what do you need to know
to be well prepared for professional practice?

You can't know it all and you don't need to. But what content in nursing school is most important and must be mastered so you can successfully transition to real-world clinical practice after graduation? What character and personality traits must the nurse possess to be a true health care professional?

THINK Like a Nurse: Practical Preparation for Professional Practice was written to answer these questions and teach the concept of "thinking like a nurse" so every nursing student who graduates knows the essence of what is required for professional nursing practice.

Every new nurse needs a mentor to guide them as he or she ventures out on this new journey. Join the author as he shares what he has learned about caring for others over thirty years of clinical practice.

You'll be encouraged to take a look "under the hood" and identify your strengths as well as weaknesses as a novice nurse. Once a weakness has been identified, practical tools and strategies are presented so they can be remedied and become your strength!

Keith Rischer, MA, RN, CEN, CCRN is an author, blogger, nurse educator, and staff nurse who has practiced for thirty-one years in a wide variety of clinical settings. Defined by his passion for nursing and excellence in education, he is a recognized authority on clinical reasoning and its relevance to nursing practice. His innovative work on clinical reasoning has been published in the literature as well as the current fourth edition of *Kozier & Erbs Fundamentals of Nursing* textbook. He has presented his insights to nursing students and nurse educators at conferences and workshops across the country. His blog and creative tools to develop nurse thinking are available on his website, www.KeithRN.com.

"This book is a powerful resource for nursing students. They can read/review this book each semester and subsequently improve their ability to "think like a nurse" with each clinical experience as they progress through their nursing program and even their first year of nursing practice."

Shirlee J. Snyder, EdD, RN
Co-author of Kozier & Erbs Fundamentals of Nursing

"After reading this book as a new graduate, I am more confident to go into my nursing practice. The wealth of practical information in this short read is like having a year's worth of nursing experience under my belt. I highly recommend this valuable book for new grads!"

Tamera Wimbley, RN

"THINK Like a Nurse helps the brand new nurse understand how to prioritize what actions are most critical and puts those concepts into clear, logical, and useable steps. I will be using this book for all my new grads transitioning into practice."

Willi Ellison, MSN, RN, CCRN
Nurse Residency Coordinator
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Las Vegas, Nevada

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THINK Like a Nurse
Practical Preparation for Professional Practice
SECOND EDITION
Keith Rischer

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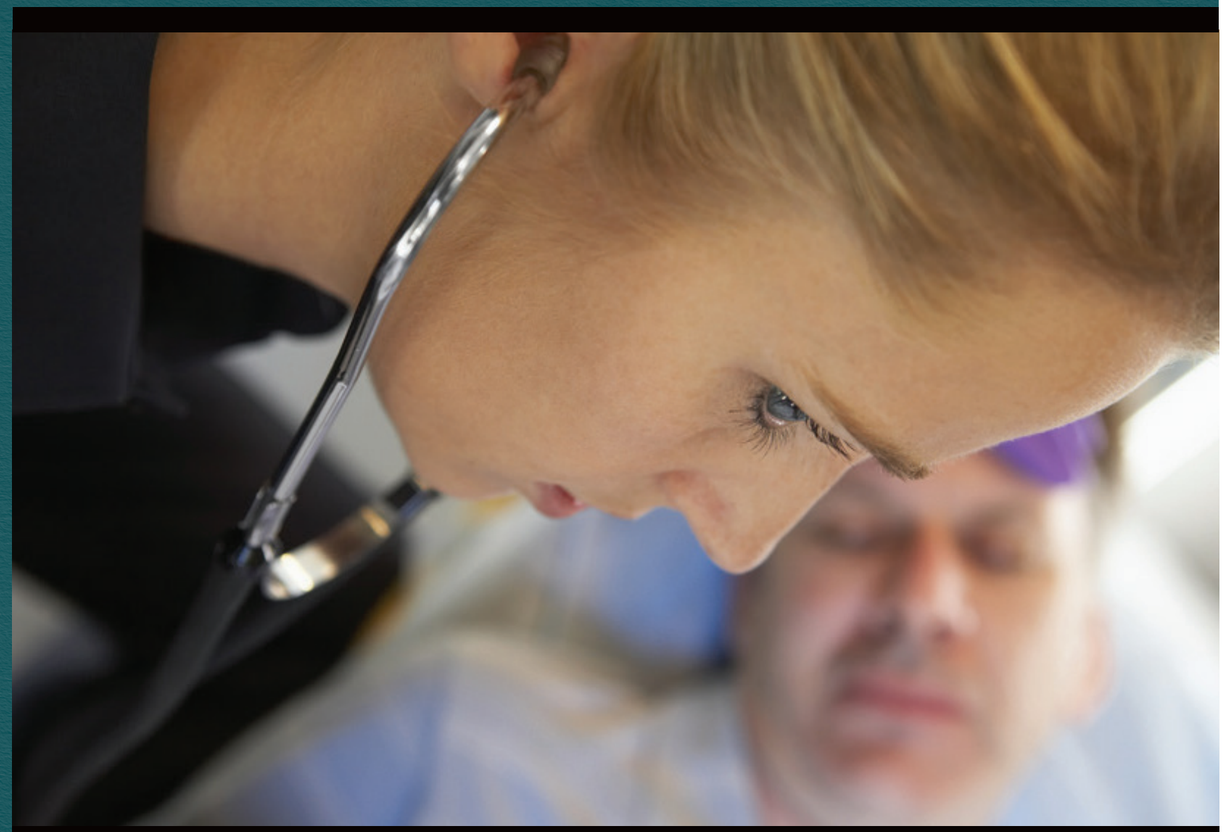
SECOND EDITION



