EBP: Myths and Realities

Marita G. Titler, PhD, RN, FAAN
Rhetaugh Dumas Endowed Chair
Associate Dean for Practice Development and Scholarship
Division Chair Health Systems and Effectiveness Science
University of Michigan School of Nursing

May 2013

Objectives

- Overview knowledge regarding transitions in care to improve patient outcomes.
- Identify the myths and realities of promoting knowledge uptake at the point of care delivery.
- Identify principles of partnerships for EBP and research
- Discuss visions of the future for EBP and translation science.

Transitions in Care Research

- Nurse scientists lead the research in this area – Mary Naylor; Gerri Lamb; Dorothy Brooten as examples
- The term "care transitions" refers to the movement patients make between health care practitioners and settings as their condition and care needs change during the course of a chronic or acute illness.

Challenges in this Field of Research

- Terminology
  - Care Transitions
  - Coordination of Care; Case management
  - Handoffs
- Measures of processes and outcomes
  - Readmissions
  - ED visits
  - Self-care management
  - Satisfaction
- The intervention
  - Populations (e.g. HF; diabetes; stroke; complexity)
  - Who does this
  - Components of the intervention

The Acronyms

- PACE
- MIND
- ALTCS
- WPP
- MSHO
- PDC
- CONNECT
- RED

Care Transitions is A Team Sport

yet all too often we don't know who our teammates are, or how they can help.
Some Commonalities Across Interventions

- Screening/identification of high risk populations
- Teams – led by experienced RN, APN
- Collaboration among clinicians and sites of care delivery
- Communication, communication, communication
- Patient and care-giver education/instruction

General Impact

- Decrease costs
- Decrease hospital readmissions, ED visits
- Improvement in self-care
- Patient and caregiver satisfaction
- Improvement or lessening decline in disease specific measures (e.g. HgbA1c; symptoms)

Published Evidence

- 21 RCTs of diverse “hospital to home” innovations targeting primarily chronically ill older adults
- 9/21, + impact on at least one measure of rehospitalization plus other health outcomes
- Effective interventions
  - Multidimensional and span settings

The Case for Transitional Care

- High rates of medical errors
- Serious unmet needs
- Poor satisfaction with care
- High rates of preventable readmissions
- Tremendous human and cost burden
Unique Features
Care is delivered and coordinated...
...by same advanced practice nurse...
in hospitals, SNFs, and homes...
...seven days per week...
...using evidence-based protocol...
...with focus on long term outcomes

Core Components
- Holistic, person/family centered approach
- Nurse-coordinated, team model
- Protocol guided, streamlined care
- Single “point person” across episode of care (relational/management continuity)
- Information systems that span settings (communication continuity)
- Focus on increasing value over long term

Across Reported RCTs, TCM has...
- Increased time to first readmission or death
- Improved physical function and quality of life*
- Increased patient satisfaction
- Decreased total all-cause readmissions
- Decreased total health care costs
*Most recently completed RCT only

TCM’s Impact on Total Health Care Costs*

<table>
<thead>
<tr>
<th></th>
<th>TCM Group</th>
<th>Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>$7,030</td>
<td>$12,481</td>
<td></td>
</tr>
<tr>
<td>$3,630</td>
<td>$6,661</td>
<td></td>
</tr>
</tbody>
</table>

* Total costs were calculated using average Medicare reimbursements for hospital readmissions, ED visits, physician visits, and care provided by visiting nurses and other health care personnel. Costs for TCM care is included in the intervention group value.
Children’s Hospital of Iowa

Development and Implementation of a Protocol for Transfers Out of the Pediatric Intensive Care Unit

Natalie R. VanWaning, BSN, HSN, ARNP
Cherriene Kellner, MA, RNC
Barbara Freyenburg, RN, MSN, ARNP

Impact

- Decrease in stress and anxiety
- Improved knowledge about transfer process
- Increased understanding of differences in care on general units versus PICU.
- Expectations of general care unit.

Being Cared for on Multiple Inpatient Units

What is the effect of a patient residing on multiple inpatient units during hospitalization on:

Resource use?

Clinical outcomes?

Sample: 7851 patients > 60 years of age
1 unit = 31%; 2 units = 35%; 3-4 units = 21%; > 5 units = 13%.

