Bridging the Gap Between Actual and Best Practice:

Quality Improvement in the ICU

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Critical Care Nutrition,
Queen’s University, Kingston ON Canada
Outline

- Defining Best Practice
  - Canadian Guidelines
- Actual Nutrition Practices
  - International Survey 2007
- Bridging the Gap
  - Identifying the barriers and enablers to guideline adherence
  - Strategies to implement change
Bridging the Gap: Quality Improvement in the ICU

- Variation in nutrition practices exist
- Changing nutrition practice is complex
- Need to identify barriers and enablers to guideline adherence
Guideline adherence is complex

Why did it take six months to complete this simple task?

Because of your continuous changes, your unclear communication, and your short work days.

I'm looking for something more along the lines of you being lazy.
Understanding Guideline Adherence: Mixed Methods Approach

Quantitative Phase

Secondary analysis of Dissemination Guideline Cluster RCT*

Qualitative Phase

Multiple case studies#

Document review

Key Informant Interviews

Revision of Framework

Framework for Adherence to CPGs in the ICU

- CLINICAL PRACTICE GUIDELINE
  - Guideline Characteristics
  - Implementation Process

- Institutional Characteristics
  - Hospital and ICU Structure
    - Hospital Processes
      - Resources
      - ICU Culture

- Patient Characteristics
  - Provider Intent
  - Provider Characteristics
    - Knowledge
    - Familiarity
    - Agreement
    - Awareness
    - Motivation
    - Outcome expectancy
    - Self-efficacy

- Provider Intent
  - Attitudes
    - Agreement
    - Self-efficacy
## Theme 1 and 2

<table>
<thead>
<tr>
<th>Theme /Factor</th>
<th>Barrier</th>
<th>Enabler</th>
</tr>
</thead>
</table>
| CPG Characteristics | • Outdated  
• Vague or complex statements                                  | • Evidence – based  
• Respected developer  
• User friendly format  
• Action-orientated |
| Implementation Process | • Lack of availability of all ICU Team to attend meetings, educational sessions etc.  
• No dedicated individual willing to ‘champion’ the guidelines  
• Time commitment to develop and implement educational strategies  
• Restricted access to computers  
• Displacement of posters and pamphlets over time | • Multiple approaches  
• Support of Clinical educator + Medical Director  
• Tailored to specific needs of individual  
• Reminders (e.g. checklist)  
• Protocols  
• Academic detailing (i.e. one-on-one education)  
• Educational sessions  
• Audit and feedback  
• E-mail / web-based tools  
• Opinion leader (e.g. the Dietitian) |
Framework for Adherence to CPGs in the ICU

CLINICAL PRACTICE GUIDELINE

Guideline Characteristics

Institutional Characteristics

Implementation Process

Hospital and ICU Structure

Provider Intent

Provider Characteristics

Patient Characteristics

Outcome expectancy

Agreement

Motivation

Self-efficacy

Familiarity

Awareness

Knowledge

Attitudes

Hospital Processes

Resources

ICU Culture
# Theme 3: Institutional Characteristics

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</table>
| Hospital and ICU Structure    | • Community hospital  
                                 • Open structure  
                                 • Rural location  
                                 • Small hospital and / or ICU  
                                 • Lack of geographical consolidation | • Large hospital and / or ICU  
                                 • Closed structure  
                                 • Critical care residency program  
                                 • Dedicated, stable workforce |
| Hospital Processes            | • Long, slow administrative process  
                                 • Disconnect between priorities of management and clinical personnel  
                                 • Organizational constraints on practice | • Support for evidence-based practice  
                                 • Efficient, flexible administrative process |
| Resources for Implementation  | • Shortage of staff  
                                 • Limited budget  
                                 • Lack of appropriate equipment / materials  
                                 • Lack of access to specialist services | • Adequate resources available (i.e. level of staffing, equipment, budget for implementation activities)  
                                 • New, contemporary facilities |
## Theme 3: Institutional Characteristics

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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Prevailing Culture of ICU</td>
<td>• No cohesive, multi-disciplinary team structure</td>
<td>• Established multi-disciplinary team</td>
</tr>
<tr>
<td></td>
<td>• No multi-disciplinary daily rounds</td>
<td>• Leadership Support</td>
</tr>
<tr>
<td></td>
<td>• Unresolved conflict or disagreements between ICU team members</td>
<td>• Collaborative decision-making</td>
</tr>
<tr>
<td></td>
<td>• Reliance on written communication (e.g. Cardex, paper notes)</td>
<td>• Patient centred approach</td>
</tr>
<tr>
<td></td>
<td>• Leadership not physically present on unit</td>
<td>• Formal / informal mentorship</td>
</tr>
<tr>
<td></td>
<td>• Poor communication</td>
<td>• Group learning</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Respect for expertise of each ICU Team member</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Innovation: embracing change</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Informal, open communication</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Positive work environment</td>
</tr>
</tbody>
</table>

