

Speeding the Translation of Research into Real World Healthcare Settings to Enhance Best Practices:

The "So What" Outcome Factors

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In God We Trust, Everyone Else Must Bring Data!



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The Current State of U.S. Healthcare

- Too many medical errors and unintended patient deaths
- Patients only receive about 55% of the care that they should when entering the healthcare system
- Poor quality healthcare costs over 700 billion dollars annually
- Wasteful healthcare spending costs 1.2 trillion dollars every year
- Healthcare systems could reduce spending by 30% if patients receive evidence-based healthcare



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The Current State of U.S. Healthcare

- Non-standardization of evidence-based guideline processes
 - As one example, a study conducted by Belamarich and colleagues (2006) revealed that none of the 162 verbal health advice directives from 57 policy statements by the AAP on which pediatricians should counsel their patients and parents included evidence regarding the efficacy of the advice
- Most research findings never make it into real world practice settings to improve healthcare quality and patient outcomes



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The IOM Roundtable on EBM

- Formed in response to the 2003 IOM's Committee on the Health Professions Education Summit recommendation that

All healthcare professionals will be educated to deliver patient-centric care as members of an **interdisciplinary team, emphasizing EBP**, quality improvement approaches and informatics

- **Ninety percent of healthcare decisions will be evidence-based by 2020**

- The IOM Roundtable on EBP

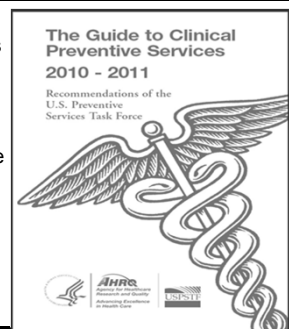


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Annual Guide to Clinical Preventive Services

- 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



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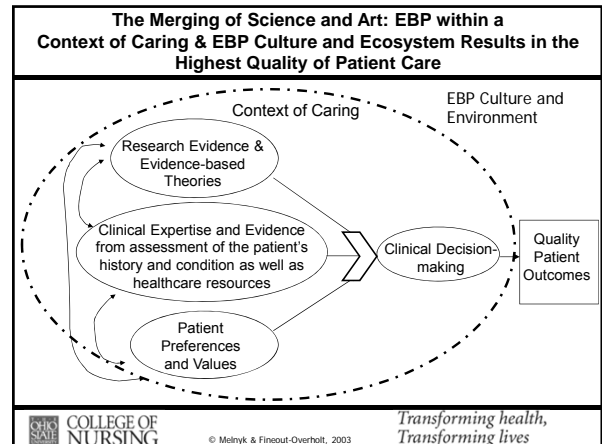
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Kaylin's Story: Australian Dream Trip Turned Nightmare




From Melnyk, B.M., & Fineout-Overholt, E. (2011).
Implementing EBP: Real World Success Stories

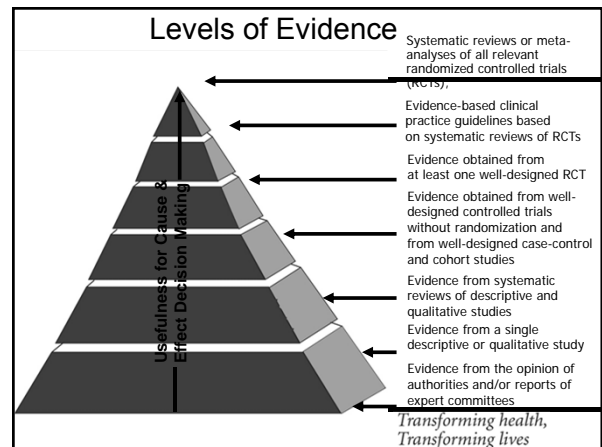
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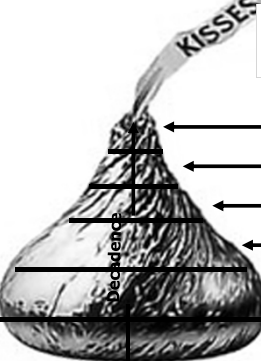
The Steps of EBP

- 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)

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Levels of... Chocolate




- ← Godiva Truffles
- ← Donnelly Chocolates
- ← Ghirardelli Chocolate Bars
- ← Hershey Kisses
- ← Fannie Farmer Sampler
- ← Nestle's Quik


"Inspirational quotes are fine, but you'll motivate more people with chocolate."

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 Modified from Julia Sollenberger,
 University of Rochester
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Acting on the Evidence

- Strength of the Evidence + Quality of the Evidence = Confidence to Act!



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Why Must We Accelerate EBP?

- A high JASPA score
(Journal of Associated Score of Personal Angst)

J: Are you ambivalent about renewing your Journal subscriptions?

