

Guidelines for the Development of Evidence-Based Emergency Nursing Resources

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2009 ENA Clinical Guidelines for Emergency Nursing Practice Committee

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INTRODUCTION

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Emergency Nursing Resources (ENRs) are evidence-based documents that facilitate the application of current evidence into everyday emergency nursing practice. ENRs are created by the ENR Development Committee following the rigorous process described in this document, *ENA's Guidelines for the Development of Evidence-Based Emergency Nursing Resources*. These *Guidelines* may also serve as a resource for others engaged in implementing evidence-based practice in emergency nursing. ENA believes that ENRs will have a positive impact on patient care and emergency nursing practice by bridging the gap between practice and currently available evidence.

ENRs contain recommendations based on a systematic review and critical analysis of the literature about a clinical question. Preparing an ENR is a complex process, involving critical thinking throughout the entire process. In order to minimize the potential for bias and inconsistency in the development process, it is important that methods are established and documented in advance. This document outlines the approach used to develop ENA's ENRs which ensures consistency of the evidence appraisal process and incorporation of current, best available evidence for practice. Further, this document provides the foundation for the development of future ENRs and serves as a resource for nurse researchers and other ENA committees by offering a systematic approach to the review and recommendation for emergency nursing practices.

A. CONTENT DEVELOPMENT

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A six-step approach is used to develop the content of ENRs:

1. Select topic areas
2. Define clinical question(s) in the topic area using the PICOT format
3. Search relevant literature for review
4. Critically appraise the literature to grade the level and quality of evidence
5. Develop the Evidence-Appraisal Table
6. Interpret summative evidence and determine level of recommendation for practice

The purpose of the six-step approach is to provide: a) a consistent method for evaluating evidence and grading recommendation based on the strength of the underlying evidence and b) a structure to communicate the strength of the evidence to users of ENRs.

1. *Selection of Topics*

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The selection of topics for ENRs is based on information culled from a variety of sources including the ENA Listservs, membership surveys, General Assembly resolutions, and other sources, and reflects ENA organizational priorities and membership needs. Most importantly, topics emphasize independent as well as collaborative nursing practices which can be identified as interventions based on clinical experience and forecasting of nursing knowledge (i.e., placing a confused patient close to the nursing station for safety). Considerations regarding the applicability to practice, nursing-sensitive patient outcomes, and available evidence are also addressed in the selection of topics.

The Committee identifies and recommends topics to the ENA Board of Directors for consideration each year. The ENA Board approves the topic(s) to be addressed based on ENA's priorities.

2. Define Clinical Questions in the Topic Area Using the PICOT Format

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Designated topics are developed into clinical questions using the PICOT format (see [Appendix A](#) for PICOT question development). Creation of a clinical question is often the most challenging step of the process. The question must be researchable, pertinent to emergency nursing practice, answerable, and have a measurable outcome. The creation of a clinical question helps limit the amount of potential inherent bias that occurs in every patient care situation (Fineout-Overholt, Melynk, & Schultz, 2005). It is important to identify whether the clinical question is one of meaning (qualitative) or intervention (quantitative) in order to state the PICOT question. The PICOT may need to be revised and refined based on the findings of the initial literature review.

3. Search Relevant Literature for Review

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A literature search is conducted for studies, meta-analyses, systematic reviews and existing guidelines relevant to the clinical question that have been published with a preference for those published within the last five years. Classic studies or meta-analyses from earlier years will also be included in this review. The search of the literature must be exhaustive to provide the best information/evidence to make reliable recommendations. Assessment of study eligibility and extraction of information from study reports will be conducted by at least two people (a Subcommittee) independently.

The working definitions of the key concepts relevant to the clinical question will also be developed and documented as the literature is being reviewed and topics refined. Final definitions, keywords, background, and significance to practice will be included as part of the Resources.

The following databases may serve as potential sources for a literature search:

- National Guideline Clearinghouse <http://www.guideline.gov>
- U.S. Agency for Healthcare Research and Quality (AHRQ) <http://www.ahrq.gov>
- The U.S. National Library of Medicine's MedlinePlus <http://www.nlm.nih.gov/medlineplus>
- National Library of Medicine <http://www.clinicaltrials.gov>
- National Institute for Health and Clinical Excellence <http://www.nice.org.uk>
- Subject Specialist Databases (e.g., CINAHL, OVID, etc.)
- Cochrane Reviews <http://www.cochrane.org>
- British Medical Journal Evidence Centre (<http://group.bmj.com/products/evidence-centre>)

Additional resources are included in [Appendix B](#).

All articles pertinent to the topic will be listed on the Reference Table – see [Appendix C](#). The Reference Table is not published as part of the ENR but is the comprehensive listing of literature reviewed and the results of that review. It remains on file at ENA in case questions arise about an ENR and to serve as a starting point for future revisions of the ENR.

4. Critically Appraise the Literature to Grade the Levels and Quality of Evidence

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The critical appraisal of the literature is conducted using the Critical Appraisal of Evidence Guide as a reference (see [Appendix D](#)). This guide provides detailed information on how to evaluate a research report and review an article. Elements of the guide include the following:

- Scope and Purpose – Is the aim of the study clear, is it significant, and the population relevant?
- Literature Review – Is the background information and literature current and logical?
- Theoretical Framework – Are the concepts/theories logical, sufficient and clear?
- Research Question – Is the research question stated? Does it guide the methods used?
- Methodology – Is the research approach (qualitative or quantitative) appropriate for the study and to answer the research question?
- Quality of Research – Does the research have scientific merit?
- Major Findings – Do the findings, data presented, conclusions and limitations explain the results and support the purpose of the study?
- Implications – Are the findings relevant, applicable and generalizable?

5. Develop the Reference, Evidence, and Other Resources Tables

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The Reference Table template ([Appendix C](#)) is completed as literature is reviewed. Specific columns are used when analyzing and synthesizing research studies, meta-analyses, systematic reviews, and clinical practice guidelines. A subset of the Reference Table becomes the Evidence Table ([Appendix E](#)) after the ENR Committee reviews and grades the literature. The Evidence-Table provides key information concerning the quality of evidence, the magnitude of effect of the decision options/interventions examined, and the sum of available data on all important outcomes for a given comparison. Essential elements included in the table are:

- Reference: Author, Year and Title
- Research Purpose/Questions/Hypothesis
- Design/Sample/Setting
- Measures/Variables/Analysis
- Findings/Implications
- Overall Quality of Research including comments
- Level of Evidence including comments.

Each ENR Subcommittee member independently reviews all identified literature and completes the Reference Table for the topic assigned. The ENR Subcommittee must reach consensus on strength and quality of evidence scores. If needed, worksheets (e.g., AGREE worksheet) for critiquing research studies ([Appendix F](#)) and evaluating practice guidelines ([Appendix G](#)) are also available to use to help complete the evidence table. If a research paper is not chosen for inclusion on the Evidence Table, the reason for not including it should be noted in the last column of the Reference Table.

