INTERNATIONAL COUNCIL OF NURSES

Closing the gap:

From evidence to action

International Nurses Day **12 May 2012**

CLOSING THE GAP:
FROM EVIDENCE TO ACTION

INTERNATIONAL NURSES DAY 2012

3, place Jean-Marteau, 1201 Geneva, Switzerland

ISBN: 978-92-95094-75-8

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12 May 2012

Dear Colleagues,

In our quest for quality and access to health care, we must constantly strive to use evidence-based approaches to nursing services. Today, health systems throughout the world are being challenged by inequities in quality and quantity of services and by reduced financial resources. Poorly informed decision making is one of the reasons services can fail to be delivered in an optimal way. It can also result in less efficient, ineffective and inequitable availability of health services. The use of evidence to inform our actions is a critical and achievable way to improve health system performance.

However, the increased availability of information can mean that rather than making finding evidence easier it can feel overwhelming. Now, more than ever, nurses need to learn not only how to gather evidence but also how to put that knowledge into everyday use. Not all evidence is robust or reliable. Nurses must learn to identify the best available evidence, taking into account the needs and preferences of health service users, while using their own expertise, skills and clinical judgement as to the feasibility of its use within the local context.

This IND Kit 2012 empowers nurses to identify what evidence to use, how to interpret the evidence, and whether the anticipated outcomes are sufficiently important to change practice and use precious resources that may be needed elsewhere.

ICN believes that nurses are well placed to supply important information about context; about different systems, population group needs and the role of local politics and social factors. The use of an evidence-based approach enables us to challenge and be challenged on our approach to practice and to hold ourselves accountable. It allows us to constantly review our practice and to seek new and more effective and efficient ways of doing things, thereby increasing access and to care and wellbeing

Sincerely,

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INTRODUCTION

The availability of information and the growth of science have led to significant improvements in health outcomes throughout the world. However differences in outcomes, health inequalities and poorly performing health services continue to present a real challenge to all nurses. Half of the world's deaths could be prevented with simple cost effective interventions but as the World Health Organization (WHO 2004) acknowledges not enough is known about how to make these more widely available to the people who need them. Stronger emphasis needs to be placed not just on the discovery of new products, drugs and diagnostics but on how we put knowledge into use; on *how we close the gap between evidence and action*.

As a community of nurses we all need to understand the role we play in the evidence to action continuum and, although these roles will be different, it is important that we feel informed enough to ask good questions, develop our skills and ensure that we work closely with colleagues to ensure the research investment is used to best effect. As users of research nurses also generate knowledge. Nurses are often well placed to supply important information about context, about different systems, population groups and the role of local politics and social factors. This understanding is vital to local service innovation and the development of new ways of working.

We should all be committed to developing an environment conducive to evidence-informed decision making and practice but to achieve this, the teams that produce research need to work closely with the teams that use their findings, including the wider community. This is not always easy to achieve for a variety of reasons but without these partnerships we continue to waste resources and important findings can take too many years to become established best practice.

This tool kit has been specifically designed to present an overview of the key aspects of this complex area of development need. It includes many links to detailed materials which are freely available for individual readers to pursue their particular area of interest and skills need.

CHAPTER 1

Understanding Evidence-based Practice

The achievement of the Millennium Development Goals set out by the United Nations is a worldwide ambition and one which calls the nurse workforce to action. These goals and indeed many other health related goals are only achievable if we have well informed health policies and well managed and led action plans. The reality is that the habits of practice rather than those informed by best evidence still persistently get in the way of achieving our goals. Poorly informed decision making is one of the main reasons services can fail to be delivered in an optimal way and can also contribute to variations in practice which make services less efficient, ineffective and inequitable. For different reasons we are all required to spend our budgets wisely and evidence has a vital role to play in this area.

Since the beginning of the 1990s there has been a drive towards evidence-based medicine which focused on medical decision making. It grew from the work of a group of researchers at McMaster University in Ontario who set out to redefine the practice of medicine so that information could be collected and used more easily. They wanted to shift medicine from a culture based on clinical experience, rather than medical evidence, and characterised by individual bias and poor recording of results to one where unbiased recorded information and patient benefits were valued.

This approach quickly started to show real benefits to patients and in reducing costs. Other practitioners soon followed and the principles of this approach have now been adapted by all aspects of many health systems including service users, policy makers, health care managers and, of course, nurses. An initial criticism of the evidence-based practice (EBP) approach was that it fostered a belief that most practices were largely determined by research evidence. This was a challenge for nursing where the research base has still a long way to develop. In fact this was never the case and what the EBP approach has always acknowledged is that decisions are rarely based on evidence alone; judgements, values and individual factors always play a role (Hamer & Collinson 2005).

However what is also clear is that if nurses use an evidence-based approach to their practice they are more able to ask good questions about how and when they should change their practice, demonstrate that they are using good information on which to base their decisions, evaluate their practice and know that the outcomes they are being measured on are appropriate and agreed in advance. That is why ICN promotes and supports evidence-based practice through its publications and the ICN Research Network (ICN 2010; www.icn.ch/networks/research-network/).

What is evidence?

It is easy to get confused by the language associated with the EBP approach as it frequently uses academic language which historically may have acted as a barrier to nurses' understanding. Perhaps it helps to develop a common understanding of what evidence is. As Lomas et al. (2005) note: "evidence concerns facts (actual or asserted) intended for use in support of a conclusion". Additionally, a fact is something that is known through observation or experience. So this means that there are many possible sources of evidence using many different media, from traditional stories to visual images on the internet.

Figure 1: Key definitions

Evidence-based Practice
A problem solving approach to clinical decision making that incorporates a search for the best and latest evidence, clinical expertise and assessment, and patient preference values within a context of caring.

Nursing Research
Nursing research involves the systematic inquiry specifically designed to develop, refine and extend nursing knowledge. The intent of nursing research is to answer questions and develop knowledge using a scientific method such as quantitative, qualitative or mixed methods.

Quality Improvement (QI)
Quality, clinical or performance improvement focuses on systems, processes and functional, clinical, satisfaction, and cost outcomes .QI projects may contribute to understanding best practice or processes of care in which nurses are involved. QI is not designed to develop nursing practice standards or nursing science.

Mazurek Melnyk et al (2005)

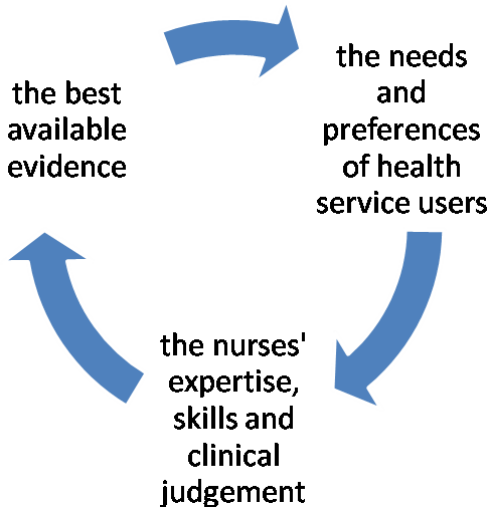
Not all evidence is equally useful. How useful evidence is can be the subject of much debate (WHO 2004) but generally research evidence ─ because it uses systematic methods to collect and analyse observations ─ is weighed more heavily in decision making processes. Also the better the research is in terms of design and execution the more useful it is viewed to be by decision makers.

When making judgements about using evidence (and you may be using many different types), it is useful to be able to account to others as to how you have arrived at your decision. Therefore, it helps to carry out your decision making process in a systematic and visible way which can be clearly communicated to others. This can increase the quality of the decision, reduce the possibility of errors and disagreement and increase the likelihood of new practices being implemented as all evidence is context specific (Ruland 2010). This process also can help clarify evidence needs and enable other practitioners to find and assess evidence.

Different types of evidence are more relevant to different questions and nurses need to be actively engaged in making sure that relevant research, where available, is identified, appraised and used appropriately. Building in the patient and carer perspective to this process is critical in order to increase the possibility of a successful change process.

The three key elements to successful evidence-based practice are outlined in Figure 2.

Figure 2: Elements of evidence-based practice



Identifying the evidence

There are many reasons nurses may start to look for evidence to inform a decision they would wish to make: it could be to support a change of practice, to consider the best option from a range of choices or to do a cost comparison of different forms of treatment. Whatever the reason, the first place to start is by asking a good question.

Sometimes the question is easy to define because it is based on an obvious knowledge gap a nurse may identify, such as a patient presenting with a condition they have never experienced. Less easy both to identify and define might be aspects of practice which are a "routine" but have gone unchallenged for many years but feedback from other practitioners or patients suggest that things need to change, for example, patients being encouraged to self manage chronic conditions.

