Essential Skills for Evidence-based Practice Appraising Clinical Practice Guidelines

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Abstract

Evidence-based clinical practice guidelines allow generalist nurses to benefit from the scholarship and clinical expertise of others. Guidelines summarize the available evidence about a clinical problem and make recommendations for practice based on evidence appraisal and values (often unstated) defining effective and efficient care. Practice guideline recommendations must be comprehensive even when best evidence is not available to inform each one. As a result, evidence-based clinical practice guidelines include ratings of the strength of evidence supporting each recommendation and often the strength of the recommendation (balance of risks and benefits). Clinical practice guidelines provide evidence in a format that is particularly useful for generalist nurses; however, any guideline must be appraised for trustworthiness and values fit before application to patient care. Instructions for a brief appraisal process are provided in both English and Thai.

Keywords: clinical practice guideline, evidence-based practice, strength of evidence, strength of recommendation

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Nurses and their patients benefit when evidence to guide clinical care is easily available. When that guidance is in the form of evidence-based clinical practice guidelines, there are additional advantages. A single study or systematic review provides evidence to answer a focused clinical question about some limited aspect of patient care. A synopsis (review and critical appraisal) of a single study or systematic review adds expert opinion about the strength of the evidence but remains narrowly focused. In contrast, the scope of a clinical practice guideline is broad, offering a comprehensive approach to the care of patients with an identified clinical problem.The authors of a clinical practice guideline summarize the evidence from a variety of sources, appraise the strength of that evidence and recommend a complete care plan for patients with that clinical problem.

The scholarship and expertise that go into the development of an evidence-based clinical practice guideline represent a significant investment of time and effort. Thus, guidelines are typically developed by groups that have some interest in providing effective and efficient health care. This interest may be international (for example, the World Health Organization) or very local (an individual hospital department). The guideline sponsors are usually organizations that pay for health care, institutions that provide health care, or professional associations of physicians, nurses or allied health professionals. The American Academy of Pediatrics, for example, recently published an updated clinical practice guideline for the diagnosis, management and prevention of acute otitis media in children.[1] A support organization for the British National Health Service publishes several clinical practice guidelines, including one for the prevention, diagnosis and management of delirium in hospitalized patients.[2] The clinical practice guideline for treatment of opioid dependency published by the World Health Organization addresses national policy issues and service program organizationas well as care of individual patients.[3]

Sources and formats for clinical practice guidelines

Published clinical practice guidelines are indexed in CINAHL as publication type "practice guidelines",[4] so nurses using this database can limit any topic search to identify only clinical practice guidelines. In PubMed clinical queries searches, citations for clinical practice guidelines appear in the middle column of search results, along with systematic reviews.[5]

Organizations with an interest in promoting evidence-based health care may encourage use of clinical practice guidelines by providing easy access to collections of guidelines for health care providers. Summaries of the collected guidelines or in some cases the full texts of guidelines are available through a website (Appendix 1 lists examples of these collections for English language practice guidelines).

Resources for identifying clinical practice guidelines or collections in other languages are less well developed. National health ministries or professional organizations may provide access to clinical practice guidelines in their native languages. Additional sources in a specific language may also be identified by means of an internet search in that language.

Clinical practice guidelines may be available in multiple formats, reflecting the needs of different users. The National Institute for Health and Clinical Excellence (NICE) practice guideline for delirium,[2] for example, is 447 pages long. The full version includes detailed information about the process used to develop the guideline, the impact of delirium on patient care and detailed reviews of the research, including health economics research, that supports each recommendation. While this version fully documents the scholarship and expertise that supports the recommendations, it would not be a convenient

resource for a generalist nurse. The guideline clinical recommendations, however, are also available in a Quick Reference Guide[6] intended for easy access. This 10 page booklet summarizes the recommended clinical actions and patient / family teaching in easy-to-read flow charts and tables.

Rating strength

The comprehensive nature of a clinical practice guideline makes it unique among evidence formats. In areas of practice where there are not yet well-designed studies to test diagnostic strategies or therapies, most evidence formats will not exist. Systematic reviews and synopses, if available, will report that there is no trustworthy evidence to guide clinical practice. Evidence-based summary products like Clinical Evidence omit any mention of the clinical problem. In order to be useful, however, a clinical practice guideline must make recommendations for all aspects of patient care, even though there are gaps in the evidence. Like practicing nurses, the authors of clinical practice guidelines recognize that patients cannot wait until researchers provide all the answers, but need the best care that can be provided now.