The Other Resources Table ([Appendix H](#)) is also created as a subset of the Reference Table and includes articles that do not contribute evidence directly but may be helpful to nurses who are learning more about a topic or implementing a practice change. Review articles are commonly included in the Other Resources Table.

6. Interpreting Summative Evidence and Making Recommendations: ENA's Conceptual Model

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The recommendations reflect the summative interpretation of evidence along with the clinical judgment and experience of emergency nurses. Each recommendation is assigned a level which indicates the strength of evidence upon which the recommendations is based. This differs from levels of evidence in that the entire body of work is analyzed in making a decision regarding recommendations for practice. Utilizing concepts presented in the [Advancing Research and Clinical Practice through Close Collaboration \(ARCC\) model](#) (Melnyk & Fineout-Overholt, 2005), ENA developed a conceptual model for determining the level of recommendation for practice ([Figure 1](#)). The model

consists of three components: 1) summative levels of evidence, 2) summative quality of evidence and 3) relevance and applicability to practice based on clinical judgment and experience of emergency nurses.

a. Background

The ENA model reflects the concepts of the ARCC model that guides the evaluation and ultimate determination of recommendations for practice. The ARCC model represents the incorporation of research into clinical practice (Fineout-Overholt, Melynck, & Schultz, 2005). The key components of the ARCC include: a) research evidence, b) evidence-based theories, c) clinical expertise and evidence from the assessment of the patient and healthcare resources and d) patient preferences and values. In emergency nursing, practice depends on emergency nurses balancing expert clinical judgment with patient preferences. Without the use of all of the components of the ARCC model, the application of evidence would only be research utilization. Thus, the ENA model incorporates not only the levels and quality of research evidence but also the relevance and applicability to practice based on the experience and expertise of emergency nurses.

b. Assumptions and Premises for Determining the Level of Recommendation for Practice

ENA's model for grading level and quality of evidence is consistent in principle with other evidence grading systems (Guyatt et al., 2006) including the grading system utilized by the American College of Emergency Physicians (ACEP) (Schriger, Cantrill, & Greene, 1993; Jagoda et al., 2008). The ENA model reflects the following assumptions and premises:

- 1) Grading of the recommendations is a separate function from judging the quality of the evidence.
- 2) There is a need for the simplicity and transparency of grading for the consumers of ENRs.
- 3) There must be an adequate number of "grading" categories.
- 4) Grading criteria need to be explicit.
- 5) Criteria need to have clear approaches for different levels of evidence for different outcomes.

Furthermore, the ENR grading criteria considers key factors affecting the levels of the recommendation (Ebell et al., 2004; Guyatt et al., 2008) which include:

- 1) Levels and quality of the evidence [i.e., individual study's level of evidence, types of outcomes measured by the study, quantity of the evidence (e.g., number of studies, number of subjects in the studies), consistency and coherence of the evidence (refers to similarities between studies on the same topic)]
- 2) Balance between advantageous and undesirable effects

c. Major Components to Determine the Level of Recommendation for an ENR

The ENA model for determining the level of recommendation of the ENR for practice includes three components to provide structure and transparency in the recommendations for the final ENR as shown in [Figure 1](#).

1) Grading levels of the evidence. This component provides an objective description of the design and types of studies supporting an ENR. ENA adopted the Melnyk and Fineout-Overholt model for categorizing levels of evidence (see Table 1). The Melnyk and Fineout-Overholt model is known for its clarity of categories for ranking the type of research designs. The model is easy to understand and apply as a critical appraisal system. The summative level of evidence provides the link between the recommendations and evidence base of an ENR.

2) Grading the quality of the evidence. This component provides a means to delineate the overall summative quality of the body of evidence that is available for an ENR (see [Table 1](#)). This component considers the relative strengths and weaknesses of available evidence, as well as any conflicting or heterogeneous findings from

multiple studies. Grading of the quality of the evidence evaluates issues that can affect quality (e.g., blinded versus non-blinded outcome assessment, direct or indirect outcome measures—including reliability and validity, biases, sufficient sample sizes etc.).

3) Grading the clinical relevance and applicability of the evidence to emergency nursing practice. The clinical relevance and applicability of the evidence is determined by consensus of the Committee. Although research provides the basis for examining the evidence, it is recognized that research is not the single determinant of use of evidence in practice. Sound clinical decisions need to address other considerations such as clinical expertise, patient expectations and preferences, social circumstances, resources availability (e.g., time, equipment, personnel) in the clinical setting, community support services available, access to care, ethical issues and medico-legal risks. Clinical relevance and applicability of the evidence to practice is determined based on the experience and expertise of emergency nurses. This component in determining the level of recommendation acknowledges the expert opinion of emergency nurses to assess the strength or generalizability of the evidence, while considering the tradeoffs between benefits and harm to patients. The goal of this component is to be explicit and transparent regarding the use of clinical expertise in the final determination of the level of recommendation. Incorporating clinical expertise of emergency nurses assures the applicability of the ENR to clinical practice

d. Description of Levels of Recommendation for Practice.

ENA's levels of recommendation are classified as high, moderate, weak or not recommended for practice. A description of each level of recommendation is provided in [Table 2](#). The levels of recommendation reflect the general principles of grading evidence for practice used by other professional groups such as ACEP. The level of recommendation for practice for each ENR is determined by the Committee based on the level of the evidence, quality of the evidence, and the clinical relevance and applicability. As a note of caution, regardless of the recommendation for practice, it is still the responsibility of individual clinicians to use their judgment and consider patient circumstances when making individual decisions regarding the use of an ENR for practice.

B. MANAGEMENT OF THE DEVELOPMENT PROCESS

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1. *Timeline*

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[Figure 2](#) maps the development process. The anticipated timeline for each ENR is approximately 12 months (six months for preliminary content development and six months for review, refinement, and production of final product).

2. *Subcommittees*

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At least two individuals are assigned to conduct the initial literature review. A nursing research expert also reviews the literature and works with the Subcommittee as a consultant. Conference calls with Subcommittee members and staff are held as necessary to discuss progress and facilitate the Subcommittee's work. All members of the Subcommittee independently complete an exhaustive review of all identified literature, complete a separate evidence table for each topic (if possible), and then reconvene to reach consensus. Each Subcommittee prepares a description of the topic, definition, background, significance, and evidence table. All articles and documents are uploaded to the ENR Development website for easy retrieval by everyone involved with the development process. The Subcommittee identifies and assigns preliminary scores for quality and strength of evidence, and describes conclusions based on the review of the body of evidence. Each Subcommittee also serves as "second readers" for another topic; this assures an in-depth look at the literature by two Subcommittees. The entire Committee reads the articles and reviews the evidence-appraisal tables for each topic and then finalizes implications for practice and the level of recommendation.

