What is Evidence-Based Practice Anyway?

Michele Farrington, BSN, RN, CPHON

39th Annual SOHN Congress & Nursing Symposium
September 27, 2015
1400 – 1500

Objectives
- Describe approaches to question practice and engage in a systematic process to initiate change.
- Discuss how evidence-based practice can guide quality initiatives in the clinical area.

Evidence-Based Practice (EBP)
- Evidence-based practice is the process of shared decision-making between practitioner, patient and others significant to them based on research evidence, the patient's experiences and preferences, clinical expertise or know-how, and other available robust sources of information. (STTI, 2008)

EBP Examples – Pain
- Patient preferences in pain assessment
  - Pain scale selection (children & older adults)
- Distraction helps reduce pain for children during procedures
  - Child life involved in every procedure
  - Make distraction tools/equipment available
  - Sucrose solution helps reduce pain in neonates

Conflict of Interest Disclosure
- No conflicts of interest or disclosures to report.

Conduct of Research
- A systematic, scientific process that generates new knowledge or validates existing knowledge.
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Research Examples – Pain
- Topical pain management for oral mucositis
- Translation research for distraction to improve adoption of the procedures
  - Target: Child life and nurses
- Validation of revised Iowa Pain Thermometer scoring (i.e., 0-10)
- Pain management to reduce delirium of older adults after cardiac surgery

Quality Improvement (QI)
- Use of data to monitor the outcomes of care processes and use of improvement methods to design and test changes to continuously improve the quality and safety of health care systems.

QI Examples – Pain
- Compliance with regulations related to pain assessment and re-assessment after an intervention
- Patient/family education about pain management
- Patient/parent satisfaction with pain control
- Monitoring diversion of controlled substances

Similarities Between EBP, Research, and QI
- Address a clinical issue
- Problem solving processes
- Collect evaluative data
- Reporting and publishing of results
- Evolving standards or interpretation
- Potential impact on patient care
- Organizational commitment & resources

Benefits of EBP, Research, and QI
- Improve patient care & outcomes
- Cost savings and cost avoidance
- Moving from tradition-based to evidence-based practice
- Empowerment and increased perceived professionalism of staff
- Stay ahead of changing regulatory standards

EBP Models
EBP Scholarship

- Follow an EBP process model
- Review and consider the body of evidence
- Application of implementation science to promote change
- Process and outcome evaluation

Knowledge Generation & Use Cycle

- Identify Questions
- Conduct Research
- Generate New Knowledge
- Disseminate Knowledge
- Apply Findings in Practice
- Quality Clinical Practice

EBP Models – Roadmap

- To introduce the EBP process to a multidisciplinary team
- To guide development of a project action plan
- To organize reporting of an EBP project
- To use in an EBP project publication

EBP Models/Frameworks

- Iowa Model of EBP to Promote Quality Care
  (Titler et al., 2001)
- Stetler Model of EBP
  (Stetler, 2001)
- A Model for EBP
  (Borokhov & Landry, 1999)
- The Johns Hopkins Nursing EBP Model
  (Newhouse et al., 2005)
- The ARCC Model
  (Melnyk et al., 2002)
- The ACE Star Model of Knowledge Transformation
  (Shaw et al., 2004)
- PARIHS Framework
  (Rahim et al., 1999)
- Knowledge Transfer Framework
  (Schwanbeck & Fretz, 1996)
- The Ottawa Model of Research Use
  (Logan & Graham, 1998)

Iowa Model of Evidence-Based Practice to Promote Quality Care

(Titler et al., 2001)
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Problem Focused Triggers
1. Risk Management Data
2. Process Improvement Data
3. Internal/External Benchmarking Data
4. Financial Data
5. Identification of Clinical Problem

Knowledge Focused Triggers
1. New Research or Other Literature
2. National Agencies or Organizational Standards & Guidelines
3. Philosophies of Care
4. Questions from Institutional Standards Committee

Is this Topic a Priority For the Organization?

Organizational Priority

Team

Form a Team

Evidence

Assemble Relevant Research & Related Literature

Critique & Synthesize Research for Use in Practice

Sufficient Research Base

Is There a Sufficient Research Base?