Keith Rischer, MA, RN, CEN, CCRN

Praise for *THINK Like a Nurse*

From New Nurses:

"Nursing school has limitations to what can be taught before you graduate and enter the profession. 'THINK Like a Nurse' addresses this and provides the new nurse with need-to-know content, along with Keith's clinical pearls, to help you see the 'big picture' of patient care. I strongly recommend this invaluable book for all nursing students and/or new graduates."

–Andrea Baland, RN

"This is a must-read for all nursing students and new graduates. The content is invaluable and will encourage you to live up to your full potential as a new nurse!"

–Desiree Rohling, RN

"After reading this book, I am more confident to go into my nursing practice. The wealth of practical information in this short read is like having a year's worth of nursing experience under my belt. I highly recommend this valuable book for new grads!"

–Tamera Wimbley, RN

"I found 'THINK Like a Nurse' very helpful in getting me to think MORE like a nurse, and LESS like a nursing student…think- less deer-in-the-headlights!"

–Claire Schuchard, RN

"'*THINK Like a Nurse' helped me with my job as a newly graduated RN. I truly enjoyed reading and reflecting upon your nursing experiences. I found it particularly helpful that you considered holistic nursing in chapter 1. I also liked how you organized your book starting from the foundation then building up to the applied sciences and critical thinking."*

–Renate Jeddahlyn P. Depuno, RN

"When I read 'THINK Like a Nurse,' my first thought was, 'Wow! Where was this book when I was in nursing school?' I enjoyed how much of a condensed version of nursing school this book was. I would definitely recommend this book to my friends who are still in nursing school because I feel it would help benefit them a lot and better prepare them for the 'real' nursing world."

–Samantha Fernando, RN

"As a new grad on the floor, I've come to realize that because I am so focused on doing all the tasks, I sometimes forget to stop and take my time to think about why I am doing what I'm doing. Reading this book made me aware of this and aware of the fact that I can change. I am happy to say that I feel that I've improved my abilities to think like a nurse with the help of this informative book."

–Marian Maniago, RN
New graduate residency program
St. Rose Dominican Hospital, Las Vegas, Nevada

"The case studies were very useful in connecting the dots and applying critical thinking. This book was not boring at all. I liked the house analogy and it did put things in perspective. I wish I had this book while in nursing school."

–Jennifer Antoin-Nuguid, RN
New graduate residency program
St. Rose Dominican Hospital, Las Vegas, Nevada

"Overall, 'THINK Like a Nurse' definitely prepares new grads for their role as an RN. I benefited most from the content on lab values. This content opened my investigative approach to nursing as well as helping me to become more aware of my patient's situation."