“Content Experts” maybe recruited by Subcommittee members. Content Experts have pre-existing knowledge and expertise about the topic and may include authors of General Assembly resolutions, emergency nursing texts, or journal articles; researchers, and speakers. Generally, no more than two-three Content Experts should be recruited by each Subcommittee. They may assist the Subcommittee members in any aspect of ENR development as mutually agreed upon. However, the official ENR Development Committee members are ultimately accountable for completing the work. Content Experts are not official committee members and do not attend meetings (unless by conference call). Their contributions will be acknowledged but Content Experts generally will not be identified as authors of the ENR. ENA will send a formal letter outlining this information to each Content Expert.

3. Documentation

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All documentation (search strategy, electronic copies of each article, reference table, etc.) are completed and submitted to the Committee with written recommendations. Documentation that occurs in the development of the ENR that is not published is archived by ENA staff.

4. Finalizing Documents

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All documents will be formatted according to the American Psychological Association (APA) Guidelines, 6th edition. Working drafts of the narrative document will have line numbers inserted to facilitate Committee discussion. The documentation is submitted to electronically to the ENR Development website for. The meetings and conference calls encompass a discussion of the evidence, determination of the strength and quality of the evidence, recommendations for practice, and consensus to continue with development of the ENR or refocus it as necessary. The Subcommittee will refine the evidence tables based on Committee consensus. The Institute for Emergency Nursing Research (IENR) Advisory Council reviews the final document for overall validity and provides feedback as appropriate using the ENR Evaluation Worksheet ([Appendix G](#)). Reviews and feedback are sent to the Subcommittee to evaluate and incorporate, as appropriate. An Executive Summary of the recommendations is created ([Appendix I](#)). ENA staff creates the final products for publication with input from the Committee (see [Table 3](#) for ENR Development Process).

The following components appear in the final Committee document:

- Title: PICOT Question
- Authors
- Disclaimer
- Dates of publication
- Content
 - Title
 - Background/significance
 - Literature search strategies
 - Description of decision options/interventions and the level of recommendation
 - Evidence Table
 - Other Resources Table
 - References
 - Acknowledgements
- Executive Summary

C. DISSEMINATION OF ENRs

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ENRs are disseminated by multiple methods, including but not limited to:

- Electronically on the ENA Website and via other electronic media, if appropriate
- Print versions (as indicated)

- *Journal of Emergency Nursing*
- Submission to the National Guidelines Clearinghouse

D. REVIEW AND REVISION OF ENRs

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ENRs will be reviewed and or revised a minimum of every three years to ensure the content is current. Updates involve a search for new studies and may involve revision of the question of interest and incorporation of new information. The review will be completed by the Committee, IENR Advisory Council, and/or the ENA staff (refer to [Table 4](#)).

Bibliography

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- The AGREE Next Steps Consortium. (2009) *Appraisal of guidelines for research and evaluation II*. Retrieved from <http://www.agreetrust.org/resource-centre/the-original-agree-instrument/>
- Burns, N., & Grove, S. (2005). *The Practice of nursing research: Conduct, critique, & utilization* (5thed). St Louis, MO: Elsevier.
- Duffy, M. E. (2005). Resources for critically appraising qualitative research evidence for nursing practice clinical question. *Clinical Nurse Specialist, 19*(6), 288-290.
- Ebell, M.H., Siwek, J., Weiss, B.D., Woolf, S.H., Susman, J., Ewigman, B., & Bowman, M. (2004). Strength of recommendation taxonomy (SORT): A patient-centered approach to grading evidence in the medical literature. *American Family Physician, 69*(3), 549-557.
- Ellett, M. L., & Beausang, C. C. (2002). Introduction to qualitative research. *Gastroenterology Nursing, 25*(1), 10-14.
- Fineout-Overholt, E., Melynk, B., & Schultz, H. (2005). Transforming health care from the inside out: Advancing evidence-based practice in the 21st Century. *Journal of Professional Nursing, 21*(6), 335–344.
- Fineout-Overholt, E., Melnyk, B. M., Stillwell, S. B., & Williamson, K. M. (2010). Evidence-based practice step by step: Critical appraisal of the evidence: Part I. *The American Journal of Nursing, 110*(7), 47-52.
- Fineout-Overholt, E., Melnyk, B. M., Stillwell, S. B., & Williamson, K. M. (2010). Evidence-based practice, step by step: Critical appraisal of the evidence: Part II: Digging deeper--examining the "keeper" studies. *The American Journal of Nursing, 110*(9), 41-48.
- Fineout-Overholt, E., Melnyk, B. M., Stillwell, S. B., & Williamson, K. M. (2010). Evidence-based practice, step by step: Critical appraisal of the evidence: Part III. *The American Journal of Nursing, 110*(11), 43-51.
- Greer, N., Mosser, G., Logan, G., & Halaas, G. W. (2000). A practical approach to evidence grading. *Journal on Quality Improvement, 26*(12), 700-712.
- Guyatt, G., Gutterman, D., Baumann, M. H., Addrizzo-Harris, D., Hylek, E. M., Phillips, B., Raskob, G., Lewis, S. Z., & Schunemann, H. (2006). Grading strength of recommendations and quality of evidence in clinical guidelines. *Chest, 129*, 174-181.
- Guyatt, G. H., Oxman, A. D., Vist, G. E., Kunz, R., Falck-Ytter, Y., Alonso-Coello, P., & Schuneman, H.J. (2008). GRADE: An emerging consensus on rating quality of evidence and strength of recommendations. *British Medical Journal, 336*, 924-926.
- Hadorn, D. C., Baker, D., Hodges, J. S., & Hicks, N. (1996). Rating the quality of evidence for clinical practice guidelines. *Journal of Clinical Epidemiology, 49*(7), 749-754.
- Jagoda, A. S., Bazarian, J. J., Bruns Jr, J. J., Cantrill, S. V., Gean, A. D., Howard, P. K., Ghajar, J., Riggio, S., Wright, S. W., Wears, R. L., Bakshy, A., Burgess, P., Wald, M. M., & Whitson, R. R. (2008). Clinical Policy: Neuroimaging and Decisionmaking in Adult Mild Traumatic Brain Injury in the Acute Setting. *Annals of Emergency Medicine, Volume 52*, Issue 6, December 2008, Pages 714-748

