Igniting and Sustaining Research and EBP to meet the Quadruple Aim in Healthcare: Key Strategies for Success

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The Quadruple Aim in Healthcare

- Enhance the patient experience (includes quality)
- Improve population health
- Decrease costs
- Improve the work life of healthcare providers

The State of U.S. Healthcare and Health

- There are up to 200,000 unintended patient deaths per year (more than auto accidents & breast cancer)
- Patients only receive about 55% of the care that they should when entering the healthcare system
- Poor quality healthcare costs the United States about 720 billion dollars every year
- The U.S. healthcare system could reduce its healthcare spending by 30% if patients receive evidence-based healthcare
- One in 2 Americans has a chronic condition and 1 in 4 have multiple chronic conditions
- One in 4 Americans, including children, have a mental health disorder

Current State of Health in Nurses

<table>
<thead>
<tr>
<th>Chronic Health Problems Among Physicians, Nurses, and Other Workers</th>
<th>Physicians</th>
<th>Nurses</th>
<th>Other workers</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Obesity</td>
<td>15</td>
<td>22</td>
<td>25</td>
</tr>
<tr>
<td>% High Blood Pressure</td>
<td>16</td>
<td>22</td>
<td>22</td>
</tr>
<tr>
<td>% High Cholesterol</td>
<td>21</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>% Diabetes</td>
<td>4</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>% Depression</td>
<td>7</td>
<td>14</td>
<td>13</td>
</tr>
<tr>
<td>% Heart Attack</td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>% Arthritis</td>
<td>9</td>
<td>11</td>
<td>10</td>
</tr>
<tr>
<td>% Cancer</td>
<td>8</td>
<td>5</td>
<td>4</td>
</tr>
</tbody>
</table>

Gallup-Healthways Well-Being Index
GHWLI
Every day, we make behavioral choices that influence our health and wellness outcomes.

Based on Evidence
What Do We Know?

People who have the following behaviors have 66% less diabetes, 45% less heart disease; 45% less back pain, 93% less depression, and 74% less stress

- **Physical activity**: 30 minutes 5 days per week
- **Healthy eating**: 5 fruits and vegetables per day
- **No smoking**
- **Alcohol in moderation**: 1 drink per day for women, 2 drinks per day for men

Kaylin’s Story:

Australian Dream Trip Turned Nightmare


The Merging of Science and Art: EBP within a Context of Caring & EBP Culture and Environment Results in the Highest Quality of Patient Care

Acting on the Evidence

- Strength of the Evidence + Quality of the Evidence = Confidence to Act!
Annual Guide to Clinical Preventive Services

- Evidence-based gold standard recommendations adapted for a pocket-sized book
- Formatted for clinicians to consult for clinical guidance in their daily practice
- Recommendations are presented in an indexed, easy-to-use format with at-a-glance charts

Patient Outcomes With and Without Evidence-Based Practice

The So What Factor in an Era of Healthcare Reform

- Conducting research and EBP projects with high impact potential to positively change healthcare systems, reduce costs and improve outcomes for patients and their families
- Key questions when embarking on a research study or an EBP project:
  - So what will be the end outcome of the study or EBP project once it is completed?
  - So what difference will the study or EBP project make in improving healthcare quality, costs or patient outcomes?

Why Must We Accelerate EBP?

Despite an aggressive research movement, the majority of findings from research often are not integrated into practice to improve outcomes

The gap between the translation of research into practice and policy is huge; It often takes decades to translate research findings into practice and policy

COPE (Creating Opportunities for Parent Empowerment): An Evidence-Based Program to Improve Outcomes in Critically Ill/Hospitalized Young Children, LBW Premature Infants & Parents

FUNDING FOR THIS WORK BY THE NATIONAL INSTITUTE OF NURSING RESEARCH
R01NR05077
NR05077-04S1

A 4 Day Shorter Length of Stay (LOS) for COPE Preterms Resulted in Cost Savings of $5000 per infant; 8 Day Shorter LOS for Preterms < 32 Weeks

* p < .05
The 15-Session COPE Healthy Lifestyles TEEN (Thinking, Emotions, Exercise and Nutrition) Program
Randomized Controlled Trial
- 7 Sessions of cognitive-behavioral skills building
- 8 Sessions of nutrition and physical activity education
- 20 minutes of physical activity in each session

