



ROADTRIP! USING A CLINICAL INQUIRY ROADMAP TO GUIDE YOUR WAY!

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1

Clinical Inquiry

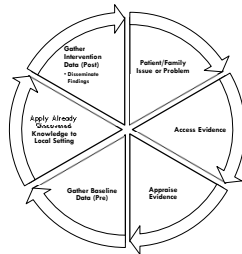
- Clinical practice is varied, complex, and often presents with thorny problems that clinicians struggle to solve
- Is a constellation of research and research-related activities
- Includes
 - Quality Improvement
 - EBP at the Point of Care
 - Primary Research
 - Secondary Research
- All types of clinical inquiry activities are necessary, and one is not more important than another

Stannard, 2014

2

Quality Improvement

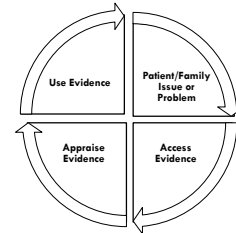
- Defined as the deliberate application and/or implementation of knowledge in local settings that has been previously discovered



3

Evidence-Based Practice at the Point of Care

- Defined as the utilization of all types of current evidence to guide decision making in health care
- Sources of evidence include data from research, expert consensus, and expert opinion



4

Research

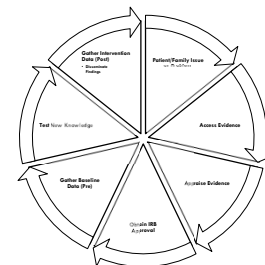
- Can take many forms, depending on the discipline and research question
- Divided into two major categories
 - Primary Research
 - Secondary Research



5

Primary Research


- Primary research is a systematic process that is discovery-oriented




6

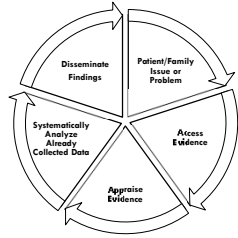
Secondary Research

-Involves the summary & analysis or synthesis of existing research

•Secondary analysis 

•Systematic review 

-Because no human subject contact is involved, IRB approval is not necessary



7

What is a Systematic Review?

- The identification, selection, appraisal, and summary of primary (or single) studies addressing a focused clinical question using methods to reduce the likelihood of bias
- Formal SRs are incredibly rigorous!
- The SR is a form of research--frequently referred to as secondary research
- Also referred to as a form of evidence synthesis
 - Stannard, 2022



8

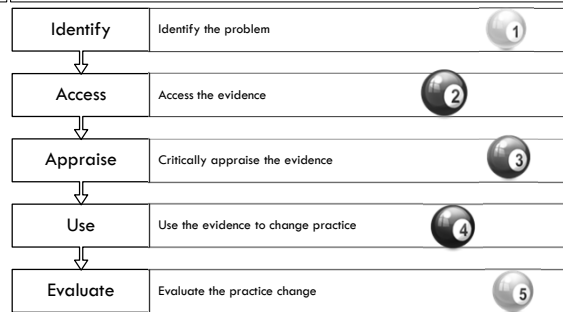
Online Databases of Systematic Reviews

- Cochrane Collaboration: quantitative health science reviews
 - Oxford, United Kingdom
- JBI (formerly known as the Joanna Briggs Institute): qualitative & quantitative nursing and health science reviews
 - Adelaide, Australia
- Campbell Collaboration: quantitative social science reviews
 - Oslo, Norway



9

Common Theme: Five Steps of EBP



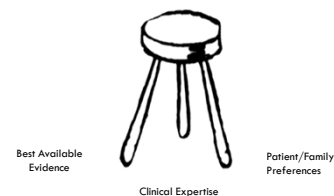
10

What is EBP?

Traditional Definition of EBP

- "Evidence-based medicine is the integration of the best research evidence with clinical expertise and patient values"
 - Sackett et al., 2000

Think of EBP as a 3-Legged Stool



11

12

What is EBP?

Practical
Definition of
EBP

- EBP for nursing is a way of entering the situation with curiosity and engagement that follows the nursing process by responding to the issue or problem using the best available evidence

* Stannard, 2019

13

Nursing Process

Assessment

Diagnosis

Planning

Implementation

Evaluation

14

Five Steps of EBP

Identify	Identify the Problem
Access	Access the Best Evidence
Appraise	Critically Appraise the Evidence
Apply	Apply the Change/Intervention to Practice
Evaluate	Evaluate the Change/Intervention in Practice <small>*Sackett & Rosenberg, 1995</small>

15

Putting It All Together...