A: Do you feel Anger toward prolific authors?

S: Do you ever use journals to help you Sleep?

P: Are you surrounded by piles of Periodicals?

A: Do you feel Anxious when your Journals arrive?

Modified from BMJ (1995), 311, 166-168



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Why Must We Accelerate EBP?

- Practices routinized 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



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Why Must We Accelerate EBP?

- ❖ Tongue Patch for Weight Loss



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Major Barriers to the Advancement of EBP

- Lack of knowledge and skills
- Low comfort level with search techniques
- Perceived lack of time
- Challenges with critically appraising research
- Lack of organizational/administrative support
- Educational programs that continue to teach research the "traditional way" with a focus on producing instead of using evidence
- Negative attitudes toward research



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

Other Findings

(Mehmet et al., JONA, 2012)

- More highly educated nurses reported being more clear about the steps in EBP and having more confidence implementing evidence-based care
- 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

	%
EBP is consistently implemented in my healthcare system	53.6
My colleagues consistently implement EBP with their patients	34.5
Findings from research studies are consistently implemented in my institution to improve patient outcomes	46.4
EBP mentors are available in my healthcare system to help me with EBP	32.5
It is important for me to receive more education and skills building in EBP	76.2



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The One Thing That Prevents You From Implementing EBP	
	Total Responses
1. Time	151
2. Organizational culture, including policies and procedures, politics, and a philosophy of "that is the way we have always done it here."	123
3. Lack of EBP knowledge/education	61
4. Lack of access to evidence/information	55
5. Manager/leader resistance	51
6. Workload/staffing, including patient ratios	48
7. Nursing (staff) resistance	46
8. Physician resistance	34
9. Budget/payors	24
10. Lack of resources	20

The So What Outcome Factors in an Era of Healthcare Reform

- We must conduct research and EBP projects with high impact potential to positively change healthcare systems, reduce costs and improve outcomes for patients and their families by including the measurement of "so what" outcome factors
- Key questions when embarking on a research study or an EBP project:
 - Which "So what" outcome measures will I include in my study or EBP project that the healthcare system cares about?
 - "So what" difference will my study or EBP project make in improving healthcare quality, costs or patient outcomes?

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Why Measure "So What" Outcomes

Outcomes reflect IMPACT!

- Research and EBP's effect on patients
 - ❖ Physiologic (complication reduction; health improvement)
 - ❖ Psychosocial (quality of life; depressive and anxiety symptoms; patient satisfaction with care)
 - ❖ Functional improvement
- Research and EBP's effect on the health system
 - ❖ Decreased costs, length of stay
 - ❖ Nursing turnover/retention/job satisfaction


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Evidence-Based Facilitators of EBP

- Individual knowledge and skills of EBP
- Beliefs that EBP improves care and ability to use it
- Mentors who are skilled in EBP
- Role modeling and valuing of research by leaders
- Administrative/organizational support
- EBP cultures and ecosystems
- Including "so what" outcomes in research and EBP/quality improvement projects

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Translating COPE from Research to Real World Practice Settings




FUNDING FOR THE COPE PREEMIE STUDY BY THE NATIONAL INSTITUTE OF NURSING RESEARCH
R01#05077
NR05077-04S1

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Background/Significance of Preterm Birth

- Preterm birth costs the world billions of dollars every year
- Preemies and parents experience a variety of short- and long-term adverse outcomes



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Study Design

A randomized controlled trial which tested the efficacy of the COPE Program at two study sites in the Northeast involving 260 LBW premature infants, 258 mothers and 154 fathers with follow-up through 3 years corrected age



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The Sample of Infants

- Mean gestational age = 31.3 weeks (range = 26 to 35 weeks)
- Mean birth-weight = 1650 grams, with 102 infants weighing less than 1500 grams
- Males = 126 (48.5%)
- Females = 134 (51.5%)



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The COPE NICU Program

○ 7 part series of audio tapes, driven by self-regulation theory and control theory, and a workbook that provided parents with infant behavior and parent role information and parent skills building activities that help parents implement the COPE information

- ❖ 2-4 days after admission to NICU
- ❖ 2-4 days after the first intervention
- ❖ 1-4 days prior to discharge
- ❖ 1 week after discharge
- ❖ 2, 9 and 18 months after discharge



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The COPE NICU Program



www.copeforhope.com



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The COPE Program Teaches Parents about the Behaviors and Physical Characteristics of Preterms and How Best to Parent Them



