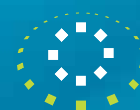
DISCUSSION PAPER **2**

Clinical Outcomes

Clinical outcomes - promoting patient safety and quality of care: implications for nurses and midwives

JUNE 2010



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

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

Introduction

Published in 2006, the National Council for the Professional Development of Nursing and Midwifery's (National Council/NCNM) document *An Evaluation of the Extent of Measurement of Nursing and Midwifery Interventions in Ireland* (National Council 2006a) was a report on a study of nurses' and midwives' interventions and outcomes measurement taking place in the multidisciplinary environment of the health services in Ireland. The study indicated that nurses and midwives were using various instruments to guide and measure their interventions and that the use of these instruments was likely to be enhanced by the user-friendliness of the instruments themselves, the provision of adequate resources and a supportive workplace culture. Recommendations emerging from the study concerned the need for nurses and midwives to be:

- aware of the quality and effectiveness of their interventions;
- competent and confident in the selection and prioritisation of interventions, especially those to be documented to meet the requirements of quality improvement programmes; and
- able to collaborate with their colleagues on the multidisciplinary team in the provision of high-quality, cost-effective care while also being able to articulate their distinct contribution to service goals.

In the four years since the publication of the report and its accompanying guidance and resource pack (National Council 2006b), the National Council has built on the findings from the study and has added to the resources and support available to nurses and midwives working in Ireland. In that time the term *clinical outcomes* has come to the fore in the literature and work pertaining to health service reform and quality improvement. The achievement of desirable clinical outcomes has become an integral aim of healthcare provision and service delivery both in Ireland and abroad and this has implications for how different disciplines and grades of staff work together as members of uni- or multi-disciplinary teams within and across healthcare settings.

The purpose of this discussion paper is to provide an update on topics and issues relating to nursing and midwifery interventions following the publication of the resource pack in 2006 and an overview of the work undertaken by the National Council since that time. In addition it seeks to prompt discussion about and reflection upon the environment in which nurses and midwives work today. This environment is made all the more complex because of the interdependencies and interrelationships between trends in health care and service delivery, expectations of patient safety and quality standards, the increasing sophistication of research and evidence, and many other factors. The emphasis of this paper is to make sense of the complex healthcare environment from a nursing and midwifery perspective, while not losing sight of the goals shared by everyone with a vested interest in ensuring that patients receive safe, high-quality care.

A full bibliography can be downloaded from the National Council's website.

Clinical Outcomes in Healthcare: The Global Context

Outcomes are used to evaluate the effectiveness of care, to describe the effects of care on patients' lives, to identify areas of care for improvement in care, and to establish a basis for clinical decision-making (Davies et al 1994). Clinical outcomes are bound to the interventions made by nurses, midwives and other healthcare professionals, whether as individuals or as members of a team. These interventions are selected from a range known to the individuals and teams on the basis that once implemented they will give rise to expected outcomes. Interventions and their outcomes are measured or studied using recognised research methods and designs, and their use is continued, modified or terminated in accordance with the findings of the evidence. When determining outcomes, clinicians previously relied primarily on traditional biomedical measures, such as the results of laboratory tests, to determine whether a health intervention was necessary and whether it would be successful. Researchers discovered, however, that when they used only these measures, they missed many of the more qualitative outcomes that might matter most to patients. Hence, outcomes research also measures how people function and their experiences of care (Agency for Healthcare Research and Quality 2000). The range of interventions from which a nurse or midwife makes her selection will be appropriate to her area of practice and the patient group with whom she is working (e.g., an acute hospital or a residential setting for older people). The example in **Box 1** opposite illustrates possible clinical outcomes and associated interventions in the prevention, care and management of pressures areas.

Box 1. Example: Clinical Outcomes in Pressure Area Maintenance and Pressure Ulcer Prevention, Detection and Treatment

POSSIBLE CLINICAL OUTCOMES	ASSOCIATED INTERVENTIONS	OTHER ASSOCIATED OUTCOMES
Maintenance of pressure areas and prevention of pressure ulcers	Full assessment of patient's health status, skin condition, mobility and continence conducted with reference to *National Best Practice and Evidence-Based Guidelines for Wound Management* (Health Service Executive 2009) Mobilisation of patient depending on identified need Observations and care are documented	Patient's functional status maintained Patient's length of stay maintained with service performance indicators Audits of documentation show adherence to best-practice guidelines Costs of care maintained within service performance indicators
Detection of pressure ulcers in early stage of development	As above	As above
Pressure ulcers are treated	As above	As above

The way in which the nurse makes her interventions will be influenced by prevailing policy drivers as well as professional principles and concepts. These are informed in turn by factors affecting and affected by the wider social context and environment such as demographics and population changes, values and legislation. **Figure 2** depicts the complexity of the environment in which interventions are made and outcomes are determined.

Figure 2. The Complex Environment in which Interventions are Made and Clinical Outcomes are Determined