Once a problem is identified, it is much easier to move on with the help of appropriate questions to identify the evidence you need to tackle the problem.

Figure 3: Asking a good question

PICO:

Problem

Intervention

Comparison

Outcome

There are a number of methods for building questions but most contain four elements (Figure 3);

1. The problem: the patient or client, population or condition you are dealing with.
2. The intervention you are considering.
3. A comparison (this may not be always needed) with which to compare the existing intervention.
4. The outcomes of interest.

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Having a defined question it is now possible to locate the evidence. There is certainly no shortage of information and indeed that is the challenge (Figure 4). Library shelves can be full of journals and the internet can deliver thousands of pieces of information in the click of a button. There is such a wide source of evidence that nurses and, indeed, patients need to work hard to remain active**,** informed and critical consumers and not to feel so overwhelmed by the task that they do not to attempt to engage in it at all. All nurses should be able to make a judgement about the strengths, weaknesses and limitations of the ways in which evidence was developed, to appraise and use it critically if that is appropriate. An example of a critical appraisal tool can be seen in **Annex 1.**

Figure 4: Potential sources of evidence

- Research by health professionals or academics
- Research by companies e.g. pharmaceutical companies
- Reviews of research and clinical guidelines
- Expert opinion
- Opinion of colleagues
- Clinical experience
- Experience of patients, carers or clients
- Clinical audit data

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All evidence has its value and the contributions of fellow practitioners and patients remain equally important.

Research is different from other forms of evidence because of the processes it uses and although there are many types of studies they are all expected to be systematic (following a clear protocol), rigorous and relevant. In many areas of practice the type of question requires that a particular research method be used. For example, a randomised controlled trial can examine the effectiveness of a new treatment but a qualitative methodology will be needed to understand the patient's feelings about the effect of the treatment. This combination of methods is increasingly viewed as critical to the successful introduction of new practices. That is why ICN (2007) in its position on nursing research gives equal weight to qualitative and quantitative research methods. As we have seen earlier the more evidence we have to understand the changes we wish to effect the more likely we are to be successful.

This can be viewed as a continuum of evidence shown in Fig.5:

Figure 5: Continuum of evidence

Qualitative					Quantitative
Opinion based on experience	Systematic quantitative designs	Descriptive studies	Surveys	Cohort studies	Randomised controlled trials

No matter what methodology is employed all evidence has its strengths and weaknesses; the central question remains: is this the appropriate method and was the research conducted **rigorously and systematically**? For more information about the different research methods refer to some of the additional links and resources at the end of this tool kit.

Meta analysis
This technique combines original data from similar studies and using statistical techniques creates a single estimate of the results.

Summarising the evidence

As nurses start to look for evidence, it can be very time consuming and expensive to look at each individual study. "Primary"[1] evidence can also present contradictory views. There is a specialist set of skills associated with the weighing of large volumes of evidence in order to make recommendations. This work is frequently done by universities for health services. Recognising this challenge and the associated costs, many governments have established specialist units to develop clinical guidelines, systematic reviews and critical reviews.

Figure 6: Examples of specialist centres

The Cochrane Collaboration is an international, independent, not-for-profit organisation of over 28,000 contributors from more than 100 countries, dedicated to making up-to-date, accurate information about the effects of health care readily available worldwide. Contributors work together to produce systematic reviews of health care interventions, known as Cochrane Reviews, which are published online in The Cochrane Library: www.thecochranelibrary.com.

The Joanna Briggs Institute (JBI) is an international not-for-profit, membership based, research and development organisation based within the Faculty of Health Sciences at the University of Adelaide, South Australia. The Institute collaborates internationally with over 70 entities across the world. The Institute and its collaborating entities promote and support the synthesis, transfer and utilisation of evidence through identifying feasible, appropriate, meaningful and effective health care practices to assist in the improvement of health care outcomes globally. www.joannabriggs.edu.au.

[1] Primary sources are original materials that have not been filtered through interpretation or evaluation and on which other research is based. They are usually the first formal appearance of results in physical, print or electronic format. They present original thinking, report a discovery, or share new information. (Source: University of Maryland Libraries: www.lib.umd.edu/guides/primary-sources.html)

A systematic review sets out to identify all the literature on a particular topic. Cullum (1997) states that a systematic review must consist of a number of important elements:

- The formulation of a clear problem or question.
- The use of comprehensive searches to locate and select studies which may be published or unpublished.
- Clear criteria for what will be included or excluded.
- Systematic grading of the quality of the research reported.
- Abstraction of data from the original studies and synthesis of data wherever possible.
- Analysis and presentation of results.

Critical reviews bring a number of studies together, and can often help in providing a summary of the evidence for an area of study.

Clinical guidelines bring together the best available evidence ideally using a transparent and rigorous approach and, from this, develop practical guidance for professionals. As a source of evidence for nurses they have increased significantly in terms of importance and can be used as a way of assessing effectiveness. They may be produced by government organisations, national nursing associations (NNAs), professional journals and professional interest groups such as patient advocacy groups.

Guidelines can also be developed locally. Clearly guidelines are only really useful if they have been developed appropriately and, because they are much more able to influence practice due to their design, nurses need to be clear about how a guideline has been developed and that the evidence is weighed in this light.

Care pathways seek to describe the service interventions and expected outcomes that a patient might expect to receive and achieve during treatment for a specific condition. Evidence is used to clearly describe the expected recovery or treatment path. The expected interventions and sequence of events are clearly documented; therefore clinicians need to consider carefully before deviating from this path. There are clear opportunities to involve patients at all stages of their development. This approach also increases the opportunity for an outcome-based approach to the development of services. The use of care pathways can also highlight gaps in the evidence base thus identifying priorities for future research. For an example of this approach looking at the care of patients with fractured neck of femur go to: www.institute.nhs.uk/images/documents/Quality_and_value/Focus_On/DVQ_path_fracturefemurPROOF_Nov.pdf

CHAPTER 2

Sources of Evidence

Searching for the evidence

The increase in information availability can mean that rather than making finding evidence easier it can feel more difficult. Nurses also need to understand how they prefer to learn as not only do learning styles affect educational processes but also information-seeking behaviours.

Clinical practice is driven by a process of problem identification, hypothesis formation and testing and problem solving. This is the same process nurses can adapt to information processing and transfer. Browne (1997) describes the stages of idea generation, question formulation, analysis, interpretation, evaluation, organisation, synthesis, repackaging, dissemination and retrieval. These stages, as with clinical practice, do not occur as separate events but because the nurse engaged in the search is constantly learning, so the process evolves and changes.

Confirmation bias is a tendency for people to favour information that confirms their preconceptions or hypotheses regardless of whether the information is true. As a result, people gather evidence and recall information from memory selectively, and interpret it in a biased way. The biases appear in particular for emotionally significant issues and for established beliefs.

One of the first steps to finding evidence is to identify those sources of information available to nurses. In the past, nurses have relied heavily on an oral tradition and much practice has been (and will be continue to be) shared this way. However, as nursing has developed as a discipline and become a confident member of the multidisciplinary team, this has increasingly been complimented by the use of books, journals and specialist libraries. The growth of the evidence-based culture and the drive to share information related to clinical effectiveness more efficiently has lead to major improvements in access.

The development of sophisticated search engines on the internet has made it possible to search across multiple resources at one time. These tools also help to narrow down the amount of evidence through which nurses will need to sift.

For most of the common queries nurses will generate there will be:

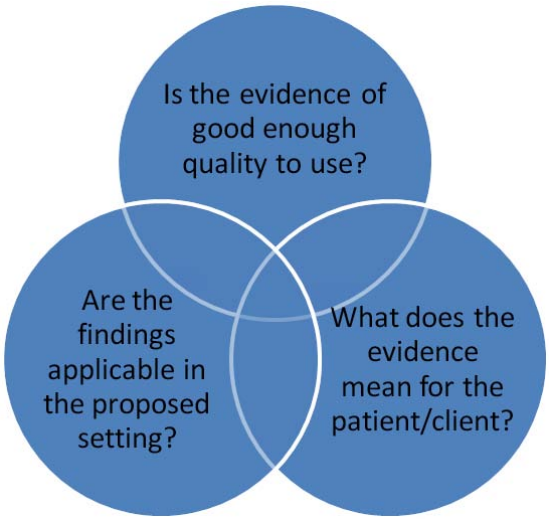
- Specialist organisations dedicated to summarising research findings which may make these available in a variety of media.
- Specialist journals with a focus in the area of interest.
- Specialised databases.
- The internet.