Base Practice on Other Types of Evidence
1. Case Reports
2. Expert Opinion
3. Scientific Principles
4. Theory

No

Piloting

Pilot the Change in Practice
1. Select Outcomes to be Achieved
2. Collect Baseline Data
3. Design Evidence-Based Practice (EBP) Guideline(s)
4. Implement EBP on Pilot Units
5. Evaluate Process & Outcomes
6. Modify the Practice Guideline

Yes
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Iowa Model Revised: Evidence-Based Practice to Promote Excellence in Health Care
(Buckwalter et al., in review)

Sacred Cows
- Old practice habits
- Practices considered routine and above dispute, that are particularly resistant to change

Sacred Cow Rustlers
- Kirsten Hannahan, DNP, ARNP
- Michele Wagner, MSN, RN, CNRN
- Grace Matthews, MSN, RN-BC
- Stephanie Stewart, MSN, RN, NIC
- Cindy Dawson, MSN, RN, CORLN
- Joseph Greiner, MSN, RN, CPHQ
- Jean Pottinger, MA, RN, CIC
- Paula Vernon-Levett, MS, RN, CCRN
- Debra Herold, MSN, RN, CORLN
- Rachel Hottel, MSN, RN, CNOR
- Laura Cullen, DNP, RN, FAAN
- Sharon Tucker, PhD, RN, PMHCNS-BC, FAAN
- Ann Williamson, PhD, RN, NEA-BC

Adopt Practice Change?

- Continue to Evaluate Quality of Care and New Knowledge
- Is Change Appropriate for Adoption in Practice?
- Institute the Change in Practice
- Monitor and Analyze Structure, Process, and Outcome Data
  - Environment
  - Staff
  - Cost
  - Patient and Family
- Disseminate Results
Systematic Evaluation Process

- Analyzed institution’s standards to identify Sacred Cow practices
- Surveyed nurse managers regarding Sacred Cow practice patterns on their unit
- Graded performance
- Identified priorities
- Determined strategies for improvement and responsibility for action plan

Grading Rubric

<table>
<thead>
<tr>
<th>Grade</th>
<th>Evidence to Support Practice is in the Standard of Practices (SOPs)</th>
<th>Practice is Consistent with Best Evidence</th>
<th>Other</th>
<th>How to Raise Your Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
<td>Update SOPs.</td>
</tr>
<tr>
<td>B</td>
<td>No</td>
<td>Yes</td>
<td></td>
<td>+ Practice is consistent with the SOP</td>
</tr>
<tr>
<td>C</td>
<td>No</td>
<td>Evidence is not known.</td>
<td></td>
<td>- Practice not consistent with the SOP</td>
</tr>
<tr>
<td>D</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td>Implementation/ translation project.</td>
</tr>
<tr>
<td>E</td>
<td>No</td>
<td>No</td>
<td></td>
<td>Safety issue.</td>
</tr>
<tr>
<td>F</td>
<td>No</td>
<td>No</td>
<td></td>
<td>Safety issue.</td>
</tr>
</tbody>
</table>

UIHC Report Cards

<table>
<thead>
<tr>
<th>2011 Sacred Code</th>
<th>2011 Grade</th>
<th>2011 Code</th>
<th>2011 Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institution of normal saline before endotracheal suctioning</td>
<td>A</td>
<td>Managing hypertension</td>
<td>F</td>
</tr>
<tr>
<td>Verification of gastric and post gastric tube placement</td>
<td>A-</td>
<td>Managing diarrhea and fecal incontinence</td>
<td>A-</td>
</tr>
<tr>
<td>Accurate BP measurement/Arterial line care</td>
<td>A-</td>
<td>Gastric residual volume and aspiration rate</td>
<td>B</td>
</tr>
<tr>
<td>Selection of ECG leads</td>
<td>D</td>
<td>Visitation policies</td>
<td>C+</td>
</tr>
<tr>
<td>Patient positioning and mobility</td>
<td>B</td>
<td>Nursing interventions for Catheter associated UTI</td>
<td>C</td>
</tr>
<tr>
<td>Neurological assessment</td>
<td>B</td>
<td>Cell phone use</td>
<td>D+</td>
</tr>
<tr>
<td>Management of intracranial hypertension</td>
<td>A</td>
<td>Accurate assessment of body temperature</td>
<td>C+</td>
</tr>
</tbody>
</table>

Diffusion of Innovations

Illusions about Implementation

- Implementation isn’t that difficult
- They know what to do
- We already provide the best care
- They just need to know the evidence
- If it works for them, it should work for us
- We just need to tell them what to do
- We just need to find the one right way to implement a practice change

