Measuring Quality and Safety Knowledge, Skills, and Attitudes of Pediatric Clinical Teachers on a Dedicated Education Unit

Leslie McKeon, PhD
Paula Dycus, DNP
Sherry Webb, DNSc
Brittany Cardell, MSN
Ann Reed, MSN
Marie Gill, MSN

University of Tennessee Health Science Center
College of Nursing
Purpose

Evaluate quality and safety competencies among staff nurses serving as Clinical Teachers on two pediatric Dedicated Education Units using a revised version of Quality Improvement Knowledge Skills and Attitudes Survey.
Background

- **Quality Improvement Knowledge Skills and Attitudes Survey**
  - Nursing quality outcomes for St. Jude Children’s Research Hospital International Outreach Site
    - No nursing specialty education or quality improvement training provided
  - International study of pediatric oncology nurses
    - Framework: QSEN Pre-Licensure Competencies


Background

- UTHSC-LeBonheur Dedicated Education Units (DEU)
  - Clinical Teacher Training
    - QSEN pre-licensure competencies
    - Adult learning principles & teaching techniques
  - DEU Pilot Evaluation
- 2009 Master’s Entry Clinical Nurse Leader Program
  - CNL & QSEN graduate competencies
  - Pilot *Quality Improvement Knowledge Skills and Attitudes Survey* to assess Clinical Teacher learning needs

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Methods

• Revised *Quality Improvement Knowledge Skills and Attitudes Survey*
  • 27 Multiple choice knowledge and skill questions
  • 23 Self-rated proficiency questions
  • 14 Self-rated level of agreement with QSEN attitudes
• Established content validity
• Obtained UTHSC and Methodist-LeBonheur IRB Approval
• Tested survey in *SurveyMonkey®*
• Administered survey to 14 Clinical Teachers
• Shortened survey to include only self-rated skills and attitudes
• Analyzed results
Multiple Choice Question: Safety Knowledge

Competency: Describe factors that create a just culture and culture of safety

Actions immediately following a near-miss medication error indicating a culture of safety include:

a. congratulating the person that caught the error
b. identifying how the error was detected
c. reprimanding the person who made the error
d. reporting the incident to the physician
Self-rated Proficiency: Quality Improvement

Competency: Design a small test of change in daily work using an experiential learning method such as PDSA

Rate your proficiency from Novice to Expert (1 - 6 scale)

Using quality improvement methods such as Plan-Do-Study-Act or Six Sigma

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<tr>
<td>NOVICE</td>
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<td>UNDERSTAND</td>
<td>SKILLED</td>
<td>PROFICIENT</td>
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QSEN Attitude Competency: Level of Agreement

Competency: Respect the centrality of the patient/family as core members of any health care team

Rate your level of agreement with the following statement:

It is important to include patients and families as core members of the health care team

Strongly Disagree    Disagree    Neither Disagree or Agree    Agree    Strongly Agree
Results

- 6 (43%) Clinical Teachers complete the full survey
- 11 (79%) Clinical Teachers completed the self-rated portion
  - Electronic and paper surveys
- Multiple choice mean score 57.4%
  - “too much like a test”
  - “too difficult and long”
- Self-assessed QSEN skills
  - Highest in Patient-centered Care
  - Lowest in Quality Improvement
- Lack of variance in self-assessed attitudes
Results: Multiple Choice Questions

Low Scored

• Quality Improvement
  • Describing strategies to learn about clinical outcomes

• Teamwork
  • Improving systems to support team functioning

• Evidence-based Practice
  • Interpreting Evidence Summaries
  • Understanding health research methods
  • Developing guidelines for clinical decision making

High Scored

• Patient-centered Care
  • Managing Pain; Engaging patients in partnership

• Evidence-based Practice
  • Defining EBP; Identifying reliable sources of evidence

• Safety Culture

• Teamwork
  • Communication in handoffs

• Informatics
  • Benefits and limitations
Clinical Teacher Self-Rated QSEN Skills

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<tr>
<th>Skill</th>
<th>NOVICE</th>
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<th>UNDERSTAND</th>
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<td>Patient-centered Care</td>
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Le Bonheur
Methodist Healthcare
Children's Hospital
Using quality improvement methods such as Plan-Do-Check-Act
Interpreting descriptive statistics such as mean, SD, freq, etc
Interpreting graphs such as: Run Charts and Control Charts
Mapping processes or flowcharting
Collecting data for analysis
Anticipating potential safety problems when processes are changed
Using strategies to reduce reliance on memory (such as prompts)
Engaging patients in active partnerships in making care decisions
Eliciting patient values and preferences in plan of care
Serving as a resource for nursing document at advanced levels

Highest and Lowest Self-Rated QSEN Competencies

- NOVICE
- FAMILIAR
- UNDERSTAND
- SKILLED
- PROFICIENT
- EXPERT
Conclusions

• Clinical Teacher QSEN competencies
  • Higher in clinical practice applications
    • empowering patients and families, pain management, EMR, handoff communication, and patient safety.
  • Lower in understanding and applying data
    • interpreting evidence and data analysis
• Self-assessed attitudes lack of variation may be due to sample, scale, or survey bias; original survey used 4-point importance scale
• Future professional development to include how to use outcome data to improve practice
  • QSEN KSAs may be better assessed through case studies and simulation rather than through traditional testing methods
Example of Case Study Assessment Method

- QSEN Quality Improvement Skills Competencies
  - Design and use databases as sources of information for improving patient care
  - Select and use relevant benchmarks

- **Community acquired pneumonia (CAP) is a major contributor to illness and mortality in the United States, causing 4 million episodes of illness and nearly one million hospital admissions each year.**

- Scientific evidence indicates that the following measures represent the best practices for the treatment of community-acquired pneumonia:
  - Patients who have community acquired pneumonia should get:
    - Time to treat with antibiotics
    - Influenza and pneumococcal vaccines
    - Advice to quit smoking

- **The Joint Commission Benchmark for CAP:** 95% of pneumonia patients receive their initial antibiotic within 4 hours after arrival.
Consider the following definition of a particular measure to answer questions 1 – 5*:

- **Numerator:** For the month, the number of patients admitted to the hospital who were diagnosed with community-acquired pneumonia (CAP) and received antibiotics within four hours of admission
- **Denominator:** For the month, the total number of patients who were admitted to the hospital who were diagnosed with community-acquired pneumonia
- Multiply the N/D ratio by 100 to convert to percent.

1. During the month of May, 42 patients were admitted with community-acquired pneumonia; 36 of these patients received antibiotics within four hours of admission, and six of these patients got antibiotics more than four hours after admission. How would you calculate the measure?

   a. \((36/42) \times 31\) * 100
   b. \((36/42) \times 100\)
   c. \((6/42) \times 100\)
   d. Can't tell from the definition

*Adapted from IHI Open School Quality Improvement Course
2. How should you count the six patients who were admitted with CAP but did not get antibiotics within four hours?
   a. As part of the numerator
   b. As part of the denominator
   c. They are not counted in this measure
   d. You can't tell from the definition

3. How should you count patients who were admitted to the hospital for another reason and subsequently developed pneumonia in the hospital ("health care-associated pneumonia")?
   a. As part of the numerator
   b. As part of the denominator
   c. They are not counted in this measure
   d. You can't tell from the definition

4. How should you count patients who were admitted with CAP and who did not receive antibiotics due to contraindications?
   a. As part of the numerator
   b. As part of the denominator
   c. They are not counted in this measure
   d. You can't tell from the definition

5. Did you meet the Joint Commission Benchmark for CAP care?
   a. Yes
   b. No
Acknowledgement

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The New Le Bonheur

Questions