However, even though these sources are improving their usability, nurses are still required to have the skills to use them effectively. Many nurse curriculum and research courses now include developing search skills as these can significantly affect the degree of success of a search. A good search strategy begins by extracting as many references as possible and then moves on to defining the requirement more precisely. The challenge is to then look within a narrower more specific set of references for high quality evidence. If you want to develop a better understanding, look at the additional resources listed in this tool kit which may be of use to you or your colleagues.

Is the evidence good enough to use?

Having identified the evidence, the nurse needs to appraise whether there is a case for considering a change to practice. It might be that the question has not been sufficiently well answered or that the evidence is not strong enough for the nurse to be confident to act. This process is frequently referred to as critical appraisal and in relation to evidence-based practice it refers to reviewing the academic merit of the evidence and the context in which the evidence is to be applied. It has three main aspects all of which need to be considered at the same time and it can be that the answers to the questions in one domain have consequences for another.

Figure 7: The three aspects of critical appraisal



Assessing the quality of a study has been referred to in this tool kit on a number of occasions and an example of the detail of the process is given in **Annex 1.** There are also a range of online learning tools listed in this tool kit.

It is worth noting that researchers themselves are taking more responsibility for helping those that wish to use their findings as part of their commitment to improving

the take-up of research. They will often detail the limitations of their work (there is no such thing as a perfect study) and make suggestions for its potential use. Increasingly, as recommended by knowledge transfer research, they may also place their work in the context of their particular field of enquiry which can be helpful in understanding its importance.

Figure 8: Questions for assessing applicability of a study

What is the study about?

Who are the participants in the study (e.g. age gender, condition, occupation)?

In what way are our patients/contexts different?

Where did the study take place (institution, country)?

What are the benefits of the change described?

What are the costs (financial of other) of the change?

Do the changes proposed challenge values and preferences of staff or patients?

(Adapted from Pettigrew & Roberts 2005)

Assessing whether the findings can be applied in a local practice setting requires the nurse to consider a number of things. It is very unlikely that one setting described in a piece of research will be identical to another; context by its very definition is always unique. The nurse needs to consider the following factors:

- Do the participants of the study have similar characteristics?
- Is it possible to introduce the intervention described?
- What are the possible financial implications?
- Is there a patient acceptability consideration?

Assessing the consequences for staff and patients can be a key aspect of the decision making process. Understanding what the evidence means for individual patients can be difficult to assess as the findings tend to be given as probabilities, or an expression of the likelihood that an intervention was by chance. There are ways of calculating whether results are clinically meaningful.

The “clinical significance" answers the question, *how effective* is the intervention or treatment, or how much change does the treatment cause? In terms of testing clinical treatments, practical significance ideally tells you in detail quantified information about the importance of a finding, using metrics such as effect size and number needed to treat. Practical significance may also convey semi-quantitative, comparative or feasibility assessments of its usefulness.

To a certain extent the process described above has all been preparatory and focused on the sources of evidence. At this point a judgement will have been made by you and your colleagues about whether to proceed to action...are you now ready to put the evidence into practice?

CHAPTER 3

From Evidence to Action

From evidence to action

By its very nature, evidence-based practice is often based in real-world observation and methodology which, as we have noted, means that it can more rapidly be applied to the clinical setting. Frequently it is associated with more of an issue of getting the information out and changing behaviours or guidelines, rather than introducing a new treatment or piece of equipment. However, changing any part of the health care system requires careful thought and planning; an individual nurse's decision to change an element of practice can rapidly have consequences for colleagues and patients (see Figure 9).

Even something as apparently simple as changing hand washing practices can have an impact on other professionals, patients, support staff and the availability of cleaning products, not forgetting the location of sinks.

Figure 9: Exceptional patient care has its roots in evidence-based practice

Introducing infections to a patient is the last thing health practitioners want to do. So when Joyce Maygers MSN, RN began to look for a research subject, she focused on urinary tract infections (UTI) in stroke patients where data shows stroke patients suffer from a high rate of UTIs, but there wasn't a lot of information on how to prevent them. It turned out that urinary catheters (routinely given to stroke patients) were a big culprit behind UTIs. Because of her clinical experience and skill at analyzing patient outcomes, Maygers suspected there was an easy answer to this problem: maybe it wasn't necessary to catheterize every stroke patient or leave the catheters in for so long? When she started to look at the medical reasons for automatically ordering catheters for stroke patients, she found out that there were no clinical indicators for routine catheters.

Maygers spent a year working with physicians, nurses, and other health care workers at John Hopkins Bayview Medical Center to consider if catheterization was really necessary. She introduced changes to the way stroke patients were being treated and how to prevent UTIs. She had hoped to achieve a 10% reduction in the number of catheterizations but her efforts were almost twice as successful. Patients at Bayview's stroke centre had more than 20% fewer catheter use days, and the resulting positive outcomes - a decrease in amount of UTIs and readmission of stroke patients for UTIs, and shorter stays by stroke patients - have been so noticeable that the process is being considered for adoption throughout all of Bayview.

Source: John Hopkins Nursing Magazine, Spring 2010, Vol. VIII, Issue 1
http://web.jhu.edu/jhnmagazine/spring2010/features/making_research_relevant

At an organisational or policy level then the resource consequences of introducing a new way of delivering services needs careful consideration. Not only have we had many examples of wasting resources on unsuccessful change initiatives but we can also fail to sustain the ones we have. This can lead to inconsistency and variation in our services.

Changes are rarely easy as it involves changing the way people and the system behave. Change can frequently be messy, waste time and can have unpredicted consequences. However change can be exciting and motivating. Understanding and planning how to take evidence into practice, to action knowledge, is important. This area, because it is so critical, has been the subject of an increasing amount of research itself. Understanding how ideas (innovations) are taken up and diffused is sometimes referred to as knowledge mobilization or knowledge transfer. There is currently a view that "service innovation" can be an easy solution to difficult problems but as we have noted earlier we need to treat this with some caution and use the same EBP skills for this area of practice too.

A good example of an evidence-based approach to service innovation is the ICN's approach to TB prevention. The ICN training methodology promotes peer education and utilizes a problem solving, practical approach that takes into account nurses' working environments. To date more than 1,100 nurses in countries with a high burden of TB and MDR-TB have participated in ICN training for trainers (TOT) courses. These nurses have, in turn, been involved in training 28,000 additional nurses and allied health workers. Feedback from participants indicates that the training methodology developed through ICN's TB Project results in improved attitudes to patients, lower default rates, better case finding and safer work environments. (The course can be accessed at www.icn.ch/projects/tb-online-learning-resources/.)

Another example comes from Botswana. The World Health Organization Collaborating Centre at the University of Botswana nursing education department used a variety of EBP activities including a community development approach and action research to form community health-based care committees (CHBC) responsible for delivering care to chronically ill patients in the community. This was a response to the high incidence of HIV/AIDS in the country which has led to a shift from institutionalised care to CHBC (Tlou 2006). The outcomes were better patient care and more community participation.

A practice based EBP approach was used by nurses at a Midwestern children's hospital in the USA who introduced a nasogastric tube placement verification in paediatric and neonatal patients. Auscultation of air insufflation over the abdomen is still used to check placement in many settings, despite research dating back to the 1980s questioning this approach. X-ray remains the only certain way to verify placement, but getting an X-ray before each feeding would be costly and impractical. Additional bedside methods were needed. Nurses introduced an evidence-based practice approach to outline nursing practice and to minimize the risk of incorrectly placed NG tubes. Project results demonstrated a decrease (from 93.3% to 46.2%) in the use of auscultation and improved use of other, more reliable methods to determine nasogastric tube placement (Farrington et al. 2009).

Figure 10: An evidence-based approach to improving nursing care of acute stroke in an Australian emergency department

Australian nurses in an emergency department at a northern hospital in Melbourne introduced changes to their practice to improve the emergency nursing care of acute stroke by enhancing the use of evidence regarding prevention of early complications. They used pre-test/post-test design using a guideline for emergency department nursing management of acute stroke. Data were collected using medical record audit. The intervention for the study was a guideline for the emergency nursing management of stroke, the implementation of which was supported with tutorials.

The main outcome measures were measured before and after guideline implementation: triage category, waiting time, emergency department length of stay, time to specialist assessment, assessment and monitoring of vital signs, temperature and blood glucose and venous-thromboembolism and pressure injury risk assessment and interventions.

