Clinical Reasoning Questions to Develop Nurse Thinking

(Formulate and reflect before and after report, but **BEFORE** seeing patient the first time)

1. *What is the primary problem and what is its underlying cause or pathophysiology?*

2. *What clinical data from the chart is RELEVANT and needs to be trended because it is clinically significant?*

3. *List all relevant nursing priorities. What nursing priority captures the "essence" of your patient's 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), key assessments and psychosocial needs 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?*

While Providing Care (Review and note after initial patient assessment)

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?*

Caring and the "Art" of Nursing

13. *What is the patient likely experiencing/feeling right now in this situation?*

14. *What can I do to engage myself with this patient's experience, and show that he/she matters to me as a person?*

History of Present Problem:

What data from the PRESENT PROBLEM are RELEVANT and must be interpreted as clinically significant by the nurse?

RELEVANT Data from Present Problem:	Clinical Significance:

Patient Care Begins:

Current VS:	P-Q-R-S-T Pain Assessment:
T: (oral)	**P**rovoking/Palliative:
P: (regular)	**Q**uality:
R: (regular)	**R**egion/Radiation:
BP:	**S**everity:
O2 sat:	**T**iming:

What VS data are RELEVANT and must be interpreted as clinically significant by the nurse?

RELEVANT VS Data:	Clinical Significance:

Current Assessment:	
GENERAL APPEARANCE:	
RESP:	
CARDIAC:	
NEURO:	
GI:	
GU:	
SKIN:	

What assessment data are RELEVANT and must be interpreted as clinically significant by the nurse?

RELEVANT Assessment Data:	Clinical Significance:

Lab Results:

Basic Metabolic Panel (BMP:)	Current:
Sodium (135–145 mEq/L)	
Potassium (3.5–5.0 mEq/L)	
Glucose (70–110 mg/dL)	
Creatinine (0.6–1.2 mg/dL)	

What lab results are RELEVANT and must be interpreted as clinically significant by the nurse?

RELEVANT Lab(s):	Clinical Significance:

Complete Blood Count (CBC:)	Current:
WBC (4.5–11.0 mm 3)	
Neutrophil % (42–72)	
Hgb (12–16 g/dL)	
Platelets (150-450 x10$_3$/µl)	

What lab results are RELEVANT and must be interpreted as clinically significant by the nurse?

RELEVANT Lab(s):	Clinical Significance:

Misc. Labs:	Current:

What lab results are RELEVANT and must be interpreted as clinically significant by the nurse?

RELEVANT Lab(s):	Clinical Significance:

Put it All Together to THINK Like a Nurse!

1. What is the primary problem that your patient is most likely presenting?

2. What nursing priority(ies) will guide your plan of care? (if more than one-list in order of PRIORITY)

3. What interventions will you initiate based on this priority?

Nursing Interventions:	Rationale:	Expected Outcome:

4. What is the rationale for treatment and expected outcomes for medical management of the priority problem?

Care Provider Orders:	Rationale:	Expected Outcome:

Bringing Clinical into Class: Strategies to Strengthen Learning & Engagement

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Why Transform?

How do you Define…

RADICAL
- Very different from the usual or traditional: extreme
- Favoring <u>extreme changes</u> in existing views, practices, or institutions

TRANSFORMATION
- Complete or <u>major change</u> in someone's or something's appearance, form
- Synonyms:
    - changeover, metamorphosis

Three Paradigm Shifts

1. Teach for salience, situated cognition
- CONTEXTUALIZE CONTENT!
- What clinical data is MOST important
- Need rich knowledge base to make connection

2. Integrate classroom & clinical teaching
- Decreases current fragmentation

3. Emphasize clinical reasoning
- Reason as situation changes
- Situated learning to bedside

Sacred Cows to Put Out to Pasture…

Principles to Transform Class

- DEEP learning of MOST important
  - No more "covering the content!"
  - Emphasize RELEVANCE
- Emphasize CLINICAL REASONING
  - PRACTICE in safety of classroom
- Make learning ACTIVE/INTERACTIVE
- Students come to class PREPARED
- Pursue PASSION