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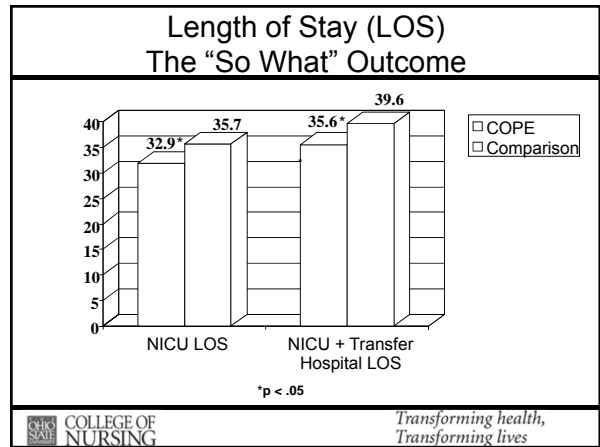
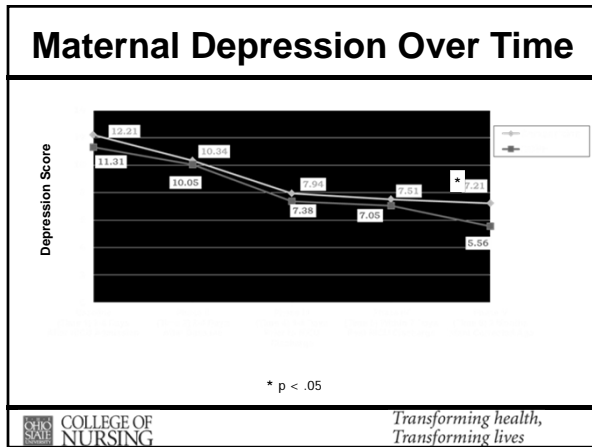
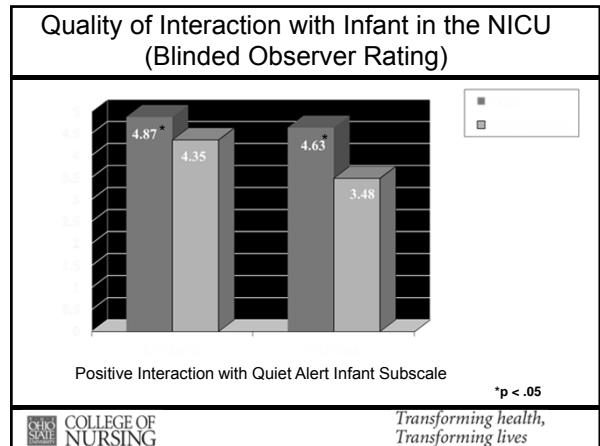
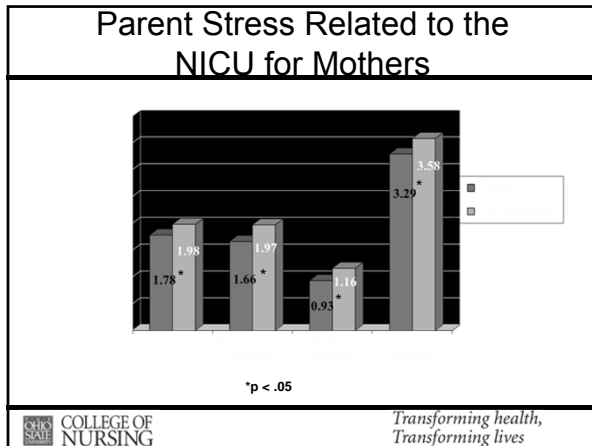
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COPE also Teaches Parents How Best to Interact with and Parent their Preterm Infants



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Cost Analysis

- The net direct health care cost savings per child through NICU discharge after deducting the cost of the COPE intervention was \$4,864
- Further subgroup analyses for LOS based on birthweight revealed that COPE infants <1500 grams had an even shorter NICU length of stay (n = 90, 8.3 days), which resulted in even greater savings

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Cost Benefit for the U.S. Healthcare System

- Routine administration of COPE in NICUs across the United States could not only improve infant and parent outcomes, but lead to substantial cost savings
- A decreased hospital cost of \$5,000 for 500,000 premature infants born every year in the U.S. would result in a 2.5 billion dollar cost-savings for the U.S. Healthcare System

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Translating COPE into Clinical Practice: Lessons Learned

Funded by Phoenix Children's Hospital Competitive Grant Program

- The purposes of this dissemination-implementation study were to determine:
 - the impact of translating the evidence-based COPE program into clinical practice on nurses' EBP beliefs and implementation, and
 - the best strategy for disseminating COPE in the NICU so that all parents of preterm babies receive COPE



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Subjects and Methods

- Subjects: 81 out of 180 nurses (45%) from a 55 bed NICU of a large children's hospital
- All participants completed the EBP Beliefs and EBP Implementation Scales (Melnik & Fineout-Overholt) at baseline and six months after implementation of COPE in the NICU
- Nurses from two of the five pods in the NICU received an 8 hour workshop on EBP and the COPE program, and were then instructed to implement COPE