The results showed a significant improvement in triage decisions. Frequency of assessments of respiratory rate, heart rate, blood pressure and oxygen saturation increased. In terms of risk management, documentation of pressure area interventions increased, documentation increased, swallow assessment prior to oral intake increased, speech pathology assessment in emergency department increased non significantly, and there was 93.5 minute decrease in time to speech pathology assessment for admitted patients.

Source: Considine & McGillivray (2010)

A research project (Figure 11) looking at the transfer of knowledge into practice produced a useful framework, (this can be viewed in detail in **Annex 2**) which highlights the complexity of knowledge transfer but also demonstrates that active leadership and management of this process increases the likelihood of a successful change project.

Figure 11: A proposed framework for knowledge transfer

Knowledge transfer (KT) is seldom a linear process. Instead it is a complex social process involving a series of interactions and linkages between the producers and users of research (McWilliam et al. 2009; Kitson et al. 2008). However, the planning, delivery and evaluation of KT requires an underpinning logical framework. Research at LIHS has developed a framework of the KT process, based on a thematic analysis of 28 KT models (Ward et al. 2009) and on subsequent evidence from fieldwork. The framework comprises five key elements which seem essential to planning and delivering KT and outlines the activities associated with these elements. The model also shows that each of the key elements interacts, can operate singularly or in parallel and that the intensity of each element alters over the course of the KT process. See **Annex 2.**

Source: Ward et al. (2010)

This framework can assist nurses, managers and researchers to work together to develop a better understanding of the change they are considering.

Context and culture are crucial

All models that consider implementing change acknowledge the importance of context and culture. Too often, although the evidence is well presented and compelling, the surrounding circumstances to move forward are too difficult (see Figure 12). A possible way of assessing the factors which will drive a change and its likelihood of success is PESTLE, spelled out below:

- **Political factors** : the role of policy , government, elections
- **Economic**: financial considerations, supply and demand issues
- **Social**: public reactions , acceptability
- **Technological:** development of new devices, information systems, tests
- **Legal:** legislative issues, contract law
- **Ethical:** professional standards, access issues

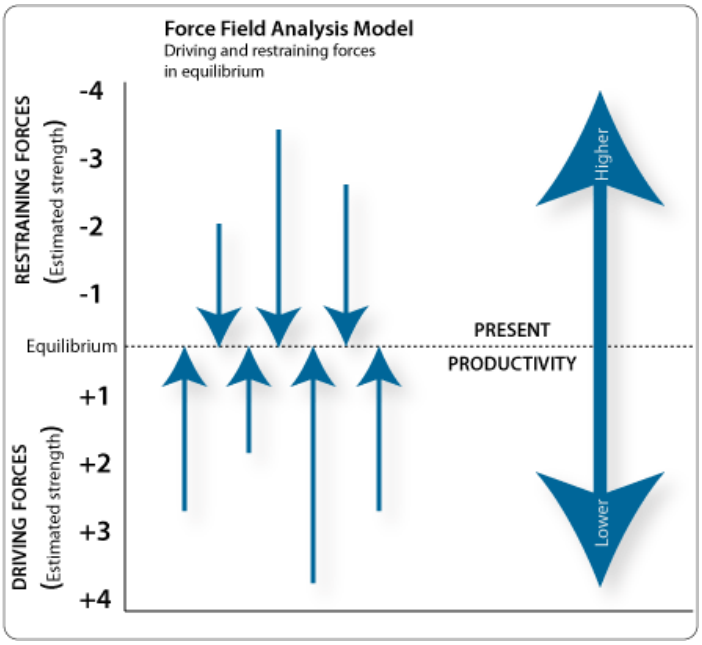
Having assessed the culture and context it is often possible to develop a culture that is supportive of the anticipated change. Factors which will help are careful preparation to ensure those leading the change really understand the local factors and effective communication to all those most likely to be affected by the change throughout the process (Dunning et al 1998).

A possible technique you could consider using is Force Field Analysis. Force field analysis is a management technique developed by Kurt Lewin (1997), a pioneer in the field of social sciences, for diagnosing situations. This approach can help you quickly identify people, issues or things that may get in the way of any improvements you are planning. It can also help you find allies to support you. To make it work, you do need to act on some of the forces that you identify. It can also be of use in team building projects, when attempting to overcome resistance to change. Lewin assumes that in any situation there are both driving and restraining forces that influence any change that may occur.

Driving forces are those forces affecting a situation that are pushing in a particular direction; they tend to initiate a change and keep it going.

Restraining forces are forces acting to restrain or decrease the driving forces. Equilibrium is reached when the sum of the driving forces equals the sum of the restraining forces.

Figure 12: Force Field Analysis Model (Lewin 1997)



Some types of forces to consider are:

- Available resources
- Traditions
- Vested interests
- Organisational structures
- Relationships
- Social or organisational trends
- Attitudes of people
- Regulations
- Personal or group needs
- Present or past practices
- Institutional policies or norms
- Agencies
- Values
- Desires
- Costs
- People
- Events

Now that you've identified those things that may help or hinder your project or planned changes, the next step is to make sure you use this knowledge to drive the project. Ask yourself: 'What can and are we going to do about the things that will help or hinder our project / planned changes?'.

In order to support the development of practice, the clinical environment should be one in which ideas, innovations and evidence are valued. The reality, as we have seen earlier, is that the clinical environment itself can be one of the major barriers to change. Changing practice requires confident well supported practitioners, as it is they who are ultimately accountable for their own practice. They need to be empowered to make changes and will need skills such as negotiating, selling, consensus building and of course risk taking. Additionally, as all changes take time they may need to be supported and actively led over long periods. A health care team committed to EBP find it easy to share their knowledge and teach others and this can be an additional motivation.

There are many practical ways that EBP can be fostered and implemented and these can be broadly set out using the following headings;

- **Building partnerships** – bringing individuals, groups and teams together to develop a shared vision and sense of purpose.
- **Using champions/change agents** –identifying and recruiting key people to support the change; they need credibility and to be respected by the individuals you are seeking to influence.
- **Sharing and disseminating information** – this can be done through a variety of media, and designed with specific audiences in mind; it can involve writing leaflets, the use of plays, and the use of social media platforms.
- **Education and training interventions** – such as continuing education modules, decision support systems, one to one coaching, online learning, use of simulations.
- **Standardising practice** – using care pathways, clinical audit, variance reporting, checklists and guidelines.

It is unlikely that you would need to use all these interventions although it is likely that there will need to be a mixture of several of these approaches to achieve success. All of them have an associated cost and this will need to be considered in the design phase. For an example see Figure 13.

Once you have clarified what you want to change and how you are going to set about that change it is useful to set some objectives and outcome measures. The **SMART** acronym is very useful and commonly used.

Specific – objectives should refer to specific, detailed outcomes rather than vague or broad statement.

Measurable – it should be possible to monitor whether or not something has changed.

Appropriate – the objectives set should be achievable and realistic.

Relevant – the objectives should make sense in terms of the overall purpose of the project.

Time bound – the objectives should set clear time frames.

Developing time to learn: Reflection on practice

Although we have discussed many different organisational approaches to changing practice, they all rely on the ability of individuals (nurses or patients) to think about what they want and whether they want to change. Change can be viewed as a continuous learning process. By using a systematic approach to reflection, practitioners can make sense of their practice in a meaningful and constructive way. Reflective practice is now viewed as a key element of professional practice and techniques for developing these skills are incorporated into many training programmes. There does, however, need to be time set aside to enable it to occur in busy practice settings. (See **Annex 2**)

"The hierarchy of evidence that has promoted randomized control trials as the most valid form of evidence may actually impede the use of most effective treatment because of practical, political/ideological and epistemological contradictions and limitations. Furthermore, evidence-based practice appears to share very similar definitions, aims and procedures with reflective practice. Hence, it appears that the evidence-based practice movement may benefit much more from the use of reflection on practice, rather than the use of the hierarchical structure of evidence." (Mantzoukas 2007)

Peer reflection (also known as action learning groups) can be particularly helpful at times of practice change. However, the groups do need to be supported and led. There needs to be approved time away from the clinical area where the group is not disturbed; regular meetings; a high degree of trust and confidentiality among members of the group; and facilitation to ensure a creative and challenging environment that enables the group to move along in its process. The production of action plans can also be helpful.

Networking is also important to the sharing and dissemination of EBP. Lomas (2007) in his review of the adoption of evidence across the New Zealand health system pointed to the essential nature of networks.

