maternity services (NCNM 2008g).

Internationally, education for APs is being advanced to Master's level where, again, Ireland leads the field. The success of the CS/AP roles shown by this study is therefore due, in part, to the strong frameworks, entry criteria, educational standards and accreditation processes set up. Any change to these processes might adversely affect the documented outcomes in the future.

7 Conclusion

The majority of the CSs/APs in this study had complex roles and most worked closely with a multidisciplinary team. It has been stated previously (Gerrish et al 2007) that the precise contribution that CSs/APs make to care is hard to identify and attribute directly to them, due to this close relationship. The benefit of using mixed methodology in this major national study is clear, however, in that the majority of outcomes highlighted have been substantiated by a number of different sources. As interview data corresponded with documentary evidence, service users' questionnaires and comments, fieldnotes, and key behaviour scoresheets, as well as with the policy maker and focus group data, and Delphi surveys, both between- and within-method triangulation corroborated the findings.

The weight of evidence demonstrating the key and influential roles of these personnel is considerable. The overall positive effect of CSs/APs on patient/client care, other staff and the health services in general is very apparent. Given these considerable benefits, and the fact that the economic analysis did not demonstrate a difference in costs between services with CSs/APs and the comparison sites, there is a strong case for introducing more CS and AP posts across the country. In particular, expansion of the CS/AP roles in chronic disease management and community care is essential to the transformation agenda of the HSE. CMS and AMP posts should also be encouraged.

Strong structures and processes around approval/accreditation and, for APs, re-accreditation, have led to this consistently high standard of practitioner and outcomes. The success of the introduction of these roles in Ireland now needs to be maintained and developed to ensure continued excellence into the future.

8 Recommendations

Introduction

This study, through extensive research methods, using a variety of data collection tools, has examined the clinical outcomes of CSs and APs in Ireland. Boxes 1, 2 and 3 summarise the main findings for CSs and APs, which had strong and very strong evidence.

This study has demonstrated conclusively that care provided by CSs and APs improves patient/client outcomes, is safe, acceptable and cost neutral. Nursing and midwifery care is provided in a complex changing environment and it is critically important that resources be used in a cost-effective, strategic manner. The study shows the potential of CSs and APs to support implementation of health policy, meet the changing health needs of the population, address patient expectations, contribute to service reconfiguration and provide nursing and midwifery leadership for the introduction of care models and care programmes into the HSE and, potentially, other health services. CSs and APs support a safe environment for patients by increasing the use of evidence-based clinical guidelines and by the conduct of research.

Clinical Specialists: Main Findings (strong and very strong evidence[9])

The CS caseload involves working with the MDT to provide specialised assessment, planning, delivery and evaluation of care using protocol driven guidelines. The CS role maximises the team impact on patient outcomes. Care delivery and caseload management is delivered in line with core concepts identified by the National Council *(clinical focus, patient/client advocacy, education and training, audit and research, consultancy).*

Clinical care is a significant part of the CS role in Ireland. This is contrary to international and, in particular, US profiles where the literature shows CSs have limited patient/client contact. Overall, there was no additional cost for CS service (staff costs and activity levels for matched CS and non-CS services). CS services had decreased costs for colposcopy and managing challenging behaviour. CSs were working to expand and develop practice (many CSs were working towards AP role).

Table 5.7 outlines integrated data sources showing differences between CMS and CNS roles.

Box 1 outlines main findings CNSs.

Box 2 outlines main findings CMSs.

Box 1: Clinical Nurse Specialist Main Findings (strong and very strong evidence)

Evidence demonstrated that CNSs:

- Reduced morbidity
- **Decreased considerably SUs waiting times**
- Provided earlier access to care. **CNSs provided early access to first visits**
- Decreased readmission rates
- Increased evidence-based practice
- Increased use of clinical guidelines for MDT
- Increased continuity of care
- Increased patient/client satisfaction
- Increased communication with patients/clients and families
- Promoted patient/client self-management
- Had significant MDT support for the role
- Provided clinical leadership
- Conducted clinical audit (and 53% conducted research).

[9]Further details in Tables 5.1 to 5.5.

Box 2: Clinical Midwife Specialist Main Findings (strong and very strong evidence)

Evidence demonstrated that CMSs:

- Reduced morbidity
- Decreased waiting times
- Provided earlier access to care. **CMSs provided early access to treatment**
- Decreased readmission rates
- Increased evidence-based practice
- Increased use of clinical guidelines for MDT
- Increased continuity of care. **CMSs spent significant time with SUs teaching, advising and explaining tests and results**
- Increased patient/client satisfaction. CMSs were noted by service users to make a difference to their care
- Increased communication with patients/clients and families. **CMSs spent significant time with SUs to discuss their problems**
- Promoted patient/client self management
- Had significant MDT support for the role
- Provided clinical leadership
- Conducted clinical audit (and 53% conducted research).

Advanced Practitioners: Main Findings (strong and very strong evidence[10])

The AP caseload involves holistic assessment, diagnosis, autonomous decision making regarding treatment, provision of interventions and discharge from a full episode of care. Care delivery and caseload management is provided by APs in line with core concepts identified by the National Council *(autonomy in clinical practice, expert practice, professional and clinical leadership, research).*

The education level of APs in Ireland is in line with international standards. Overall, there was no additional cost for AP service (staff costs and activity levels for matched AP and non-AP services). AP services had decreased costs for ED minor injuries and sexual health.