See Our Poster in the Exhibit Hall
Framework for Adherence to CPGs in the ICU

CLINICAL PRACTICE GUIDELINE

- Guideline Characteristics

Implementation Process

- Institutional Characteristics
  - Hospital and ICU Structure
    - Hospital Processes
      - Resources
        - ICU Culture
  - Knowledge
    - Familiarity
    - Awareness
  - Agreement
  - Motivation
  - Outcome expectancy
  - Self-efficacy

- Provider Intent
  - Provider Characteristics

- Patient Characteristics

ADHERENCE
### Theme 4: Provider Intent

<table>
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<tbody>
<tr>
<td>Knowledge</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Familiarity</td>
<td>• CPGs infrequently used due to rare clinical condition or narrow case-mix</td>
<td>• Part of daily routine&lt;br&gt;• Visibility / access to CPGs on ICU</td>
</tr>
<tr>
<td>Awareness</td>
<td>• Conflicting and numerous CPGs on same topic&lt;br&gt;• Information overload&lt;br&gt;• Time required to remain updated&lt;br&gt;• Poor dissemination</td>
<td>• Effective implementation process</td>
</tr>
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# Theme 4: Provider Intent

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<tbody>
<tr>
<td>Attitudes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outcome Expectancy</td>
<td>• Experience of adverse event from following guideline</td>
<td>• Belief that best for patient&lt;br&gt;• Positive experience from following guideline</td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>• Labour-intensive&lt;br&gt;• Complex procedure&lt;br&gt;• Limited circle of influence</td>
<td>• Recommendation simple and quick to perform&lt;br&gt;• Procedure frequently performed successfully&lt;br&gt;• Possession of skills and training to perform procedure&lt;br&gt;• Procedure within usual scope of practice</td>
</tr>
<tr>
<td>Motivation</td>
<td>• Inertia of previous practice, especially among experienced, older staff&lt;br&gt;• Physician resistance&lt;br&gt;• High cost / work burden</td>
<td>• Shared team goal to optimize patient care&lt;br&gt;• Enforcement or incentive to perform task</td>
</tr>
<tr>
<td>Agreement</td>
<td>• Paucity of evidence supporting recommendation&lt;br&gt;• Lack of generalizability to critical care and/or specific patient groups</td>
<td>• Buy-in of attending physicians&lt;br&gt;• Buy-in of all members of the ICU Team&lt;br&gt;• Understanding rationale behind recommendation</td>
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# Theme 4: Provider Intent

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<tr>
<td>Provider Characteristics</td>
<td>• Circle of influence of nursing staff and allied healthcare professionals (e.g. dietitian) dependent on support of physician and leadership team</td>
</tr>
<tr>
<td>Professional Roles</td>
<td>• Junior, novice staff • Locum or casual staff</td>
</tr>
<tr>
<td>Critical Care Expertise</td>
<td>• Clinical training &gt; 10 years • Reliance on expert opinion</td>
</tr>
<tr>
<td>Educational Background</td>
<td>• Type B personality • Uncooperative • Laggard / skeptic</td>
</tr>
<tr>
<td>Personality</td>
<td></td>
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| Patient Characteristics        | • Poor prognosis  
• Other priorities of care  
• Unstable clinical condition  
• Surgical patients  
• Reconciliation with family preferences | • Medically stable  
• Functioning gastrointestinal tract |

**Theme 5:** Patient Characteristics
Next Steps....

- Development of screening questionnaire based on Framework
- Tailored approach to guideline implementation
  - Future Trial

What can you do?
Is Best Practice an Achievable Goal?

Yes!
Bridging the Gap: A.C.T

- **Audit and Feedback**
  - International Nutrition Survey 2008

- **Communicate**
  - Informal one-on-one discussions
  - Academic detailing, ward rounds

- **Triggers**
  - Daily check-list
  - Posters
Bridging the Gap: A.C.T

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International Nutrition Survey 2008

- Plan to participate: 14 May 2008
- Review your Site Report with your ICU colleagues
- Present results at various forums
- Identify your strengths and weaknesses
- Identify barriers to change
- Agree actionable items
- Implement change
- Re-audit
Bridging the Gap: A.C.T

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- **Triggers**
  - Daily check-list
  - Posters
Triggers

- Checklists
- Reminders
- Pre-printed orders
- Protocols
What we offer?

We are dedicated to the improvement in nutrition therapies in intensive care units across the world.

We bring to you...

**Important Announcement:**

Get ready for the next International Survey starting **Wednesday, 14 May 2008.**
For more information, please click [here](#).

- The latest evidence based recommendations for nutrition therapies in the ICU ([here](#))
- Tools to assist in implementing the evidence from the Clinical Practice Guidelines ([here](#))

And much more...

www.criticalcarenutrition.com
Thank you

Questions