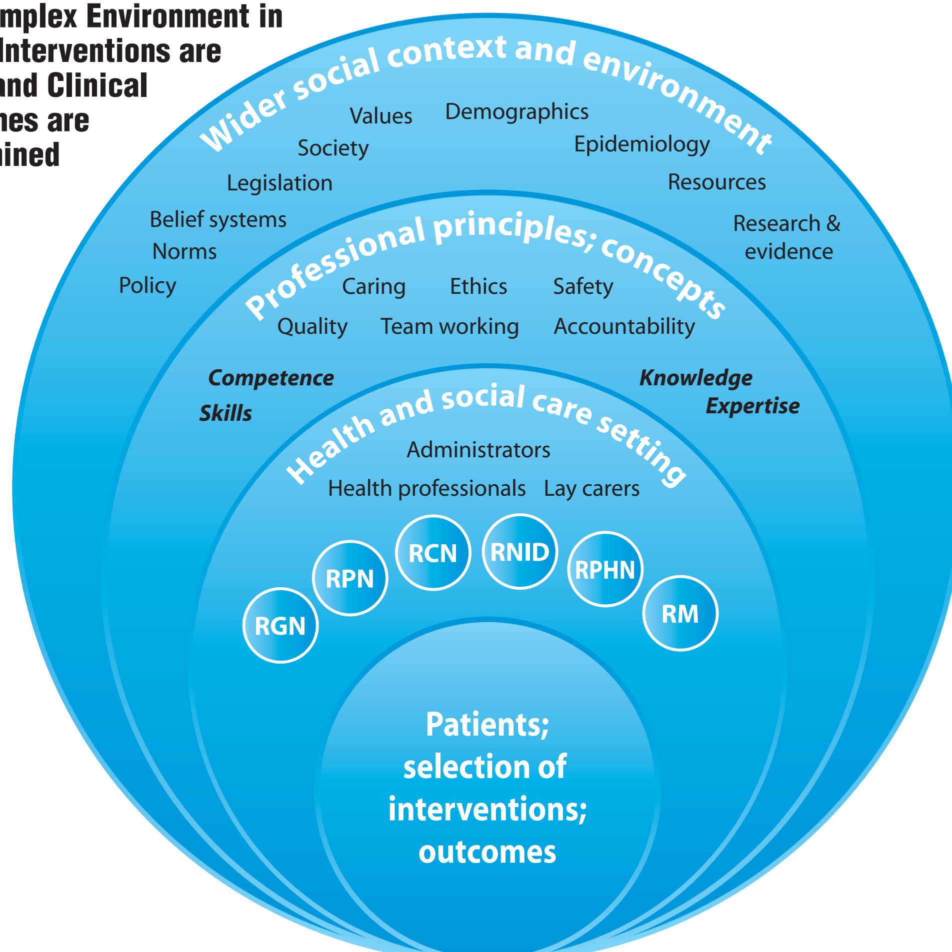
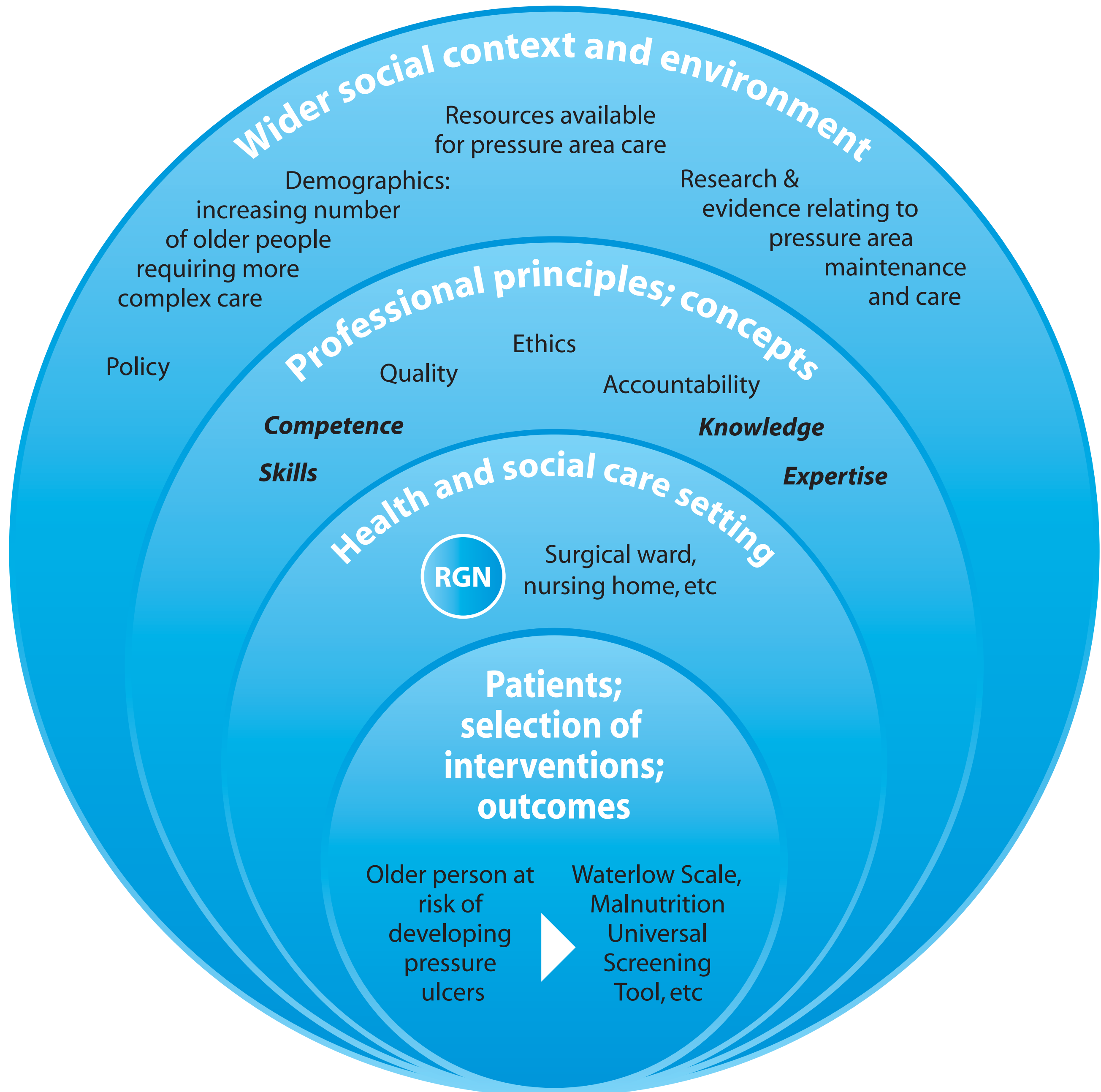