To manage the conflict between gaps in strong evidence and the need to recommend a complete care plan, the authors of clinical practice guidelines rate each of their individual recommendations according to the strength of evidence that exists to support it. The specifics vary among rating schemes, but the highest strength ratings go to recommendations based on multiple well-designed studies with consistent findings.[7] Lower strength ratings go to recommendations based on studies that have weaker (more vulnerable to bias) design or inconsistent findings or to studies that were conducted among groups that are different in some important way from the patients whose care is the target of the guideline. The weakest support for a guideline recommendation is expert opinion. Care recommendations based on expert opinion may change when stronger forms of evidence become available, but are the best advice available until then.

In addition to strength of evidence ratings, authors of clinical practice guidelines may include a second set of ratings in their practice guidelines: strength of recommendation ratings. Whereas the strength of evidence ratings indicates how sure the authors are that their recommendations are based on accurate evidence, the second set of ratings indicates how important each recommendation is. "Important" usually reflects a balance of benefits to be gained from the recommended action versus the burdens and potential risks.[8] For example, there may be strong evidence that a treatment provides an increase in mobility for persons with arthritis, but the increase is small and the treatment is painful and expensive. Depending on the rating scheme used, the strength of recommendation for this treatment would be rated "weak" or "conditional" or "optional". Under these circumstances, patient values have increased influence in making clinical decisions. The nurse and patient may agree to pursue the arthritis treatment if even small increases in mobility are very important to the patient, or to omit the treatment if comfort and cost are the patient's major concerns.

Trustworthy Guidelines

When nurses incorporate clinical guidelines into their practice, they have decided that they can entrust their patients' care to the scholarship and expertise of the guideline authors. The Institute of Medicine has proposed a set of standards that characterize a trustworthy guideline.[9]

- The funding and process for developing the guideline is clear, detailed and available to the public.
- Persons involved in developing the guideline have disclosed any other commitments that might

influence their decisions about guideline evidence and recommendations (conflict of interest). Ideally, guideline developers have removed themselves from those competing commitments.

- The group developing the guideline includes experts in evaluating the scientific merit of the evidence, expert clinicians and patients or their representatives.
- Each recommendation is based on one or more high quality systematic reviews of the available evidence where a body of relevant evidence exists.
- Each recommendation is rated for both strength of evidence and strength of recommendation, with the reasons for the assigned ratings explained.
- Each recommendation takes the form of a specific action plan. Strong recommendations are worded so that compliance can be measured.
- The guideline has received external review by representatives of all stakeholder groups before being published and the developers have responded to that review.
- Dates associated with guideline development (e.g. date of literature search, date of external review) are published. A plan for updating the guideline is made at the same time the guideline becomes available.

Why are funding source and developers' conflicts of interest important issues to consider? Practice guidelines make recommendations for care that is not only effective but also efficient. While the balance of benefits and burdens for patients should always remain a major consideration, the wise use of other stakeholder resources may also be considered. When the people judging that balance have financial or employment interests at stake, their recommendations may appear to be overly influenced by the possibility of their own benefit. Clear statements of the values used to judge benefits and risks build trust that patient concerns remain central.

Evaluating guidelines for application to practice

Supporters of evidence-based practice have developed detailed appraisal strategies for many formats of evidence, including clinical practice guidelines.[10] Traditionally, these approaches consider the validity of the evidence (can it be trusted) before determining how the evidence could be applied to the care of patients (is it useful). Generalist nurses may find it more efficient to reverse this process for clinical practice guidelines, judging whether the guideline is useful before considering whether it can be trusted. Both questions must, of course, be satisfactorily answered, no matter the order in which they are asked, before the guideline is applied to practice.

Brief Appraisal Strategy for Clinical Practice Guidelines

(See Appendix 2 for the Thai language version of this strategy)

Step One: Does the guideline make any recommendations that would change practice in your setting?

Yes (Go to Step Two)

No (Stop)

A clinical practice guideline is useful when it changes practice. If there are no recommendations in the guideline that would change practice in any way, there is no patient benefit to be gained by adopting the guideline as a practice standard. From a practical perspective, it does not matter whether or not the guideline can be trusted if it is not going to be put to use.

The usual reason a guideline would not change practice is that practice is already consistent with guideline recommendations. In some cases, however, the reason is that the recommended changes would clearly not be possible or acceptable in the setting where they are being considered.