Networks are an important way in which nursing, as a large and complex professional group, shares knowledge. At times of pressure it is easy to see these networks, both informal and formal, as being low value and to judge them as unimportant. Networks or frameworks for sharing and disseminating information have been described by Mc Sherry and Warr (2008) as the key to excellence. They view them as important for the following reasons:

- To ensure that there is help and support for individuals, teams and organisations to innovate and change.
- For sounding out and sharing ideas.
- To build a supportive network for the development of individual and professional development.
- To ensure a robust system for the collaboration and communication of change.
- To encourage and engage staff so that they become familiar with the innovation and change.
- To establish a network for the sharing and spreading of advanced knowledge and evaluations regarding innovation and change.
- To reduce work related stress and build confidence.

For a good example of how a team has used many of these approaches see the Gallagher Ford (2011) article in the additional resources material.

Sometimes change can save money but transition funding may be needed as new systems may need to overlap and run alongside old systems for a while. Transition funding may also be needed to work with some of the restraining factors that have been identified earlier in the tool kit.

Having thought about how to develop a successful environment for evidence-based practice to flourish, it is also important to consider the wider implications of EBP on the resources of the health system. Indeed to advance practice we will often be in competition for limited resources so we will need to understand and develop a strong case for change this is the subject of the next chapter.

Figure 13: Example of EBP local intervention

Context/background: Improving diabetic patients' foot care behaviours is one of the most effective strategies in minimizing diabetic foot ulceration and its further negative impacts, either in diabetic hospitalized patients or outpatients.

Objectives: To describe foot care knowledge and behaviours among hospitalized diabetic patients; to apply selected foot care knowledge and behaviours improvement evidence; and to evaluate its effectiveness.

Design/methodology: Case study, pre and post test interviews.

Setting: A surgical ward in a university hospital, Thailand.

Participants: Four diabetic patients who were under care for at least three days.

Intervention/method: The educational programme based on patients' learning needs, provided diabetic foot care leaflet, and assisted patients to set their goal and action plans. In the third day of treatment, patients' foot care knowledge and their goal and action plan statements in improving foot care behaviours were evaluated.

Main outcome measures: Patients' foot care knowledge and their goal and action plan statements in improving foot care behaviours

Main results/findings: All patients needed foot care behaviour improvement and the educational programme that combined with goal setting and action plans improved hospitalized patients' foot care knowledge and their perceived foot care behaviours.

Conclusions: This combination method was easy, safe and seemed feasibly applicable for hospitalized diabetic patients. The results of this study provide valuable information for improvement of hospitalized diabetic patients' foot care knowledge and behaviours. The authors recommend nurses to use this evidence-based practice to contribute in improving the quality of diabetic care.

Source: Kurniawan & Petpichetchian (2011)

CHAPTER 4

Making the Case

Evaluating the practice change

Health systems are under pressure for resources and to ensure they use those that they have as effectively as possible. Until recently the EBP field put most of its emphasis on establishing the effectiveness of interventions; did the new intervention work? However it is not simply enough to have strong clinical evidence for change for although this can be very compelling it may not be affordable or it may require other resources to be allocated to ensure its success.

"Developing countries have limited resources, so it is particularly important to invest in healthcare that works. The case for evidence-based practice has long been made in the West. However, poor access to information makes this endeavour near impossible for health professionals working with vulnerable communities in low-income economies. Other fundamental economic, social and political issues in many developing nations impede access to healthcare services and medicines and healthcare services often take a back seat to defence spending. In some countries available health funds are left unspent because of bureaucratic mix-ups and mismanagement. Given these problems, it is clearly imperative that investments are made into those health interventions and activities that are the most feasible, appropriate, meaningful and effective in this unique and inimitable context." (Pearson & Jordan 2010)

There are already more proven interventions than we have funding for. As we have seen, judgements are always required, such as what evidence to use, how to interpret the evidence and how confident are we in the findings. Most importantly, we need to make a decision about whether the anticipated outcomes are sufficiently important and big enough to change practice and use resources which might be spent elsewhere. It is quite likely you will be competing for resources and that there is frequently a need to justify why you would wish to change practice and how much that might cost in some detail; you may be asked to prepare a business case or some form of economic evaluation. (See **Annex 3** for a business/service development template).

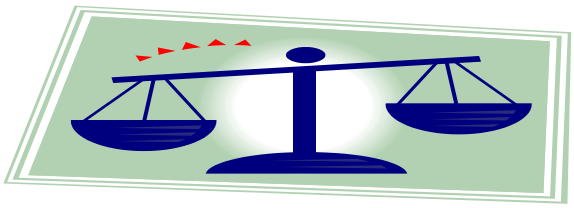
Nurses need to feel confident about quantifying the anticipated outcomes of the new intervention from a range of standpoints. In many situations implementing a service innovation will involve stopping doing something else. The cost of "stopping" needs to be accounted for in the project proposal. Clearly where the costs and risks compared to benefits are viewed as too high, by any of the key partners (including patients and their carers) then the proposed change is unlikely to be successful.

The following questions may be helpful in preparing a case that details the options:

1. What are the different options being compared?
2. What are the most important potential outcomes of the options being compared?
3. What is the likely impact of the options?
4. Is a formal economic analysis likely to help decision making?
5. What are the risks of introducing change?
6. Is there a capacity to implement change and to make the system stronger?
7. What is the extent of leadership support for change?

It may be helpful when considering these questions to see this as an appraisal of all the options which will need to achieve some sort of balance to be successful. As can be seen in Figure 14 if you were considering introducing a new public health service you would want to consider as a minimum the issues to do with access, use of resources; equity and service use.

Figure 14: Balancing the options: issues to consider?



Advantages	Disadvantages
Improved access	Reduced access
Reduced inequalities	Increased inequalities
Savings	Costs
Better utilization of services	Less appropriate use of services

The answers to these questions enable you to start to organise your thinking, structure the evidence and construct a balance sheet which can clearly list the advantages and disadvantages. The aim of this approach is to help focus the team on key decisions and on the most important outcomes, this helps to support evaluation activities too (Oxman et al. 2010).

To determine the success of practice changes it is helpful to identify outcome measures. It is also helpful if these can be easily measured and reported upon. For example, if you wanted to introduce an infection control policy it might be helpful in the short term to set an outcome of all staff passing a hand washing assessment and in the longer term an outcome might relate to a reduction in infection rates. Sustaining practice changes is also important to the perceived value of the EBP initiatives. (Case study Figure 15).

Figure 15: Implementation of clinical guidelines for adults with asthma and diabetes: a three-year follow-up evaluation of nursing care

The Registered Nurses' Association of Ontario in Canada has developed and published more than 42 guidelines related to clinical nursing practice and healthy work environments. To date, evaluation has involved one-year studies of the impact of guideline implementation, but little is known about whether changes in practice that were made during the initial implementation period have been sustained.

Objectives: To report on a three-year follow-up evaluation of nursing care indicators following the implementation of the Adult Asthma Care Best Practice Guideline and the Reducing Foot Complications for People with Diabetes Best Practice Guideline and to describe the contextual changes in the clinical settings.

Intervention/methods: Site observations and interviews were conducted with key informants at two hospitals. Indicators of nursing care changes identified six months post-implementation were compared with indicators found during a retrospective chart audit at the same sites three years later.

Main results/findings: Three out of 12 indicators related to asthma care remained consistently high (≥84% of audited charts) and four indicators declined significantly ($p < 0.01$). There were significant ($p \leq 0.05$) improvements in nine out of 12 indicators related to diabetes foot care.

Conclusions: Long-term follow-up of both clinical indicators and contextual factors are important to monitor to promote sustained implementation of guidelines.

Source: Higuchi et al. (2011)

Sometimes when the decisions are complex and are likely to result in big differences in the use of resources such as building new facilities or hiring new staff then you may need to use some sort of economic modelling. For example, you may need to determine if there will be big benefits for a small numbers of patients or small benefits for a large number of patients. This is an increasingly important area to consider as all health systems find themselves under pressure and competition for resources is high. To help with this form of decision making managers in health systems are increasingly applying economic models adapted from other fields.

The type of economic evaluation will vary and can be carried out by nurses with the support of specialist from this field (Gray 1999 Figure 16). By adopting a framework to evaluate the likely costs and benefits associated with your proposals you can ensure that what are sometimes difficult choices are carried out in an explicit and transparent way. There are a number of frameworks which can be used and an example of one can be seen in **Annex 3**.

Figure 16: Examples of economic evaluations

- Cost analysis: no information on outcomes, may not compare alternatives, just gives the cost
- Cost-minimisation study: main interest is in identifying and choosing the least cost option
- Cost-effectiveness: can be used if outcomes are known to compare a specified alternative as a ratio of difference in outcomes

Source: Gray (1999)

Finally, in terms of making sure that the changes in outcomes are a result of your intervention, it may be appropriate to build in some form of monitoring or impact evaluation. Monitoring is useful if you want to know what is actually happening, for example you may decide to monitor the implementation of a care pathway. This enables you to get early information and perhaps adjust the programme if need be. Monitoring can be expensive to set up and is not worth while if data remains unused. Monitoring activities do not necessarily indicate whether a policy or programme has had an impact on the indicators you are interested in.