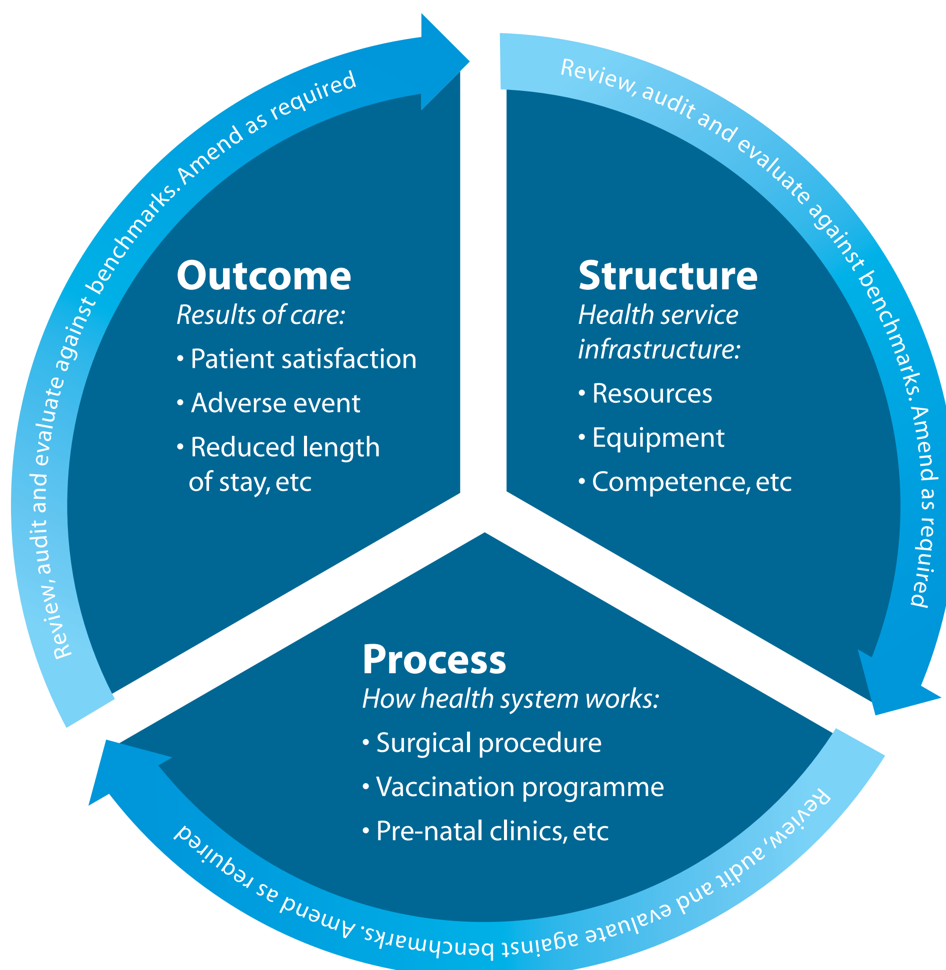
Figure 3 below shows how determining clinical outcomes and selecting appropriate interventions relating to the pressure area maintenance and pressure ulcer prevention takes place in the complex environment illustrated in Figure 2 above.

Figure 3. The Complex Environment in which Interventions Relating to Pressure Area Maintenance and Pressure Ulcer Prevention are Made and Clinical Outcomes are Determined.



Ways to define, categorise, and measure quality have become increasingly important concerns in the era of managed care and cost containment. Most attempts at developing quality indicators have been based on the development of outcome measures. The Donabedian linear model of *structure -process-outcome* (**Figure 4**) has been universally accepted and used as the basis for much of the work addressing quality and outcomes both nationally and internationally.

Figure 4. The Structure-Process-Outcome Model in Healthcare



Patient Safety and Quality of Service

Patient safety and quality of health service provision have long been considerations for nurses, midwives and other healthcare providers. They remain the most significant driving forces behind health policy and the development of healthcare practice. In October 2004 the World Health Organisation (WHO) launched an international patient safety programme in response to a World Health Assembly Resolution (WHA55.18 2002). This resolution urged the WHO and Member States to pay the closest possible attention to patient safety. The establishment of the WHO Patient Safety programme underlined the importance of patient safety as a global healthcare issue (World Health Organisation, undated). The programme aims to co-ordinate, disseminate and accelerate worldwide improvements in patient safety.

Patient safety issues have also come to prominence in Ireland in the last decade. Established by the Minister for Health and Children in 2007, the Commission on Patient Safety and Quality Assurance was charged with developing clear and practical recommendations which would ensure patient safety and the delivery of high-quality health and personal social services would be paramount within the Irish health service. The terms of reference of the Commission on Patient Safety and Quality Assurance

"It is self-evident that safe and effective treatments and care are important in ensuring that patients get the best outcomes from their care. The international evidence also indicates that effective care is often the most efficient care. However, defining what effective care is, ensuring that both professionals and patients are aware of what effective care is and ensuring that effective care and treatments are available in a fair and equitable way across the entire system presents significant challenges."

(Department of Health and Children, 2008, *Building a Culture of Patient Safety*, p. 11).

included undertaking an examination of "the process of quality assurance of clinical services (with an emphasis on clinical outcomes) for public and private healthcare providers and services" (Department of Health and Children 2008, p. viii). Factors identified by the Commission as contributing to optimal clinical outcomes are illustrated in **Figure 5**. They include evidence-based practice and clinical guidelines, clinical audit that complies with national standards and health priorities, and continuing professional development and assessment of continued competence. The emergence of these issues and topics have inevitably affected the development of new roles and practice in nursing and midwifery in Ireland and will continue do so in the coming years as the Implementation Steering Group (ISG) established in 2009 puts into effect the Commission's recommendations (Department of Health and Children 2009). An overview of publications and events illustrating the emergence of patient safety, quality of care and clinical outcomes in nursing and midwifery role and practice development is shown in **Box 6**.

Figure 5. Factors Enhancing Clinical Outcomes for Patients. Source: *Building a Culture of Patient Safety* (Department of Health and Children 2008)

Box 6. Key Publications and Events Illustrating the Emergence of Patient Safety, Quality of Care and Clinical Outcomes in Nursing and Midwifery Role and Practice Development from 2001 to 2010