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Findings

- Very few parents received all phases of the COPE program in the first 12 weeks of the study
- A COPE Mentor was introduced after 12 weeks to assist the nurses with the implementation of COPE
- Nurses in the COPE pods had stronger beliefs about EBP and greater implementation of EBP than nurses in the non-COPE pods
- After the COPE Mentor was introduced, nearly all parents of preterm infants received all phases of the program



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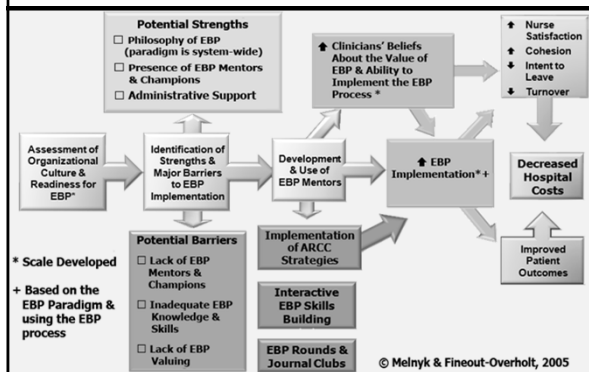
Barriers to Implementation

- Competing priorities because the physical care of the infants took higher priority than delivering the COPE program
- Time, due to the demands of caring for the infants
- Transfer of babies between the pods due to remodeling of the unit
- The nurses reported that the barriers were decreased with the introduction of the COPE mentor



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The ARCC Model (Advancing Research & Clinical practice through close Collaboration)



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



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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



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The Evidence from Implementation Science: Major Factors Influencing Adoption of EBPs

- Characteristics of the EBP (e.g., strength of the evidence, ease of administration, cost)
- Characteristics of the clinician (e.g., understanding, cognitive beliefs/confidence to implement)
- The environment and culture of the organization
- The process through which the change is implemented (e.g., building consensus, use of opinion leaders and EBP mentors)



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The Evidence from Implementation Science: Major Factors Influencing Adoption of EBPs

- Incentives
- Performance improvement
- Behavioral skills training
- Organizational culture and ecosystem or environment that supports EBP



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We Must Make it Easy and Fun for Clinicians To Implement Best Practices

- Clinicians are overburdened with high patient loads and competing priorities
- Building EBPs into electronic records can help, but too many reminders may lead to clinicians beginning to ignore them
- We must build a team dream of what we want to accomplish and the impact we want to make



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The Next 2-3 Years

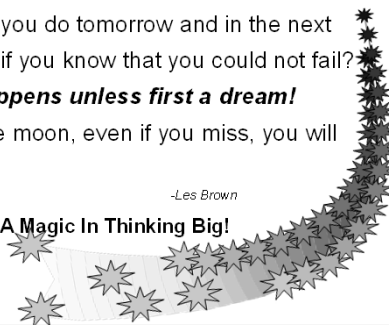
What would you do tomorrow and in the next 2 to 3 years if you know that you could not fail?

Nothing happens unless first a dream!

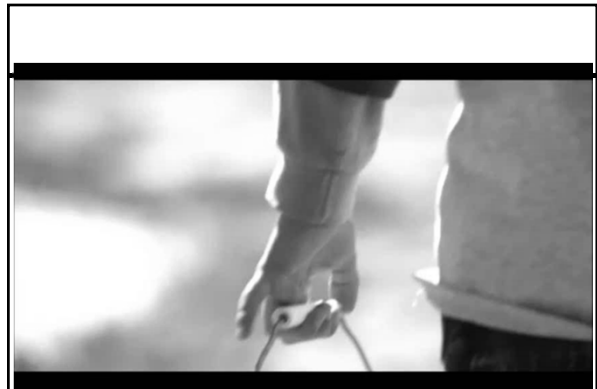
Shoot for the moon, even if you miss, you will hit the stars

-Les Brown

There Is A Magic In Thinking Big!



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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."

Thomas Edison



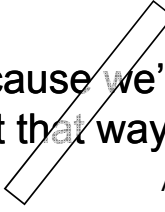
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? "...because we've always done it that way." ?

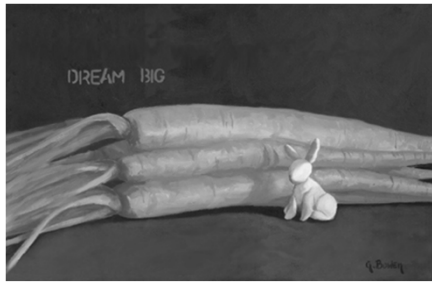
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Nothing Happens Unless First a Dream!
Carl Sandburg



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