Transformed Classroom:
DEEP Learning of Most Important

- Pathophysiology review
- Relevant/most important labs
- Relevant/most important medications
  - Use "Foundational 5" questions to guide
  - Emphasize mechanism of action!
- Most important nursing priorities/plan of care
- Body system to focus/essential assessments
- Worst possible/most likely complication(s)
 - Assessments needed for EARLY identification

Clinical Reasoning Defined

- 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)
- Grasp the essence of current clinical situation
- IDENTIFY if actual problem is present

"Clinical Reasoning-Based" Curriculum

- Emphasize relevance NOT content
  - Emphasize DEEP learning of what is most important
    - A&P
    - F&E
    - Pharmacology
- EVERYTHING is contextualized to the bedside
- Emphasize clinical reasoning as "nurse thinking"

Published in the Nursing Literature
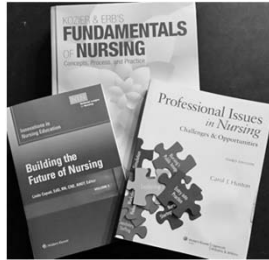
Clinical Reasoning Questions: BEFORE pt. care

*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?*

Clinical Reasoning Questions: BEFORE pt. care

*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?*

"Jason" is still out there…

Clinical Reasoning Template: During 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
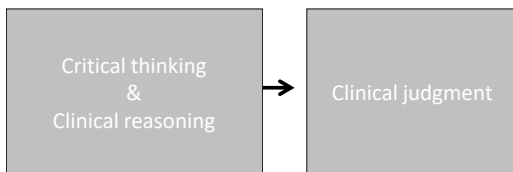
Thinking Needs to Be Practiced!

"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

Ruts & Reasoning

Passive vs. Active Learning

Passive (Lecture)	Active (case studies)
• Emphasis content presentation	• Emphasis essential skills
• Role of student:	• Increased engagement
• Absorb knowledge	• Learning promoted
• Take notes	• Promotes higher level thinking/learning
• Passive	• Adult learning strategy
• 80% forgotten in 24 hours	• Role of student:
• After 20" begin to disengage	• Participate
	• Experience
	• Think & discover
	• Construct/apply knowledge

The Power of a Good Story

- Easily understood
- Not easily forgotten
- Reinforces the "essence"
- Simplifies the complex vs. burden w/TMI

Popil, I. (2011). Promotion of critical thinking by using case studies as teaching method. Nurse Education Today

Benefits of Case Studies

- Facilitate active/experiential learning
- Identify problems
- Experience clinical dilemmas
- APPLY theory
- Emphasize knowledge usage
- Safe environment to practice

Developing a Salient Scenario

Telling a story…

- Setting
  - Where does it take place?
- Plot and structure
  - Age, gender, psychosocial dynamics
- Character
  - Put a human face
- Elements of style
  - More than one solution/distractors

Scenario Example

- Mandy White is a 16-year-old adolescent who has struggled with anorexia nervosa since the age of 11. She admits to drinking several large glasses of water daily.

- Mandy has also been recently engaging in self injurious behavior (SIB) of cutting both forearms and thighs with broken glass, causing numerous lacerations and scars.

- Mandy presents to the emergency department (ED) with increasing weakness, lightheadedness and a near syncopal episode this evening. She admits to inducing vomiting after meals the past three weeks.

- She is 5' 5" and weighs 83 lbs/37.7 kg (BMI 13.8). Mandy is reluctantly brought in by her mother and does not want to be treated. As the primary nurse responsible for the care of Mandy, you overhear her say to her mother, "I hate everything about me! I am so tired of living, I wish I were dead!"

Build Your Own Scenario…

I. Data Collection
History of Present Problem:

Personal/Social History:

What data from the histories is important & RELEVANT; therefore it has clinical significance to the nurse?