–Jean-Claude Perrenoud, RN
New graduate residency program
St. Rose Dominican Hospital, Las Vegas, Nevada

"I liked that the book was very personal, as if Keith was speaking directly to you. This book condensed and summed up a lot of important information used in nursing that allowed me to easily recall and apply to practice such as lab values, common disease processes and what to expect. I feel 'THINK Like a Nurse' should be utilized not only by new grads, but also nursing students."

–Jerisha San Sebastian, RN
New graduate residency program
St. Rose Dominican Hospital, Las Vegas, Nevada

From Nurse Educators:

"Keith has masterfully presented the true essence of nursing including the 'art' with relevant historical perspective. Students will discover what is needed to become an excellent nurse. The strength of this book is the emphasis on how to practically transition successfully to real world practice."

–Barbara Hill, RN, MSN, CNE, CMSRN
Professor of Nursing
The Community College of Baltimore County
Catonsville, Maryland

"In nursing education there is the ideal we strive for and the real world of current clinical realities. There rarely exists a resource that bridges the two so honestly and powerfully as 'Think Like a Nurse.' In nursing education we strive to impart knowledge, but knowledge without wisdom and insight will leave the student nurse struggling to integrate the art of nursing into practice. I recommend this book to nurse educators, nursing students, and anyone who wants to deeply understand the profession of nursing."

–Karla Larson, PhD, MSN, RN
Associate Professor, Department of Nursing
Chamberlain College of Nursing
St. Louis, Missouri

"As an experienced bedside nurse and educator, I have always tried to help the brand-new nurse understand how to prioritize what actions are most critical. 'THINK Like a Nurse' puts all of those concepts into clear, logical, and usable steps. My students really appreciate the clinical 'pearls,' the lab overviews, and the cardiac medication reviews. I will be using this book for all my new grads transitioning into practice."

–Willi Ellison, MSN, RN, CEN, CCRN
Residency Coordinator
Dignity Health/St. Rose Hospitals, Las Vegas, Nevada

"'THINK Like a Nurse' provides relevant information in an easy-to-read, clear, and focused manner along with helpful advice from an expert nurse and teacher. This book is a powerful resource for nursing students. They can read/review this book each semester and subsequently improve their ability to 'think like a nurse' with each clinical experience as they progress through their nursing program and even their first year of nursing practice."

–Shirlee J. Snyder, EdD, RN
Co-author of Kozier & Erb's Fundamentals of Nursing

"I highly recommend 'THINK Like a Nurse.' This book is perfect for student nurses in the last semester of their nursing program and for new graduate nurses. Keith takes the common core knowledge and skills that the new nurse needs and drills them down to the nuggets of wisdom needed to be successful in practice. His thoughts and experiences in practice are insightful and easy to apply. A great resource for nurse educators too!"

–Melinda M. Luther, MS, RN, CNE
Professor and Chair, Department of Nursing
Nashua Community College
Nashua, New Hampshire

"Our clinical faculty appreciate 'Think Like a Nurse' and use it in the first semester clinical week one! The medication and lab references are very helpful in narrowing the amount of information students need to digest. The 'Clinical Reasoning Questions to Develop Nurse Thinking' is an excellent tool for the clinical instructor as they guide their students to begin to think like a nurse."

–Janet Wessels, MSN, RN, PHN
Director, Entry Level Masters Program, School of Nursing
Azusa Pacific University
San Diego, California

"This book offers the novice nurse guidance and wisdom in a unique resource that is unlike any other student textbook. The author pours his heart and soul into making nursing education logical and fun. This resource should be utilized with students during their final year in nursing education."

–Georgia Dinndorf-Hogenson, PhD, RN, CNOR
Assistant Professor, Department of Nursing
College of St. Benedict/St. John's University
Collegeville, Minnesota

About the Author

Caring in crisis attracted me to nursing over 30 years ago. I wanted to be a flight nurse/paramedic and chose to get my nursing degree right out of high school. I completed my EMT after my first year of nursing school and began to volunteer as an EMT in our community. I was so traumatized by getting lost on the back country roads with a critical patient in the ambulance, that I re-routed my career path and completed my two-year nursing degree in 1983 at a local community college and entered a very tight job market as a registered nurse.

