What are your burning questions?
Generating and transferring knowledge to improve patient outcomes

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October 5, 2016
Objectives:

• Describe the difference between knowledge generation and knowledge transfer.

• Describe how a burning question translates into PICO question within the IOWA Model framework.
Knowledge
Can EBP, Innovation, Performance Improvement and Research- all live together?

Understanding Complexity & Context
So

Where do we begin?

Predicting the future is easy.
It's trying to figure out what's going on now that's hard.

Fritz RW Dressler
When you generate your question- ask yourself...

- Is there evidence?
  - Do people know the evidence?
    - Do they believe the evidence?
      - Do they use the evidence?
        - Do they use it consistently?
You question and intervention will be different based on where your issue lies!

- Is there evidence?
- Do people know the evidence?
- Do they believe the evidence?
- Do they use the evidence?
- Research
- Education
- Sense-making & conversation
- Evidence Based Practice
- QI/Process Improvement
- Do they use it consistently?
Evaluating Research in Complex settings poses numerous challenges.

Sense making is a critical group process.

The role of conversation as a means to sense making can facilitate your work!

The role of conversation in health care interventions: enabling sensemaking and learning
Michelle E Jordan, Holly J Lanham, Benjamin F Crabtree, Paul A Nutting, William L Miller, Kurt C Stange and Reuben R McDaniel
Implementation Science 2009 4:15

The Organization
# TABLE: Characteristics of a Continuously Learning Health Care System

## Science and Informatics
- **Real-time access to knowledge**—A learning health care system continuously and reliably captures, curates, and delivers the best available evidence to guide, support, tailor, and improve clinical decision making and care safety and quality.

- **Digital capture of the care experience**—A learning health care system captures the care experience on digital platforms for real-time generation and application of knowledge for care improvement.

## Patient-Clinician Relationships
- **Engaged, empowered patients**—A learning health care system is anchored on patient needs and perspectives and promotes the inclusion of patients, families, and other caregivers as vital members of the continuously learning care team.

## Incentives
- **Incentives aligned for value**—In a learning health care system, incentives are actively aligned to encourage continuous improvement, identify and reduce waste, and reward high-value care.

- **Full transparency**—A learning health care system systematically monitors the safety, quality, processes, prices, costs, and outcomes of care, and makes information available for care improvement and informed choices and decision making by clinicians, patients, and their families.

## Culture
- **Leadership-instilled culture of learning**—A learning health care system is stewarded by leadership committed to a culture of teamwork, collaboration, and adaptability in support of continuous learning as a core aim.

- **Supportive system competencies**—In a learning health care system, complex care operations and processes are constantly refined through ongoing team training and skill building, systems analysis and information development, and creation of the feedback loops for continuous learning and system improvement.
“Even timely, accurate information may not be heard or acted upon if the recipient does not respect the source”

National issues & organizational priorities
Iowa Model of Evidence-Based Practice to Promote Quality Care

**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 and Guidelines
3. Philosophies of Care
4. Questions from Institutional Standards Committee

Consider Other Triggers

- **Is this Topic a Priority for the Organization?**
  - Yes
  - No

- **Form a Team**

Titler MG, et al. The Iowa model of evidence-based practice to promote quality care. CCN, 2001
What are the most pressing issues for nursing at Baystate that are related to these triggers?

**Problem Focused Triggers:**
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**Ideas:**
IHI WHOLE SYSTEM MEASURES associated IOM Aims

http://www.ihi.org/resources/pages/ViewAll.aspx?FilterField1=IHI_x0020_Content_x0020_Type&FilterValue1=94ee13e7-06de-453a-b053-979131880fc5&Filter1ChainingOperator=And&TargetWebPath=/resources

- Rate of Adverse Events: **Safety**
- Incidence of Nonfatal Occupational Injuries or Illnesses: **Safety**
- Hospital standardized Mortality Ratio (HSMR): **Effective**
- Unadjusted Raw Mortality Percentage: **Effective**
- Functional Health Outcomes Scores: **Effective**
- Hospital Readmission Percentage: **Effective**
- Reliability of Core Measures: **Effective**
- Patient Satisfaction with Care Score: **Patient-Centered**
- Patient Experience Score: **Patient-Centered**
- Days to Third Next Available Appointment: **Timely**
- Hospital Days per Decedent During the Last 6 Months of Life: **Efficient**
- Health Care Cost per Capita: **Efficient**
- Equity: **Equitable**

State of MA

http://www.patientcarelink.org/

http://www.patientcarelink.org/Healthcare-Provider-Data/Hospital-Data/Statewide-Aggregate-Performance-Measures.aspx
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- Yes
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Ideas:
What is going on nationally in nursing research and quality?

NINR
https://www.ninr.nih.gov/

Quality
http://www.nursingworld.org/MainMenuCategories/ThePracticeofProfessionalNursing/PatientSafetyQuality/Quality-O rganizations

NINR Priorities in the new Strategic Plan

• Symptom Science
• Health & Prevention of Illness
• Caring for Patients with Chronic Illness
• End of life and palliative care,

https://www.ninr.nih.gov/aboutninr/ninr-mission-and-strategic-plan#V_P_m_krKig
Identifying Clinical Research Questions
Unit Based Approach

Is there existing evidence to support patient care decisions?
How do we locate evidence & apply it to use in every day practice?

- **Post-it Notes:** Central board,
- **Focus Group:**
  - Review & prioritize potential questions during CPC meetings.
  - Brainstorm potential ideas for research. NRIIC rep to serve as moderator. Involve multidisciplinary group.
  - Narrow list to top 3-5 ideas based on interest.