- Melnyk, B. M., & Fineout-Overholt, E. (2005). *Evidence-based practice in nursing and healthcare: A guide to best practice*. 2nd Ed. Philadelphia, PA: Wolters Kluwer/Lippincott, Williams, & Wilkins.
- Polit, D. F., & Hungler, B. P. (1999). *Nursing research: Principles and methods*. Philadelphia, PA: Lippincott.
- Public Health Resource Unit, England. (2006). *Critical appraisal skills program (CASP); Making sense of the evidence*. Retrieved from http://www.phru.nhs.uk/Doc_Links/Qualitative%20Appraisal%20Tool.pdf
- Rutgers University: *Format for written critique of a nursing research article*. Retrieved from http://www.camden.rutgers.edu/dept-pages/nursing_ugrad/Fall2004/Research/Research_Written_Critique_Format_F04.pdf
- Sackett, D. L., Straus, S. E., Richardson, W. S., Rosenberg, W., & Haynes, R. B. (2000). *Evidence-based medicine: How to practice and teach EBM*. London, England: Churchill Livingstone.
- Schriger, D.L., Cantrill, S.V., Greene, C.S. (1993) The origins, benefits, harms, and implications of emergency medicine clinical policies. *Annals of Emergency Medicine*, 22 (3), 597 -602.
- Stillwell, S.B., Fineout-Overholt, E., Melnyk, B.M. & Williamson, K. M. (2010). Evidence-based practice, step by step: Asking the clinical question: A key step in evidence-based practice. *The American Journal of Nursing*, 110(3), 58-61.
- Stillwell, S.B., Fineout-Overholt, E., Melnyk, B.M. & Williamson, K. M. (2010). Evidence-based practice, step by step: Searching for the evidence. *The American Journal of Nursing*, 110(5), 41-47.
- Treloar, C., Champness, S., Simpson, P.L., & Higginbotham, N. (2000). Critical appraisal checklist for qualitative research studies. *Indian Journal of Pediatrics*, 67(5), 347-351.
- University of Glasgow; Department of General Practice. (n.d.). *Critical appraisal checklist for an article on qualitative research*. Retrieved from http://www.gla.ac.uk/media/media_64038_en.pdf
- University of Salford; A Greater Manchester University. (2009). *Health Care Practices R & D Unit. Tools for Critical Appraisal*. Retrieved from <http://www.fhsc.salford.ac.uk/hcprdu/critical-appraisal.htm>

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Table 1. Determinants of the Level of Recommendation

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Component	Decision Rule	
1	<p>Grade the Levels of the Evidence (Melnik & Fineout-Overholt, 2005)</p> <ul style="list-style-type: none"> I. Evidence from a systematic review or meta-analysis of all relevant randomized controlled trials or evidence-based clinical practice guidelines based on systematic reviews of RCTs II. Evidence obtained from at least one properly designed randomized controlled trial III. Evidence obtained from well-designed controlled trials without randomization IV. Evidence obtained from well-designed case control and cohort studies V. Evidence from systematic reviews of descriptive and qualitative studies VI. Evidence from a single descriptive or qualitative study VII. Evidence from opinion of authorities and/or reports of expert committees 	<p>Strength of the Evidence =</p> <hr/> <p>(Determine the overall level of evidence strength based on the aggregate of data available from all sources)</p>
2	<p>Grade the Quality of the Evidence</p> <ul style="list-style-type: none"> I. Acceptable Quality: No concerns II. Limitations in Quality: Minor flaws or inconsistencies in the evidence III. Major Limitations in Quality: Many flaws and inconsistencies in the evidence IV. Not Acceptable: Major flaws in the evidence <p>Specify any study design concerns:</p> <p>_____</p> <p>_____</p>	<p>Overall Quality of the Evidence: (Use I - IV scale)</p> <ul style="list-style-type: none"> I. Acceptable II. Limitations in Quality of the Evidence III. Major Limitations in the Quality of the Evidence IV. Not Acceptable
3	<p>Grade the Relevance and Applicability of the Evidence to Emergency Nursing Practice</p> <ul style="list-style-type: none"> 1. Is there consensus in the Subcommittee that the evidence has relevance and applicability to emergency nursing practice? 	<p>Relevance & Applicability</p> <p><input type="checkbox"/> YES <input type="checkbox"/> NO</p>

Table 2. Levels of Recommendation for Practice

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Description	Level
<p>High</p> <p>Recommendation:</p> <ul style="list-style-type: none"> • Reflects a high degree of clinical certainty. • Based on availability of high quality level I, II and/or III evidence available using Melnyk & Fineout-Overholt grading system (Melnyk & Fineout-Overholt, 2005). • Based on consistent and good quality evidence; has relevance and applicability to emergency nursing practice. • Is beneficial. 	<p><input type="checkbox"/> A – High</p>
<p>Moderate</p> <p>Recommendation:</p> <ul style="list-style-type: none"> • Reflects moderate clinical certainty. • Based on availability of Level III and/or Level IV and V evidence using Melnyk & Fineout-Overholt grading system (Melnyk & Fineout-Overholt, 2005). • There are some minor or inconsistencies in quality evidence; has relevance and applicability to emergency nursing practice. • Is likely to be beneficial. 	<p><input type="checkbox"/> B – Moderate</p>
<p>Weak</p> <p>Recommendation:</p> <ul style="list-style-type: none"> • Level V, VI and/or VII evidence available using Melnyk & Fineout-Overholt grading system (Melnyk & Fineout-Overholt, 2005) -Based on consensus, usual practice, evidence, case series for studies of treatment or screening, anecdotal evidence and/or opinion. • There is limited or low-quality patient-oriented evidence; has relevance and applicability to emergency nursing practice. • Has limited or unknown effectiveness. 	<p><input type="checkbox"/> C – Weak</p>
<p>Not Recommended for Practice</p> <ul style="list-style-type: none"> • No objective evidence or only anecdotal evidence available; or the supportive evidence is from poorly controlled or uncontrolled studies. • Other indications for not recommending evidence for practice may include: <ol style="list-style-type: none"> 1. Conflicting evidence. 2. Harmfulness has been demonstrated. 3. Cost or burden necessary for intervention exceeds anticipated benefit 4. Does not have relevance or applicability to emergency nursing practice • There are certain circumstances in which the recommendations stemming from a body of evidence should not be rated as highly as the individual studies on which they are based. For example: <ol style="list-style-type: none"> 1. Heterogeneity of results. 2. Uncertainty about effect of magnitude and consequences. 3. Strength of prior beliefs. 4. Publication bias. 	<p><input type="checkbox"/> Not Recommended</p>

Table 3. ENR Development Process[Top](#)

Process	Format of Implementation
Receive project orientation and topic assignments	Committee Conference call
Transform and narrow topic into a clinical question; recruit Content Experts (optional)	Subcommittee
Review articles, complete critique worksheets, and refine the clinical question	Subcommittee
Develop preliminary definition of the clinical question and the background information including significance	Subcommittee
Create preliminary evidence table using the evidence-appraisal table template	Subcommittee
Review, discuss, and refine the evidence-appraisal table as a group	Committee Meeting
Determine the level of recommendation	Committee Meeting
Refine the draft ENR including definition, background, evidence-appraisal table and level of recommendation	Subcommittee
IENR Advisory Council reviews the ENR	IENR
Refine the final version	Committee Conference Call
Create final product(s)	ENA Staff with Committee Input