Assessment & Diagnosis = Identify the Problem

Planning = Access the Best Evidence

Planning = Critically Appraise the Evidence

Implementation = Apply the Evidence

Evaluation = Evaluate the Change

16

Identifying the Problem



Quantitative Problem

- P = Population
- I = Intervention
- C = Comparison
- O = Outcome
- Example: What is the effectiveness of forced air warming as compared to resistive heating on the incidence of inadvertent postoperative hypothermia in adult patients following non-emergent general surgery?

Qualitative Problem

- PI = Phenomenon of Interest
- Co = Context
 - What is the lived experience of thermal comfort in adult patients following non-emergent general surgery in the post anesthesia phase of care?

Stannard, 2021

17

Accessing the Evidence



18

Sample PICO

Does coronary revascularization increase the long-term survival of adult end stage renal disease patients?

P	adults with end-stage renal disease
I	coronary revascularization
C	'standard practice'
O	long-term survival

□ (chronic kidney failure OR chronic renal failure OR chronic kidney disease OR chronic renal disease OR ckd[tiab] OR end stage renal disease OR ESRD OR 'kidney insufficiency' OR 'renal insufficiency' OR 'renal failure' OR 'kidney failure' OR hemodialfiltration OR hemodialysis OR dialysis OR kidney, artificial) AND (myocardial revascularization[mh:noexp] OR angioplasty, balloon, coronary OR atherectomy, coronary OR coronary artery bypass OR internal mammary coronary artery anastomosis OR myocardial revascularization OR coronary revascularization OR cardiac revascularization OR cabg OR angioplasty OR coronary stenosis/surgery[mh:noexp] OR atherectom[tiab] OR stent[tiab] OR stents[tiab] OR stenting[tiab] OR stents[mh] AND (coronary OR cardiac OR myocardial) OR percutaneous coronary intervention OR percutaneous intervention*) NOT (acute kidney[tj] OR acute renal[tj]) NOT (animals[mh] NOT humans[mh])

19

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Why You Need a Librarian in Your Life!

Can physical activity, dietary changes, and other lifestyle behavior interventions prevent/delay a range of chronic disease in Asian Americans?

20

How Do you Find the Best Available Evidence?

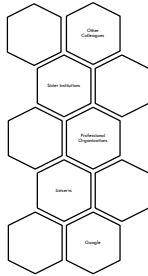
Databases

- PubMed
- CINAHL
- JBI
- Cochrane
- Campbell

Systematic Reviews

Stannard & Jacobs, 2021

Other Sources



21

Appraising the Evidence



22

Critical Appraisal of Evidence

- An examination of all aspects of evidence (research and non-research) includes:
 - A systematic and careful review of the content, the references, and the authors themselves
 - Evidence should be unbiased or, at the very least, balanced
- Goals are to judge the:
 - Strengths
 - Limitations
 - Trustworthiness
 - Meaning
 - and Applicability and relevance to the question/project/practice
- This is what helps you to determine where on the evidence pyramid the evidence falls!



23

Why Critically Appraise?

Ideally, you wouldn't have to, provided:

All evidence is high quality

All evidence pertains to your question/project/practice area

All evidence is relevant

24

What is EBP?

Practical Definition of EBP

- EBP for nursing is a way of entering the situation with curiosity and engagement that follows the nursing process by responding to the issue or problem using the best available evidence
 - Stannard, 2019

25

What is the Best Available Literature?

- Systematic reviews are the highest level of evidence, as they are a form of secondary research that pool high quality single studies into one research study
- RCTs fall below a rigorous systematic review, as they are single studies
- Quasi-experimental studies fall below RCTs because they lack randomization, which can lead to increased bias
- Observational studies (such as cohort, case-controlled, and descriptive studies) and qualitative studies fall below quasi-experimental studies, as they are conducted under less controlled conditions which can lead to increased bias
- Expert opinion, laboratory research, and expert consensus, while still important, are at the bottom of the evidence pyramid



Stannard, 2019

26



Using or Implementing the Evidence

27

Why Focus on Implementation?

- Getting best available evidence into practice
- Implementation is a complex, dynamic process that has no standard formula
- Defined as the art and science of embedding and enculturating an evidence based change in practice

The JBI Model of Evidence-based Healthcare



Overarching principles
Culture – Capacity – Communication – Collaboration

28



Evaluating the Practice Change

29

Common Theme...



30

Common Theme at Magnet Hospitals!