An advantage of appraising usefulness and trustworthiness in this order is that usefulness (Step One) can often be determined based on short form or quick guide versions of the clinical practice guidelines. Determining trustworthiness (Step Two) requires more complete study of the full documentation for the guideline.

Step Two: Can you trust the guideline?

Who wrote it? What are their interests?

As noted earlier, recommendations for practice may incorporate the balance of benefits and burdensfor other stakeholders in health care, as well as for the patient.[11] These stakeholders include the same groups that are likely to sponsor development of clinical practice guidelines: agencies that pay for health care, institutions that provide health care and organizations of health care professionals. If the values of the developing group are in conflict with patient values, it is important to consider how those conflicts were resolved in the recommendation process.

When was it written?

Have there been important practice changes or new evidence since that date?

Knowledge about health and disease increases daily. The process of locating, assembling and reviewing evidence, then making evidence-based recommendations, takes time. As a result, even a newly published clinical practice guideline will lag behind the available evidence. At what point does a clinical practice guideline become out of date and no longer trustworthy? The answer depends on the strength of evidence supporting the recommendations and how fast practice is changing.

Shekell and colleagues[12] identify situations which might require updating of a clinical practice guideline. Among them are:

- Additional evidence available about the desired and undesired outcomes of some recommendation - for example, studies revealing cardiac risks for non-steroidal anti-inflammatory drugs[13]
- Availability of new diagnostic tests and treatments not considered when the guideline was developed
- Changes in the costs or availability of existing tests or treatments - for example, price drops when generic versions of drugs become available[12]
- Changes in what outcomes are considered important - for example, the emerging interest in quality of life outcomes[12]
- Changes in values about outcomes – for example, how much society is willing to pay to achieve some outcome

The American Academy of Pediatrics practice guideline for otitis media1 was originally published in 2004 and the process of updating, completed in 2013, began in 2009. The updated version recommends preventive use of vaccines that were not available when the original version was published. Like all NICE practice guidelines, the British clinical practice guideline for delirium[2] is reviewed by a designated member of the development group every two years to determine whether new evidence justifies revision, with a more complete review conducted after four years.[14] The World Health Organization only promotes access to their guidelines published within the past five years.[15]

What process did the writers use to assemble the evidence?

Does it appear to be systematic, objective and complete?

The strongest evidence to support a clinical practice guideline recommendation is one or more up-to-date systematic reviews with consistent findings. The process that results in an adequate systematic review is desirable for developing practice guidelines,

as well. The hallmark of this process is strict adherence to a plan made in advance that assures all the available evidence is located and objectively reviewed.[16]

Do the authors rate the strength of evidence behind each recommendation?

Strength of evidence ratings indicates how confident guideline developers are that their recommendations are accurate. These ratings connect practice with its evidence base and reflect the necessary expertise about research design that generalist nurses are unlikely to have themselves. Awareness of these ratings promotes critical thinking about the bases for practice. Recommendations based on strong evidence, moreover, are likely to remain valid for longer periods of time. It is extremely unfortunate when the expert consultation represented by strength of evidence ratings is omitted from short form versions of clinical practice recommendations, even when it is available in full versions.

Whose values were considered in making recommendations?

Were patient values included?

The three bases for clinical decision making in evidence-based practice are evidence, clinical expertise and patient preferences. Clinical practice guidelines are recommended clinical decisions, based on consensus judgments about the benefits and burdens of the recommended actions. While not every guideline development group includes patients, the presence of patient advocates is crucial. Nurses are, of course, among those advocates.

If you feel comfortable that you can trust the guideline, proceed to Step Three. If not, get consultation about the evidence that supports the change from your practice that the guideline recommends.

By virtue of age, sponsorship or process, some clinical practice guidelines may not be fully trustworthy. In this situation, the task of conducting a critical appraisal of the evidence supporting some recommendation and judging the relative benefits and burdens of adopting that recommendation falls to the guideline user. Generalist nurses faced with this task will benefit from working with colleagues who have advanced clinical or research preparation.

Step Three: Consider whether you can apply the guideline in your practice setting

Translation from one language to another involves more than the simple substitution of words. Application of a clinical practice guideline is a translation process that must consider the fit of values and resources from the recommendations to the settings where they will be employed.

What outcomes define effective care in the guideline?

Do these same outcomes define effective care in your setting?