Box 3: Advanced Practitioners Main Findings (strong and very strong evidence)

Evidence demonstrated that APs:

- Reduced morbidity
- Decreased waiting times
- Provided earlier access to care
- Decreased readmission rates
- Increased patient/client throughput
- Increased evidence-based practice
- Increased use of clinical guidelines for MDT
- Developed guidelines for local, regional and national distribution
- Increased continuity of care
- Increased patient/client satisfaction
- Increased communication with patients/clients and families
- Promoted patient/client self management
- Worked to expand and develop scope of practice to include more complex care provision
- Demonstrated high job satisfaction
- Had significant MDT support for the role
- Provided clinical and professional leadership
- Conducted audit and research.

[10]Further details in Tables 5.1 to 5.5.

Recommendations

Service Delivery and Service Planning

1. This study has demonstrated that care provided by CSs and APs is cost neutral and improves patient/client outcomes. There are therefore demonstrable value-added benefits for patient/client outcomes and service delivery as a result of having CSs and APs as part of the overall nursing or midwifery team.

   It is recommended that service planning and service development incorporate the roles of CS and AP where appropriate. This should include strategic short, medium and long term planning at national, regional and local level, based on service need, in order to ensure coherent service development. In particular:

   a. **Further expansion of CS roles in chronic illness management and community care is essential to support the transformation agenda of the HSE, to provide increased continuity of care and to manage the hospital/community interface.**

   b. **Further expansion of AP roles in chronic illness management and community care is essential to support the transformation agenda of the HSE, to facilitate patient/client access, early diagnosis, treatment and continuity of care, and to manage the hospital/community interface.**

   c. **Clear delineation between CS and AP roles should be maintained; where the service requires competencies at AP level, systems should be identified to facilitate the required development as appropriate, with emphasis on the entire nursing/midwifery resource, grounded in service need.**

   d. **CS and AP role development should ensure that the unique nursing or midwifery contribution to holistic care is retained.**

2. This study collated more economic data than most international studies examining CS and AP practice. Cost data were limited for a number of CS and AP services, which impacted on the extent of detailed judgement that could be made about the cost-effectiveness of CS and AP roles. The importance of being able to demonstrate efficiency and cost-effectiveness cannot be understated; guidance on the data required is given in Appendix 1.

   It is recommended that consideration be given at service, regional and national level to improving the collection of data to facilitate economic analysis. Cost data should be recorded, available and standardised across all health authorities so that complete economic data analysis is possible in the future.

3. This study has demonstrated significant improved clinical outcomes for patients and clients. The importance of ongoing measurement of clinical outcomes is critical to ensuring maximisation of resources. The tool developed for this study provides key outcome areas for measuring the impact of CS and AP roles.

   a. **It is recommended that specific key performance indicators be developed for core CS and AP clinical outcomes to facilitate future audit and research.**

   b. **It is recommended that specific clinical specialty outcomes be developed and implemented for CSs and APs.**

   c. **It is recommended that clear governance structures and systems be put in place for all CS roles to reduce diversity of outcomes and maximise impact.**

4. The findings of this study indicate that, in services that had CSs and APs, evidence-based practice,

motivation of staff nurses and midwives, practice development, innovation and clinical leadership all increased. This indicates that, in addition to improving direct patient/client care, CSs and APs maximise the potential to impact on the practice of others and on the service as a whole.

It is recommended that considerable emphasis be placed on the clinical and professional leadership aspect of CS and AP roles when such roles are being developed, in order to maximise their potential to influence and develop the practice of others and contribute to service development.

Role Development

5. This study has demonstrated that the core concepts of CS and AP practice outlined by the National Council are being fulfilled by CSs and APs and that the current national frameworks and standards (based as they are on international evidence on role development and excellence in clinical practice) have proven to be robust and successful in improving patient/client care and service delivery. The level of preparation put into service needs analysis, defining roles and integrating them into services has contributed significantly to their success. Lack of clarity around role development that results in reduced role effectiveness has been demonstrated in other countries. Therefore, it is imperative that current frameworks and standards be maintained to mitigate this risk, and that the visibility of the roles be increased.

    a. **It is recommended that current standards and frameworks for CS and AP roles be maintained and enhanced to ensure that the positive outcomes identified in this study are continued and improved upon.**

    b. **Regular audit of CS and AP roles and outcomes should be conducted, using the CS and AP evaluation tools based on the minimum data sets derived from the Delphi survey, with speciality specific additions, and results should be disseminated through case reviews, annual reports and through the service planning process.**

6. It is clear from the findings of this study that developments in the clinical career pathway of Midwifery and Intellectual Disability Nursing have not taken place at the same pace as in some of the disciplines of nursing. Consideration now needs to be given to how CS and AP posts in these two areas can be developed, with the involvement of all stakeholders, based on service need.

    It is recommended that those in leadership positions in areas of Intellectual Disability Nursing and Midwifery progress the debate in order to ensure appropriate consideration is given to enable the development of the clinical career pathway in the interest of excellence in health service delivery and client care.

Continuing Professional Development

7. APs (and some CSs) were engaging in research, and clinical audit was well established for both CSs and APs. On going support to build these skills is required.

    a. **It is recommended that collaborative research networks of CSs and APs, clinicians and academics in relevant disciplines be established in order to maximise research potential.**

    b. **It is recommended that links with nursing and midwifery academic areas be forged, including, where possible, partnerships, secondments, or joint appointments, in order to maximise CS/AP research and publications.**

    c. **It is recommended that protected time to pursue research and publication activities be established for all APs.**

d. It is recommended that both CSs and APs be provided with access to educational opportunities and resources to develop their skills in audit and measurement of clinical outcomes in order to increase quality care, research and audit in practice.

