Promoting Interdisciplinary Research in the ICU

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Research

- Important to clinical practice
- Serves as the basis for evidence based practice
- Reality: it is often difficult to devote time to interpreting, conducting and using research in practice
  - Daily demands of practice often take precedence
Research Made Simple
Research ‘Reality’

- Clinicians do not readily know how to apply research findings to clinical practice
- Lack of time for clinicians to conduct research
- Lack of administrative support
- Limited research findings that are directly applicable to clinical practice
- Negative attitudes about research

Critical care is one of the most rapidly growing areas in medicine. In the US, care for the critically ill consumes $80 billion each year. Mortality rates in ICUs in US hospitals exceed those of other care areas. One in five deaths in the US occurs in the ICU.

The traditional “silo-ed” approach to critical care research must be altered. Suboptimal collaboration among different professionals (eg. physician, nurse, pharmacist, basic scientist) and among specialty training (eg. medicine, surgery, anesthesiology, pediatrics) may have stymied progress and innovation.
Creating interdisciplinary research, in which individual disciplines transcend boundaries to create new meaning, is imperative. At its best, critical care research is a shared endeavor, focused on patient success instead of individual or disciplinary advancement. It focuses on highly significant problems affecting morbidity, mortality, and patient and family satisfaction with processes and outcomes.

Research that arises from interdisciplinary attention to patient problems will be highly innovative, practice-changing science.
Strategies for Implementing Research in Clinical Practice

- Promoting the use of research
  - Increase awareness of research
  - Provide access to resources
  - Implement research initiatives
Access to Resources

- Provision of relevant user-friendly information
  - Bulletin board article postings
  - Research Briefs
  - “Bathroom” Reviews
Relevant Research

Article Reviewed:

Pacing as a Treatment Technique for Transitional Sucking Patterns


Article summary/review by Joyce Zuleger, RN

So what is Paced Feeding?

First, it is not what has recently been discussed on the unit as paced feedings so please
Promoting the Journey to Evidence Based Practice and Research

“Journey” Project”   JOURNal rEcYcling Project
Strategies for implementing Research

- Identifying, developing, and implementing projects
  - Identify current initiatives that can be formulated into research projects
  - Develop research projects that target established indicators
Identifying Research Projects

**Quality Indicators:**

- National Quality Forum Performance Measures
- Falls/patient injuries
- UTI
- Hospital-acquired pneumonia
- Post op pulmonary embolism/DVT
- Post op infections
- Sepsis
- Decubitus ulcer prevalence
- Post op hip fracture
OVERVIEW

This program is one way that IHI is helping hospitals implement a key component of the IHI Improvement Map.

Research has shown that urinary catheters are often overused and left in place longer than necessary. However, processes for their reliable insertion and removal can decrease use and significantly reduce catheter-associated urinary tract infections (CA-UTIs) and risk. To support hospitals in implementing demonstrated, effective ways to reduce catheter use, the Institute for Healthcare Improvement is offering this Expedition on Preventing Catheter-Associated Urinary Tract Infections. This web-based Expedition will provide both best practices and an opportunity to learn how to reduce these infections from expert faculty and other participants.

Accounting for more than 30 percent of the total, catheter-associated urinary tract infections are the most common hospital-acquired infection. Because they are viewed as largely preventable, the Centers for Medicare & Medicaid Services (CMS) have included CA-
Value Based Purchasing Program

- Affordable Care Act
  - Hospital Inpatient Value-Based Purchasing Program
    Focuses on a hospital’s performance on 25 quality measures related to clinical process of care measures and patients’ experience of care.
    Under the program, incentive payments will be made to hospitals based on performance of certain quality measures as well as improvement in performance.

Hospital Acquired Conditions

- Foreign Object Retained After Surgery
- Air Embolism
- Stage III and IV Pressure Ulcers
- Falls and Trauma
- Manifestations of Poor Glycemic Control
  - Diabetic Ketoacidosis
  - Hypoglycemic Coma
- Catheter-Associated Urinary Tract Infection (UTI)

720 bed University Medical Center, Chicago Illinois

22 bed Surgical ICU
21 bed Medical ICU
25 bed NeuroSurgical ICU
25 bed CCU/CSU
Total admissions/year = 8,349
Reducing Use of Indwelling Urinary Catheters and Associated Urinary Tract Infections
Ellen H. Elpern, Kathryn Killeen, Alice Ketcham, Amanda Wiley, Gourang Patel and Omar Lateef

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Published online http://www.ajcconline.org

Purpose
- To implement and evaluate the efficacy of a multidisciplinary initiative to reduce CAUTIs in a Medical ICU by decreasing urinary catheter device use
During 6 month period, reinforced assessment of appropriate use of urinary catheters and monitored catheter device days and rates of CA-UTI's compared to prior 11 month timeline

<table>
<thead>
<tr>
<th>Appropriate indications</th>
<th>Inappropriate indications</th>
</tr>
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<tbody>
<tr>
<td>Urinary tract obstruction</td>
<td>Incontinence without any of the appropriate indications</td>
</tr>
<tr>
<td>Urinary retention</td>
<td>Diuresis</td>
</tr>
<tr>
<td>Patient to undergo prolonged (&gt;2 hours) procedure</td>
<td>Frequent, but nonessential, determination of urinary output</td>
</tr>
<tr>
<td>Recently underwent surgical/invasive procedure</td>
<td>Nurse's concern about patient's discomfort</td>
</tr>
<tr>
<td>Epidural catheter in place</td>
<td>Diarrhea, without any of the appropriate indications</td>
</tr>
<tr>
<td>Frequent monitoring (every 1-2 hours) of urinary output required</td>
<td>Patient's preference</td>
</tr>
<tr>
<td>Deep sedation/paralysis</td>
<td></td>
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<tr>
<td>Stage III or IV skin ulcers</td>
<td></td>
</tr>
<tr>
<td>Surgical repair of decubitus ulcer</td>
<td></td>
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<tr>
<td>Movement intolerance due to terminal illness or severe impairment</td>
<td></td>
</tr>
</tbody>
</table>

Table 1
Indications for use of an indwelling urinary catheter
Figure 1 Number of urinary catheter device days by month.
Figure 2  Rates of catheter-associated urinary tract infections by month.
Building Support for Conducting Research

- Communication is essential
- Encourage participation of staff
- Include staff in the active stages of planning
"What I'm suggesting is a research partnership. I'll think up the bright ideas, and you'll do the research."
Addressing Barriers to Conducting Research

- Inadequate knowledge of research process
  - Solution: Find mentorship
- Resources for conducting research
  - Solution: Find funding/support to facilitate
- Lack of Time
  - Solution: Negotiate time
Be Prepared!
Summary

- Conducting interdisciplinary clinical research can impact patient outcomes and promote best ICU care practices.
- A variety of strategies exist which can be used to facilitate interdisciplinary clinical research.
DEAR MOM I NO THAT DOING RESHEARGH IS HARD WORK. I NO Y DONT YOU TAKE A BREAK AND GO DO SOMETHING FUN! LOVE HORACE.

RUSH

Horace, age 6, 7-03