31

Evaluating the Practice Change

- The evidence has been put into practice, but does the change:
 - ▣ Improve patient/family outcomes?
 - ▣ Alter workflows leading to downstream effects?
 - ▣ Require extra resources for sustainability?
 - ▣ Increase patient/family/staff satisfaction?
 - ▣ Reduce costs?
 - ▣ Other?

5

32

Why Do I Need a Clinical Inquiry Roadmap?

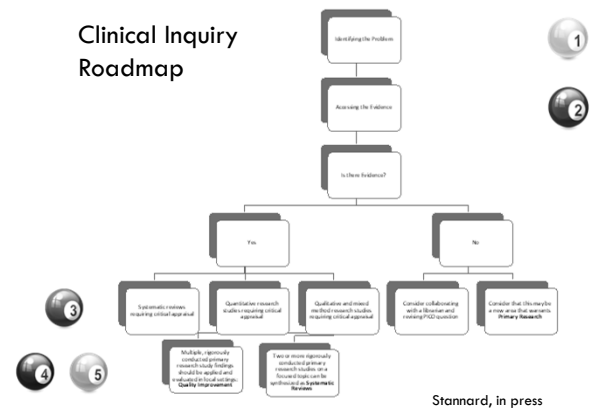


This is what we want to see in our practice: an easy to use guide that takes us to the treasure!

This is typically what we find instead: several paths and no clear direction as to which one to follow!

33

Clinical Inquiry Roadmap

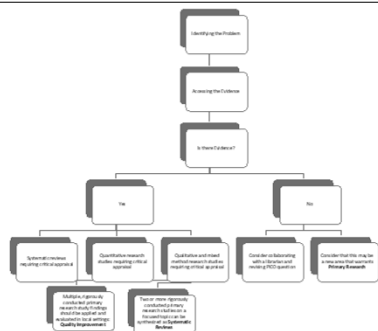


34

Clinical Inquiry Roadmap

With any complex project, the first 3 steps of EBP are typically required

Depending on one's answers, steps 4 and 5 may be implicated



35

Scenario 1



- You have provided your librarian with your PICO question and no results are returned
- Using the Clinical Inquiry Roadmap, what are your next steps?
 - ▣ Meet with the librarian, suggest new search terms, and re-run the search
 - ▣ Consider forming a team to launch a primary research study if no results are found with the revised search terms

36

Scenario 2



- You have identified a recurring problem in your unit that you would like to resolve
- You have identified some research studies that have tested the effectiveness of an intervention you would like to apply in your unit
- Using the Clinical Inquiry Roadmap, what are your next steps?
 - Consider forming a team to launch a quality improvement project

37

Scenario 3



- You have attended JBI Comprehensive Systematic Review training and would like to conduct a systematic review on a particular topic
- Your lit search showed 2 or more robust studies on this topic
- Using the Clinical Inquiry Roadmap, what are your next steps?
 - Write up your systematic review protocol for approval by JBI!
 - If there were fewer than 2 research studies on your topic, you would either need to change your topic or consider forming a team to conduct primary research

38

Scenario 4



- You have identified a common clinical issue in your unit and met with the librarian to see what has been published on this topic
- You receive a list from the librarian of 15 articles
- Using the Clinical Inquiry Roadmap, what are your next steps?
 - Critical appraisal is next, as you don't know what type of articles the list contains until you review them!

39

Scenario 5



- You have identified a common clinical issue in your unit and met with the librarian to see what has been published on this topic
- You receive a list from the librarian of 15 articles
- After critically appraising the articles, you find only quality improvement and review articles
- Using the Clinical Inquiry Roadmap, what are your next steps?
 - Meet with the librarian, suggest new search terms, and re-run the search
 - Consider forming a team to launch a primary research study if no results are found with the revised search terms

40

Summary

- There are four types of clinical inquiry, and all are equally important and necessary to answer different types of clinical questions
 - Quality improvement
 - EBP at the point of care
 - Primary research
 - Secondary research
- EBP can be practiced daily using the 5 steps:
 - Identify the problem
 - Access the literature
 - Critically appraise the literature
 - Use the evidence
 - Evaluate the practice change (if applicable)
- Using the Clinical Inquiry Roadmap can help guide next steps once the first 3 steps of EBP are completed



41

References

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- Stannard D, Jacobs W. Accessing and selecting the best available evidence: The second step in evidence-based practice. *AORN J.* 2021;114(4):336-338.



42



May The
Evidence Be
With You!

Questions?