Hints and Tips about translation into Care Delivery

- Patient population of focus
- What is the intervention – be specific about activities and role of each discipline
- Try/pilot the program with refinement as necessary
- Re-engineering work flow or processes
- Evaluate – ongoing; pre, during, and “post”
- Leadership support and commitment

Findings

Patients that resided on a greater number of units:

- Less Patient Teaching and Discharge Planning
- Longer lengths of stay
- Greater total hospital cost
- Higher likelihood of:
  - Nosocomial infections
  - Adverse occurrences
  - Falling
  - Medication errors
  - Discharged to a location other than home
Program of Research

- Focuses on 1) testing implementation interventions to improve knowledge uptake and use to improve patient outcomes and population health, and 2) explicating what implementation strategies work for whom, in what settings, and why.

Funded Projects – Translation Science

- Evidence-Based Practice: From Book to Bedside (PI: Titler, R01 HS10482; AHRQ, 1.5 million)
- Book to Bedside: Sustaining Evidence-Based Practices in Elders (PI: Titler, R02 HS10482; 0.5 million)
- Cancer Pain in Elders: Promoting EBPS in Hospices (PI: Herr; Co-PI Titler; R01CA115383; 2.6 million)
- Advancing Quality Care Through Translation Research (PI: Titler R13 HS014141)
- Moving Beyond Fall Risk Scores: Implementing fall prevention interventions that target patient specific fall risk factors (Titler and Conlon RWJ INQRI 68266)

Funded Projects Co-Investigator

- Dissemination of Tobacco Tactics versus 1-800-QUIT-NOW for Hospitalized Smokers. 1U01 HL105218-01 PI: S. Duffy. 2010-2014.

Evidence-Based Practice

- Integration of best research evidence with clinical expertise, patient values, preferences, and culture/ethnicity (Sackett et al, 2000)
Conduct of Research

- Systematic study of a phenomenon such as testing an intervention to improve self-care of individuals with heart failure.

Examples Of EBPs

Why Listen to Bowel Sounds?

- Auscultation of bowel sounds first proposed in 1905 (Cannon - reported in Nachlas, Younis, Roda, et al., 1972)
- Motility involves electrical activity coordinated with motor/muscle contraction leading to propulsion (Livingston & Passaro, 1990)

Literature Summary
Literature Summary


• Monitoring bowel sounds does not serve to indicate recovery of motility s/p abdominal surgery patients (Huge, et al, 2000)

Why Listen to Bowel Sounds?

TRADITION

EBP Standard

• Primary markers of return of GI motility (Bauer et al, 1985):
  – First flatus
  – First BM

• Additional markers of return of GI motility:
  – Return of appetite
  – Benign abdomen or absence of other symptoms

• Monitoring for complications

Hawaii State Center for Nursing

• Hawaii Nurses Shaping Healthcare: A State-Wide Evidence-Based Practice Initiative

• Legislative mandate to for EBP and quality outcomes

Debra D. Mark, RN, PhD
Nurse Researcher, Hawai’i State Center for Nursing
debmark@hawaii.edu

Outcomes to Date

• Increasing EBP capacity across the state
• Trained 39 teams
• 8 Health care systems
• Institutionalizing practice change
• Papers and conference presentations

"It is my hope that nursing leaders in other states will ... seriously consider replicating Hawaii’s program to engage nurses in EBP to improve patient care" Susan Hassmiller
Articles/Topics in NCNA

- Shhh….. I’m Growing: Noise in the NICU
- Promoting Sleep in Adult SICU to Prevent Delirium
- Normothermia for NeuroProtection – It’s Hot to be Cool
- Perioperative Hyperglycemia Management

Myths and Realities of Implementation

Implementation is a process

Illusions about Implementation

- We just need to tell them what to do
  - “I told them what to do and they don’t change”
- Clinicians will remember the change once they are told
  - Once should be enough
  - Clinicians can be more watchful so they will remember to use the new way
- I just need to find the one right way to implement a practice change

Multifaceted strategies are necessary to translate research into Practice (Greenhalgh et al, 2005)
Implementation Model

Characteristics of the EBP → Communication Process → Social System → Rate & Extent of Adoption → Users of the EBP

Myths
- Dissemination of trustworthy practice guidelines promotes use of EBPs.
- The evidence is strong, thus clinicians will change their practice – we just have to show them the evidence.
- Clinicians care about the EBP topic (e.g. fall prevention; CAUTI)
- An EBP standard will change practice
- Yes, there is an evidence base for this ….; the evidence shows that ….

Realities about the EBP Topic or Innovation

The Topic Matters

“I just realized something. This study isn’t that important.”