Nature of the Innovation – Resistance to Change

- Nursing traditions – sacred cows
- Lack of authority and support
- Landmines
- It takes time
- Evidence can be overwhelming – access, amount, quality, ability (critique, synthesis, statistics, etc.)
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Diffusion Theory – Rogers

- Diffusion is the process by which an innovation is communicated through certain channels over time among the members of a social system

Diffusion Rate

Diffusion Model – Innovation-Decision Process

- I. Knowledge
- II. Persuasion
- III. Decision
- IV. Implementation
- V. Confirmation

Implementation Strategies

- Passive
- Active
- Interactive

EBP Implementation Model

Laura Cullen, DNP, RN, FAAN
Susan Adams, PhD, RN

- I. Create Awareness & Interest
- II. Build Knowledge & Commitment
- III. Promote Action & Adoption
- IV. Pursue Integration & Sustained Use

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Implementation Target Groups
- Clinicians
- Organizational Leaders
- Key Stakeholders
- Social System
- Organizational Context

Implementation Strategies for Evidence-Based Practice
(Cullen & Adams, 2012)

Evidence-Based Strategies
- Empirical Evidence in Healthcare*
  - Audit and feedback
- Little Evidence in Healthcare
  - Unit posters
  - E-mail broadcasts

Cullen & Adams, 2012

Phase I: Create Awareness & Interest

Goals
- What are the positives about the EBP?
- Think of this as marketing the EBP.
- Should be fun and eye catching.

Strategies
- Highlight advantage
- Highlight compatibility
- Sound bites

Cullen & Adams, 2012

Phase II: Build Knowledge & Commitment

Goals
- How do clinicians within a discipline like to learn?
- Build upon the natural tendency for clinicians to learn from each other.
- Keep an eye toward building the EBP into the system to make it easy to do it right.

Strategies
- Education
- Change agents
- Educational outreach or academic detailing
- Gap assessment/gap analysis
- Local adaptation and simplify
- Action plan

Cullen & Adams, 2012

Phase III: Promote Action and Adoption

Goals
- Use highly interactive and personal approaches.
- Demonstrate with return demonstration and reinforcement.
- Expand upon context focused strategies.

Strategies
- Educational outreach/academic detailing
- Try the practice change
- Change agents
- Audit key indicators
- Actionable and timely data feedback
- Report into quality improvement program

Cullen & Adams, 2012
Phase IV: Pursue Integration and Sustained Use

Goals
- Think about booster shots or periodic reinforcement.
- Build toward EBP becoming the norm or standard way to practice.
- Building EBP into the system is critical to help clinicians.

Strategies
- Peer influence
- Audit and feedback
- Report into quality improvement program

Questions/Comments
Michele-Farrington@uiowa.edu
The Iowa Model of Evidence-Based Practice to Promote Quality Care

Problem Focused Triggers
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5. Identification of Clinical Problem

Knowledge Focused Triggers
1. New Research or Other Literature
2. National Agencies or Organizational Standards & Guidelines
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Consider Other Triggers

Is this Topic a Priority For the Organization?
Yes

Form a Team

Assemble Relevant Research & Related Literature

Critique & Synthesize Research for Use in Practice

Is There a Sufficient Research Base?
Yes

Pilot the Change in Practice
1. Select Outcomes to be Achieved
2. Collect Baseline Data
3. Design Evidence-Based Practice (EBP) Guideline(s)
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5. Evaluate Process & Outcomes
6. Modify the Practice Guideline

No

Is Change Appropriate for Adoption in Practice?
Yes

Institute the Change in Practice

No

Continue to Evaluate Quality of Care and New Knowledge

Disseminate Results

Monitor and Analyze Structure, Process, and Outcome Data
• Environment
• Staff
• Cost
• Patient and Family

Base Practice on Other Types of Evidence:
1. Case Reports
2. Expert Opinion
3. Scientific Principles
4. Theory

Conduct Research

No

REQUESTS TO:
Department of Nursing
University of Iowa Hospitals and Clinics
Iowa City, IA 52242-1009

The Iowa Model Revised: Evidence-Based Practice to Promote Excellence in Health Care