An impact evaluation should be built at the time of the planned change and designed with the same care as a research study. Its goal is to establish whether observed changes in outcomes can be attributed to your intervention. Good evaluation work helps others to make better decisions about how transferable your intervention is to their context.

As nurses develop their roles and act as active members of the multidisciplinary team then it is increasingly important that we are able to challenge and be challenged on our approach to practice and to hold ourselves to account. The use of an evidence-based approach enables us to do just that. It allows us to constantly review our practice and to seek new and more effective ways of doing things. Equally, at times of financial challenge, it enables us to use those resources we have as efficiently as possible. All of us frequently have much that can be adapted and shared which will help colleagues who are addressing similar issues. This is where professional networks can be very helpful in reducing time spent on developing ideas into actions.

The final chapter will demonstrate the important ways in which national nurses associations can work to help develop all aspects of the EBP cycle, from help with specific guideline development to supporting nurse researchers in their global networking.

CHAPTER 5

The Role of National Nurses Associations

National nurses associations (NNAs) have a pivotal role in leadership to ensure that patients receive safe, effective person-centred care, based on the best available evidence. Nurses' ability to apply a combination of technical expertise, clinical reasoning and evidence appropriate to a range of health care settings develops over time, and is a result of formal teaching, experiential learning, effective mentorship and reflective practice. NNAs are well positioned to support this agenda. Some studies show that most nurses provide care based on what they learned in nursing school and rarely use journal articles, research reports or hospital libraries for reference (Pravikoff et al. 2005).

Taking up the challenge of evidence-based practice requires foresight and commitment by NNAs. Given the competing and urgent priorities, and the current economic climate, it is tempting to relegate EBP to the background. However, the need for evidence-based practice aiming to improve patient safety, quality and cost-effectiveness is needed now more than ever. It is vital that NNAs provide leadership to the nursing profession now.

NNAs are in a strong position to inform, engage and empower nurses at every level to work with a wide range of stakeholders including communities, employers, partners, policy makers, schools, patients and families to advance EBP, to promote well being and ensure the best possible health outcomes.

Each NNA must consider a range of factors in deciding a plan of action appropriate to their circumstances including the capacity for implementation of EBP, availability of resources and support. Selecting a small number of activities to demonstrate the benefits of translating evidence to practice and doing them well is likely to lead to transformation to evidence-based practice.

Disseminating information and advocacy

NNAs are well placed to disseminate information and key messages about evidence-based practice to their members, nurse managers, educators and policy-makers. Wide distribution of comprehensive and evidence-based information on benefits of EBP is needed to raise awareness and influence behaviour change. Sharing information about the importance of translating evidence to practice is also needed to create an environment that fosters change, implementation, innovation and evaluation for better health outcomes. NNAs can:

- Establish an online community to exchange ideas and best practices with peers.

- Publicise key information, benefits of evidence-based practice in their journals, web sites, presentations, conferences and press releases.
- Disseminate information on evidence-based practice to their members, nurse managers and policy makers.
- Organise national campaigns and events to raise awareness of evidence-based practice.
- Provide a platform for discussions on evidence-based practice in relevant nursing and other forums and meetings.
- Establish an award for excellence and innovation in implementation of evidence-based practice and profile nurses' work in publications, websites, conferences, etc.
- Facilitate collaboration with other health professional associations, health ministries, research organisations and other relevant sectors and stakeholders.
- Work with ministries of health and others to influence national health and other relevant public policy to support evidence-based practice.
- Disseminate evidence on best practice and outcomes including cost.

Building partnerships

Successful implementation of evidence-based nursing practice requires coordinated action with ministry of health, education, health-care workers, and the private health sector. Effective partnerships encourage collaboration, minimize overlap and reduce competition for resources, allowing organisations to strengthen implementation of EBP and to learn from each other.

- Establish partnerships amongst health professionals and policy makers to share information develop strategies and mobilize resources for transformation into evidence-based nursing.
- Work with policy makers to increase investment in nursing workforce and to implement programmes and policies that promote evidence-based practice.
- Provide input to health care organisations, researchers and policy makers on the implications of translating knowledge to evidence and the benefits including better outcomes, reduced cost, etc.
- Work with educational facilities to strengthen integration of evidence-based practice into the nursing curricula.
- Collaborate with nursing education and research centres to facilitate dissemination and application of research results.

Building capacity

NNAs play an important role in building capacity across the nursing profession and in building the capacity of nurses in translating evidence to practice so that nursing fulfils its mandate of providing the best possible care using the available evidence.

- Provide workshops, journal clubs, debates and downloadable tools and other resources to promote evidence-based practice.
- Provide a space/forum for exchange and discussion of practices, lessons learned and innovations in translating knowledge to practice.
- Disseminate nursing innovations based on current evidence to nurses and others.
- Stimulate interest in nursing research through lobbying for fellowships and training opportunities for nurses and the development of career opportunities.
- Encourage/facilitate uptake of new information technologies, through adequate training and feedback mechanisms.
- Facilitate change management to support evidence-based practice.

Writing policy briefings

Nursing has a major contribution to make to health policy. Nurses are excellent at giving care and at solving immediate problems, often with few resources. They interact with consumers of health care in a wide variety of settings. This gives nurses a broad understanding of health needs of how factors in the environment might affect the health situation for clients and families, and of how people might respond to different strategies and services. Yet, nursing has difficulty getting this message out to policy-makers. NNAs are best positioned to influence policy by bridging the bedside to boardroom divide. One way to do this is to develop policy briefings and to lobby for more nursing input into health care decision-making. In the longer term, NNAs need to work to put nurses at the policy table and to remove the cloak of invisibility and influence policy by raising nurses' voice. To do this NNAs must develop policy briefings that make the case, present the key messages and identify the needed support.

In order to be successful in implementation of evidence-based practice, NNAs need to challenge their own assumptions and be willing to work with others to improve care processes and patient outcomes. Evidence-based practice takes resources, time and effort, but the outcomes make them worthwhile. Every patient deserves care that is based on the best scientific knowledge and that ensures high-quality, cost-effective care. NNAs, as a collective voice of nurses at the national level, are key partners in transformation to evidence-based practice.

In conclusion NNAs must be active in promoting evidence-based practice using different approaches and focusing on changing competences and attitude to translating evidence to practice for better health outcomes. NNAs also need to explore other types of activities including behaviour-oriented approaches, approaches using structural, social or financial influence to introduce a sustainable environment for evidence-based nursing practice.

ANNEXES

ANNEX 1

Critical appraisal skills

When reading any research – be it a systematic review, randomised control trial, economic evaluation or other study design – it is important to remember that there are three broad things to consider: validity, results, relevance. It is always necessary to consider the following questions:

1. Has the research been conducted in such a way as to minimise bias?
2. If so, what does the study show?
3. What do the results mean for the particular patient or context in which a decision is being made?

Having addressed these three essential questions you can usually determine whether to continue to use your time. There are number of frameworks available to use to ask more detailed questions and some organisations try to use the same one when reviewing guidelines so that they get a more consistent approach.

The American Nurses Association has developed the following framework:

Framework for how to read and critique a research study

1. Critiquing the research article

   a. Title – Does it accurately describe the article?

   b. Abstract – Is it representative of the article?

   c. Introduction – Does it make the purpose of the article clear?

   d. Statement of the problem – Is the problem properly introduced?

   e. Purpose of the study – Has the reason for conducting the research been explained?

   f. Research question(s) – Is/are the research question(s) clearly defined and if not, should they be?

   g. Theoretical framework – Is the theoretical framework described? If there is not a theoretical framework, should there be?

   h. Literature review – Is the literature review relevant to the study, comprehensive and include recent research? Does the literature review support the need for the study?

   i. Methods – Is the design appropriate for the study? Does the sample fit with the research design and is the size sufficient? Was a data collection instrument needed? How were data collected? Were reliability and validity accounted for?

   j. Analysis – Is the analytical approach consistent with the study questions and research design?

k. Results – Are the results presented clearly in the text, tables and figures? Are the statistics clearly explained?

l. Discussion - Are the results explained in relationship to the theoretical framework, research questions, and the significance to nursing?

m. Limitations – Are the limitations presented and their implications discussed?

n. Conclusion – Are there recommendations for nursing practice, future research and policymakers?