RELEVANT Data from Present Problem:	Clinical Significance:
RELEVANT Data from Social History:	Clinical Significance:

Case Study Components

- Identify RELEVANT clinical data
  - Scenario/VS/assessment/labs
- Clinical reasoning questions
- Medical management/rationale
- Priority setting of orders
- SBAR
- Reflect on caring
- Reflect on thinking

Clinical Reasoning Case Studies

- **Clinical Reasoning 123**
  - 3 brief/sequential case studies
- **Fundamental Reasoning**
  - Practical/vocational programs
  - 1st semester RN
- **Rapid Reasoning Study**
  - Basic med/surg (1st year)
- **Unfolding Clinical Reasoning**
  - Advanced med/surg

RAPID Reasoning Scenario

- Jean Kelly is an 82-year-old woman who has been feeling more fatigued the last three days and has had a fever the last twenty-four hours.
- She reports a painful, burning sensation when she urinates as well as frequency of urination the last week.
- Her daughter became concerned and brought her to the emergency department (ED) when she did not know what day it was. She is mentally alert with no history of confusion.
- While taking her bath today, she was weak and unable to get out of the tub and used her personal life alert button to call for medical assistance.

WHAT DATA IS RELEVANT AND WHY?

Vital Signs & Orthostatic BP's

Vital Signs
- T: 101.8
- P: 110
- R: 24
- BP: 102/50

WHAT DATA IS RELEVANT AND WHY?

Orthostatic BP's
- Lying
  - HR: 110
  - BP: 102/50
- Standing
  - HR: 132
  - BP: 92/42

Assessment Data

- **RESP:** Breath sounds clear with equal aeration bilaterally, nonlabored respiratory effort
- **CARDIAC:** Pink, warm and dry, no edema, heart sounds regular-S1S2, pulses strong, equal with palpation at radial/pedal/post-tibial landmarks
- **NEURO:** Alert and oriented x2-is not consistently oriented to date and place, c/o dizziness when she sits up
- **GI:** Abdomen soft/nontender, bowel sounds audible per auscultation in all four quadrants
- **GU:** Dysuria and frequency of urination persists, right flank tenderness to gentle palpation
- **SKIN:** Skin integrity intact, lips dry, oral mucosa tacky dry

Labs: Complete Blood Count (CBC)

Current:
- WBC: 13.2
- Hgb: 14.4
- Platelets: 246
- Neutrophil %: 93

Previous Admission:
- WBC: 8.8
- Hgb: 14.6
- Platelets: 140
- Neutrophil %: 68

WHAT DATA IS RELEVANT?
WHY?
TREND?

Labs: Basic Metabolic Panel (BMP)

Current:
- Sodium: 140
- Potassium: 3.8
- Glucose: 184
- BUN: 35
- Creatinine: 1.5

Previous Admission:
- Sodium: 138
- Potassium: 3.9
- Glucose: 128
- BUN: 14
- Creatinine: 1.1

WHAT DATA IS RELEVANT?
WHY?
TREND?

Clinical Reasoning Begins…

1. What is the primary problem that your patient is most likely presenting?
2. What is the underlying cause/pathophysiology of this primary problem?
3. What nursing priority will guide your plan of care?
4. What interventions will you initiate based on this priority?
   - Rationale…Expected Outcomes
5. What body system(s) will you most thoroughly assess based on the primary/priority concern?

Clinical Reasoning Begins…

6. What is the worst possible/most likely complication to anticipate?

7. What nursing assessment(s) will you need to initiate to identify this complication EARLY if it develops?

8. What nursing interventions will you initiate if this complication develops?

9. What psychosocial needs will this patient and/or family likely have that will need to be addressed?

10. How can the nurse address these psychosocial needs?

Medical Management

- Establish peripheral IV
- 0.9% NS 1000 mL IV bolus
- Acetaminophen 650 mg
- Ceftriaxone 1g IVPB…after blood/urine cultures obtained
- Morphine 2 mg IV push every 2 hours prn-pain

Rationale…Expected Outcome

Priority Setting: What do 1st…Why?

- Establish peripheral IV
- 0.9% NS 1000 mL IV bolus
- Acetaminophen 650 mg
- Ceftriaxone 1g IVPB…after blood/urine cultures obtained
- Morphine 2 mg IV push every 2 hours prn-pain

Caring & Reflection Questions

Caring/Holistic Care

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 he/she matters to you as a person?