Identify Triggering Issues / Opportunities
- Clinical or patient identified issue
- Organization, state, or national initiative
- Data / new evidence
- Accrediting organization requirements / regulations
- Philosophy of care

State the Question or Purpose

Is this topic a priority?
- Yes
  - Form a Team

- No
  - Consider another trigger

Form a Team

Assemble, Appraise and Synthesize Body of Evidence
- Conduct systematic search
- Weigh quality, quantity, consistency, and risk

Is there sufficient evidence?
- No
  - Conduct research

- Yes
  - Reassemble

Design and Pilot the Practice Change
- Engage patients and verify preferences
- Consider resources, constraints, and approval
- Develop localized protocol
- Create an evaluation plan
- Collect baseline data
- Develop an implementation plan
- Prepare clinicians and materials
- Promote adoption
- Collect and report post-pilot data

Is change appropriate for adoption in practice?
- No
  - Consider alternatives

- Yes
  - Redesign

Integrate and Sustain the Practice Change
- Identify and engage key personnel
- Hardwire change into system
- Monitor key indicators through quality improvement
- Reinforce as needed

Disseminate Results

◆ = a decision point

REQUESTS TO:
Department of Nursing / University of Iowa Hospitals and Clinics
Iowa City, IA 52242-1009 / Email: UIHCnursingresearchandebp@uiowa.edu

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### Implementation Strategies for Evidence-Based Practice

#### Create Awareness & Interest
- Highlight advantages* or anticipated impact*
- Highlight compatibility*
- Continuing education programs*
- Sound bites*
- Journal club*
- Slogans & logos
- Staff meetings
- Unit newsletter
- Unit inservices
- Distribute key evidence
- Posters and postings/fliers
- Mobile ‘show on the road’
- Announcements & broadcasts

#### Build Knowledge & Commitment
- Education (e.g., live, virtual or computer-based)*
- Pocket guides
- Link practice change & power holder/stakeholder priorities*
- Change agents (e.g., change champion*, core group*, opinion leader*, thought leader, etc.)
- Educational outreach or academic detailing*
- Integrate practice change with other EBP protocols*
- Disseminate credible evidence with clear implications for practice*
- Make impact observable*
- Gap assessment/gap analysis*
- Clinician input*
- Local adaptation* & simplify*
- Focus groups for planning change*
- Match practice change with resources & equipment
- Resource manual or materials (i.e., electronic or hard copy)*
- Case studies

#### Promote Action & Adoption
- Educational outreach/academic detailing*
- Reminders or practice prompts*
- Demonstrate workflow or decision algorithm
- "Elevator speech"
- Data collection by clinicians
- Report progress & updates
- Change agents (e.g., change champion*, core group*, opinion leader*, thought leader, etc.)
- Role model*
- Troubleshooting at the point of care/bedside
- Provide recognition at the point of care*

#### Pursue Integration & Sustained Use
- Celebrate local unit progress*
- Individualize data feedback*
- Public recognition*
- Personlize the messages to staff (e.g., reduces work, reduces infection exposure, etc.) based on actual improvement data
- Share protocol revisions with clinician that are based on feedback from clinicians, patient or family
- Peer influence
- Update practice reminders

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**Building Organizational System Support**

- Knowledge broker(s)
- Senior executives announcements
- Publicize new equipment

- Teamwork*
- Troubleshoot use/application*
- Benchmark data*
- Inform organizational leaders*
- Report within organizational infrastructure*
- Action plan*
- Report to senior leaders

- Audit key indicators*
- Actionable and timely data feedback*
- Non-punitive discussion of results*
- Checklist*
- Documentation*
- Standing orders*
- Patient reminders*
- Patient decision aids*
- Rounding by unit & organizational leadership*
- Report into quality improvement program*
- Report to senior leaders
- Action plan*
- Link to patient/family needs & organizational priorities
- Unit orientation
- Individual performance evaluation

- Audit and feedback*
- Report to senior leaders*
- Report into quality improvement program*
- Revise policy, procedure or protocol*
- Competency metric for discontinuing training
- Project responsibility in unit or organizational committee
- Strategic plan*
- Trend results*
- Present in educational programs
- Annual report
- Financial incentives*
- Individual performance evaluation

* = Implementation strategy is supported by at least some empirical evidence in healthcare

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Requests to:
Department of Nursing
Kimberly-jordan@uiowa.edu
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Iowa City, IA 52242-1009
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