2. Determine the level and quality of the evidence using a scale (several can be found in ANA's Research Toolkit: www.nursingworld.org/MainMenuCategories/ThePracticeofProfessionalNursing/Improving-Your-Practice/Research-Toolkit)

3. Decide if the study is applicable to your practice.

a. *Can you use the results and recommendations in your practice?*

Prepared by Louise Kaplan, PhD, ARNP, FNP-BC, FAANP Senior Policy Fellow, Department of Nursing Practice and Policy.

ANNEX 2

Reflective practice framework

There are many models available to help you structure your reflections; this is an example of one.

Johns' Model for Structured Reflection (2000)

Johns' model of guided reflection is a practitioner-based framework of questions designed to highlight the ways in which we seek out and validate knowledge we gain from experience. The framework is centred on five key cue questions, each of which seeks to promote further questioning through detailed reflection, and thus enable experiential learning.

As a practitioner based model, Johns saw the model as part of a shared reflective system that would ultimately promote a community of knowledge through an emphasis on situated learning or learning in context. Methods of using Johns' model would therefore required structured formats, such as diaries, and supervisor support and feedback.

1. Description of the experience

- Phenomenon – describe the experience.
- Casual – what essential factors contributed to this experience?
- Context – what are the significant background factors to this experience?
- Clarifying – what are the key processes for reflection in this experience?

2. Reflection

- What was I trying to achieve?
- Why did I intervene as I did?
- What were the consequences of my actions for myself, the patient or family, the people I work with?
- How did I feel about this experience when it was happening?
- How did the patient feel about it?
- How do I know how the patient felt about it?

3. Influencing factors

- What internal factors influenced my decision-making?
- What external factors influenced my decision-making?
- What sources of knowledge did / should have influenced my decision-making?

4. Evaluation

- Could I have dealt with the situation better?
- What other choices did I have?
- What would be the consequences of these choices?

5. Learning

- How do I now feel about this experience?
- How have I made sense of this experience in light of past experiences and future practice?

Whilst reflective practices have always been implicit within learning, models such as this require a specific and structured approach to the subject. Once a model has been decided upon then a medium for that model must then be adopted, whether it be through a diary journal, a portfolio, work experience or peer collaboration and discussion. How such models and mediums are embedded into continuing professional development are fundamental to the overall success of such a strategy.

ANNEX 3

Business planning /service development template

The most important aspect of most business plans is the actions and/or recommendations, and the main purpose is generally to achieve (within ethical considerations) the maximum return on investment (or, in the case of public services and not-for-profit organisations, the best use of investment and resources).

This is a quick and easy template which is effective for most types of business plans and planning reports. This planning report structure can also be adapted for operational and team planning as the same principles apply.

This business plan structure is by its nature pragmatic, i.e. it is 'fit for purpose' and concise. A business plan or report is necessarily focused on profit, outcomes and financial effectiveness (without which, generally, nothing much else can happen). Nevertheless, ethics and wider issues of corporate responsibility (e.g. patient safety) are important and should be identified.

Business/ service plan structure

- **Title page:** Title or heading of the plan and brief description if required, author, date, company/organisation if applicable, details of circulation and confidentiality.
- **Contents page:** A list of contents (basically the sections listed here, starting with the introduction page, and listing the main body sections in the template below) showing page numbers, plus a list of appendices or addendums (added reference material at the back of the document). The contents page must enable the reader to find what they need and navigate the document easily, and to enable a presenter or questioner to refer the audience to particular items and page numbers when reviewing or querying.
- **Introduction page**: Introduction and purpose of the plan, terms of reference if applicable (usually for formal and large plans or projects).
- **Main body of plan headings as required:** See template below.
- **Appendices:** Diagrams, statistics, examples, examples, spreadsheets, and other reference material underpinning and supporting the plan's recommendations.

Business/service planning document

1. **Executive summary** - concise summary of everything that follows below - a clear irresistible business case or service development plan no more than a page long - normally best to write this last. Strong emphasis on expected advantages, strategic fit, margins, timescale and return on investment.

2. **The market opportunity (or situation/background/need)** - (subheadings as appropriate, suggestions in bold here; also where relevant refer to diagrams/maps which you should append) - explain and define the market **-** end user sector(s) and segment(s) descriptions. Outline the strategic business drivers within sector and segments, purchasing mechanisms, processes, restrictions, growth, legislation, seasonality - what are the factors that determine customers' priorities and needs**,** and what they are. Explain historical/existing solutions and their weaknesses/deficiencies. Show and explain the routes to market, strategic gatekeepers/influencers, relationships. Outline the recommended products/services and proposition(s**)** and show the USPs. Indicate typical/average contract sales values and margins achievable. Quantify the market potential and realizable market share - by segment if necessary, size, numbers, values, (contracts, locations, people/users, etc, whatever enables business scale to be explained) - for the stated proposition(s). Refer to case studies examples if any exist (and append them). Refer to competition real or potential, threats, and your advantages over the competition (in terms of proposition, delivery, and strategy/routes/partnerships). It is logical and appropriate to refer to ethics and CSR (corporate social responsibility) in this section.

3. **Strategic action plan** - sub-headings as appropriate - actions with outputs, necessary to realise the goals stated above. Strong emphasis on leveraging and working with sales organizations or other key partners - you can be quite specific here. Timescales, costs, resources where known and applicable. Much of this is in your head already - it all just needs sorting, prioritising and writing down so it forms a cohesive logical series of actions with measurable outputs and values. Mostly these actions will be your own, supported by others, probably some marketing. Show costs and returns and margins over time. Show total return for this current year or planning period and it is also helpful to indicate same for following year. This could be supported with a spreadsheet.

4. **Recommendations** - action points/authorisation/budgets/product or service development, resources required, etc., required to make it happen. This will depend on extent of higher authority/executive support required - ideally as little as possible.

Position Statement

ANNEX 4

Nursing research

ICN Position:

Research-based practice is a hallmark of professional nursing. Nursing research, both qualitative and quantitative, is critical for quality, cost-effective health care.

To enhance nursing research and research-based practice, the International Council of Nurses (ICN):

- Facilitates and promotes the conduct, dissemination and utilisation of research related to nursing, health and health care systems.
- Collaborates with national and international organisations to enhance nurses' contributions to nursing, health and health systems research.
- Promotes opportunities for nurses to disseminate research and publish in international journals.
- Supports networks for nurse researchers.
- Encourages member associations in their research-related capacity building.
- Promotes research in areas which have practice implications and improved outcomes for patients and the public and which are meaningful to nurses' daily practice.
- Provides global leadership in establishing ethical guidelines for nurses in the conduct, dissemination and utilisation of research.
- Promotes the use of research to inform evidence-based practice.

ICN supports its national nurses associations (NNAs) in their efforts to enhance nursing research, particularly through:

- Improving access to education which prepares nurses to conduct research, critically evaluate research outcomes, and promote appropriate application of research findings to nursing practice.
- Lobbying for nursing research funding from public and private sources.

ICN believes NNAs have a key role in promoting and facilitating the research process with employers, educational institutions and funding agencies. By working together, associations, educational institutions, managers and employers can create a climate of inquiry, increase access to education in research methods to advance nursing science and knowledge development and increase the application of research to health care.

International Council of Nurses

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Background

Nursing research is needed to generate new knowledge and advance nursing science, evaluate existing practice and services, and provide evidence that will inform nursing education, practice, research and management.

Research is directed toward understanding the fundamental mechanisms that affect the ability of individuals, families and communities to maintain or enhance optimum function and minimise the negative effects of illness. Nursing research should also be directed toward the outcomes of nursing interventions, so as to assure the quality and cost effectiveness of nursing care.

Nursing research also encourages knowledge of policies and systems that effectively and efficiently deliver nursing care; awareness of the profession and its historical development; understanding of ethical guidelines for the delivery of the nursing services; and, knowledge of systems that effectively prepare nurses to fulfil the profession's current and future social mandate.

ICN has identified nursing research priorities in health, illness and care delivery services[1] that emphasise quality and cost-effective care, community-based care, nursing workforce and health care reform.

Adopted in 1999
Reviewed and revised in 2007

[1] International Council of Nurses (1997), Nursing Research: Building International Research Agenda. Report of the Expert Committee on Nursing Research. Geneva: ICN.