**What are YOUR Units Priorities?**

**Identify following for your unit/department:**
- High risk/high clinical benefit situations
- Important clinical outcomes
- High volume situations catheter
- Institutional Priority
- Regulatory requirement use
- Organizational goal/objective medication reconciliation

**Examples:**
- Falls, cardiac arrest
- Infection, pain
- IV insertions, urethral catheter
- LOS, patient satisfaction
- Handwashing, restraint
- CMS indicators-
**Iowa Model of Evidence-Based Practice to Promote Quality Care**

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**Is this Topic a Priority For The Organization?**

- **No** → **Consider Other Triggers**
- **Yes** → **Form a Team**

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Research Priorities Based on BHS 2020 Goals: SAFETY

1. Falls
2. HAIs: CAUTI/CLABSI
3. Pressure Ulcers

**Planned tactics:**
- TST solutions for falls, Warm handoffs/Safe Start. House wide handwashing campaign, NDNQI performance for nurse sensitive indicators, CAUTI nurse driven protocol, Implement (WTA) Wound Treatment Associate program
Research Priorities Based on BHS 2020 Goals:

VALUE

1. Cost of Care:
2. Patient Progress:

Planned tactics:
Continue support on patient progress initiatives/warm handoffs, implement financial training seminars for nurse leaders, behavioral consult service 7 days/week to ↓ constant companion hours, fill nursing vacancies to ↓ OT utilization, train inpatient resource nurses in behavioral management techniques,
Research Priorities Based on BHS 2020 Goals: QUALITY

1. **Readmissions for Heart Failure & COPD:** ↓ readmissions
2. **Certification:** ↑ nurse certification
3. **Employee engagement/ nurse satisfaction:** ↑
4. **Nursing Research, Innovation & Improvement:** ↑ # of IRB research/QI projects.

**Planned tactics:**

Continue to facilitate EBP, redesign discharge instructions, hardwire medication reconciliation, discharge medication delivery service, minimize care variations, continue Magnet journey, Shared Governance infrastructure, certification classes, ↑ leader visibility/communications, partner with academic colleagues for research support.
1. Willingness to recommend: Inpatient/Outpatient

Planned tactics:
Implement relationship based care, Hardwire purposeful rounding/ NBR/ Safe Start/ Warm Handoff, IPOC Rounds, Implement Quiet Hours, Baystate celebrates to all staff recognized in patient surveys
Identify Clinical Research Questions
Unit Based Approach

Collaborate to Identify
High Priority Clinical Questions Based on High Priority Clinical Issues

Form Unit Sub-Committees Care Teams

Channel Questions for support & mentoring

A of A/Q NRIIC
PICOT: What kind of?

**Background Question**
A broad, basic-knowledge question commonly answered in a textbook.
May begin with *What* or *When*.  
**Examples**
1. What is the best method to prevent pressure ulcers?  
2. What is sepsis?  
3. When do the effects of Lasix peak?

**Foreground Question**
A specific question that, when answered, provides evidence for clinical decision making.

**P** Patient Population  
**I** Intervention or issue of interest  
**C** Comparison intervention or issue of interest  
**O** Outcome(s) of interest  
**T** Time it takes for the intervention to achieve the outcome of interest
What is your PICOT?

• **Patient population/disease**
  - Age
  - Gender
  - Ethnicity
  - Certain Diagnosis
  - other

• **Intervention or issue of interest**
  - Intervention for example
    - Therapy (physical, rehab, music, guided imagery)
    - Risk or risk behavior
      (issue of interest)
PICOT cont..

• **Comparison intervention or issue of interest**
  – No intervention
  – Placebo
  – Absence of risk

• **Outcome of interest**
  – Outcome expected as a result of the therapy, intervention or comparison

• **Time involved to demonstrate the outcome**
  – Time it will take from intervention to achieve the outcome or
  – Time to reduce the risk etc
You question and intervention will be different based on where your issue lies!

Is there evidence?

Do people know the evidence?

Do they believe the evidence?

Do they use the evidence?

Research

Education

Sense-making & conversation

Evidence Based Practice
QI/Process Improvement

Success
Baystate Nursing will address the identified issues this year

What are your burning questions?

Triggers?

PICOT??

Classic Example of Study Types

Enumerative/Research

Analytic/Performance
Analysis: Learning to improve future performance is the key!

Enumerative Studies
- Designed to create new knowledge
- Designed to test hypotheses
- Results of the study have implications for the sample/population of interest

Analytic Studies
- Focus is on prediction - the results will be used in a system in the “future” where the conditions are not necessarily the same. (ie the river)

More traditional research

Performance Science
What are we doing Research or Improvement? (IHI)

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Measurement for Research</th>
<th>Measurement for Learning and Process Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tests</td>
<td>One large &quot;blind&quot; test</td>
<td>Many sequential, observable tests</td>
</tr>
<tr>
<td>Biases</td>
<td>Control for as many biases as possible</td>
<td>Stabilize the biases from test to test</td>
</tr>
<tr>
<td>Data</td>
<td>Gather as much data as possible, &quot;just in case&quot;</td>
<td>Gather &quot;just enough&quot; data to learn and complete another cycle</td>
</tr>
<tr>
<td>Duration</td>
<td>Can take long periods of time to obtain results</td>
<td>&quot;Small tests of significant changes&quot; accelerates the rate of improvement</td>
</tr>
</tbody>
</table>
Using Rapid Cycle Research to Reach Goals: Awareness, Assessment, Adaptation, Acceleration

Citation:

Link:
Rapid-Cycle Research is a process by which practical problems are identified and addressed using analysis methods that are incremental and contextually informed.
Questions?

Thanks!