Reality: Characteristic of the EBP Topic that Influences Adoption
- Complexity of EBP (simple versus complex)
- Relative advantage of EBP – effectiveness, relevance to the task, social prestige
- Compatibility with values, norms, work flow and perceived needs of end-users: clinicians, patients and families
- Strength of the evidence – needs to have an evidence-base.
- Leader/facilitator needs to have an understanding about the evidence-base; articulate of the evidence source (authors, year).

Reality: Strategies for adoption related to characteristics of the EBP topic
- Creating interest and excitement about the EBP topic.
- Practitioner review and use of the EBPs to fit the local context - localization.
- Use of quick reference guides and decision aides
- Use of clinical reminders – CDS; electronic reminders.

Reality: Important Principle
- Attributes of the EBP topic as perceived by users and stakeholders (e.g. ease of use, valued part of practice) are neither stable features nor sure determinants of their use.
- Rather it is the interaction among the characteristics of the EBP topic, the intended users, and a particular context of practice that determines the rate and extent of adoption.
Fall Prevention Bundle

- Focus on interventions that reduce or modify individual risk factors.
- Studies with sustained reductions in falls have focused on identifying individual fall risk factors (rather than ticking boxes to get a score).
- Put in place interventions to address each risk factor, used a fall as a learning opportunity to improve care.

You “Otter” Wash Your Hands Campaign

- To ask your staff/provider “Did you wash your hands?”

Implementation Model

- Characteristics of the Innovation
- Communication Process
- Users of Innovation
- Communication User
- Rate & Extent of Adoption
- Social System

Myths

- We stay abreast of the latest evidence in our practice.
- It is feasible to know all of the latest evidence for healthcare practice.
- Clinicians learn about new evidence from...
- We just need to educate them about the EBP – didactic presentation preferred.
- Focus on nursing practice
Realities

• Most clinicians learn about the evidence for practice from a trusted colleague
• Explosion of evidence today; know evidence sources; use EBP guidelines (critique them 1st)
• Electronic world – use search engines (not just google scholar)
• Education is necessary but not sufficient to change practice (attend to both knowledge and skills)

Realities

• Interdisciplinary and trans-disciplinary perspective of the EB practice (multiple disciplines)
• Who will be influenced by the EBP? Who will be users of the EBPs? Stakeholders
• Patient centered

Reality: Communication factors that influence adoption

• Interpersonal communication channels
• Methods of communication
• Social networks of users

Communication

The Stickiness Factor:
There is a simple way to package information that, under the right circumstances, can be irresistible. Memorable ideas spur us to action.

(Stickel, 202)

Reality: Strategies for adoption r/t communication

• Interactive education is more effective than didactic education alone.
• Clinicians need the knowledge and skills to carry-out the EBPs.
• Must consider patient and family values, culture, preferences, and stories
• Key messages at the site of care
Reality: Communication Strategies

- Opinion leaders
- Change champions – in unit/clinic
- Educational outreach/academic detailing – topic expert; meets one-on-one with practitioners in their setting (“site visits” with rounding)

Opinion Leaders

- Clinical experts who are influential among their peers and set the standard
- Effective in changing behaviors of clinicians because their colleagues trust them to evaluate the EBP and local situation
- Practitioner within specific discipline, (e.g. RN or MD)

Identifying an Opinion Leader

- May need an opinion leader from each discipline
- Viewed by colleagues as technically competent
- Well-respected and influential
- Trusted to judge the fit between the innovation and the local situation

Role of Opinion Leaders

- Model practice
- Influence their peers
- Conduct informal or formal education, one-on-one discussions
- Alter the norms or expected behaviors of the group
- Affect organizational structure to support practice

Change Champions

- Practitioners within the local group setting (clinic, unit) who are passionate about promoting the EBP
- Partners with opinion leaders to foster the use of EBPs by their peers, educating and demonstrating use of the new practice in everyday care
A change champion believes in an idea; will NOT take no for an answer; is undaunted by insults and rebuff; and above all, persists.

Selecting Change Champions
- Clinical experts
- Passionate about the EBP topic and committed to providing quality care
- Positive working relationships with other healthcare professionals
- Persistent about implementation of the EBP
- Focus at the unit, clinic, CBO level

Role of Change Champions
- Circulate information
- Encourage peers to adopt the innovation
- Arrange demonstrations
- Orient staff to the innovation
- Act as “resident expert” in the EBP, modeling the practice
- Coordinate with opinion leaders to foster adoption of the EBPs

Educational Outreach
- Educated person who meets 1:1 with practitioners in their setting to provide information about the EBPs, address questions, positive comments about aligning practice with the evidence.
- Feedback on provider performance
- Consultation on issues
- Who does this?
- Opinion leader
- Consistent person/consistent message