Funded by NIH/NINR R01NR012171

The COPE (Creating Opportunities for Personal Empowerment) Program
Based on the key concepts in CBT, the program emphasizes cognitive restructuring, problem solving, behavior change, and the thinking/feeling/behaving triangle

The COPE Program Teaches the ABCs
STRESSOR (Activator or trigger) 
↓
NEGATIVE THOUGHT TO STOP (negative Belief) 
↓
REPLACE THE NEGATIVE WITH A POSITIVE THOUGHT 
↓
POSITIVE EMOTION & BEHAVIOR (Consequence)

Findings from the COPE RCT
Post-intervention, COPE Teens versus Attention Control Teens had significantly:
- Greater steps per day
- Higher average scores on three social skills subscales: (a) cooperation (b) assertion, and (c) academic competence
- Higher health course grades
- Less alcohol use
- Lower mean BMI
- Less depression in teens who began the trial with severe depressive symptoms (see Melnyk et al, 2013, in the American Journal of Preventive Medicine)

Percentage of Overweight for the COPE and Control Groups Across Time

Depression 12 months Post-Intervention
Research on the 7 Session COPE
Cognitive-Behavioral Skills Building Program

- The manualized program has been used with school age children, teens and college age youth
- COPE can be delivered in individual brief sessions (20 – 30 minutes) or in group sessions (45 – 50 minutes)
- Findings from multiple studies indicate that the program increases self-esteem, decreases anxiety and depressive symptoms, and reduces negative behaviors

Why Must We Accelerate EBP?

Practices routed in tradition are often outdated and do not lead to the best patient outcomes
- Daily changing of IV dressings
- Mayonnaise for head lice
- Sugar paste for pressure ulcers
- Albuterol delivery with nebulizers
- Checking placement of NG tubes with air
- Vital signs every 2 or 4 hours
- 12 Hour Shifts for Nurses

The Steps of EBP

- **Step 0:** Cultivate a Spirit of Inquiry & EBP Culture
- **Step 1:** Ask the PICO(T) Question
- **Step 2:** Search for the Best Evidence
- **Step 3:** Critically Appraise the Evidence
- **Step 4:** Integrate the Evidence with Your Clinical Expertise and Patient Preferences to Make the Best Clinical Decision
- **Step 5:** Evaluate the Outcome(s) of the EBP Practice Change
- **Step 6:** Disseminate the Outcome(s)

The EBP Process

- **Clinical Inquiry:** Formulate a Searchable, Answerable Question (PICOT)
- **Search for the Best Evidence:** Rapid Critical Appraisal, Evaluation, and Synthesis of Evidence
- **Integrate the Evidence with Clinical Expertise and Patient Preference(s):** Generate Evidence Internal: QI External: Research
- **Evaluate Outcomes based on Evidence:** Disseminate the Outcome(s)
A Critical Step in EBP:
The PICO(T) Question

Ask the burning clinical question in PICO(T) format

- **Patient population**
- **Intervention or Interest area**
- **Comparison intervention or group**
- **Outcome**
- **Time**

In *adults with depression (P)*, how does *CBT (I)* versus *interpersonal therapy (C)* affect *depressive symptoms (O) 3 months after treatment (T)*?

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**Levels of Evidence**

- Systematic review or meta-analyses of all relevant randomized controlled trials (RCTs)
- Evidence-based clinical practice guidelines based on systematic reviews of RCTs
- Evidence obtained from at least one well-designed RCT
- Evidence obtained from well-designed controlled trials without randomization and from well-designed case-control and cohort studies
- Evidence from systematic reviews of descriptive and qualitative studies
- Evidence from a single descriptive or qualitative study
- Evidence from the opinion of authorities and/or reports of expert committees

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**Why Measure the Outcomes of EBP?**

Outcomes reflect IMPACT!