Table 4: Time frame/Schedule of Process for ENR Development

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Activities	Y1 Q3	Y1 Q4	Y2 Q1	Y2 Q2	Y2 Q3	Y2 Q4
July of Y1: Potential new ENRs identified by ENR Committee	X					
Fall Y1: ENA Board of Directors approves final list of ENRs to be developed in following Year		X				
<ul style="list-style-type: none"> Assign Subcommittees for ENR development Recruit Content Experts (optional) Finalize PICOT for ENR Critique of Literature Development of Reference Table of the literature 			X			
<ul style="list-style-type: none"> Finalize the Reference table Draft of ENR for ENR committee meeting mid-year 				X		
<ul style="list-style-type: none"> Critique and input on Draft of ENR by ENR Committee & IENR representative(s) 				X		
<ul style="list-style-type: none"> Draft of ENR completed Literature search conducted to include any additional current references since beginning of the year and/or since last literature search Final review by ENR committee and IENR committee 					X	
<ul style="list-style-type: none"> Final version of ENR for approval by ENA Board of Directors Final ENR uploaded to ENA website ENR submitted to the National Guidelines Clearinghouse ENR submitted to <i>Journal of Emergency Nursing</i> 						X

Figure 1. ENA Model for Determining Level of Recommendation

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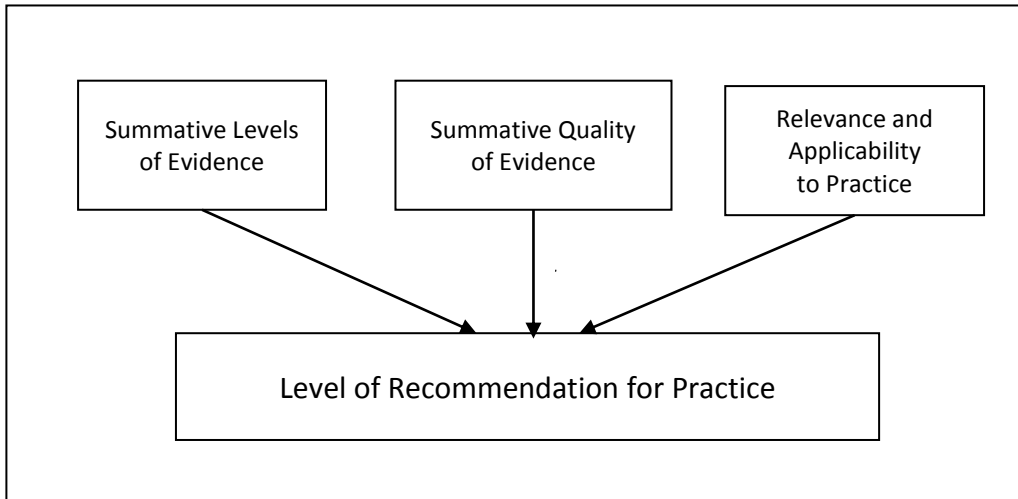
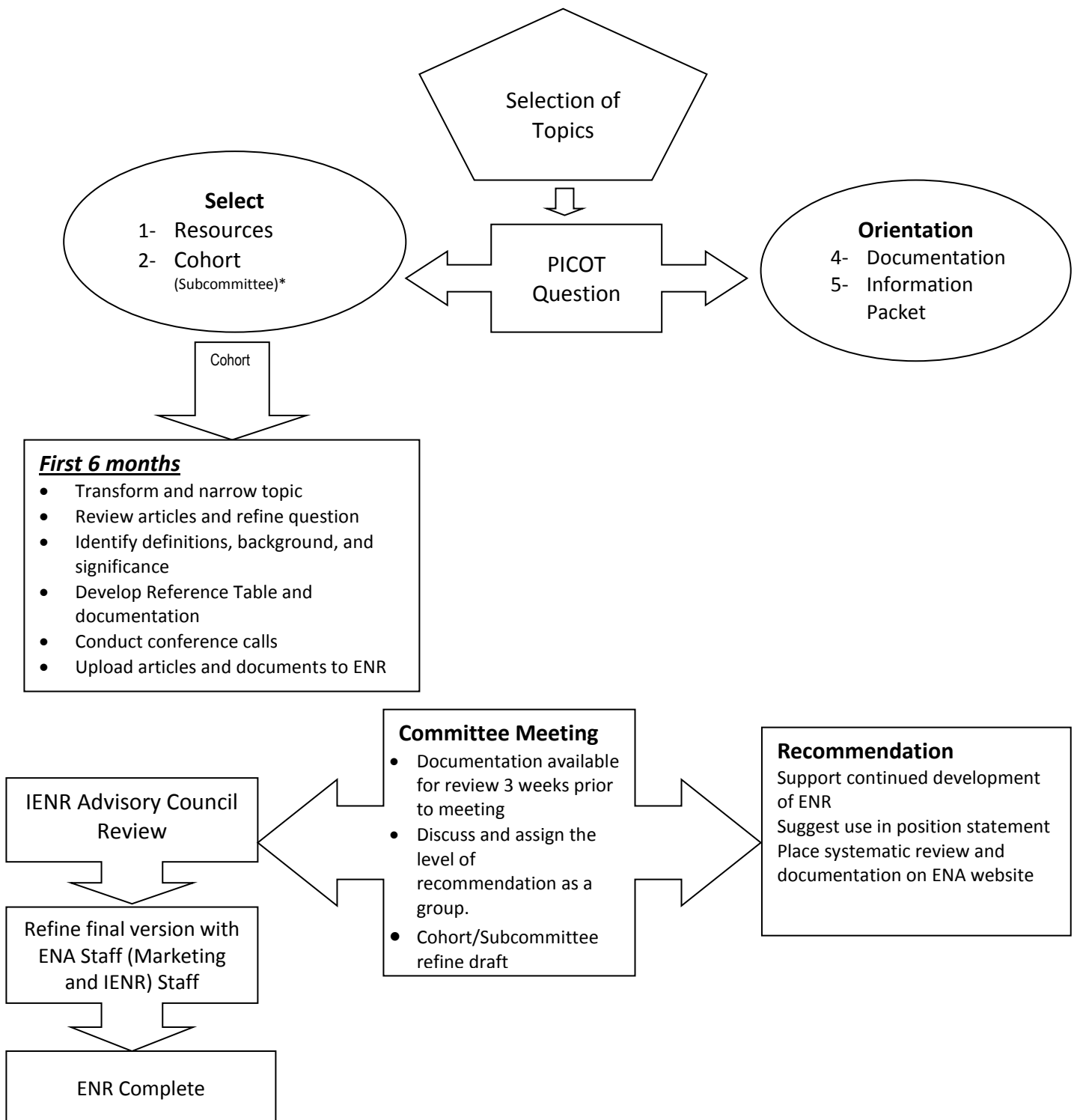


Figure 2. ENR Development Process Map

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Appendix A. PICOT Development

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PICOT DEVELOPMENT

Clearly formulating the clinical question is the key to getting usable information. Clear questions allow for a better utilization of time, resources, and facilitating search strategies. The framework utilized to define the question is PICOT:

- Patient Population - What patient population/problem are you trying to address?
- Intervention (area of interest) - What will you do for the patient or problem?
- Comparison Intervention or Groups – What is an alternate group or intervention?
- Outcome – What is the desired effect or improvement for the patient/population?
- Time – Timeframe

Using the PICOT framework allows for clear parameters when searching the literature and evaluating the application in the ED. The final clinical question that appears in the ENR does not need to follow format but should take all elements into consideration when possible.

