How to Guide New Nurses to Competent Practice Using Clinical Reasoning

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Failure to RESCUE

- Nurses’ inability to recognize or manage complications that result in a preventable death
  - EARLY signs of distress are not recognized or acted upon
- Successful rescue requires:
  - Surveillance: EARLY recognition
    - Safe staffing
  - Take action: Bring skilled care providers quickly to bedside

The Walls: Applied Sciences

- Wall #1
  - Nursing pharmacology
- Wall #2
  - A&P
- Wall #3
  - F&E

Most Important Meds

- What are top 10-15 meds that are MOST RELEVANT to your content that must be understood to promote DEEP LEARNING?
Deep Learning of Most Important

- Top 10-15 medications
  - Foundational “5” questions
- Top 5-10 labs
  - Lab planning
- Top 3-5 medical/surgical problems
- Most common complications
  - Identify EARLY assessment findings
- Most common clinical dilemmas
  - End of life, treatment, ethical, etc.

Practical Wall Raising

**Pharmacology: Foundational Five**

- What is it for?/What is the pharmacologic class?
- Why is your patient receiving?
- What is the mechanism of action?
- What assessments do you need to know before you administer?
- Is this a safe dose? Is the dose range low-mid-high?

Understanding Mechanism of Action

**CO=SVxHR**

- Beta-blockers
- ACE inhibitors
- Ca++ channel blockers
- Diuretics
- Nitrates

Power of a Tool

“If you want to teach people a new way of thinking, don’t bother to teach them. Instead give them a tool, the use of which will lead to new ways of thinking.”

Buckminster Fuller

Tool from the Toolbox

<table>
<thead>
<tr>
<th>Medications That Must Be Mastered Worksheet</th>
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<tr>
<td>Name</td>
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Most Important Labs

- What 5-10 labs are MOST RELEVANT to your content that must be understood to promote DEEP LEARNING?
 ALWAYS Relevant Labs

- Basic Metabolic Panel (BMP)
  - Sodium
  - Potassium
  - Creatinine/GFR
  - Magnesium

- Complete Blood Count (CBC)
  - Hemoglobin
  - WBC
  - Neutrophil %

“Lab Planning”

<table>
<thead>
<tr>
<th>Relevant Lab</th>
<th>Nursing Interventions</th>
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| Creatinine (cGFR) | 1. Assess for signs of fluid retention/edema  
| 2. Assess daily weight and trend daily  
| 3. Assess Glomerular Filtration Rate (GFR) |

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| BNP | 1. Assess respiratory status for tachypnea and breath sounds for basilar or scattered crackles (may be fine or course crackles depending on severity)  
| 2. Assess HR and SBP carefully to promote decreased cardiac workload (heart rate <80 and SBP <140)  
| 3. Assess tolerance to activity  
| 4. Assess I&O and urine output  
| 5. Assess lower extremities for any pitting edema present |

Tool from the toolbox: “Lab Planning”

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<tbody>
<tr>
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<th>Nursing Assessment/Interventions Required</th>
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“Truss #1- Nursing Process”

- Assessment
- Nursing Diagnosis…(Priority)
- Outcomes/Planning
- Implementation
- Evaluation

“A Crisis in Critical Thinking”

- 65% new grads do NOT meet entry levels of clinical judgment
- Why???
  - Too much content
  - Less emphasis on application/knowledge usage
  - Content knowledge not same as clinical decision
- How to improve nursing education
  - BEST…preceptor coaching by asking questions
  - More experience with simulation/clinical exp.
  - Active learning that emphasizes application/synthesis

Roof: Thinking Like a Nurse

- Truss #1
  - Nursing process
- Truss #2
  - Critical thinking
- Truss #3
  - Identify clinical relationships
- Truss #4
  - Clinical reasoning

Building the “Living” House

Truss #1

- Nursing process
**A Crisis in Critical Thinking** (del Bueno, 2005)

- New grads unable to translate theory & knowledge to practice
  - Why???
- _ _ _ _ 
- N_N_ _
- N_ND _
- NANDA

**Truss #2-Critical Thinking**

- Can it be taught?
- How do you define?
  - "The nurses’ ability to focus their thinking to achieve timely, quality outcomes."
  - "Thinking about your thinking, while you’re thinking, to make it better, more clear, accurate, and defensible."

