Evidences, Action and Outcome

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The unprecedented advances in information technology have made research and other types of evidences available to the health care professionals and practitioners. It has supported the communication of best practice, and provided the consumers open access to health care information. As a result, evidence-based practice is quickly becoming the norm for effective nursing practice.

Professional nurses must be able to respond to the patients’ needs for information about scientific merit of intervention and relative benefit of treatment option. Evidences for nursing practice should be generated by the nurses. Although many care processes are collaborative and multidisciplinary, many other are wholly up to the nurses to implement.

Effective nursing practice is based on best possible and rigorously tested evidence and there is an emphasis on evidence as a basis for practice. Nurses need to grasp how best to incorporate evidence into their everyday decision making. Nurses are well-placed within the health care sector not only to deliver, but also generate and share important health care knowledge that benefits patients and practitioners alike.

What is Evidence?

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. Evidence refers to knowledge on which to base belief such as the evidence that the smoking causes lung cancer.

Evidence as a proof is factual information that verifies a conclusion rigorously tested. In scientific research evidence is accumulated through observation of phenomena that occur in the natural world or which are created as experiments in a laboratory or other controlled conditions.

Best evidences generally refer to findings from research that are methodologically appropriate rigorous and clinically relevant for answering pressing questions not only about the efficacy, safety and cost effectiveness of nursing intervention but also about the reliability of nursing assessment measures, the determinants of health and well being, the meaning of health or illness and nature of patient’s experiences.

Confidence in evidence is enhanced when research method is compelling, there have been multiple confirmatory replication studies and evidence have been systematically evaluated and synthesised.

Why are evidences important in Nursing?

- It contributes to effective nursing care of the patient and streamlines nursing care.
- Patient outcomes are substantially improved
- Untested interventions are ethically unsound.
- Best evidences can help nurses to avoid decision making errors in patient care.

Use of Evidences

1. Using evidence allows nurses to be more confident in reflecting on, and developing their own practice and knowledge, thereby continuously building their professional education and career opportunities. Research evidence can reduce the mistakes caused by bias and other errors of judgement, making the use important for ethical reasons, as well as for efficiency.

2. Using evidence from reputable sources is important as every nurse is accountable for practice – being able to validate why a clinical decision was made though supporting scientific evidence is necessary.

3. Use of evidence-based practice in nursing is not yet common in South-East Asian countries. Updated and reliable evidence in nursing is scarce and not easily available.

4. Use of evidence helps nurses to carry out pre-decision making process in a systematic and visible way which can be clearly communicated to others. It allows nurses to constantly review their practice and seek new and more effective ways of doing things, provides choices of actions, increases likelihood of new practice or change of practice and positive outcomes. It also allows nurses to account for their decision making and justify it accordingly, as well as allowing practices to be reviewed and evaluated objectively.

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Identifying Evidences
Nurses first find the sources of information available to them. 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, with nursing having developed as an integral to multidisciplinary team, this has increasingly been complimented by the use of books, journals and specialist libraries.

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 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. 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. Methods for building questions mainly contain these elements: the patient or client; population; and condition you are dealing with.

Library shelves can be full of journals and the internet can deliver thousands of pieces of information at the click of a button. There is such a wide source of evidence that nurses and, indeed, patients need to remain active, informed and critical consumers.

Sources of evidence: There are many different sources of evidence, and not all evidence is equally useful. Examples of different types of evidence utilised in health care today include: reviews of research and clinical guidelines; opinion of experts and colleagues; experience of patients, carers or clients; clinical audit data; experiences of patients or clients; clinical guidelines and research; systematic review; critical review and guidelines; care pathways; secondary evidence; and the search engine on the internet.

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: formulation of a clear problem or question; 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; and 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. These are 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 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. Use of care pathways can also highlight gaps in the evidence base thus identifying priorities for future research. It is important for nurses to ensure that evidence is good enough to use, applicable in the proposed client setting and is clinically significant.

Evidences provide the basis for effective nursing practices. These can be incorporated into every step of nursing process in the following situations: assessment of patient condition, diagnosis of patients’ problems, planning of patient care, intervention to improve the patients function and condition, or to prevent complications.

Evidences as a basis for policies and procedures: Evidence provides the foundation for nursing practice, policies and procedures such as care maps, critical, paths, protocols and standard order sets. Evidences serve as a rational basis for standardised practices.

Evidences in care of the individuals: Studies have found that the more familiar a patient was to a practitioner the less likely the clinician was to use evidences as basis for care, not limited to clinical care, evidence may relate to team functioning, best way
to communicate change, organisational models for research use.

Strategies to promote use of evidence as basis for clinical practice include: (1) Insight into the obstacles, which can form the basis for a plan to overcome barriers to evidence; (2) Strengthen beliefs about the benefits of evidence-based practice will result in improved care for patients, so they will be more likely to embrace it; (3) Nurses unfamiliar with evidence-based practice may resist it, yet overcoming this fear through education will give them confidence; (4) Organising and implementing journal clubs, which can be a strong first step in familiarising nurses with evidence in a non-threatening, learning-based peer group; (5) Conducting evidence-based practice rounds regularly can serve as a basis for individuals with specific evidence-based expertise to communicate the evidence; (6) Questioning your own and your colleagues’ current practice is more likely to result in change than a judgmental one; (7) Creating a culture in which EBP is valued: creating a culture in which evidence as a basis for practice is supported and expected will result in the great long-term gains in quality patient care.