Example 1

P	I	C	O	T
Patient population	Intervention	Comparison	Outcome	Time
Low speed MVC patients in spinal precautions in the emergency department	Clearance by RN (assessed and removed from precautions per protocol by an RN)	Removed from precautions by a physician	Have more positive radiological findings	During their emergency department stay

An example of a PICOT question:

Do low speed MVC patients in spinal precautions in the emergency department who are assessed and are cleared (have spinal precautions removed per protocol) by an RN have more positive radiological findings during their ED stay than patients whose precautions are removed by physicians?

Example 2

P	I	C	O	T
Patient population	Intervention	Comparison	Outcome	Time
Do patients with chest pain in the emergency department	cardiac enzyme profiles every 6 hours x 3	Cardiac enzyme profiles 12 hours x 2	Have fewer complications	In the first 24 hours of admission

An example of a PICOT question:

Do chest pain patients in the emergency department who have cardiac injury (enzyme) profiles every 6 hours times 3 vs. every 12 hours times 2 have fewer complications during their first 24 hours of admission?

Appendix B. Resources for the Creation of ENRs

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Duke University Medical Center Library	http://guides.mclibrary.duke.edu/ebm
Formulating a PICOT question	http://www.usc.edu/hsc/ebnet/ebframe/PICO.htm
Joanna Briggs Institute	http://www.joannabriggs.edu.au/About%20Us
UNC Library (EBP tutorial)	http://www.hsl.unc.edu/Services/Tutorials/EBN/intro.htm
British Medical Journal Evidence Centre	http://group.bmj.com/products/evidence-centre

Research Methods

Research Tutorial	http://allpsych.com/researchmethods/researchcontents.html
Developing Questionnaires	http://www.managementhelp.org/businessresearch/questionnaires.htm

Research Terms

Cochrane Tutorial	http://www.cochrane.org/glossary
Health evidence Canada	http://www.health-evidence.ca/glossary_entries/glossary_of_terms#76
Clinical Trials Glossary	http://clinicaltrials.gov/ct2/info/glossary
Research and IRB terms	http://www.coloradocollege.edu/dean/oir/irb/glossary.htm

APA Resources

American Psychological Association	www.apastyle.org
Purdue APA	http://owl.english.purdue.edu/owl/resource/560/01/
Wooster APA	http://www.wooster.edu/Academics/Areas-of-Study/Psychology
University of Illinois - APA	http://www.cws.illinois.edu/workshop/writers/citation/apa/

Statistics Resources

Statistics Glossary	http://www.stats.gla.ac.uk/steps/glossary/index.html
Statistics Glossary	http://www.statsoft.com/textbook/glosfra.html

National Databases

Cochrane evidence-based reports	www.cochrane.org
National Library of Medicine (NLM of NIH)	http://www.nlm.nih.gov/
IOM - Hospital-Based Emergency Care: At the Breaking Point	http://www.iom.edu/CMS/3809/16107/35007.aspx
Agency for Healthcare Research and Quality (AHRQ)	http://www.ahrq.gov/
AHRQ evidence-based practice	http://www.ahrq.gov/clinic/epcix.htm
ESI Version 4: Implementation Handbook	http://www.ahrq.gov/research/esi/esihandbk.pdf
Merck Manual Online	http://www.merck.com/mmpe/index.html
National Guideline Clearinghouse	http://www.guideline.gov/
Evidence-based Nursing Journal	http://ebn.bmj.com/

Appendix C. Reference Table Template

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Article File Name (1st Author _Publication _Year)	Year	Full APA Citation	Key words	ENR Committee Reviewer	Type of Pub (Research, review article, letter to editor, etc) **Note if endorsed by Prof Org	Research Purpose/ Questions/ Hypothesis	Design/ Method (prospective , controlled, descriptive, variables, etc) ***IRB approval?	Sample (N, randomized, convenience, population, etc) Setting (ED, critical care, urban, rural, community hospital, academic medical center, etc)	Measures/ Instruments/ Appropriate Statistical Analysis	Findings/ Implications / Conclusions re: PICOT question (e.g. Relative Risk Ratios, p value, confidence intervals)	Generalizable/ Relevance to Practice/ Feasibility	Limitations for both study design and results	Overall Quality of Research including comments (4-point scale)	Level of Evidence including comments (7-point scale)	Final Disposition 1- Evidence Table, 2-Other Resources Table 3-Do Not Include
Make sure this is identical to how article file is named .		Include DOI when available.	Pertaining to article.	Initials		Use direct quote. Include page #.	IRB: yes, no, or not stated.	Both should be included.	Indicate specific brand/model of any devices used.	If conclusion does not fully apply to PICOT, include explanation of how it does.					Include notes for each article to explain why assigned 1, 2, or 3

APA format must be used for references.

If you have questions on vernacular or research terms see resources page.

Utilize Appendix D: Critical Appraisal of Evidence Guide for reviewing elements of the study.

Utilize Table 1 for leveling information.

Appendix D. ENA Critical Appraisal of Evidence Guide

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Source: Is the study report from a peer-reviewed publication?

Purpose

Purpose of Study

Is the purpose of the study clearly stated?

Significance

1. Does the investigator provide a good argument for significance?
2. Does the investigator provide a rationale for why the study is being conducted?
3. Does the study have the potential to help solve or provide further data for evaluating a problem that is currently faced in clinical practice, education or research?
4. Is the study relevant to emergency nursing practice, education and research?

Problem statement

Is the problem statement clear and concise?

Background/Literature Review

1. Does the review of literature follow a logical sequence?
2. Does the author review a sufficient amount of literature? Does the literature review include research done within past five years? Does the literature review include historical and/or classical research?
3. Does the investigator use primary sources?
4. Does the investigator identify gaps in the research literature and support the need and design of the present study?
5. Does the literature review reflect the current state of science?

Theoretical Framework

1. Is there a theoretical/conceptual framework identified?
2. If no framework is provided, is it difficult to understand the relationships among variables in the study?
3. Is the identified conceptual framework relevant to the research area and are appropriate relationships among major variables identified?
4. Did the framework guide the methods and conclusions?

Research Questions/Hypotheses

1. Is the research question(s) clearly stated?
2. Are hypotheses specified, if applicable?
3. Are the hypotheses appropriate and precisely stated in a format that allows for testing?
4. Is there a logical consistency between purpose and research questions/hypotheses?