The values that shape guideline recommendations are rarely stated explicitly. They can often be inferred, however, on the basis of the outcomes the guideline aims to achieve. What is the stated purpose of the guideline? Whose benefits and burdens were considered in making recommendations and assigning strength of recommendation ratings? Are there priorities among the outcomes? Are those priorities consistent with the values of the setting where the guideline will be applied? [11]

What resources are considered when the efficiency of care is determined?

Do you place the same values on resources in your setting?

Health problems are universal, but the resources available for managing them are not. Practice guideline recommendations reflect judgments about the relative value of different resources. What is worth doing depends on whose resources are being considered. What is worth applying in a new setting depends on whether those resources are available and

valued in the same way.

Are your patients and setting similar to the target population for the guideline? Mixture of diagnoses and co-morbidities, staffing, severity of illness, values?

This final question in Step 3 is actually a confirmation of Step 1. Recommendations to change practice must be relevant to the practice settings where they will be applied. Even if there is good fit between the guideline and the proposed application setting as to resources and values, important differences in patient groups and settings will likely result in different outcomes. A clinical practice guideline for preventing falls among frail community-dwelling elders is not likely to be helpful to nurses seeking to prevent falls among hospitalized infants and toddlers.

If you are comfortable that the guideline applies to your setting, proceed to the application model.

The application model has been discussed in a previous publication[17] (see Appendix 3 for the Thai language version of the application model). Remember that evaluating the impact of a practice change is an essential part of application.

References

1. Lieberthal AS, Carroll AE, Chonmaitree T, et al. The diagnosis and management of acute otitis media. Pediatrics. 2013;131(3):e964-99.
2. National Clinical Guideline Centre. Delirium: diagnosis, prevention and management. Clinical Guideline 103 [Internet]. London: National Clinical Guideline Centre; 2010. Available from: http://www.nice.org.uk/nicemedia/live/13060/49908/49908.pdf
3. World Health Organization, Department of Mental Health and Substance Abuse. Guidelines for the psychosocially assisted pharmacologic treatment of opioid dependence [Internet]. Geneva, Switzerland: WHO Press; 2009. Available from: http://www.who.int/substance_abuse/publications/9789241547543/en/index.html
4. EBSCO Host. Document types. CINAHL Support Center [Internet]. Massachusetts, USA: EBSCO Publishing; 2013 [cited 2013 June 11]. Available from: http://support.epnet.com/cinahl/training.php
5. National Center for Biotechnology Information. PubMed Clinical Queries [Internet]. Marryland: National Center for Biotechnology Information; [cited 2013 Jun 11]. Available from: http://www.ncbi.nlm.nih.gov/pubmed/clinical
6. National Clinical Guideline Centre. Quick reference guide. Delirium: Diagnosis, prevention and management. Clinical Guide 103 [Internet]. London: National Clinical Guideline Centre; 2010. Available from: http://www.nice.org.uk/nicemedia/live/13060/49913/49913.pdf
7. Balshem H, Helfand M, Schünemann HJ, et al. GRADE guidelines: 3. Rating the quality of evidence. J Clin Epidemiol. 2011;64(4):401-6.
8. Andrews J, Guyatt G, Oxman AD, et al. GRADE guidelines: 14. Going from evidence to recommendations: the significance and presentation of recommendations. J Clin Epidem. 2013;66(7):719-25.

9. Institute of Medicine. Clinical practice guidelines we can trust. National Academies of Science Institute of Medicine Standards [Internet]. Washington: Institute of Medicine; 2011 [cited 2013 Jun 11]. Available from: http://www.iom.edu/~/media/Files/Report%20Files/2011/Clinical-Practice-Guidelines-We-Can-Trust/Clinical%20Practice%20Guidelines%202011%20Insert.pdf
10. Guyatt G, Rennie D, editors. Users' guides to the medical literature. Chicago, IL: AMA Press; 2002.
11. Grace J. Value conflicts in evidence-based practice. J Nurs Sci (Thailand). 2010;28(2):8-12.
12. Shekell P, Eccles MP, Grimshaw JM, Woolf, SH. When should clinical guidelines be updated?. BMJ. 2001;323(7305):155-7.
13. Solomon DS, Wittes J, Finn PV, et al. Cardiovascular risk of celecoxib in 6 randomized placebo-controlled trials: The cross trial safety analysis. Circulation. 2008;117(16):2104-13.
14. National Institute for Health and Clinical Excellence. The guidelines manual [Internet]. London: National Institute for Health and Clinical Excellence; 2007. Available from: http://www.nice.org.uk/niceMedia/pdf/GuidelinesManualAllChapters.pdf
15. World Health Organization. WHO guidelines approved by the Guidelines Review Committee [Internet]. Geneva, Switzerland: World Health Organization; 2013. [cited 2013 Jun 27]. Available from: http://www.who.int/publications/guidelines/en/index.html
16. Grace J. Essential skills for evidence-based practice: Understanding and using systematic reviews. J Nurs Sci (Thailand). 2010;28(4):20-5.
17. Grace J. A model for applying evidence to nursing practice. J Nurs Sci (Thailand). 2012;30(2):7-11.