8. Both this study and the literature highlighted the importance of continuing professional development to maintain and develop further skills and competencies and to support expanded roles.

   The data identified a clear differentiation between CS and AP in terms of leadership roles.

   a. It is recommended that clear governance structures, models of clinical supervision and mentorship be developed and implemented in order to maximise the effectiveness of the CS/AP role.

   b. It is recommended that key competencies and key performance indicators specific to AP leadership and research outcomes be identified.

   c. It is recommended that key competencies and key performance indicators specific to the leadership role of the CS be developed.

   d. It is recommended that CSs and APs have access to a variety of continuing professional development activities such as competency development, peer review, education and training in order to achieve their key performance indicators.

9. The issue of professional isolation for APs is well documented in the international literature, and also emerged as an issue, for some, in this study. If advanced practitioners are to demonstrate true professional leadership, this aspect of their role development needs support.

   It is recommended that APs be facilitated to participate in national and international networks in order to maximise professional leadership potential.

Future Research

10. This study provides a list of key outcome areas, which can be used as a minimum data set for measuring the impact of CS and AP roles and outcomes. It was evident from the literature review that clinical outcome measurement tools for CS and AP services are limited. The importance of being able to demonstrate clinical outcomes for CS and AP roles cannot be overstated.

    It is recommended that future research focus on developing methods for capturing *specific* clinical outcomes related to CS and AP interventions for their clinical specialty.

11. A number of key research gaps were identified during this study.

    It is recommended that further research be conducted into:

    a. evaluating the effects of CS or AP interventions through randomised controlled trials using nurse- and midwife- sensitive outcomes identified in this study,

    b. the effects of CS and AP care on patients/clients in specialist areas (e.g. reduction in (re)admissions for people experiencing mental health problems, and chronic disease management),

    c. the application and appropriateness of the CS and AP models in intellectual disability nursing,

    d. the factors that maximise CS/AP effectiveness,

    e. the differences between CS and AP roles,

    f. work satisfaction and retention among CSs/APs.

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Appendix 1

Appendix 1 Evaluation Tools

This Appendix contains the following tools that clinical specialists and advanced practitioners may find useful in evaluating the services they provide:

a) Clinical specialist evaluation tool

b) Advanced practitioner evaluation tool

c) Guidance for future economic evaluation of role(s)

d) Core observation 'tick box' tool - key tasks and behaviours

e) Service user questionnaire (ANP, AMP, CNS, CMS)

Appendix 1a. Clinical specialist evaluation tool

This tool contains a core set of outcome measures identified by clinical specialists as important in evaluating the impact of their role on individual patient/client outcomes, outcomes for nurses, midwives and other healthcare professionals, and outcomes for healthcare services and settings. For the purpose of this tool, an outcome is defined as a state, behaviour or belief that can be affected as a result of nursing or midwifery care (Johnson et al 2000). The 47 outcomes in the data set can be supplemented with items relevant to your specific clinical specialist role. Examples of specific items for some specialist roles are available in Appendix 5a, Final Report.

Please rate each outcome on a scale of 1 to 7 as follows:

1 = Very low impact: I believe that I am achieving a very low impact on this outcome

4 = Neutral: I believe that I am achieving neither a high nor low impact on this outcome

7 = Very high impact: I believe that I am achieving a very high impact on this outcome.

Note 1: CSs could use other evidence to support their own ratings of outcomes for example, reports of case studies, clinical supervision or clinical audits – see no. 8 below.

Note 2: CSs could develop key performance indicators (KPIs) based on the core set of outcomes (see NCNM Discussion Paper No 3, December 2010. *Key Performance Indicators: A Guide to Choosing, Developing and Using KPIs for Clinical Nurse/Midwife Specialists and Advanced Nurse/Midwife Practitioners*).

Core outcome item	1	2	3	4	5	6	7
Patient/client outcomes							
1. Communication (e.g. person's non-verbal/verbal skills, expression of preferences)							
2. Therapeutic relationship (e.g. trust, openness, nurse's/midwife's credibility)							
3. Patient/client satisfaction with information (e.g. satisfaction with professional advice) (use of SCAPE SU questionnaire or other as appropriate – see Appendix 1e)							
4. Personal preferences respected (e.g. patient/client perspective taken on board by MDT, degree to which the person's voice is heard)							
5. Shared decision making (e.g. patient/client involvement in decision making, involvement of family)							
6. The person's knowledge (e.g. possessing relevant information, person's understanding of medical condition/treatment, making sense of personal experience)							
7. Patient/client satisfaction with interpersonal aspects of care (e.g. patient/client evaluation of emotional support and communication)							
8. Appropriateness of interventions (e.g. degree to which medical/nursing/midwifery procedures, interventions and treatments are appropriate) could use other evidence e.g. report of case study/clinical supervision/clinical audit)							
9. Access to care (e.g. speed of access to appropriate care, assessment/treatment delay, waiting for appointment)							
10. Patient/client anxiety (e.g. worry, stress reactions, restlessness and agitation)							
11. Appropriateness of referral (e.g. degree to which appropriate referral to other nurses, midwives, doctors, professionals, etc takes place)							
12. Appropriateness of assessments (e.g. degree to which clinical investigations, tests, etc are appropriate)							
13. Health promotion beliefs (e.g. beliefs about healthy lifestyle, acceptance of behaviour change advice, self-directed on health promotion needs)							
14. Patient/client satisfaction with technical aspects of care (e.g. patient/client evaluation of service delivery)							
15. Quality of life – physical (e.g. physical well-being inclusive of pain, mobility, physical comfort)							
16. Symptom management (e.g. relief from symptoms such as pain, agitation, inflammation)							
17. Adherence (e.g. following medical treatment, medication compliance, taking up dietary or exercise advice)							
18. Physical comfort (e.g. nausea, physical discomfort, being settled)							
19. Appropriateness of medication regime (e.g. degree to which dosage, type, etc of medications is appropriate)							
20. Relapse (e.g. flare up in chronic condition, re-emergence of acute symptoms, frequency/severity of relapse)							
21. Quality of life – psychological (e.g. psychological well-being inclusive of emotional stability and adjustment, self-esteem, body image)							
22. Self-esteem (e.g. person's opinion of self, body image, positive/negative self-beliefs)							
23. Mood (e.g. postnatal depression, feeling down, depression)							
24. Personal independence – personal beliefs (e.g. beliefs about recovery, self-efficacy, institutionalisation)							
25. Quality of life – social (e.g. social well-being inclusive of relationships with social network, friends and family)							
26. Patient/client safety – potentially avoidable adverse events (e.g. misdiagnosis, medication errors, inappropriate treatment)							