Outreach visits
- What I was thinking is her site visits…. was very inspirational to the staff. … is very inspiring and it really motivated people to think outside the box, or “How can we be better at this?”
- And after she rounded on the units, we would meet in a room and talk more about our audits that we would provide her and looking at our really risk factors and our interventions and how we were doing with those. That was useful for the team.
Implementation

Characteristics of the Innovation

Communication Process

Rate & Extent of Adoption

Characteristics of Innovation

Myths

- Clinicians will adopt EBPs at about the same pace
- I just have to get those resistors on board.
- Focus on the resistors first and others will follow
- “If I build it, they will come” AKA: If I tell them, they will do it!

The Faces of Resistors

“Because implementation of a new practice almost invariably requires changing how things are done, it affects multiple individuals from multiple specialties and their interrelationships”

(Lucian Leape, 2005)

Reality

Reality: Implementation Requires Partnerships and Collaboration

Reality: Who are/will be the Users of the Evidence-Based Practice

- Nurses
- Physicians
- Patients
- Family caregivers
- Respiratory Therapists
- Physical Therapists
- Pharmacists
- Others
Marita Titler 5/4/2015

Reality: Diffusion

- Diffusion is the process by which (1) an innovation (2) is communicated through certain channels (3) over time (4) among the members of a social system


Reality: Implementation Strategies to address users of the EBP

- Performance gap assessment – beginning of the change; indicators related to EBP topic.
- Audit and feedback – during the practice change. Discussion forums rather than passive reports
- Trying the practice – plan as part of the implementation process.

Performance Gap Assessment

- Recommended practice compared to current practice
- Key indicators - do not try to assess all performance measures.
- Do early in process/beginning
- Get the data to those providing care/discussion
- Positive effect on changing practitioner behavior

Performance Gap Assessment – Pain Management

- Effective Strategy
- Improved effectiveness in combination with other strategies
- Keep feedback actionable
- Link with organizational quality improvement structure and processes
- Data perceived by the clinician as important and valid.
- Timely, individualized, non-punitive feedback

% of Patients with Every 4 Hour Pain Assessment during first 48 hrs. – Postop surgery

Audit Feedback Example

Fall Rate

Myth or Reality

Implementation Model

Myths

- “One size fits all”
- Practice cultures are the same or similar in our organization.
- Changing practice is the NM’s responsibility
Reality: Organizational factors that affect adoption

- Learning culture
- Leadership
- Capacity to evaluate the impact of the EBP during and following implementation
- Effective implementation needs both a receptive climate and a good fit with intended users needs and values


Reality: Culture of Learning

- External mandates – may provide a first burst of energy to examine practices. Not likely to address clinical culture for adoption of EBPs.
- Healthcare’s reliance on accreditation criteria to force change in practice will not create the learning environments essential for EBP to thrive (Senge, 1990).
- Generative learning cannot be sustained in an organization where event thinking predominates (e.g. Case reviews of practices: purpose of the review about this event or are we reviewing specific practices to learn).

Reality: Organizational Strategies to Promote Adoption of EBPs

- Professional roles – expect EBP in each role
- Performance criteria aligned with use of EBP; Career ladder programs
- Advanced Practice Nurses (CNS; NPs)
- Multidisciplinary teams
- Policies/procedures/documentation
- Technology for knowledge management to support patient care

Reality: Resources and Governance Structure

- Access to experts
- Knowledge and skills to promote EBP with staff nurses (e.g. APN)
- Access to web sites
- Know process to follow
- Primary accountability - in which group/committee/council does this work reside?
Creating Capacity: Learning Organizations

- Successful learning organizations have leaders who are devoted to developing capacity for the future.
- Development of people in the organization is a major factor of looking beyond the moment, and moving beyond reactive approaches to problems.
- Systems approaches to addressing challenges and opportunities

“Institutionalize” EBP as a Normal Part of Work (Stetler et al., 2009)

- Role model site: Deliberately and strategically building the capacity to implement and institutionalize EBP over a period of 5 years.
  - Why/motivation for EBP clear
  - How or methods of strategic EBP change
    - What including operationalized infrastructures for EBP
- Beginner site: EBP rarely seen as an ongoing explicit priority or vision.