Year	Events
2001	• *Quality and Fairness – A Health System for You* (Department of Health and Children 2001) • *Learning from Bristol: The report of the public inquiry into children's heart surgery at the Bristol Royal Infirmary 1984-1995* (Department of Health, London 2001) • The first editions of the National Council's frameworks for clinical career pathway are published (National Council 2001a, 2001b). The need for clinical nurse/midwife specialists to ensure practice is based on evidence is made explicit, as is the requirement for advanced nurse/midwife practitioners to demonstrate research competencies. The frameworks are updated in 2004, 2007 and 2008 (National Council 2004a, 2004b, 2007a, 2007b, 2008a, 2008b)
2002	• The Clinical Indemnity Scheme is established
2003	• The Health Service Reform Programme is announced • The National Council publishes the first edition of portfolio guidelines for the voluntary recording of continuing professional development activities (National Council 2003)
2004	• The Health Information and Quality Authority is established on an interim basis • The World Health Organisation establishes the World Alliance for Patient Safety • The National Council's report on the continuing professional development of staff nurses and midwives demonstrates that nurses and midwives voluntarily engage in continuing professional development activities to enhance their practice (National Council 2004c)
2005	• The Health Service Executive is fully established • The National Council's baseline survey of nursing and midwifery research activity in Ireland demonstrates that such activity had been taking place, but that there is a need to develop strategies to support and enhance research capability and capacity (National Council 2006c) • Developed with the Northern Ireland Practice and Education Council, the All-Ireland Practice and Quality Development Database is launched on the two organisations' respective websites: its purpose is to facilitate sharing of good nursing and midwifery practice throughout the island of Ireland
2006	• The National Council publishes guidance for nurses and midwives in the use of integrated care pathways, the aims being to promote the monitoring of patients' progress against pre-established outcomes (National Council 2006d) • The National Council's evaluation of the extent of measurement of nursing and midwifery interventions in Ireland confirms that nurses and midwives participate in quality improvement and assurance programmes and that they use recognised instruments to guide and document their interventions. The accompanying guidance and resource pack aims to assist nurses and midwives in the selection and assessment of interventions (National Council 2006a, 2006b)
2007	• The Health Information and Quality Authority is fully established • The National Council commences follow-up work on the nursing and midwifery interventions project, involving consultation with practitioners and academics
2008	• *Building a Culture of Patient Safety. Report of the Commission on Patient Safety and Quality Assurance* (Department of Health and Children 2008)
2009	• The Implementation Steering Group for the Report of the Commission on Patient Safety and Quality Assurance is established and categorises the recommendations contained in the report into thirteen separate projects

Continued overleaf

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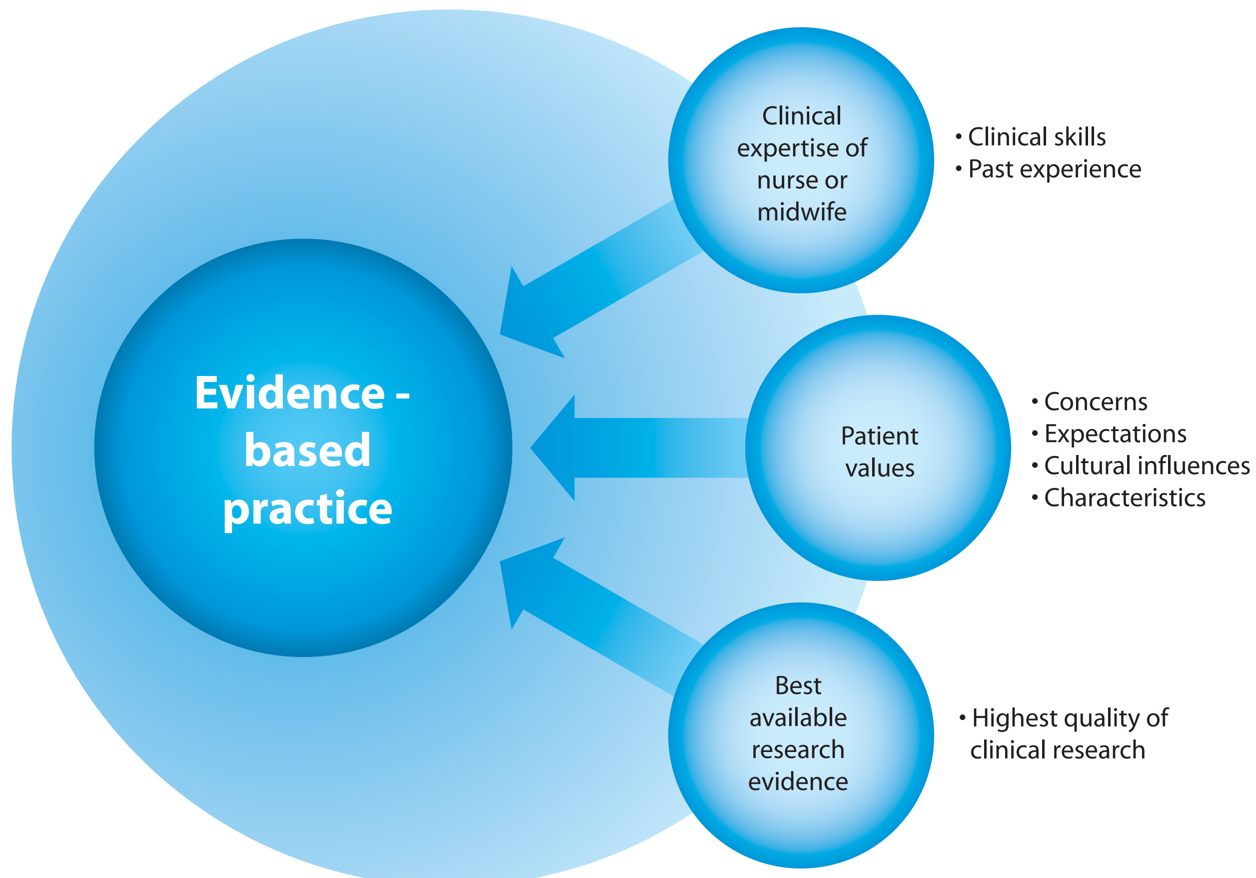
	• The National Council's website is expanded to include the Nursing and Midwifery Interventions section. An electronic networking group (e-group) is established to facilitate the sharing of resources relating to interventions and outcomes • Building on the finding in the *Report on the Baseline Survey of Research Activity in Irish Nursing and Midwifery* that fewer than 50% of services had developed research-based practice guidelines, the National Council publishes guidance for adapting clinical practice guidelines and implementing evidence in practice (National Council 2009)
2010	• *The Nurses and Midwives Bill* (Government of Ireland 2010) is published, indicating that registered nurses and midwives may be required to maintain and demonstrate professional competence • *A Review of Practice Development in Nursing and Midwifery in the Republic of Ireland and the Development of a Strategic Framework* (Department of Health and Children 2010) is published, emphasising the necessity for taking a strategic approach to practice development by nurses and midwives

Evidence-Based Practice and Clinical Guidelines

Nurses and midwives in Ireland are already familiar with the concept of evidence-based practice and the use of clinical guidelines. Arising from clinical epidemiology (the study of health and disease in populations) within the last twenty years, evidence-based ways of thinking have enabled the application of valid, research-based information in clinical decision-making (Cullum *et al* 2008). Nurses and midwives do not, however, use research-based information in isolation: they use it in tandem with their knowledge of patients' symptoms, diagnoses and expressed preferences and in the context in which the decision is being made (for example, the care setting and resources available) (see **Figure 7**).