- *EBP’s effect on patients*
  - Physiologic (complication reduction; health improvement)
  - Psychosocial (quality of life; depressive and anxiety symptoms; patient satisfaction with care)
  - Functional improvement

- *EBP’s effect on the health system*
  - Decreased cost, length of stay, rehospitalizations
  - Nursing retention / job satisfaction
  - Interdisciplinary collaboration

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**Findings from our EBP Survey with U.S. Nurses**

Melynk et al., 2012, JONA

- Over 1000 randomly sampled nurses from the American Nurses Association
- The more years in practice, the less nurses were interested in and felt it was important to gain more knowledge and skills in EBP

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**Percent of Respondents from the ANA Survey Who Agreed or Strongly Agreed with the Following Statements**

<table>
<thead>
<tr>
<th>Statement</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>EBP is consistently implemented in my healthcare system</td>
<td>53.6</td>
</tr>
<tr>
<td>My colleagues consistently implement EBP with their patients</td>
<td>34.5</td>
</tr>
<tr>
<td>Findings from research studies are consistently implemented in my institution to improve patient outcomes</td>
<td>46.4</td>
</tr>
<tr>
<td>EBP mentors are available in my healthcare system to help me with EBP</td>
<td>32.5</td>
</tr>
<tr>
<td>It is important for me to receive more education and skills building in EBP</td>
<td>76.2</td>
</tr>
</tbody>
</table>
The One Thing That Prevents You From Implementing EBP

<table>
<thead>
<tr>
<th>Factor</th>
<th>Total Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Time</td>
<td>151</td>
</tr>
<tr>
<td>2. Organizational culture, including policies and procedures, politics, and a philosophy of “that is the way we have always done it here.”</td>
<td>123</td>
</tr>
<tr>
<td>3. Lack of EBP knowledge/education</td>
<td>61</td>
</tr>
<tr>
<td>4. Lack of access to evidence/information</td>
<td>55</td>
</tr>
<tr>
<td>5. Manager/leader resistance</td>
<td>51</td>
</tr>
<tr>
<td>6. Workforce/staffing, including patient ratios</td>
<td>48</td>
</tr>
<tr>
<td>7. Nursing (staff) resistance</td>
<td>46</td>
</tr>
<tr>
<td>8. Physician resistance</td>
<td>34</td>
</tr>
<tr>
<td>9. Budget/payors</td>
<td>34</td>
</tr>
<tr>
<td>10. Lack of resources</td>
<td>20</td>
</tr>
</tbody>
</table>

The National Chief Nurse Survey
Melnyk et al., 2016, Worldviews on Evidence-based Nursing

- 93% currently in the CNO role
- Ages ranged from 32-68 (M= 55 years)
- Years in practice ranged from 8-47 (M=31 years)
- Years as a CNO ranged from <1- 32 (M= 9 years)
- 92% female; 94% White
- 6% bachelor’s degree; 69% master’s degree;
- 8% PhD prepared; 10% DNP prepared
- 45 States and DC represented
- 18% work in Magnet facilities
- 55% reported having clinical ladder systems
- 47% had no ongoing nursing research projects

EBP Priorities
How much do you believe implementation of EBP improves quality & patient outcomes?

CNOs EBP Beliefs
I am sure about how to measure the outcomes of services provided to patients

Organizational Readiness for EBP
To what extent is EBP clearly described as central to the mission & philosophy of your institution?

Organizational Readiness
In your organization, to what extent is there a critical mass of nurses who have strong EBP knowledge & skills?
Top Priorities
As a CNO/CNE, what are the top priorities that you are currently focused on in your role?

<table>
<thead>
<tr>
<th>Priority</th>
<th>Frequency</th>
<th>Percent %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety</td>
<td>41</td>
<td>15%</td>
</tr>
<tr>
<td>Patient Safety</td>
<td>162</td>
<td>59%</td>
</tr>
<tr>
<td>Infection</td>
<td>49</td>
<td>18%</td>
</tr>
<tr>
<td>Mortality</td>
<td>15</td>
<td>5%</td>
</tr>
<tr>
<td>Morbidity</td>
<td>6</td>
<td>2%</td>
</tr>
</tbody>
</table>

Organization Related Questions
What % of your annual operating budget do you spend on building and sustaining EBP in your organization?

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent %</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>15%</td>
</tr>
<tr>
<td>1 to 10</td>
<td>59%</td>
</tr>
<tr>
<td>11 to 25</td>
<td>18%</td>
</tr>
<tr>
<td>26 to 50</td>
<td>5%</td>
</tr>
<tr>
<td>51 to 100</td>
<td>2%</td>
</tr>
</tbody>
</table>

Performance Metrics
NDNQI Metrics

Performance Metrics
Core Measures

Creating a Culture and Environment to Sustain EBP
What Works
Remember, Culture Eats Strategy!