Appendix 1 Sources for Clinical Practice Guidelines

1. Agency for Healthcare Research and Quality National Guideline Clearinghouse http://www.guideline.gov/ United States government source for national and international guidelines in English. Availability of versions in other languages noted. Provides structured summary and comparison tools.
2. Joanna Briggs Institute http://www.joannabriggs.edu.au/Best%20Practice%20Information%20Sheets Australian university-based institute to promote evidence-based nursing care. Best Practice materials now available by subscription only.
3. Ministry of Health Singapore Nursing Practice Guidelines http://www.moh.gov.sg/content/moh_web/healthprofessionalsportal/nurses/guidelines/cpg_nursing.html Also guidelines for physicians and allied health professionals with nursing implications. Recommendations available in "quick guide" formats.
4. National Institute for Health and Care Excellence (NICE) http://www.nice.org.uk/#panel3 United Kingdom source for guidelines developed for the National Health Service. Includes NICE pathways, a graphic guideline search tool.
5. Registered Nurses Association of Ontario http://rnao.ca/bpg/guidelines/clinical Canadian best practice guidelines developed with funding from the Province of Ontario. Translations of selected guidelines into other languages (Chinese, French, Japanese, Italian, Spanish) sponsored by international partners.
6. World Health Organization http://www.who.int/publications/guidelines/en/index.html Guidelines with a global perspective, sometimes available in French or Spanish as well as English.

Appendix 2 Brief Appraisal Strategy for Clinical Practice Guidelines
กลวิธีการประเมินแนวปฏิบัติทางคลินิกฉบับย่อ

Step one: Does the guideline make any recommendations that would change practice in your setting?
ขั้นตอนที่ 1: แนวปฏิบัติให้ข้อแนะนำที่ก่อให้เกิดการเปลี่ยนแปลงการปฏิบัติในหน่วยงานของท่านหรือไม่?

- Yes (Go to step two)
  ใช่ (ไปต่อขั้นที่ 2)
- No (stop)
  ไม่ (ยุติ)

Step Two: Can you trust the guideline?
ขั้นตอนที่ 2: แนวปฏิบัตินั้นเชื่อถือได้หรือไม่?

- Who wrote it? What are their interests?
  ใครเป็นผู้เขียนแนวปฏิบัติ? และผู้เขียนให้ความสำคัญในเรื่องใด/ กับผู้รับบริการหรือไม่?
- When was it written? Have there been important practice changes or new evidence since that date?
  แนวปฏิบัติเขียนเมื่อใด? และหลังจากนั้นมีการเปลี่ยนแปลงการปฏิบัติที่สำคัญเกิดขึ้น หรือมีหลักฐานเชิงประจักษ์ใหม่หรือไม่?
- What process did the writers use to assemble the evidence? Does it appear to be systematic, objective and complete?
  ผู้เขียนใช้กระบวนการอะไรบ้างในการรวบรวมหลักฐาน? หลักฐานที่รวบรวมนั้นมีการจัดทำอย่างเป็นระบบมีหลักเกณฑ์ และมีความครอบคลุมหรือไม่?
- Do the authors rate the strength of evidence behind each recommendation?
  ในแต่ละข้อแนะนำ ผู้เขียนได้มีการระบุระดับความเข้มแข็งของหลักฐานหรือไม่?
- Whose values were considered in making recommendations? Were patient values included?
  คุณค่าของใคร (ผู้มีส่วนได้ส่วนเสีย) ที่นำมาใช้ในการพิจารณาข้อแนะนำ? ได้คำนึงถึงคุณค่าของผู้ป่วยด้วยหรือไม่?
- If you feel comfortable that you can trust the guideline, proceed to step 3. If not, get consultation about the evidence
  หากท่านเชื่อถือแนวปฏิบัตินั้น ดำเนินการขั้นตอนที่ 3 ต่อไป ถ้าไม่ ให้ปรึกษาผู้รู้