Figure 7. Evidence-Based Practice. Adapted from Melynk and Fineout-Overholt (2005).



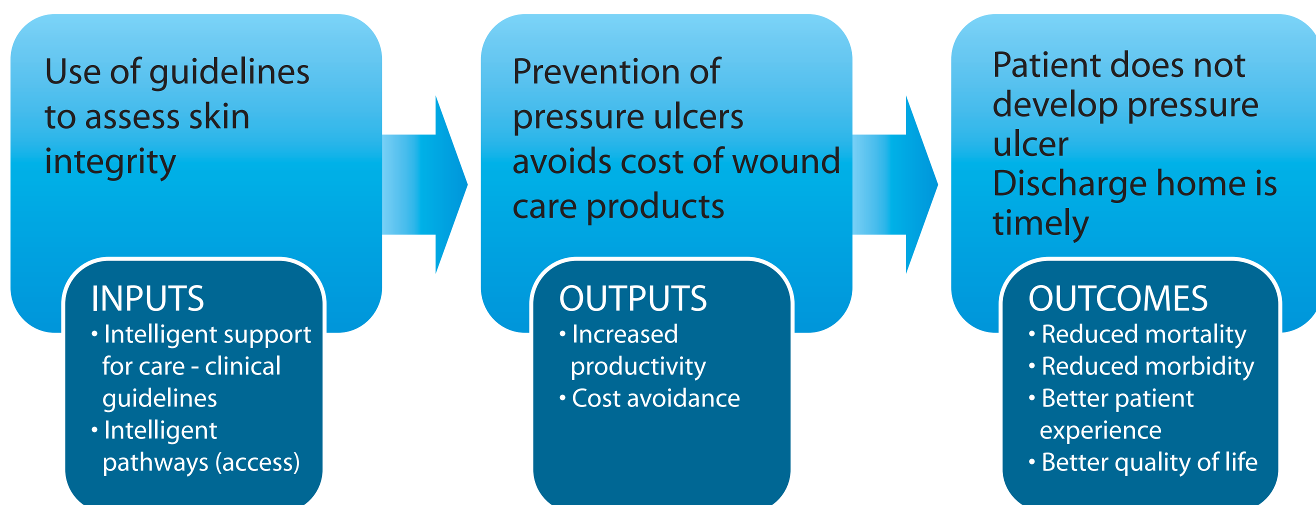
This approach to decision-making in a front-line clinical setting is reflected in the Health Service Executive's (HSE) *National Best Practice and Evidence-Based Guidelines for Wound Management* (HSE 2009). The guidelines were developed using the AGREE (Appraisal of Guidelines Research and Evaluation) Instrument[1], which has been widely accepted internationally as the "gold standard" for guideline development and appraisal (National Council 2009). The author of the Irish guidelines advises, as might be expected, that the guidelines represent best practice in wound management based on the evidence available at the time of writing, and acknowledges that some aspects of them will become obsolete and require updating in the light of new evidence. Built into the guidelines are pointers on the development and documentation of risk assessments, implementation of the guidelines in practice, and the strength of the evidence base for the practice recommendations. A clinical audit tool to be used with the guidelines is provided in an appendix, which contains examples of audit statements with relevant quality objectives, outcome measures and targets.

Health System Reform: Quality and Cost-Effectiveness

Health system reform is an international phenomenon with many countries aiming to improve the performance of their health systems and services. This performance is usually measured against health policy objectives such as access to services, quality, responsiveness, sustainability, equity and efficiency ("value for money") (Hurst 2010). Evidence-based healthcare has become a priority for many developed countries, in keeping not just with the ethical requirement to provide effective care, but also with the economic agenda requiring good husbandry and minimal waste of valuable resources (Ciliska et al 2007). The global economic climate has always affected the resources available for healthcare provision throughout the developed world (Drummond et al 2005; Wonderling et al 2005). The scarcity of resources, therapeutic and preventive processes in medicine and healthcare is a constant theme in the international and national literature, with calls for evaluation of effectiveness to include evaluation of cost-effectiveness (Walter & Zehetmayr 2006). Present fiscal constraints in Ireland have meant that the financial resources available for healthcare and service provision must be used efficiently and effectively; at the same time the quality of service provision must improve where necessary (Layte 2009). National health policy drivers have been reiterated in the HSE's national service plans. The current national service plan states clearly the requirement to provide cost-effective services (HSE 2010) and outlines the themed programmatic approach to transforming health services, with clear targets and key performance indicators.

The HSE's programmatic approach is aimed at improving care, particularly in areas associated with high volumes of activity, focusing on key service deliverables within main *cost drivers* (ie, any activity that incurs a cost). A simple example is the purchase of wound care products in the treatment of pressure ulcers) (see **Figure 8** below).

Figure 8. Clinical Outcomes of Interventions Relating to Maintenance of Pressure Areas and Prevention of Pressure Sores in the Context of the Health Service Executive's Programmatic Approach. Adapted from the *HSE National Service Plan, 2010* (p.9).



1 Visit the AGREE Collaboration website for more information – www.agreecollaboration.org.

The programmatic approach involves the development of programmes or complex projects concerning *inter alia* respiratory diseases, cardiovascular diseases, diabetes, emergency departments and metrics for quality initiatives. The key result area (KRA) for each programme builds on outputs from the previous year, where applicable, and has identified targets or deliverables and target timescales for the current year. In order to measure progress towards the targets, key performance indicators have been developed pertaining to each KRA[2]. From a nursing and midwifery perspective, it is desirable for the two professions to identify their contribution to KRAs and clinical outcomes and to be able demonstrate this contribution to others. But, as Griffiths et al (2008) point out, there are difficulties inherent in striking the correct balance between collecting the data required to do this and in ensuring that "performance on indicators represents broad achievement of the goals of nursing [and midwifery] or processes that deliver those goals" (p. 11).