Reflection

1. What did I learn from this scenario?
2. How can I use what has been learned from this scenario to improve patient care in the future?

No Student will RISE to LOW Expectations

Steps to TRANSFORM

1. Come to class PREPARED
   - Post case study ahead of class
2. Cut lecture in HALF
   - NEED vs. NICE to know
   - Lecture no more than 25"
3. Faculty "guide on the side"

Way to Engage

- Break classroom into small groups
- Assign question from case study
  - Use textbooks/each other
- Each group presents to class
- Educator role
  - Present mini lecture concepts
  - Guides/facilitates discussion
  - Reinforces key concepts

One Student's Perspective…

"I didn't feel like I was memorizing for the test. I felt like I was able to apply the information. It helped put knowledge into practice and made it clear why it was relevant."

Educator's Perspective…

- *"Your case studies break complex topics into bite size pieces that help student comprehend difficult topics and concepts."*
  - Sharyn Shaner, RN, MSN

- *"I used your clinical reasoning case studies when I was a BSN student. They do an absolutely wonderful job of walking the student through the reasoning process and help to enhance critical thinking skills."*
  - Shelly Jack, BSN, RN

Principles of the NCLEX

- Context is the bedside
  - Application /Analysis
- Assesses ability to make safe judgments based on clinical reasoning
  - No NANDA
  - PRIORITY setting
  - RATIONALE
  - EXPECTED OUTCOME
  - RELEVANT data
    - Labs, VS, assessment

Passing the NCLEX

50-75% NCLEX	25-50% NCLEX
1. Management of care	5. Safety/infection control
• 16–22%	• 8–14%
2. Medication/IV therapies	6. Basic cares/comfort
• 13–19%	• 6–12%
3. Physiologic adaptation	7. Health promotion/maintenance
• 11–17%	• 6–12%
4. Reduction of risk	8. Psychosocial integrity
• 10–16%	• 6–12%

Strengths

- **Implementation of educational best practice**
  - 1. Contextualize content
  - 2. Integrate classroom & clinical
  - 3. Emphasize clinical reasoning
- NCLEX principles reinforced
- Promotes "thinking like a nurse" in practice
  - Open ended vs. multiple choice
- Practice thinking (ruts) & common change of status
- Active learning strategy
  - Promotes student engagement…20" lecture MAX

Faculty Barriers

- Change
- Faculty buy in
- Time commitment
- Clinical currency

Buy-In: Students

- Classroom is no different than clinical
  - Come prepared to promote learning

- Communicate rationale
  - Educational best practice
  - Practice nurse thinking
  - Active learning that applies to the bedside
  - NOT "busy work"

Summary

- PREPARE students for PRACTICE
- CONTENT
  - Eliminate TMI!
  - DEEP learning most important
  - Contextualize content to bedside
- CLINICAL REASONING
  - Emphasize/integrate curriculum
  - Provide opps to PRACTICE
- DELIVERY
  - Active/interactive classroom

Stop & Reflect…

- What is the most important take away
- What is ONE thing will I DO to bring needed change?
  - Set time frame

The Choice is Yours…

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Bibliography

- Alfaro-LeFevre, R. (2013). Critical thinking, clinical reasoning, and clinical judgment: A practical approach, St. Louis: MO, Elsevier.
- Benner, P., Sutphen, M., Leonard, V., & Day, L. (2010). Educating nurses: A call for radical transformation. San Francisco, CA: Jossey-Bass.
- Benner, P., & Wrubel, J. (1989). Primacy of caring: Stress and coping in health and illness. Menlo Park, CA: Addison-Wesley Publishing Company.
- Clarke, S.P. & Aiken, L.H. (2003). Failure to rescue. *American Journal of Nursing, 103,* 42-47.
- Del Bueno, D. (2005). A crisis in critical thinking, Nursing Education Perspectives, 26(5), 278-282.
- Popil, I. (2011). Promotion of critical thinking by using case studies as a teaching method. *Nurse Education Today, 31,* 204-207.
- Tanner, C. A. (2006). Thinking like a nurse: A research-based model of clinical judgment in nursing. *Journal of Nursing Education, 45*(6), 204–211.