ANNEX 5

NURSING MATTERS

Nursing Matters *fact sheets provide quick reference information and international perspectives from the nursing profession on current health and social issues.*

Fact Sheet

Nursing sensitive outcome indicators

Introduction

Along with health care reform, the quest for cost-effectiveness and quality of care and the growing sophistication of health care systems, has come an increased emphasis on evidence and outcomes. These elements, together with a growing concern about changes in skill mix, prompted nursing to focus on identifying outcome indicators sensitive to nursing inputs and staffing levels.

Nursing sensitive patient outcomes

Outcomes define the end results of nursing interventions and are indicators of problem resolution or progress toward problem or symptom resolution.[1] The ICNP® defines a nursing outcome as the measure or status of a nursing diagnosis at points in time after a nursing intervention, while [2] nursing-sensitive outcomes are defined as changes in health status upon which nursing care has had a direct influence.[3] Variables affecting patient outcomes include diagnosis, socio-economic factors, family support, age and gender, and the quality of care provided by other professionals and support workers.

Commonly used nursing sensitive outcome indicators

The following patient outcomes are commonly used nursing sensitive indicators:[4]

1) Patient complications, such as urinary tract infections, skin pressure ulcers, hospital acquired pneumonia and deep vein thrombosis/pulmonary embolism.
2) A group of exploratory measures, comprising upper gastrointestional bleeding, central nervous system complications, sepsis and shock/cardiac arrest.

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[1] ANA Web site www.nursingworld.org/mods/archive/mod30/cec213.htm
[2] International Council of Nurses (2001) International Classification for Nursing Practice – Beta 2 version. Geneva, ICN.
[3] Ke-Ping A. Yang; Lillian M. Simms; Jeo-Chen T. Yin (1999) Factors Influencing Nursing-Sensitive Outcomes in Taiwanese Nursing Homes, Online Journal of Issues in Nursing , Article published August 3, 1999
[4] nursingworld.org/books

3) Complications among surgical patients such as wound infection, pulmonary failure and metabolic derangement.
4) Patient length of stay, and failure to rescue (failure to respond to patients' urgent conditions such as shock, cardiac arrest and deep vein thrombosis, potentially resulting in increased morbidity and/or mortality).

In addition, an inventory of patient outcomes has been identified related to the scope of practice and staff mix in a health facility. These include:[5]

- Symptom control and change in symptom severity.
- Functional status.
- Knowledge of condition and treatment.
- Patient satisfaction with care.
- Unplanned emergency department visits.
- Unplanned hospital readmissions.
- Strength of treatment alliance.

What is the importance of nurse sensitive indicators?

Use of nursing sensitive outcome indicators helps focus attention on the safety and quality of patient care and the measurement of care outcomes.[6] It is important that nurses and health facilities collect data to monitor the ongoing cost and quality of patient care. Using nursing sensitive outcome indicators is crucial to effectively demonstrate that nurses make the critical, cost-effective difference in providing safe, high-quality patient care.

The importance of articulating nursing sensitive quality indicators cannot be overstated. Such articulation and the correlation of nursing activities with health outcomes provide strong support for appropriate allocation of health care resources. For example, studies comparing staffing levels and patient outcomes show that when there are more registered nurses, patients' experience fewer complications, shorter lengths of stay, decreased mortality rates and even lower overall costs.[7] Similarly, a strong and consistent relationship has been found between nurse staffing and five patient outcomes in medical patients: urinary tract infections, pneumonia, length of stay, upper gastrointestinal bleeding and shock.[8] This means higher levels of nurse staffing are associated with less adverse effects.

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[5] Calgary Health Region. http://www.clpna.com/HPA.pdf#search=%22%22Nursing%20sensitive%20outcome%20indicators%20%22%22

[6] American Nurses Association. www.nursingworld.org/mods/archive/mod30/cec213.htm

[7] American Nurses Association (1997), *Implementing Nursing's Report Card: A Study of RN Staffing Length of Stay and Patient Outcomes*. ANA Web site www.nursingworld.org/mods/archive/mod30/cec213.htm

[8] American Nurses Association. www.nursingworld.org/mods/archive/mod30/cec213.htm

Conclusion

Nursing sensitive outcome indicators are intended to draw correlations between nursing intervention patients have received and their resulting health status. They are an attempt to measure the effectiveness of nursing care by measuring patient outcomes. Linkages are more easily seen when diagnosis, intervention and outcomes are identified. Since nurses are an integral part of the health care delivery system, nursing sensitive indicators capture what nurses do, what outcomes they achieve and at what cost. This is an important step in appropriate allocation of health care resources and in making nursing contribution to health care visible.

For further information, please contact: icn@icn.ch

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TG/2007

ANNEX 6

NURSING MATTERS

Nursing Matters *fact sheets provide quick reference information and international perspectives from the nursing profession on current health and social issues.*

Fact Sheet

Nursing research: a tool for action

What is nursing research?

The quest for quality and cost-effective health care has brought evidence based practice and nursing research into the forefront. Nursing research is a systematic enquiry that seeks to add new nursing knowledge to benefit patients, families and communities. It encompasses all aspects of health that are of interest to nursing, including promotion of health, prevention of illness, care of people of all ages during illness and recovery or towards a peaceful and dignified death[1]. Nursing research applies the scientific approach in an effort to gain knowledge, answer questions, or solve problems.

The knowledge generated through nursing research is used to develop evidence-based practice, improve the quality of care and to maximise health outcomes and cost-effectiveness of nursing interventions.

Why nursing research?

Research-based practice is a hallmark of professional nursing. Nursing research, both qualitative and quantitative, is critical for quality, cost-effective health care[2]. Nursing research is needed to generate new knowledge, evaluate existing practice and services, and provide evidence that will inform nursing education, practice, research and management. Nursing research is a powerful means of answering questions about health care interventions and finding better ways of promoting health, prevention of illness and providing care and rehabilitation services to people of all ages and in different settings.

The main goal of nursing research is to improve care outcomes by advancing nursing knowledge and practice and to inform health policy. To this end, ICN facilitates and promotes the conduct, dissemination and utilisation of research related to nursing, health and health care systems.

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[1] International Council of Nurses (1998), Practical Guide for Nursing Research. Edited by W.L. Holzemer. Geneva: ICN.

[2] International Council of Nurses (1999), ICN Position Statement on Nursing Research.

Priority for nursing research

ICN has identified nursing research priorities in two broad areas that address the phenomena of interest to nursing. These are Health and Illness and Delivery of Care Services. [3].

***Health and Illness*.** Nursing research in health and illness focuses on a number of areas including health promotion, prevention of illness, control of symptoms, living with chronic conditions and enhancing quality of life; caring for clients experiencing changes in their health and illness; assessing and monitoring client problems; providing and testing nursing care interventions and measuring the outcomes of care.

The recommended nursing research priorities relating to Health and Illness are include issues such as HIV/AIDS and other sexually transmitted infections, chronic illness, infection control, women's health and mental health.

***Delivery of Care Services*.** Nursing research priorities in Delivery of Care Services focus on quality and cost effectiveness of care, community based care, nursing workforce and health care reform. Areas for nursing research include impact of nursing interventions on client outcomes, evidence-based nursing practice, primary health care, home care, quality of nurses' work life, retention, satisfaction with work, impact of reform on health policy, program planning and evaluation, impact upon equity and access to nursing care and its effects on nursing, and the financing of health care.

Strategies for nursing research

Strategies in nursing research need to support nursing research internationally and build and sustain the knowledge base for nursing practice. ICN strategies are designed to enhance the capacity for nursing research at an international level and aim to:

- Support and encourage national nurses Associations (NNAs) in capacity building related to nursing research such as by developing a research agenda and priorities, research support and advice, research-related data-bases, research education, research dissemination and utilization, and promoting cooperation in nursing research.
- Continue to work with WHO, NGOs and others to ensure that the international nursing research agenda is visible and included in priority statements; lobby for nurse researchers to be on appropriate research boards, and health-related international research bodies.
- Establish and support a network of nurse researchers who will have the capability to pursue the recommended international nursing research agenda on Health and Illness and the Delivery of Care Services
- Develop and promote the utilization of the Internet as a strategy to enhance international communication among nurse researchers, increase access to documents, and provide access to an international pool of expert nurse researchers.

[3] International Council of Nurses (1997), Report of ICN Research Expert Group

- Promote opportunities for nurse researcher to publish in international journals such as the International Nursing Review; encourage editors to include international membership; assist authors whose first language may not be English; and encourage journals to include an English abstract if the journal is published in another language.

In the era of evidence based practice and knowledge-driven health care, nurses are constantly challenged to discover new and better ways of delivering care that is grounded in new knowledge and evidence derived through research. Nurses have a professional obligation to society to provide care that is constantly reviewed, researched and validated.

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TG/2002

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