Categorising Clinical Outcomes: The Nursing and Midwifery Perspective

The National Council previously researched and identified the terminology used in relation to nursing/midwifery interventions and outcomes of those interventions (National Council 2006a). Data gathered in the course of that study led to a recommendation for clarity around the terminology used in interventions and outcomes measurement. Defined in the simplest terms, an outcome is the result of an intervention (National Council 2006a) and in the context of healthcare, the term clinical outcome may be used to denote the outcome of a clinical (or treatment-focused) intervention. As such, clinical interventions and outcomes may fall within the domain of health interventions, ie, those treatment-focused or preventive (educational) actions taken by healthcare professionals and others to improve the health of a patient/client and to enable them to take steps to improve and maintain their own health (Bruhn 2001).

The literature review undertaken by the National Council in 2005-2006 (see Appendix 1 of National Council 2006a) indicated that nurse and midwife researchers in Europe and elsewhere were taking this approach when studying the outcomes of nurses' and midwives' healthcare interventions. More recently Kleinpell (2009) has categorised studies relating to the outcomes measures used in researching the effectiveness of advanced practice nurses under three headings: care-related, patient-related and performance-related; **Figure 9** contains a brief description of the different types of outcomes and examples of each. These category headings are not mutually exclusive and will be used in this discussion paper in relation to the clinical outcomes of **all** nurses and midwives working at all clinical grades and as members of uni- and multi-disciplinary teams.

2 For guidance on developing indicators for performance measurement read Pencheon (2008).

Figure 9. Categories and Examples of Outcome Measures in Nursing and Midwifery. Adapted from Kleinpell (2009).

CATEGORY OF OUTCOME		
Care-related	**Patient-related**	**Performance-related**
Outcomes resulting from nurses' and midwives' interventions or involvement in clinical care	Outcomes resulting from nurses' and midwives' interventions or involvement in clinical care and affecting patients' perceptions, preferences and knowledge	Outcomes resulting from nurses' and midwives' interventions or involvement in clinical care and reflecting the quality of care provided by nurses and midwives
EXAMPLES		
May include changes in: • Physiological values such as weight loss or gain • Clinical symptoms such as dyspnoea or pain • Aspects of health such as physical functioning and mobility • Costs of care • Length of stay • In-hospital morbidity • Re-admission rates • Infant immunisations • Rates of Caesarian section • Quality of life	May include: • Quality of life • Use of health services (e.g., decreased length of hospital stay) • Compliance with treatment plans • Complaints • Knowledge • Symptom management • Social function • Psychological function • Patient satisfaction • Patient access to care • Symptom resolution or reduction • Health maintenance • Blood pressure control • Blood glucose levels • Functional status	May include: • Quality of care • Interpersonal skills • Completeness of documentation • Clinical competence • Collaboration • Clinical examination comprehensiveness • Adherence to best-practice guidelines

A "desk research" exercise conducted by the National Council in July 2009 elicited information about determining clinical and service outcomes that had been measured through audit, research, peer review, etc, by or in relation to clinical nurse/midwife specialists, advanced nurse/midwife practitioners and other specialised nursing/midwifery roles. The information from seven respondents has been used in this discussion paper to illustrate how nurses and midwives might categorise the clinical outcomes of their interventions (see **Box 10**). Audit was the most frequently utilised approach to data collection. The data collected and the ways in which the results were reported varied from site to site; nevertheless the reports provide an insight into how nurses and midwives in these roles can demonstrate their contribution to patient care and service delivery and the type of clinical outcomes resulting from their care. (The National Council plans to identify more exemplars of nurses and midwives measuring their clinical outcomes and to publish reports on these activities.)

Box 10. Clinical Outcomes of Nursing and Midwifery Interventions in Ireland Categorised Using Kleinpell's Category Headings (Kleinpell 2009)[3]

Based on data gathered in the course of a desk research exercise conducted by the National Council in 2009.

OUTCOME CATEGORY	DESCRIPTION OF SERVICE, INTERVENTIONS AND OUTCOMES MEASURED
Patient-related clinical outcomes	**Maternity services in the hospital and community setting, Midland Regional Hospital (MRH), Portlaoise** The clinical midwife specialist in lactation aims to promote, support and protect breastfeeding. She has responsibility for co-ordinating the hospital's Baby Friendly Hospital Initiative, thereby increasing breastfeeding rates. Ongoing clinical audit in the MRH maternity services involves a monthly correlation of feeding method statistics. These show that breastfeeding rates increased from 42% in 2004 to 49% in 2009.
	Diabetes care, Midland Regional Hospital (MRH), Portlaoise As a member of the MRH diabetes team, the clinical midwife specialist in diabetes provides a comprehensive education programme for clients, thereby enabling them to achieve their health targets while maintaining a high quality of life. An audit of patients with type 1 diabetes admitted in 2007 and 2008 showed: • no change in the numbers admitted with diabetic keto-acidosis • a reduction in the length of hospital stay and in bed occupancy by 22.2% • a 50% reduction in the number of patients admitted in a coma • a 57% reduction in the number of patients admitted for poor diabetic control • a 35.9% reduction in inpatient bed occupancy rates
	Advanced nurse practitioner (ANP) (Oncology) services, Letterkenny General Hospital The caseload of the ANP in oncology comprises patients with breast, colorectal or testicular cancer on surveillance follow-up, and other patients with any type of cancer at any stage for support, education and advice. Audits conducted in 2007 and 2008 of the management of patients with a diagnosis of breast cancer and colorectal cancer respectively and attending for review with the ANP showed a higher than 90% adherence to pre-determined practice guidelines. Patients' waiting times have been reduced and their satisfaction with services has increased since the introduction of the ANP into the oncology team.
Care-related patient outcomes	**Infection control, Kerry General Hospital** Consisting of two infection control nurses and a microbiologist, the infection control team has responsibility, *inter alia*, for implementing effective infection control measures and evaluating the effectiveness of such measures. In 2008 the team introduced a number of strategies aimed at reducing MRSA bacteraemia rates. These included the introduction of sanitising swabs and preparations for skin antisepsis and the development of a blood culture policy. MRSA bacteraemia rates in 2008 fell by 19% compared to rates in 2007.
	Tissue viability nursing service, St Mary's Hospital, Phoenix Park, Dublin The tissue viability nursing service was introduced in 2006 to look after the needs of patients at particular risk of developing pressure ulcers. The tissue viability nurse is involved in direct patient care, as well as the education of the multidisciplinary team, research and audit. She conducts monthly monitoring of the incidence and prevalence of pressure ulcers within the hospital. From 2006 to 2009 the prevalence of pressure ulcers has fallen from 7.6% to 1.5% approximately; in addition, where pressure ulcers have occurred, they have been less severe than previously.