Core outcome item	1	2	3	4	5	6	7
Client/patient outcomes (continued)							
27. Maintenance of safe environment (e.g. avoiding risks in clinical environment to patient/client and others, safe home environment)							
28. Preparedness for treatment (e.g. patient/client expectations for surgery, awareness of treatment side-effects)							
29. Family knowledge (e.g. possessing relevant information, understanding of medical condition/treatment)							
Outcomes for nurses, midwives or other health professionals							
30. Use of clinical guidelines (e.g. staff nurse or midwife awareness and take up of guidelines, staff access to evidence-based guidelines)							
31. Integration of research in clinical practice (e.g. use of research findings among clinical team, attitude to evidence-based practice)							
32. Nursing/midwifery staff understanding of clinical specialist role (e.g. knowledge about specialist role, integration of specialist role in unit)							
33. Achievement of new educational intervention – peers (e.g. education on assessment, treatment or management of a condition)							
34. Research awareness in clinical practice (e.g. knowledge of research process in your unit, team or ward)							
35. Achievement of new educational intervention – staff nurses or midwives/other professionals (e.g. in-service education on assessment/treatment)							
36. Clinical leadership of nurses/midwives (e.g. staff feeling well supported, influence on decisions affecting patient/client care)							
37. Achievement of new educational intervention – patient/service user (e.g. information leaflets on condition, education on self-monitoring condition)							
38. Achievement of new clinical initiatives (e.g. implementation of new wound dressing, new assessment procedure)							
39. Attitude to practice development among nurses/midwives (e.g. involvement of staff in developing guidelines, openness to practice development)							
40. Other nurses' or midwives' knowledge level (e.g. staff nurses' or midwives' understanding of clinical issues, patient/client needs, family experience)							
41. Other professionals' knowledge level (e.g. understanding of clinical issues, patient/client needs, family experience, among junior doctors, occupational therapists, etc)							
Outcomes for healthcare services							
42. Multidisciplinary work – communication (e.g. communication practices and mutual understanding between health professions and team members)							
43. Best practice in clinical service delivery – locally (e.g. hospital or unit adoption of evidence-based care guidelines, implementation of national health policy or clinical guidelines)							
44. Continuity of care (e.g. consistency in patient/client interactions with same staff member)							
45. Best practice in clinical service delivery – regionally or nationally (e.g. regional or national adoption and implementation of evidence-based care guidelines)							
46. Openness to innovation – healthcare unit (e.g. attitude to innovative solutions, treatments and initiatives in unit/team)							
47. Multidisciplinary work – team performance (e.g. effectiveness in healthcare team addressing patient/client needs)							

Reference

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Appendix 1b. Advanced practitioner evaluation tool

This tool contains a core set of outcome measures identified by advanced practitioners as important in evaluating the impact of their role on individual patient/client outcomes, outcomes for nurses, midwives and other healthcare professionals, and outcomes for healthcare services and settings. For the purpose of this tool, an outcome is defined as a state, behaviour or belief that can be affected as a result of nursing or midwifery care (Johnson et al 2000). The 51 outcomes in the data set can be supplemented with items relevant to your specific advanced practice role. Examples of specific items for some AP roles are available in Appendix 5b, Final Report.

Please rate each outcome on a scale of 1 to 7 as follows:

1 = Very low impact: I believe that I am achieving a very low impact on this outcome

4 = Neutral: I believe that I am achieving neither a high nor low impact on this outcome

7 = Very high impact: I believe that I am achieving a very high impact on this outcome.

Note 1: APs could use other evidence to support their own ratings of outcomes – for example, reports of case studies, clinical supervision or clinical audits - see no. 8 below.

Note 2: APs could develop key performance indicators (KPIs) based on the core set of outcomes (see NCNM Discussion Paper No 3 December 2010. *Key Performance Indicators: A Guide to Choosing, Developing and Using KPIs for Clinical Nurse/Midwife Specialists and Advanced Nurse/Midwife Practitioners.*)