**Essence of Critical Thinking**

- Critical thinking is a commitment to think:
  - Clearly
  - Precisely
  - Accurately
  - Act on what you know about a situation

**Caputi on Critical Thinking**

- Assess systematically & comprehensively
- Gather complete and accurate data then act on that data
- Clustering related data
- Determine importance of information
  - Distinguish relevant from irrelevant

**Habits of Critical Thinkers**

- Creative
- Flexible
- Inquisitive
- Openminded
  - Consider all options
- Reflection
  - IN action
  - ON action

**Clinical Thinking Contrasted**

**Novice Nurses**

- Emphasize ACTIONS instead of ASSESSMENT
- Anxious—lack of self confidence
- Limited clinical knowledge
- NOT able to identify RELATIONSHIPS between data

**Expert Nurses**

- Assess FIRST and then ACT
- Confident, less anxious
- Depth of experience can see patterns
- ABLE to identify RELATIONSHIPS between clinical data
Truss #3: Identifying Clinical Relationships

1. RELATIONSHIP-what current medications are treating past medical problems.
2. Is there a RELATIONSHIP between PMH and development of current primary problem?
3. RELATIONSHIP between primary problem and current chief complaint?
4. RELATIONSHIP between relevant clinical data and primary problem?
5. RELATIONSHIP between newly ordered medications and primary problem?

Truss #4: Clinical Reasoning

- THINK IN ACTION and REASON as a situation CHANGES over time
- Capture and UNDERSTAND significance of clinical TRENDS
- Filter clinical data to recognize what is MOST and least important (RELEVANT)
- IDENTIFY if actual problem is present
- Grasp the essence of current clinical situation

Clinical Reasoning & Nursing Process

- Assessment
  - Recognizing RELEVANCE
- Nursing priority
  - What is my PRIORITY
- Outcomes/Planning
  - Think in action
- Implementation
  - Failure to rescue
- Evaluation
  - Think in action

Benner: Novice to Expert (1982)

- Novice
  - Concrete learners
  - No experience-no prior context
    - ALL clinical data relevant
- Advanced beginner
  - Sees exceptions to concrete textbook data
  - Clinical experience allows to see prior patterns of relevant recognition
    - Identifies CERTAIN clinical data as relevant
  - Unable to readily recognize priorities

The five rights of clinical reasoning: An educational model to enhance nursing students ability to identify and manage clinically at risk patients (2009)

Five Rights of Clinical Reasoning

- RIGHT cues
- RIGHT patient
- RIGHT time
- RIGHT action
- RIGHT reason

Components of Clinical Reasoning

- What is my PRIORITY?
- Rationale for EVERYTHING!
- What is RELEVANT?
- TREND to RESCUE
Your Nursing Assessment…

<table>
<thead>
<tr>
<th>Last VS 4 hours ago…</th>
<th>Current VS…</th>
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<tbody>
<tr>
<td>T: 101.6 (o)</td>
<td>T: 102.8 (o)</td>
</tr>
<tr>
<td>R: 20</td>
<td>R: 24</td>
</tr>
<tr>
<td>BP: 130/88</td>
<td>BP: 108/50</td>
</tr>
<tr>
<td>O2 sats: 98% RA</td>
<td>O2 sats: 92% RA</td>
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“Jason” is still out there…

Clinical Reasoning Template: Pre-Care

1. What is the primary problem and what is the underlying cause/pathophysiology of this problem?
2. What clinical data from the chart is RELEVANT and needs to be trended because it is clinically significant?
3. What nursing priority captures the “essence” of your patient’s current status and will guide your plan of care?
4. What nursing interventions will you initiate based on this priority and what are the desired outcomes?
5. What body system(s) will you focus on based on your patient’s primary problem or nursing care priority?
6. What is the worst possible/most likely complication(s) to anticipate based on the primary problem?
7. What nursing assessments will identify this complication EARLY if it develops?
8. What nursing interventions will you initiate if this complication develops?

Most Common “Jasons”…

1. Chest pain
2. Increased resp. distress/O2 sats <90%
3. Hypotension
4. Change in LOC or neuro status
5. Patient fall

“Jason” is still out there…

Clinical Reasoning Template: Providing Care

9. What clinical assessment data did you just collect that is RELEVANT and needs to be TRENDED because it is clinically significant to detect a change in status?
10. Does your nursing priority or plan of care need to be modified in any way after assessing your patient?
11. After reviewing the primary care provider’s note, what is the rationale for any new orders or changes made?
12. What educational priorities have you identified and how will you address them?