3 Full accounts of selected examples are available to view and download from the National Council's website.

OUTCOME CATEGORY	DESCRIPTION OF SERVICE, INTERVENTIONS AND OUTCOMES MEASURED
Performance-related clinical outcome	**Diabetes care, Naas General Hospital** An audit of patients' views on the service provided by the clinical nurse specialist in diabetes yielded the following information: • 90% of patients felt that the information they received from her was complete and easy to understand • 90% felt more confident and independent following consultation with her
	Pain management, Mercy University Hospital, Cork An audit of the clinical outcomes relating to the work of the clinical nurse specialist in pain management from January to July 2009 showed the following: • 256 patients were referred to the pain service and 1,426 procedures were performed • of 162 patients receiving epidural transfusions whose care she managed, 147 (90%) were satisfied with that care • of the 112 patients with acute pain whose patient-controlled analgesia she managed, 85 (76%) were satisfied with the care received

Sources and Resources for Clinical Outcomes

Since the National Council conducted its study of the interventions used by nurses and midwives and developed its guidance and resource pack, further work was undertaken to ensure that nurses and midwives would continue to have access to up-to-date guidance and resources. This work involved consultation with interested parties from front-line health services, service-based nurse/midwife educators and lecturers working in the third-level education. Following this consultation, the National Council then developed a distinct section of its website containing resources for interventions selection and outcomes measurement. In addition, an electronic network (e-network) was set up in 2009 to facilitate sharing of relevant information and resources such as updates on research studies or systematic reviews of interest, electronic newsletters (e-newsletters) from organisations like the Agency for Healthcare Research and Quality (AHRQ) Innovation Exchange or health-related discussion documents from the Organisation for Economic Co-operation and Development (OECD). In the course of conducting this work it became apparent that there was already a plethora of sources and resources available to nurses, midwives and other healthcare staff. These sources and resources include the systematic reviews available from the Cochrane Collaboration (which can be access via the Health Research Board's website – www.hrb.ie) and the Joanna Briggs Institute (www.joannabriggs.edu.au/), third-level education campus-based libraries, e-newsletters, the electronic journal *Evidence-Based Nursing* (accessible via the National Council's website) and the National Council's own on-line research database. The challenge for nurses and midwives working in front-line services is to be discerning in their use of such sources and resources, especially those available on the Internet. **Box 11** contains some pointers for choosing the appropriate sites and sources.

Box 11. Strategies for Choosing Internet Resources and Sources

1. Decide what you are looking for: facts, authoratitive opinions, reasoned arguments, statistics, etc.
2. Identify a credible source providing information that is objective, free from any conflict of interest (or else declares its interests), is quality-assured.
3. Look for the author's name, title and/or position, organisational affiliation and contact information.
4. Check when the website or webpage was created and updated.

In the guidance and resource pack published in 2006 the National Council suggested how nurses and midwives might begin to select appropriate interventions and outcome measures. Kleinpell (2009) has suggested that when determining which outcome and performance measures they might use, nurses and midwives should take into account the literature on outcomes, outcome measurement manuals, regulatory and accrediting agencies' publications, governmental sources, clinical practice guidelines and dedicated Internet resources. The HSE's key result areas and performance indicators are also likely to be taken into account. Options for collecting outcomes data and considerations for selecting instruments for outcome measurement studies are shown in **Box 12**. The HSE's *National Best Practice and Evidence-Based Guidelines for Wound Management* (2009a) is another useful source.

Box 12. Collecting Data and Choosing Instruments for Outcome Measurement Studies

OUTCOMES DATA CAN BE COLLECTED USING:	WHEN CHOOSING TOOLS AND INSTRUMENTS FOR OUTCOME MEASUREMENT STUDIES, CONSIDER:
• **Flowcharts**	• **Instrument purpose**
• **Checksheets**	• **Intended study population**
• **Protocols**	• **Length and completion time**
• **Guideline-based performance measures**	• **Degree and type of reliability**
• **Critical pathways**	• **Validity testing with the instrument**
• **Software**	• **Administration and scoring aspects**
	• **Associated fees for use and/or scoring**

While the focus of this discussion paper is clinical outcomes and best practice, nurses and midwives should always bear in mind the economic environment in which they are working and recognise that quality and performance measurement will include economic as well as clinical evaluations of healthcare interventions and outcomes (Garcia-Caban 2010). By giving consideration to the economic outcomes of their interventions, as well as the clinical outcomes, nurses and midwives can help to:

- ensure that limited resources are allocated in the most appropriate or most equitable way
- identify the money spent on an intervention and give a proper account of its use
- plan for sustainable services and end unsustainable services (Smith et al 2005; Braccia et al 2008).

The National Council is currently engaged in a project aiming to evaluate the economic implications as well as the clinical outcomes of clinical nurse/midwife specialist and advanced nurse/midwife practitioner roles in Ireland. The final report is due to be published at the end of 2010.

Developing the Competencies Required for Clinical Outcomes Measurement

As already stated, clinical outcomes are those outcomes relating to patient care and the quality of service delivery. Measurement of outcomes can reflect the contribution and performance of nurses and midwives, as well as the performance of an individual healthcare setting or a whole health service. Although patient safety and quality of healthcare are undoubtedly the principal drivers of health service reform, there is a need for the ongoing development of healthcare professionals' competence in these areas (World Health Organisation 2009). In Ireland the importance of continuing professional development and continued competence to patient safety has been underlined by the Department of Health and Children, the Commission on Patient Safety and Quality Assurance (Department of Health and Children 2008) and the HSE (HSE 2009b). The ISG for the implementation of the Commission's report is examining the recommendations relating to education and training in patient safety (Department of Health and Children 2009). At the time of writing, it is anticipated that the forthcoming *Nurses and Midwives Act* will legislate for nurses and midwives to demonstrate continuing competence in certain circumstances. In its ten years of existence, the National Council has supported the continuing professional development of nurses and midwives in Ireland and has worked on the basis that individual nurses and midwives have

voluntarily engaged in continuing professional development activities and have sought to enhance the competencies relevant to their respective areas of practice or chosen career pathway.