The only person that likes a change is a baby with a wet diaper!
An Essential Element Required for a Successful Change to System-wide EBP

A Vision with Specific Written Goals
We must begin with the end in mind

SHOCK!
“You are asking me to implement EBP on top of everything else that I do?”

Stressed!

Change Fatigue

Critical Components of an EBP Culture

A Philosophy, Mission and Commitment to EBP:
- there must be commitment to advance EBP across the organization as evidenced in orientation, clinical ladders, evaluations

A Spirit of Inquiry:
- health professionals are encouraged to continuously asks questions, review and analyze practices to improve patient outcomes

EBP Mentors:
- who have in-depth knowledge and skills in EBP, mentoring others, and overcoming barriers to individual and organizational change

Critical Components of an EBP Culture

Administrative Role Modeling and Support:
- leaders who value and model EBP as well as provide the needed resources to sustain it

Infrastructure:
- tools and resources that enhance EBP across the organization; computers for searching, up-to-date databases, library resources

Recognition:
- individuals and units are rewarded regularly for EBP
EBP Competencies for Practicing Nurses and Advanced Practice Nurses

The Establishment of Evidence-based Practice Competencies for Practicing Registered Nurses and Advanced Practice Nurses in Real-World Clinical Settings: Proficiencies to Improve Healthcare Quality, Reliability, Patient Outcomes, and Costs

2014

Download free at:

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Lisa English Long, RN, MSN, CNS
Ellen Fineout-Overholt, RN, PhD, FAAN

Return on Investment with EBP

- It is critical to establish ROI with EBP
- ROI helps with sustainability of EBP
- We must measure quality indicators

Making Use of the EBP Competencies

The new EBP competencies should be integrated into healthcare system orientation programs, clinical ladders, and performance appraisals

Incorporating the competencies into real world practice settings will assist healthcare systems in improving quality, safety, and patient outcomes as well as reducing costs!

Evidence to Support ARCC

- Study #1: Descriptive correlational study with 160 nurses
- Study #2: A psychometric study of the EBP beliefs and EBP implementation scales with 360 nurses
- Study #3: A randomized controlled pilot study with 47 nurses in the VNS
- Study #4: A quasi-experimental study with 159 nurses in a clinical research medical center environment
- Study #5: A pre-experimental study with 52 clinicians at WHHS

Outcomes of Implementing the ARCC Model at Washington Hospital Healthcare System

- Early ambulation in the ICU resulted in a reduction in ventilator days from 11.6 to 8.9 days and no VAP
- Pressure ulcer rates were reduced from 6.07% to .62% on a medical-surgical unit
- Education of CHF patients led to a 14.7% reduction in hospital readmissions
- 75% of parents perceived the overall quality of care as excellent after implementation of family centered care compared to 22.2% pre-implementation
The simple provision of resources and dissemination of information alone will not lead to uptake of EBP

A multi-component active strategy is necessary, including behavior and organizational culture change strategies

The Future of EBP: What It Will Look Like in 2030

- EBP is in the DNA of every practicing clinician and educator
- 100% of healthcare decisions are evidence-based
- Reimbursement is only provided for EBP
- There is no time lag between the generation of research findings and their implementation in practice to improve care and outcomes

What Will it Take to Achieve the Vision?

- Slaying of many sacred cows!
- An interprofessional team dream, belief, risk-taking and persistence through the “character-builders!”
- A sense of urgency; the time is NOW!
- Professors and clinical educators who have the knowledge and skills to teach EBP as people can not teach what they themselves do not know
- Investment in building cultures and environments of EBP, including critical masses of EBP mentors
- Integration of the new EBP competencies as standard of care

Diffusion of Innovation

A key ingredient for success is persistence as there will be many “character-building” experiences along the way!!

“At least I have found 9000 ways that it won’t work.”

- Innovators 2.5%
- Early Adopters 13.5%
- Early Majority 34%
- Late Majority 34%
- Laggards 16%
Ask yourself:

• What will you do if you know you can not fail in the next 2 to 5 years?

• What is the smallest EBP change that you can make tomorrow that would have the largest positive impact for your patients’ outcomes?

“…because we’ve always done it that way.”

Nothing Happens Unless First a Dream!

Carl Sandburg
The Next 2-5 Years

What can we do together in the next 2 to 5 years if we know that we cannot fail?

Let's shoot for the moon, even if we miss, we will land amongst the stars

-Les Brown

There Is A Magic In Thinking Big!

Contact Information

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