Methodology

Does the research approach fit the purpose of the study?

Design - Quantitative

1. Is the design appropriate for the research questions?
2. Was the study longitudinal or cross-sectional? Was the amount of data gathered appropriate for the research question and design?
3. If the study involves interventions was it quasi- or pre-experimental? Was this appropriate?

4. If the study involves no interventions was non-experimental (no manipulation of independent variable) appropriate?

Design – Qualitative

1. Is the design/methodology identified and appropriate?
2. Are the language and concepts consistent with the approach?
3. Does the investigator report any preconception or bias?
4. Is observational or interview experience described?

Variables

1. Are the type of variables (independent and dependent) clearly stated?
2. Are the concepts clearly and operationally defined?

Validity

1. Is the data collection technique specified, including inter-rater reliability/inter-observer agreement if applicable to the study? Does the study design effectively control sources for error/bias? If not, is it justified?
2. When present, are the potential threats to internal and external validity identified and discussed?
3. For qualitative studies, was the relationship between investigators and subjects as well as any bias addressed adequately?

Sample

1. Is sampling frame (population) identified and sampling method described?
2. Is the sample size adequate? Is a power analysis performed to show that the sample for the study is adequate, given the number of variables, to affect size and design?
3. Are the inclusion and/or exclusion criteria clear and appropriate?
4. Does the sample composition and size reflect study needs?

Data Collection

1. Are methods for data collection described/appropriate?
2. Are data collector(s) qualified?
3. Were the methods of data collection used reliable and independently verifiable?
4. Is there evidence of reflexivity, credibility and/or transferability for qualitative research?

IRB

1. Was IRB approval obtained for the study?
1. Is there adequate assurance that the rights of human subjects were protected?
2. Were the subjects pressured to participate or their responses influenced in any way?

Setting and Location

Are the setting and location for the study specified and clear? Was the setting appropriate for the study?

Measures/Instruments

Quantitative

1. Were the instruments appropriate to gather the information relevant to the research question(s)?
2. Was reliability testing described and adequate for the instruments/measures used in the study?
3. Was the validity testing described and adequate for the instruments/measures used in the study?

Qualitative

1. Did the investigator try to enhance trustworthiness of the study?
2. Did the investigator try to enhance and appraise the credibility of the data?
3. Were the findings dependable, confirmable and transferable?

Analysis

Quantitative

1. Are methods for data analysis consistent with research design and question/hypothesis?
2. Are the statistical methods for analysis described and appropriate?
3. Are appropriate statistical analysis methods being used according to level of measurement, sample size, sampling method?
4. Are the statistical findings adequately reported?

Qualitative

1. Was the data analysis rigorous?
2. Was the data transcribed/analyzed appropriately?
3. Were themes/concepts derived from the data?

Major Findings, Conclusions and Limitations

Findings and Conclusions

1. Are the results for each hypothesis clearly presented and supported?
2. Do the figures and tables help to explain the results?
3. Are results described within the theoretical framework and supporting literature?
4. Are conclusions based on the results and related to the hypotheses'?
5. Are generalizations made within the scope of the results and findings?
6. Does the data support the findings?

Limitations

1. Are study limitations identified?
2. Are suggestions for future research identified?

Implications

Generalizability

Are the findings generalizable?

Relevance to Practice

1. Are implications of findings discussed appropriately (i.e., for practice, education and research)?
2. Are the findings clinically significant?
3. Are the findings relevant to emergency nursing practice?

Applicability to Practice

1. Are the study findings feasible for nurses to apply to practice?
2. Do the study findings offer solutions that provide benefits that outweigh the risks?
3. Is the population, intervention or phenomenon described applicable to the emergency environment?
4. Will the benefits affect a large number of clients or outcomes?
5. Does the study contradict other innovations or research?
6. Are the results and implementation under the authority of nursing?
7. What is the cost/benefit ratio?
8. Does the study help clarify a concept, theory or relationship with a population?

Overall Quality of the Research

1. Does the quality of the study meet the criterion of scientific merit and can it be used as evidence for practice?
2. Identify if there are major or minor flaws in study design for the following:
 - a. Selection of patients
 - b. Allocation of patients to treatment groups
 - c. Therapeutic regimen
 - d. Study administration
 - e. Withdrawals from the study
 - f. Patient blinding (in randomized clinical trials only)
 - g. Outcome measurement
 - h. Statistical analysis
3. Major flaw=A potential bias of the study which could invalidate the study's findings.
4. Minor flaw=A small divergence from usual or best practices, but does not create a partiality which would suggest invalid study findings.
5. Three minor flaws should be considered an equivalent of a major flaw.

Appendix E. Evidence Table Template

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ENR Title

Publication Date

Reference (Author, Year, Title)	Research/Purpose Questions/Hypothesis	Design/Sample Setting	Variables/Measures Analysis	Findings/Implications	Overall Quality of Evidence (4-point scale)*	Level of Evidence (7-point scale)**

*Grading the Quality of the Evidence

- I. Acceptable Quality: No Concerns
- II. Limitations in Quality: Minor flaws or inconsistencies in the evidence
- III. Major Limitations in Quality: Many flaws and inconsistencies in the evidence
- IV. Not Acceptable: Major flaws in the evidence

**Grading the Levels of the Evidence (Melnyk & Fineout-Overholt, 2005)

- I. Evidence from a systematic review or meta-analysis of all relevant randomized controlled trials or evidence-based clinical practice guidelines based on systematic reviews of RCTs
- II. Evidence obtained from at least one properly designed randomized controlled trial
- III. Evidence obtained from well-designed controlled trials without randomization
- IV. Evidence obtained from well-designed case control and cohort studies
- V. Evidence from systematic reviews of descriptive and qualitative studies
- VI. Evidence from a single descriptive or qualitative study
- VII. Evidence from opinion of authorities and/or reports of expert committees

Appendix F. AGREE Worksheet

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Reference Evaluated: _____

	Strongly agree	Agree	Dis-agree	Strongly disagree	Comments
1. The overall objective(s) of the guideline is (are) specifically described.	4	3	2	1	
2. The health question(s) covered by the guideline is (are) specifically described.	4	3	2	1	
3. The population (patients, public, etc.) to whom the guideline is meant to apply are specifically described.	4	3	2	1	
4. The guideline development group includes individuals from all the relevant professional groups.	4	3	2	1	
5. The views and preferences have been sought.	4	3	2	1	
6. The target users of the guideline are clearly defined.	4	3	2	1	
	4	3	2	1	
7. Systematic methods were used to search for evidence.	4	3	2	1	
8. The criteria for selecting the evidence are clearly described.	4	3	2	1	
9. The strengths and limitations of the body of evidence are clearly described.	4	3	2	1	
10. The methods used for formulating the recommendations are clearly described.	4	3	2	1	
11. The health benefits, side effects and risks have been considered in formulating the recommendations.	4	3	2	1	
12. There is an explicit link between the recommendations and the supporting evidence.	4	3	2	1	
13. The guideline has been externally reviewed by experts prior to its publication.	4	3	2	1	
14. A procedure for updating the guideline is provided.	4	3	2	1	
15. The recommendations are specific and unambiguous.	4	3	2	1	