In the course of the literature search and review conducted for this discussion paper, no publications referring specifically to the competencies associated with clinical outcomes were identified. In view of this, the National Council proposes a competence mapping exercise aimed at determining the required competencies (**Figure 13**).

Figure 13. Competence Mapping

Mapping the competencies associated with clinical outcomes involves:

1. Identifying or mapping the competencies required by the individual nurse or midwife appropriate to her specific clinical environment, her role within the multidisciplinary team and the service's overall goals.
2. Defining the competencies required with reference to the short-, medium- and long-term goals of the service.
3. Assessment of existing individual, team and service competencies in order to identify and analyse strengths and needs.

4. Developing competencies through targeted education and training based on the assessment of competencies (see 3 above).

5. Evaluating and sustaining competencies through the establishment of appropriate key indicators and standardised processes.

This mapping process is conducted with reference to the literature and evidence on clinical outcomes and their measurement, patient safety and service quality, evidence-based practice, the HSE's themed programmes and key performance indicators, and continuing professional development. When framing this process for nurses and midwives in Ireland, a starting point might be the five domains of competence and their associated performance criteria and indicators prescribed by An Bord Altranais in the standards and requirements for various nurse and midwife registration programmes (An Bord Altranais 2005a, 2005b, 2007). These domains are professional and ethical practice, holistic approaches to care and integration of knowledge, organisation and management of care, personal and professional development, and interpersonal relationships. The examples of performance criteria and indicators shown in **Box 14** have been selected on the basis that they reflect the topics and themes in the broader national and international literature on clinical outcomes.

Box 14. Clinical Outcomes: Identifying the Competencies Relevant to Nurses and Midwives. Adapted from An Bord Altranais' Standards and Requirements for Education Programmes (2005a, 2005b, 2007)

DOMAIN	PERFORMANCE CRITERIA	INDICATOR
Professional and ethical practice	Practises in accordance with legislation affecting nursing/midwifery practice.	Implements the philosophies, policies, protocols and clinical guidelines of the healthcare institution
Holistic approaches to care and integration of knowledge	Implements planned nursing, midwifery and other care/interventions to achieve the identified outcomes.	Delivers nursing, midwifery and other care in accordance with the plan that is accurate, safe, comprehensive and effective.
	Evaluates client progress toward expected outcomes and reviews plans in accordance with evaluation data and in consultation with the client.	Assesses the effectiveness of care in achieving the planned outcomes. Determines further outcomes and interventions in accordance with evaluation data and consultation with the client.
Organisation and management of care	Effectively manages the care of clients/groups/communities.	Contributes to the overall goal/mission of the health care institution. Demonstrates the ability to work as a team member. Determines priorities for care based on need, acuity and optimal time for intervention. Selects and utilises resources effectively and efficiently. Utilises methods to demonstrate quality assurance and quality management.
Personal and professional development	Acts to enhance the personal and professional development of self and others.	Demonstrates a commitment to life-long learning.
Interpersonal relationships	Collaborates with all members of the health care team and documents relevant information.	Participates with all healthcare personnel in a collaborative effort directed toward decision-making concerning clients.

The knowledge, skills and attitudes associated with evidence-based practice include the individual health professional's problem-solving skills (e.g., the ability to think critically and apply clinical reasoning), and the ability to work as a team member, to communicate effectively and to integrate clinical expertise, patient values and best available research evidence (Ilic 2009). As these are already implicit in An Bord Altranais' prescribed competency domains, the competency mapping process might involve elaboration on the examples shown in **Box 14**. The findings and recommendations from studies such as the one conducted by the National Council may also inform the further development and elaboration of the performance criteria.

Summary

This discussion paper has provided an overview of developments occurring in the last ten years within the international and national healthcare environment, with a particular emphasis on the nursing and midwifery perspective. The main concerns of the healthcare environment are patient safety and quality of service, and ensuring that these are maintained and improved in spite of ongoing cost containment measures (Suñol et al 2009a; Suñol et al 2009b). Patient safety is of paramount importance and features in health policy and reform all around the world. *Building a Culture of Patient Safety: Report of the Commission on Patient Safety and Quality Assurance* (DoHC 2008) will continue to have an impact on the health system and health services in Ireland as the Implementation Steering Group executes the thirteen projects arising from the Commission's recommendations. Evidence-based practice underpins patient safety, and while systematic reviews of quantitative research are the benchmark for evidence, they can be tempered by qualitative evidence and the individual nurse's or midwife's clinical expertise and judgement. The content and guiding principles of the guidance and resource pack published by the National Council in 2006 remain valid on the whole, but the resources and sources available to nurses and midwives have multiplied in the intervening years. Nurses and midwives working in the front line of the health service have innumerable calls made on their time and expertise, and may not have the resources to conduct literature searches or investigations. While pre-registration education programmes prepare nurses and midwives to deliver high-quality evidence-based care, the time has come for consideration of how front-line staff can be supported to develop their existing competencies in research utilisation and evidence-based practice and to identify new ones in relation to clinical outcomes. Success in these areas is dependent on their being integrated within policy and at all organisational levels, and being backed by adequate resources and incentives (Royal & Blythe 2008, Spiby & Munro 2010). This has implications for nurse and midwife leaders at all levels of the health service (Wong & Cummings 2007, Marchionni & Ritchie 2008), requiring them to work strategically across organisations, sectors and disciplinary boundaries.

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NATIONAL COUNCIL FOR THE PROFESSIONAL DEVELOPMENT OF NURSING AND MIDWIFERY

6-7 Manor Street Business Park, Manor Street, Dublin 7, Ireland.
Telephone: 00 353 1 882 5300. Fax: 00 353 1 868 0366.
Email: admin@ncnm.ie Web: www.ncnm.ie