Role Model and Beginner Sites

- Beginner Site
  - Drivers of change:
    - External demands
    - Traditional QI
  - Few in nursing with in depth knowledge of concept and processes of EBP
  - Physicians knowledgeable but few other disciplines were
    - Low receptivity to EBP

- Role Model Site
  - EBP-related staff driven issues & professional practice improvements.
  - Key leadership role played by nursing in EBP activity.
  - High receptivity

“Institutionalize” EBP as a Normal Part of Work (Stetler et al., 2009)

- Role model site: Context to create and sustain EBP
  - Management
    - Creating and sustaining a clear vision
    - Role modeling
    - Developing supportive relationships
    - Mentoring
  - Leadership
    - Beyond isolated projects
    - Fabric of organization
      - Building structures
      - Provision of resources
      - Monitoring progress
      - Providing feedback
      - Changing formal leaders who did not “fit” with the strategic vision.

Transformative

- We’ve really transformed the culture …
- I think as a system, we’re so much better now
- I think this has created a teamwork that I’ve not seen before.
- But I personally feel we’ve made a much safer place for our patients, because we’ve made people aware for multiple different … you know all of the different disciplines that work with the patient are now much more aware of the fall risk of the patient.
Managers of high performing units discussed their active participation in translating research findings to their staff.
- Part of staff nurse’s EBP team
- Finding the research to support an initiative

Only managers of high performing units (4 of 5) discussed expectations that were set for them - low performing units did not.

High Performers
- Setting expectations for nursing “leaders” among staff
  - Recognized that there are leaders on unit and that it was important to set higher expectations for them.

Implementation Studies: PIs of RWJ funded INQRI IS Studies
- Telephone interviews – taped and transcribed
- Interview guide
  - Types and perceptions about implementation strategies used
  - Successes, challenges and lessons learned
  - Steps taken for sustainability

Lessons Learned
- Context
  - “So in implementation science, it seems that context is so important. You know…Obviously this is a big lesson.”
- Complexity of implementation
  - “Implementation is a complex process that takes time. … Changing practitioner behavior is hard.”
- Communication
  - “One of the lessons learned is to use multiple communication strategies with the sites to keep them engaged.”
Learning Collaborative: Resources

- **Education**
  - Newsletters
  - 21 Podcasts
  - How to start a journal club
  - EBP references
  - Eye on Evidence
  - Webinars – learn, journal clubs

- **Research**
  - Network of sites for research
  - Process for investigators to access NNPN organizations for research
  - Organization context measurement instruments
    - Culture
    - Climate
    - Interactive human relationships

Implementation Model

Myths

- Evaluation is not that important
- I can inform others verbally
- I just know we are doing better
- Stories tell the impact

Reality: Need to Evaluate & Demonstrate Impact

- Outcomes – decrease VAP
- Processes – e.g. oral care, HOB elevated
- Staff knowledge and attitudes
- Cost savings; cost avoidance
- Qualitative impact: patient stories
- Part of QI program

Partnerships for EBP and Research

Partnerships

- Among clinicians and investigators
- Across disciplines
- Engagement of patients, family members and caregivers
- Discovery and Improvement of care delivery requires partnerships
Principles of Partnerships: Research and EBP

- Be clear about purpose and goals and the entities/populations/communities with which to engage
- Be knowledgeable of the practice culture and power structures. Learn about the community’s perceptions of those initiating partnerships
- Go to the community/practices and establish relationships, build trust, work with formal and informal leaders

A Note About Key Stakeholder Engagement in Research

Historically: Investigators Perspective
The Paradigm is Changing

Research with People, Not to People.
Focus on Questions and Outcomes Meaningful to Key Stakeholders

Types of Key Stakeholders

- People with the condition or phenomenon central to the research
- Lay caregivers
- Clinicians
- Community representative geographic area
- Advocacy group representative
- Purchasers
- Health systems
- Policy Makers

(Curtis et al, 2012)

Principles of Partnerships

- Nurturing of relationships over time
- Inclusion in all phases of research
- Sustaining partnerships
  - Identifying assets and strengths
  - Develop capacity for research
  - Develop capacity for EBP

Looking Toward the Future

- Education
  - Undergraduates
  - Graduates (DNP, PhD)
- Science of translation/implementation
  - Scientist in the field
  - Training of PhD student as scientists in this field
  - Collaboration with other disciplines

- Discovery/Research in patient care, health and health care, and population science
  - Scientists consider application in practice, communities and healthcare when designing interventions
- Grant acquisition
  - PCORI
  - NIH
  - AHRQ
  - CTSA pilot grant programs
“No matter who we are, where we live in the world today, we can sustain a way of life for awhile. But if we are static, the world will pass us by.”

-William D. (Bill) English, an Alaskan Inupiat sharing wisdom for their youth.