Core outcome item	1	2	3	4	5	6	7
Patient/client outcomes							
1. Communication (e.g. person's non-verbal/verbal skills, expression of preferences)							
2. Therapeutic relationship (e.g. trust, openness, nurse's/midwife's credibility)							
3. Patient/client satisfaction with information (e.g. satisfaction with professional advice) (use of SCAPE SU questionnaire or other as appropriate – see Appendix 1e)							
4. Personal preferences respected (e.g. patient/client perspective taken on board by MDT, degree to which the person's voice is heard)							
5. Shared decision making (e.g. patient/client involvement in decision making, involvement of family)							
6. The person's knowledge (e.g. possessing relevant information, person's understanding of medical condition/treatment, making sense of personal experience)							
7. Patient/client satisfaction with interpersonal aspects of care (e.g. patient/client evaluation of emotional support and communication)							
8. Appropriateness of interventions (e.g. degree to which medical/nursing/midwifery procedures, interventions and treatments are appropriate) (could use other evidence e.g. report of case study/clinical supervision/clinical audit report)							
9. Access to care (e.g. speed of access to appropriate care, assessment/treatment delay, waiting for appointment)							
10. Appropriateness of referral (e.g. degree to which appropriate referral to other nurses, midwives, doctors, professionals, etc takes place)							
11. Appropriateness of assessments (e.g. degree to which clinical investigations, tests, etc are appropriate)							
12. Patient/client satisfaction with technical aspects of care (e.g. patient/client evaluation of service delivery)							
13. Well-being across different domains (e.g. person's functioning across bio-psycho-social domains, person's needs in multiple areas of functioning)							

Core outcome item	1	2	3	4	5	6	7
Patient/client outcomes (continued)							
14. Quality of life – physical (e.g physical well-being inclusive of pain, mobility, physical comfort)							
15. Symptom management (e.g. relief from symptoms such as pain, agitation, inflammation)							
16. Physical self-care capacity (e.g. ability to manage general needs or illness specific needs)							
17. Pain (e.g. severity, frequency, pain relief)							
18. Adherence (e.g. following medical treatment, medication compliance, taking up dietary or exercise advice)							
19. Physical comfort (e.g. nausea, physical discomfort, being settled)							
20. Appropriateness of medication regime (e.g. degree to which dosage, type, etc of medications is appropriate)							
21. Quality of life – psychological (e.g. psychological well-being inclusive of emotional stability and adjustment, self-esteem, body image)							
22. Family/carer quality of life (e.g. degree of carer strain, impact of illness on family well-being)							
23. Family/carer adjustment (e.g. family ability to support patient's/client's physical needs, acceptance of illness)							
24. Anxiety (e.g. worry, stress reactions, restlessness and agitation)							
25. Quality of life – social (e.g. social well-being inclusive of relationships with social network, friends and family)							
26. Patient/client safety – potentially avoidable adverse events (e.g. misdiagnosis, medication errors, inappropriate treatment)							
27. Maintenance of safe environment (e.g. avoiding risks in the clinical environment to patient/client and others, safe home environment)							
28. Preparedness for treatment (e.g. patient/client expectations for surgery, awareness of treatment side-effects)							
29. Appropriateness of initiating/ending healthcare episodes (e.g. degree to which appropriate admission, discharge, etc takes place)							
Outcomes for nurses, midwives or other health professionals							
30. Use of clinical guidelines (e.g. staff nurse or midwife awareness and take up of guidelines, staff access to evidence-based guidelines)							
31. Integration of research in clinical practice (e.g. use of research findings among clinical team, attitude to evidence-based practice)							
32. Nursing/midwifery staff understanding of advanced practitioner role (e.g. knowledge about AP role, integration of AP role in unit)							
33. Achievement of new educational intervention – peers (e.g. education on assessment, treatment or management of a condition)							
34. Research activity level in clinical practice (e.g. involvement of unit in research, research collaboration with other units, developing a research project)							
35. Research awareness in clinical practice (e.g. knowledge of research process in unit, team or ward)							
36. Achievement of new educational intervention – staff nurses or midwives/other professionals (e.g. in-service education on assessment/treatment)							
37. Clinical leadership of nurses/midwives (e.g. staff feeling well supported, influence on decisions affecting patient/client care)							
38. Achievement of new educational intervention – patient/service user (e.g. information leaflets on condition, education on self-monitoring condition)							
39. Achievement of new clinical initiatives (e.g. new wound dressing, new assessment procedure)							

Core outcome item	1	2	3	4	5	6	7
Outcomes for nurses, midwives or other health professionals (continued)							
40. Attitude to practice development among nurses/midwives (e.g. involvement of staff in developing guidelines, openness to practice development)							
41. Nurses'/midwives' satisfaction with clinical role (e.g. staff nurse or midwife perception of increased restriction/expansion of clinical role)							
42. Other professionals' knowledge level (e.g. understanding of clinical issues, patient/client needs, family experience, among junior doctors, occupational therapists, etc)							
43. Other nurses' or midwives' knowledge level (e.g. staff nurses' or midwives' understanding of clinical issues, patient/client needs, family experience)							
44. Other nurses' or midwives' attitudes to their work (e.g. staff nurses' or midwives' attitudes to safety, infection control, patient rights)							
Outcomes for healthcare services							
45. Multidisciplinary work – communication (e.g. communication practices and mutual understanding between health professions and team members)							
46. Waiting times (e.g. prompt appointments, waiting times for triage)							
47. Multidisciplinary work – team performance (e.g. effectiveness in healthcare team addressing patient/client needs)							
48. Best practice in clinical service delivery – locally (e.g. hospital or unit adoption of evidence-based care guidelines, implementation of national health policy or clinical guidelines)							
49. Continuity of care (e.g. consistency in patient/client interactions with same staff member)							
50. Best practice in clinical service delivery – regionally or nationally (e.g. regional or national adoption and implementation of evidence-based care guidelines)							
51. Openness to innovation – healthcare unit (e.g. attitude to innovative solutions, treatments and initiatives in unit/team)							

Reference

Johnson, M., Maas, M., & Moorhead, S. (2000) *Nursing Outcomes Classification*. Mosby, St Louis, MO.