From Evidence to Action

Turning research findings into practice can be challenging. There are many barriers to the effective translation of research findings into action including barriers which exist at organisational levels, including economic, social and political barriers.

Evidence-based practice can be fostered and implemented through partnerships with individuals, groups or teams, using change agents, sharing and disseminating information, education & training and standardised practice. Networking is also important in sharing and dissemination of evidence-based practice.

Clinical environment can be a major barrier to change when making judgments about using evidence (you may be using many different types). It is useful to be able to tell others how you arrived at a decision. 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. They need to make judgments, use or interpret the evidences.

Using evidences as a basis for practice: There are several processes through which evidences can be used as basis for practice: an individual nurse may appraise research studies and share findings with colleagues; review literature to answer specific questions, and attend research presentation at conferences.

Apprising the evidence before use: After locating evidence it is important to appraise the evidence before taking action. Appraisal of evidence may lead to different course of action. The thoroughness of appraisal depends upon: Nature of clinical action for which evidence is sought; Extent to which findings are valid; Assess what the results actually are and whether they are clinically important; Determine the magnitude of the effect for quantitative findings; Precision in estimating the effect; Financial cost of applying evidence; and Relevance to the clinical situation at hand.

Having identified the evidence, the nurse needs to appraise whether there is a case for considering a change in practice. The question may not have been sufficiently or well answered or the evidence may not be strong enough to act. This process is referred to as critical appraisal and in relation to evidence-based practice it refers to reviewing the academic merit of the evidence. The three aspects of critical appraisal are: assessing the quality; assessing whether the findings can be applied; and assessing the consequences for staff and patients.

There are many practical ways that EBP can be fostered and implemented, like:

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.

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 social media. Networking is important in sharing and dissemination.

Education and training interventions – such as continuing education modules, decision support systems, one to one coaching, online learning, use of simulations.


Once you have clarified what you want to change and how you are going to set about that change, 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.

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 viewed as a key element of professional practice and techniques for developing these skills are incorporated into many training programmes. “The hierarchy of evidence that has promoted randomised 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. 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.

Translating the evidence in usable form: In order to achieve the actual practice change, it is important to translate evidence into action. It involves a careful evaluation of characteristics of the patient population in a specified setting matched with the assessment of external validity of the studies that have been reviewed incorporating clinician’s expertise in final recommendation; and developing action plans that are realistic and continuously refined.

Using evidences for professional nursing practice: Scientific rigours peer-reviewed studies are the foundation of evidence for professional nursing practice. The application of specific evidence based practice guideline to patient situation is based on nurses assessment of situation and appraisal of the most likely successful interventions.

Use of evidence in practice – action: There are 3 general categories that indicate the need for evidence based practice.

First category includes problems-focused factors like problems that are identified through quality improvement processes, benchmarking studies, regulatory agency feedback.

Second category includes factors related to nursing knowledge. There may be a knowledge deficit and new knowledge may emerge through research studies. The professional associations or national guidelines may present opportunity for incorporating evidence-based changes into practice. For example a nurse who attends a national conference may find that hydrotherapy is evidence based treatment for pressure ulcer and use the information to motivate a change in practice.

Third category includes factors such as new equipment, technology or product that become available to the nurses.

Implementing / integrating evidence involves patient references and values, availability of resources in health care institution, and integrating evidence from qualitative research.

Transferability means assessing whether setting is incongruent with the innovation / evidence in terms of philosophy, types of client served and personnel or administrative structure.

Feasibility factors include: Availability of staff and resources; organizational climate; Need for and availability of external assistance; potential for clinical evaluation; control of nurses over innovation; cost benefit i.e. assessment of cost and benefits; and implementing and evaluating the evidences.

Pilot testing involves: Developing an evaluation plan, identifying outcomes to be achieved, determine how many client to involve in pilot testing, deciding when and how often to collect outcome information; Collecting information related to outcomes; Training relevant staff; Trying the guidelines; and Evaluating the pilot.

Outcome

It involves determining whether action or decisions are useful and achieved desired outcomes. 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. When the costs and risks compared to benefits, by any of the key partners (including patients and their carers) are viewed as too high then the proposed change is un-
likely to be successful.

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.

The following issues may be helpful in preparing a case: different options being compared; most important potential outcomes of the options being compared; likely impact of the options; economic analysis; risks of introducing change; capacity to implement change and to make the system stronger; and extent of leadership support for change.

The answers to these questions enable you to organise your thinking, identify outcomes measures e.g. introducing a infection control policy will lead to reduction in infection rates, sustain practice change and ensure that intervention has lead to change in outcome

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. Nursing outcome is the measure or status of a nursing diagnosis at point in time after a nursing intervention. Patient outcomes are influenced by 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

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 gastrointestinal bleeding, central nervous system complications, sepsis and shock/cardiac arrest.
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).

An inventory of patient outcomes related to the scope of practice and staff mix in a health facility includes: 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; and Strength of treatment alliance.

What is the importance of nurse sensitive indicators?

- Helps focus attention on the safety and quality of patient care and the measurement of care outcomes.
- Nurses make the critical, cost-effective difference in providing safe, high-quality patient care.
- 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.

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.

Every nurse could produce evidence and is encouraged to deliver evidence-based practice. This will help in improving health outcomes as well as advancing the nursing profession. Updated and reliable evidence in nursing is still very scarce and not easily available.

References

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