	Strongly agree	Agree	Dis-agree	Strongly disagree	Comments
16. The different options for management of the condition or health issue are clearly presented.	4	3	2	1	
17. Key recommendations are easily identifiable.	4	3	2	1	
19. The guideline provides advice and/or tools on how the recommendations can be put into practice.	4	3	2	1	
18. The guideline describes facilitators and barriers to its application.	4	3	2	1	
20. The potential resource implications of applying the recommendations have been considered.	4	3	2	1	
21. The guideline presents monitoring and/or auditing criteria.	4	3	2	1	
22. The views of the funding body have not influenced the content of the guideline.	4	3	2	1	
23. Competing interests of guideline group members have been recorded and addressed.	4	3	2	1	

Rate the overall quality of this guideline.	1: Lowest possible quality	2	3	4	5	6	7: Highest possible quality
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I would recommend this guideline for use.	Yes	Yes, with modifications	No
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NOTES:

Appendix G. Emergency Nursing Resources Evaluation Worksheet

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ENR Title:

Evaluated by:

Date:

	Clear and well developed	Needs some clarification or further development	Needs substantial clarification or substantial development	Comments
1. Problem statement/ PICOT Question	<input type="checkbox"/> The problem statement is specific and well delineated	<input type="checkbox"/> The problem statement is somewhat non-specific regarding significant aspects of the problem.	<input type="checkbox"/> The problem statement does not state the problem clearly.	
2. Background/ Significance	<input type="checkbox"/> The Background/ significance provide a clear overview of the problem statement.	<input type="checkbox"/> The Background/ significance need some further clarification/ development to better address problem statement being addressed by ENR.	<input type="checkbox"/> The Background/ significance are inadequate to address the problem statement being addressed in the ENR.	
3. Summary of Literature Review	<input type="checkbox"/> The literature review summary is a clear synthesis of relevant literature reflecting the scope of the ENR based on the PICOT question for the ENR.	<input type="checkbox"/> The summary of the literature review needs further clarification/ development in a few areas to more adequately synthesize the literature pertaining to the PICOT question for ENR.	<input type="checkbox"/> The literature review summary is inadequate to support the problem statement/ PICOT	
4. Evidence Appraisal Table	<input type="checkbox"/> The evidence table succinctly summarizes each evidence reference. The content of the evidence reference summarized provides sufficient information to evaluate reference for the ENR (e.g., to derive level and quality of evidence, to grade the relevance, to determine recommendations for practice).	<input type="checkbox"/> The evidence table needs further synthesis /clarification or development for some of evidence reference(s).The content of the evidence references summarized provides inadequately synthesized or insufficient information to evaluate reference for the ENR (e.g., to derive level and quality of evidence, to grade the relevance, to determine recommendations for practice).	<input type="checkbox"/> The evidence table needs substantial revision of the synthesis for many or all evidence reference (s).The content of the evidence references summarized is an unacceptable synthesis to evaluate reference for the ENR (e.g., to derive level and quality of evidence, to grade the relevance, to determine recommendations for practice).	
5. Overall Quality of the Evidence I. Acceptable II. Limitations in quality of the evidence III. Major limitations in the quality of	<input type="checkbox"/> The ratings of the Levels of Evidence are supported by design.	<input type="checkbox"/> Information of the research/ comments/ narrative is somewhat incongruent with the overall conclusion regarding the quality of the evidence.	<input type="checkbox"/> Information/ comments/ narratives do not reflect the conclusion regarding the quality of the evidence.	

evidence IV. Not acceptable				
6. Grade the Levels of the Evidence*	<input type="checkbox"/> Agree with the grading of the levels of the evidence for each of the evidence references.	<input type="checkbox"/> There are some grading of the levels of evidence that are inconsistent with one or more of the evidence references.	<input type="checkbox"/> There are several evidence references that have been inconsistently graded based on the levels of evidence.	
7. Description Options/ Interventions and the Level of Recommendations	<input type="checkbox"/> The final recommendations are clearly defined and are relevant to the ENR PICOT question. There is comprehensive inclusion of all evidence findings reflected in the final recommendations.	<input type="checkbox"/> The final recommendations are somewhat unclear, and may not adequately reflect the scope of the ENR PICOT question. And/or there is not a comprehensive inclusion of all evidence findings reflected in the final recommendations.	<input type="checkbox"/> The final recommendations are not clear; and/or do not adequately reflect the scope of the ENR PICOT question. Furthermore, there is not a comprehensive inclusion of all evidence findings reflected in the final recommendations.	

*Level I: Evidence from a systematic review or meta-analysis of all relevant randomized controlled trials or evidence-based clinical practice guidelines based on systematic reviews of RCTs

Level II: Evidence obtained from at least one properly designed randomized controlled trial

Level III: Evidence obtained from well-designed controlled trials without randomization

Level IV: Evidence obtained from well-designed case control and cohort studies

Level V: Evidence from systematic reviews of descriptive and qualitative studies

Level VI: Evidence from a single descriptive or qualitative study

Level VII: Evidence from opinion of authorities and/or reports of expert committees

Appendix H. ENA Other Resources Table Template

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Reviewer Names:	Date Review Begun:	Date Review Completed:
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Reference	Description	Conclusions about (topic of ENR)

Appendix I. Executive Summary Template

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(Insert Topic) Executive Summary

Overview-Emergency Nursing Resources (ENRs) are evidence-based documents that facilitate the application of current evidence into everyday emergency nursing practice. ENRs contain recommendations based on a systematic review and critical analysis of the literature about a clinical question.

ENRs are created following the rigorous process described in ENA's Guidelines for the Development of Evidence-Based Emergency Nursing Resources. The Guidelines may also serve as a resource for others engaged in implementing evidence-based practice in emergency nursing. ENA believes that ENRs will have a positive impact on patient care and emergency nursing practice by bridging the gap between practice and currently available evidence.

Clinical Question-

Problem-

The _____ ENR may be accessed via this link _____

Description of Decision Options / Interventions and the Level of Recommendation- Conclusions and recommendations about _____:

Green- Level A (High) Recommendation- Based on consistent and good quality evidence; has relevance and applicability to emergency nursing practice

Yellow- Level B (Moderate) Recommendation- There are some minor inconsistencies in the quality of evidence; has relevance and applicability to emergency nursing practice.

Orange- Level C (Weak) Recommendation- There is limited or low-quality patient-oriented evidence; has relevance and applicability to emergency nursing practice.

Red: Not recommended based upon current evidence

(Insert Topic) Recommendations