Appendix 1c. Guidance for future economic evaluation of role(s)

Economic analysis in healthcare compares the costs and outcomes of alternative courses of action. For example, a physician-led service may be compared to a nurse-led service in order to judge which offers the best value for money, and the findings may be used to guide health policy decision making. It is important to involve a health economist experienced in economic evaluation from the outset of the study design phase.

The measurement of resource use and costs associated with a health intervention involves three steps: identifying resources, quantifying resources, and assigning monetary values to resources. This process should follow the methodology set out in Section 2.10 of the Health Information and Quality Authority's (HIQA 2010, p. 26) *Guidelines for the Economic Evaluation of Health Technologies in Ireland* (http://www.hiqa.ie/media/pdfs/HTA_Economic_Guidelines_2010.pdf).

The primary economic analysis should consider all direct medical costs for the HSE, such as "drugs, medical devices, medical services including procedures, hospital services" (HIQA 2010). Other costs borne by the patient, such as productivity costs, can be included in a secondary analysis.

Ideally, the required data would be available from routine accounting sources, but this may not be possible due to cost aggregation into cost centres. For example, if assessing an advanced practitioner-led minor-injuries clinic, routine accounting data may not distinguish between minor injuries and the various other sections of an emergency department. To overcome this requires careful planning to collect data relevant to the intervention under examination.

To measure the outcomes of care, the reader should refer to the HIQA guidelines (2010) which recommend the Quality Adjusted Life Years outcome measure. Patients should be followed up after the intervention to capture subsequent levels of healthcare use – for example, the rate of hospital (re-)admissions. For studies measuring patient throughput, hospital inpatients may be broadly classified using Diagnosis Related Groups as identified by the ESRI in its 2010 publication *Activity in Acute Public Hospitals in Ireland, 2009 Annual Report* (http://www.esri.ie/publications/search_for_a_publication/search_results/view/index.xml?id=3146). This system does not currently extend to some services such as outpatients, in which case patient throughput may be an appropriate means of measuring productivity.

Appendix 1d. Core observation 'tick box' tool – key tasks and behaviours

A = Always, F = Frequently, S = Sometimes, N = Never, Notes = Notes on evidence – how condition was met

Criterion	A	F	S	N	Notes
Communication					
Listening skills – clinician gives time for patient/client to talk, looks open and relaxed, shows by response that they have heard what was said					
Feedback – clinician checks that patient/client understood what was said					
Decision making – patient/client's point of view asked for, patient/client appears involved in decision					
Information giving – gives information either verbal, written, or by demonstration					
Using open questions – clinician picks up and acts on cues: "You look distressed…", or "Is there anything you would like to ask?"					
Liaison with other key stakeholders (family, other MDT, other, and state which)					
Safe Environment					
Hand washing – between every patient/client and the next					
Using gloves, if appropriate					
Equipment – maintaining sterility					
Using Research Evidence					
Refers to research, or evidence from audit, or websites, during consultations					
Health Promotion/Lifestyle					
Health promotion advice or literature given – in addition to information on the specific disorder/reason for care					
Education provided on self-monitoring the patient/client's condition					

Appendix 1e. Service user questionnaire [ANP/AMP/CNS/CMS]

THE SCAPE STUDY questionnaire

(Evaluation of Specialist Clinical and Advanced Practitioners in Nursing and Midwifery)

Service users' survey – [ANP/AMP/CNS/CMS] site

INFORMATION WILL BE HELD IN CONFIDENCE

This questionnaire has 6 sections, labelled with the letters A to F, and asks you to tell us about your experiences of receiving health care from the [ANP/AMP/CNS/CMS].
Please ask if you are not sure who your [ANP/AMP/CNS/CMS]

The questionnaire only takes 15 minutes to complete!

How to fill in the questionnaire	**Example**
1. Most questions can be answered by putting a "tick" in the box next to the answer that applies to you. Please tick only one box each time	*(Please tick one box only)* Yes [1]☑ No [2]☐
2. **Please try to answer ALL of the questions**. Further instructions on how to answer questions are given throughout the questionnaire.	

THANK YOU FOR TAKING THE TIME TO FILL IN THIS QUESTIONNAIRE

IMPORTANT, please complete!!	
I am a patient/client of this service	**1☐**
I am a family member or carer completing this survey on behalf of a patient/client of this service	**2☐**

A	**QUESTIONS ABOUT COMMUNICATION**	
A1	When you had important questions to ask the [ANP/AMP/CNS/CMS], did you get answers you could understand? *(Please tick one box only)*	
	Yes, always	1☐
	Yes, sometimes	2☐
	No	3☐
	I had no need to ask	4☐
A2	Sometimes in a hospital or service, one doctor, nurse or midwife will say one thing and another will say something quite different, did this happen to you? *(Please tick one box only)*	
	Yes, often	1☐
	Yes, sometimes	2☐
	No	3☐
A3	If you had any anxieties or fears about your condition or treatment, did the [ANP/AMP/CNS/CMS] discuss them with you? *(Please tick one box only)*	
	Yes, completely	1☐
	Yes, to some extent	2☐
	No	3☐
	I didn't have any anxieties or fears	4☐
A4	Did the [ANP/AMP/CNS/CMS] talk in front of you as if you weren't there? *(Please tick one box only)*	
	Yes, often	1☐
	Yes, sometimes	2☐
	No	3☐