Essential Equation to Practice

- Critical thinking & Clinical reasoning → Clinical judgment
Thinking like a Nurse: Research Based Model of Clinical Judgment in Nursing, Tanner (2006)

Clinical Judgment

- Flexible NOT rigid/concrete
  1. NOTICE a potential problem
  2. INTERPRET meanings
     - Applied pathophysiology
     - Knowledge of patient/patterns
     - Engagement required by nurse
  3. RESPOND correctly
  4. REFLECT
     - In action…on action (error/missed sx)

Steps to Develop Clinical Judgment

1. What did you observe?
   - RELEVANT clinical data
2. What do you make of what you saw?
   - Determining degree of ambiguity
3. What course of action will you take?
   - Thinking-IN-action
   - Thinking-ON-action

Clinical Judgment & Reasoning Revisited

- Influenced more by what the nurse brings to it vs. clinical data
- Influenced by “knowing” the patient and typical pattern of responses as well as nurse engagement
- Structured reflection may influence development in students
- May be influenced by educational strategies
  - Active learning tools that integrate


Reflection-IN-Action

- Student reflects on specific situation that required a clinical judgment
  - Interpret/evaluate patient response
     - What did you learn?
     - Correct thinking if needed
     - How this could be applied in similar situation in future

Reflection-ON-Action

- Reflective writing
  - Description of situation
  - Feelings that were provoked
  - Evaluation situation
     - Describe pos/negs
  - Analysis
     - Have you seen this before
     - What did you base judgment/action on?
  - Conclusion
     - Could you have done anything differently?
  - Action plan
     - What will you do differently?
     - Additional knowledge/training needed?

Tool from the toolbox: Reflection-IN-Action


Tool from the toolbox: Reflection-ON-Action


Clinical Judgment & Reasoning Revisited

- Influenced more by what the nurse brings to it vs. clinical data
- Influenced by “knowing” the patient and typical pattern of responses as well as nurse engagement
- Structured reflection may influence development in students
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Thinking Needs to Be Practiced!

“Classroom teachers must step out from behind the screen full of slides and ENGAGE students in clinic-like learning experiences that ask them to learn to use knowledge and PRACTICE THINKING in changing situations always for the good of the patient.”
Patricia Benner, Educating Nurses, 2010

Why Care?

- Does caring make you a better nurse?
- Benefits of caring:
  - Increased vigilance
  - Improved disposition to CT
  - Improved patient outcomes
  - Benefits to the nurse

Caring & Critical Thinking

- Assumption
  - Emotions essential to how data interpreted
  - Caring results in engagement/ fully informed understanding of current scenario
- Findings
  - P<.001 between caring & disposition to CT
  - CT can be predicted by caring behaviors
- Recommendations
  - “Nursing education should emphasize a curriculum related to caring behavior to improve the disposition of CT in nursing students.”

Two Questions to Ask…

1. What is the patient likely experiencing/feeling right now in this situation?
2. What can you do to engage yourself with this patient’s experience, and show that they matter to you as a person?

Practice/Develop the THINKING!

Nurse as Lifeguard

- Does the nurse RECOGNIZE a problem?
- Can the nurse MANAGE the problem?
- Does the nurse have a sense of URGENCY?
- Does nurse take RIGHT action for RIGHT reason?
Clinical Reasoning Exercises

- **Defining clinical ambiguity**
  - Compare/contrast normal VS ranges to patient ranges last 24-48 hours
  - Determinants of ambiguity
    - Medical history
    - Current problem
    - Weight of patient
    - Medications
    - Abnormal labs/radiology results
  - Present findings/conclusions post conference

Patient Care is a Puzzle

- Multiple “puzzle” pieces of clinical data
- In order to put “puzzle together…
  - Identify RELEVANT data
  - Identify clinical relationships
    - Requires DEEP understanding of applied sciences

Final Takeaways:

1. DEEP knowledge of MOST important
   - Decrease content…contextualize concepts
2. Little things are the BIG things
3. TEMPLATE of clinical reasoning
4. RATIONALE for everything
5. PRACTICE nurse thinking
   - Clinical reasoning case studies
   - Active learning strategies
6. Reflect: Top 3 things to do to bring needed change!
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    - Home page on KeithRN.com
  - YouTube channel: Think like a Nurse

References