Step Three: Consider whether you can apply the guideline in your practice setting
ขั้นตอนที่ 3: พิจารณาว่าแนวปฏิบัติสามารถประยุกต์ใช้ในหน่วยงานได้หรือไม่

- What outcomes define effective care in the guideline? Do these same outcomes define effective care in your setting?
  ผลลัพธ์ใดที่บ่งบอกถึงประสิทธิผลของการดูแลตามแนวปฏิบัติ? และผลลัพธ์นั้นสอดคล้องกับความต้องการของหน่วยงานหรือไม่?
- What resources are considered when efficiency of care is determined? Do you place the same values on resources in your setting?
  เมื่อคำนึงถึงประสิทธิภาพของการดูแลมีทรัพยากรใดบ้างที่ต้องพิจารณา? ท่านให้คุณค่าของทรัพยากรในหน่วยงานเช่นเดียวกับที่กำหนดในแนวปฏิบัติหรือไม่?
- Are your patients and setting similar to the target population for the guideline? Variety of diagnoses and co-morbidities, staffing, severity of illness, values?
  ผู้ป่วยและหน่วยงานของท่านมีความคล้ายคลึงกับประชากรกลุ่มเป้าหมายตามแนวปฏิบัติหรือไม่? เช่น ผู้ป่วยที่มีโรคร่วม ความรุนแรงของการเจ็บป่วย ค่านิยมของบุคลากร/องค์กร
- If you are comfortable that the guideline applies to your setting, proceed to the application model
  หากท่านเชื่อว่าแนวปฏิบัตินั้นประยุกต์ใช้ในหน่วยงานของท่านได้ให้ดำเนินการ ตามกระบวนการประยุกต์ใช้

(This instruction created as a joint project between Jeanne Grace and the Faculty of Nursing, Mahidol University.)

Appendix 3 A Model for the Application of Evidence
โมเดลการประยุกต์ใช้หลักฐานเชิงประจักษ์

The Model

- Specific actions chosen to apply evidence:
  วิธีการปฏิบัติที่เลือกเพื่อนำหลักฐานเชิงประจักษ์มาประยุกต์ใช้
- Actions taken to minimize any risks associated with applying evidence:
  วิธีการปฏิบัติเพื่อลดความเสี่ยงจากการประยุกต์ใช้หลักฐานเชิงประจักษ์
- What change would these actions make in your current practice?
  วิธีการปฏิบัติดังกล่าวทำให้เกิดการเปลี่ยนแปลงอะไรบ้างกับการปฏิบัติงานของท่านในปัจจุบัน
- Institutional changes/ support needs: (What is the current institutional policy?)
  นโยบายปัจจุบันขององค์กรมีอะไรบ้าง
  วิธีการปฏิบัติที่ประยุกต์ใช้นี้มีความจำเป็นที่จะต้องปรับเปลี่ยนนโยบายหรือไม่ ต้องการการสนับสนุนจากองค์กรอย่างไรบ้าง (เครื่องมือ บุคลากร/ งบประมาณ อุปกรณ์)
- How will you incorporate patient values?
  มีวิธีการอย่างไรในการประยุกต์ใช้หลักฐานเชิงประจักษ์โดยคำนึงถึงสิ่งที่ผู้ป่วยให้คุณค่า (ความเป็นบุคคล ความต้องการ ความเชื่อ วัฒนธรรม)
- Evaluation:
  How will you know whether your actions have achieved the desired outcomes?
  การประเมินผล: จะทราบได้อย่างไรว่าการประยุกต์ใช้หลักฐานเชิงประจักษ์ บรรลุถึงผลลัพธ์ที่ต้องการหรือกำหนดไว้
  - What outcomes will you measure? (What information will you collect?)
    ผลลัพธ์/ ข้อมูล อะไรบ้างที่ต้องการประเมิน
  - What is the time frame for measuring those outcomes? (How long will it take to know whether your application of evidence was successful?)
    กำหนดระยะเวลาในการประเมินผลลัพธ์ที่ประสบผลสำเร็จในการประยุกต์ใช้หลักฐานเชิงประจักษ์
  - What are the limitations to evaluating your application of evidence to practice?
    อุปสรรคในการประเมินการประยุกต์ใช้หลักฐานเชิงประจักษ์คืออะไร

(This guideline created as a joint project between Jeanne Grace and the Faculty of Nursing, Mahidol University.)