A5	Did you want to be more involved in decisions made about your care and treatment? *(Please tick one box only)* Yes, definitely 1☐ Yes, to some extent 2☐ No 3☐
A6	Overall, did you feel you were treated with respect and dignity while you were in the hospital or service? *(Please tick one box only)* Yes, always 1☐ Yes, sometimes 2☐ No 3☐
A7	If your family or someone else close to you wanted to talk to the [ANP/AMP/CNS/CMS], did they have enough opportunity to do so? *(Please tick one box only)* Yes, definitely 1☐ Yes, to some extent 2☐ No 3☐ No family or friends were involved 4☐ My family didn't want or need information 5☐ I didn't want my family or friends to talk to a doctor or midwife 6☐
A8	Did the [ANP/AMP/CNS/CMS] give your family or someone close to you all the information they needed to help you? *(Please tick one box only)* Yes, definitely 1☐ Yes, to some extent 2☐ No 3☐ No family or friends were involved 4☐ My family or friends didn't want or need information 5☐
A9	Did the [ANP/AMP/CNS/CMS] explain the **purpose** of the medicines you were to take at home in a way you could understand? *(Please tick one box only)* Yes, completely 1☐ Yes, to some extent 2☐ No 3☐ I didn't need an explanation 4☐ I had no medicines 5☐

A10	Did the [ANP/AMP/CNS/CMS] tell you about medication **side effects** to watch for when you went home? *(Please tick one box only)* Yes, completely 1☐ Yes, to some extent 2☐ No 3☐ I didn't need an explanation 4☐ I had no medicines 5☐
A11	Did the [ANP/AMP/CNS/CMS] tell you about **danger signals** regarding your illness or treatment to watch for after you went home? *(Please tick one box only)* Yes, completely 1☐ Yes, to some extent 2☐ No 3☐ I didn't need to be told of any danger signals 4☐
A12	Did the [ANP/AMP/CNS/CMS] explain why you needed specific tests, assessments, X-rays or monitoring etc? *(Please tick one box only)* Yes, completely 1☐ Yes, to some extent 2☐ No 3☐ I didn't have any tests, assessments, X-rays or monitoring 4☐
A13	Were tests, assessments, X-rays or monitoring results clearly explained by the [ANP/AMP/CNS/CMS]? *(Please tick one box only)* Yes, definitely 1☐ Yes, to some extent 2☐ No 3☐ I didn't have any tests, assessments, X-rays or monitoring 4☐ My results are not available yet 5☐

Thank you for completing the questions so far. The next section is about CONTINUITY OF CARE (having the same person or same few people minding you) AND ACCESS TO CARE (getting appointments and tests arranged easily)

B	**Questions about continuity of care *(having the same person or same few people minding you)* and access to care *(getting appointments and tests arranged easily)***
B1	I waited the following time to get my first appointment to this service: *(Please write a number in first box only, and then tick one box only) e.g.* to put 7 weeks – write "7" in the first box and then tick the "☐ weeks" box ☐ ☐ hours ☐ days ☐ weeks ☐ months ☐ Not applicable
B2	I waited the following time to be seen on my last visit: *(Please write a number in first box only, and then tick one box only) e.g.* to put 5 hours – write "5" in the first box and then tick the "☐ hours" box ☐ ☐ minutes ☐ hours ☐ days ☐ weeks ☐ months ☐ Not applicable
B3	I waited, on average, the following time to have investigations such as blood tests, assessments, X-rays or monitoring: *(Please write a number in first box only, and then tick one box only) e.g.* to put 3 hours – write "3" in the first box and then tick the "☐ hours" box ☐ ☐ minutes ☐ hours ☐ days ☐ weeks ☐ months ☐ Not applicable
B4	I waited, on average, the following time for treatment: *(Please write a number in first box only, and then tick one box only) e.g.* to put 3 hours – write "3" in the first box and then tick the "☐ hours" box ☐ ☐ minutes ☐ hours ☐ days ☐ weeks ☐ months ☐ Not applicable
B5	I waited, on average, the following time to get results of tests: *(Please write a number in first box only, and then tick one box only) e.g.* to put 3 hours – write "3" in the first box and then tick the "☐ hours" box ☐ ☐ minutes ☐ hours ☐ days ☐ weeks ☐ months ☐ Not applicable **22**

B6	All members of my care team knew me and my story: *(Please tick one box only)* Strongly agree 1☐ Agree 2☐ Disagree 3☐ Strongly disagree 4☐
B7	My care was delivered in a planned and coordinated manner (that is, I was told what would happen, everyone seemed to work as a team, the AMP was sure of what needed to be done to help me or sought advice as necessary) *(Please tick one box only)* Strongly agree 1☐ Agree 2☐ Disagree 3☐ Strongly disagree 4☐
B8	My wishes and needs were taken into account when my ongoing care treatment/management was planned. *(Please tick one box only)* Strongly agree 1☐ Agree 2☐ Disagree 3☐ Strongly disagree 4☐

Thank you for completing the questions so far.

You are now half-way through the survey.

C	Questions about the relationship between you and the [ANP/AMP/CNS/CMS].
C1	I believe that the [ANP/AMP/CNS/CMS] was honest and open with me *(Please tick one box only)* Yes, definitely 1☐ Yes, to some extent 2☐ No 3☐
C2	I believe that the [ANP/AMP/CNS/CMS] was understanding of issues/concerns that were important to me *(Please tick one box only)* Yes, definitely 1☐ Yes, to some extent 2☐ No 3☐ I didn't have any concerns 4☐
C3	I have confidence in the [ANP/AMP/CNS/CMS] to provide the care I need *(Please tick one box only)* Yes, definitely 1☐ Yes, to some extent 2☐ No 3☐
C4	I followed the advice given to me by the [ANP/AMP/CNS/CMS] *(Please tick one box only)* Yes, definitely 1☐ Yes, to some extent 2☐ No 3☐ I didn't receive any advice 4☐

Thank you for completing these sections of the questionnaire. The next section asks about your satisfaction with care.

D	Questions about satisfaction with care
D1	How satisfied are you with the physical care you received from the [ANP/AMP/CNS/CMS]? *(Please tick one box only)* Very satisfied [1]☐ Satisfied [2]☐ Neither satisfied nor unsatisfied [3]☐ Unsatisfied [4]☐ Very unsatisfied [5]☐ **If you ticked "Unsatisfied" or "Very unsatisfied", please give your reasons:** _____ _____ _____ _____
D2	How satisfied are you with the emotional support you received from the [ANP/AMP/CNS/CMS]? *(Please tick one box only)* Very satisfied [1]☐ Satisfied [2]☐ Neither satisfied nor unsatisfied [3]☐ Unsatisfied [4]☐ Very unsatisfied [5]☐ **If you ticked "Unsatisfied" or "Very unsatisfied", please give reasons:** _____ _____ _____ _____

D3	How satisfied are you with the practical advice you received from the [ANP/AMP/CNS/CMS]? *(Please tick one box only)* Very satisfied 1☐ Satisfied 2☐ Neither satisfied nor unsatisfied 3☐ Unsatisfied 4☐ Very unsatisfied 5☐ **If you ticked "Unsatisfied" or "Very unsatisfied", please give reasons:** _____ _____ _____ _____
D4	While you were attending the [ANP/AMP/CNS/CMS], did you get enough treatment to help improve your symptoms? *(Please tick one box only)* Yes, definitely 1☐ Yes, to some extent 2☐ No 3☐ Not applicable 4☐
D5	The [ANP/AMP/CNS/CMS] made a positive difference to my health and well being. *(Please tick one box only)* Yes, definitely 1☐ Yes, to some extent 2☐ No 3☐ Not applicable 4☐ **If you ticked "Yes, definitely" or "Yes, to some extent", please give reasons:** _____ _____ _____ _____

D6	The [ANP/AMP/CNS/CMS] provided a good support to my family. *(Please tick one box only)* Yes, definitely 1☐ Yes, to some extent 2☐ No 3☐ My family did not need support 4☐ **If you ticked "Yes, definitely" or "Yes, to some extent", please give reasons:** _____ _____ _____ _____
D7	I was given sufficient time to discuss my problems with the [ANP/AMP/CNS/CMS]. *(Please tick one box only)* Yes, definitely 1☐ Yes, to some extent 2☐ No 3☐ I didn't need time to discuss 4☐
D8	I was with the [ANP/AMP/CNS/CMS] for the following amount of time *(Please tick one box only)* 0-5 minutes 1☐ 6-10 minutes 2☐ 11-15 minutes 3☐ 16-30 minutes 4☐ 31-60 minutes 5☐ Over 60 minutes 6☐
D9	I feel the [ANP/AMP/CNS/CMS] supports me to manage my own condition *(Please tick one box only)* Yes, definitely 1☐ Yes, to some extent 2☐ No 3☐ I didn't need support 4☐

D10	Issues about me and my care were discussed in public that should have been addressed in private. *(Please tick one box only)* Yes, definitely 1☐ Yes, to some extent 2☐ No 3☐ Not applicable 4☐
D11	I was given information by the [ANP/AMP/CNS/CMS] about self help and support groups. *(Please tick one box only)* Yes, definitely 1☐ Yes, to some extent 2☐ No 3☐ I didn't need any information 4☐
D12	I was given information by the [ANP/AMP/CNS/CMS] on how to maintain a healthy lifestyle. *(Please tick one box only)* Yes, definitely 1☐ Yes, to some extent 2☐ No 3☐ Not applicable 4☐ **If you ticked "yes, definitely" or "yes, to some extent", please answer question D13 below**
D13	Was the information given to you: *(Please tick one or more boxes)* Verbally 1☐ In written format 2☐ By printed leaflets 3☐ No information given 4☐
D14	Did the [ANP/AMP/CNS/CMS] tell you who to contact if you were worried about your condition or treatment after you left hospital? Yes 1☐ No 2☐ Don't know, can't remember 3☐

Three final questions about you (the patient/client):

E	**Questions about you (If you are a family member or carer completing this survey on behalf of a patient/client of this service, please use patient/client's details to complete)**
E1	I am *(Please tick one box only)* Female 1☐ Male 2☐
E2	I am in the following age group: *(Please tick one box only)* 0-3 1☐ 28-37 8☐ 4-7 3☐ 38-47 9☐ 8-11 4☐ 48-57 10☐ 12-14 5☐ 58-67 11☐ 13-17 6☐ 68-77 12☐ 18-27 7☐ 78-87 13☐ Over 87 14☐
E3	I am *(Please tick one box only)* Irish 1☐ From the UK 2☐ Polish 3☐ Other European 4☐ African 5☐ Other 6☐ *(If "other", please state country of origin)* _____

One last question over the page!!!

F	A question about the care you have received from the [ANP/AMP/CNS/CMS]:
F1	Have you noticed any difference in the care given by the [ANP/AMP/CNS/CMS] compared to care given by other members of the health care team? *(Please tick one box only)* Yes 1☐ No 2☐ If yes, please specify: _____ _____ _____ _____ _____ _____ _____ _____

Thank you very much for completing the questionnaire. We are very grateful for the time and trouble you have taken.

National Council for the
Professional Development
***of* Nursing *and* Midwifery**

An Chomhairle Náisiúnta d'Fhorbairt
Ghairmiúil an Altranais agus
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