I started my nursing career as a psychiatric nurse at the local state hospital and went on to pursue my passion for emergency nursing. I then went into long-term care, pediatric home care, step-down NICU, cardiac telemetry, cardiac ICU, and finally, after 16 years, the emergency department (ED). I currently work in the critical care float pool of a large metro hospital and float between the ED, med/surg neuro ICU, cardiac medical ICU, cardiac surgical ICU, cardiac telemetry and circulating/rapid response team. I am currently certified in my practice specialties of critical care and emergency department.

Ten years ago, I realized I enjoyed mentoring new nurses and guiding them in their professional development. I completed my BSN and went straight into a masters in nursing education program so I could pursue teaching at the collegiate level. I have been able to keep current in both clinical practice and nursing education the past several years. This bi-focal lens as a nurse educator and clinical expert nurse has allowed me to remain current in practice and draw from my experience to create salient resources, including this book, that reflect current best practice and the inherent challenges of clinical practice. I have created numerous tools and innovative strategies to strengthen student learning through an emphasis on clinical reasoning that will develop students' ability to think like a nurse.

I have had the opportunity to present my strategies to integrate clinical reasoning in the classroom and clinical settings at national and regional nurse educator conferences across the United States and Canada. I have created a unique template that breaks down the theoretical construct of clinical reasoning into 12 sequential questions that nurses can use in any patient care setting to identify relevant information and establish care priorities. I have created numerous case studies that are derived from themes I have seen in clinical practice. These case studies integrate my template of clinical reasoning questions so students are able to practice the thinking that is required for safe nursing practice. Some of these case studies are also included in this book.

My applied strategies to teach clinical reasoning to nursing students have been recently published in the nursing literature. They are featured in the current 10th edition of *Kozier & Erb's Fundamentals of Nursing*, the upcoming 4th edition of *Professional Issues in Nursing* edited by Carol Huston with a chapter titled "Can Clinical Reasoning Be Taught?" and an article on clinical reasoning for *Innovations in Nursing Education, Volume III* published by the National League for Nursing.

I am passionate about transforming nursing education by integrating clinical reasoning throughout the curriculum. I have created practical tools to help realize this transformation. My website, clinical reasoning resources, and blog are committed to be a part of the solution and to strengthen and support this needed change. I also have a passion to serve the poor through medical missions by using nursing and nursing education to share God's love and improve the quality of health care in the developing world.

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Appendices

Foreword

I have known Keith from my first year of nursing school; he was one of my fundamental nursing instructors and is now a nursing colleague in the float pool at the hospital we both work at. Keith's passion for nursing is evident not only in his practice at the bedside but also through his teaching. The clinical reasoning case studies that he created and presented to our class challenged us to think in a way that we had not experienced to this point in nursing school. His objective was to get us to "think" like a nurse. As his students in lecture, we had to take a step back and look at the bigger picture of what was truly going on with the patient in the clinical scenario. As a class, we had to identify what the clinical data represented and as nurses, the interventions we should implement to intervene and prevent a worst possible scenario from happening. Keith constantly challenged and encouraged us.

Keith had faith in us, and laid a foundation of knowledge that was applied at the bedside. Keith pushed us to start utilizing the same clinical reasoning questions during clinical. Not only did this prepare us before caring for our patients, but it also helped us to be more proficient and consistent with our skills. On a personal level, Keith cares. He was present during a crisis in my life during nursing school. He not only showed compassion for my situation and care as a friend, but his knowledge and grasp of nursing was evident.

This book has been extremely helpful to me in many ways. Not only did it remind me of all the clinical handouts Keith created that I relied on during clinical (i.e., most commonly used medication, clinical reasoning questions, etc.), but also reminded me of the living "house" nursing represents…the foundation, walls, and roof. Keith also reminded us of the centrality of caring to nursing. The content in chapter 3 on the foundation of nursing must be carefully read and not overlooked or missed by the reader. Keith goes into further detail on how to pull what we have learned from the classroom and apply it to the bedside, and how trending data is essential in practice. Keith uncovers the clinical pearls that are relevant to practice. This is something every new graduate entering the workforce should review and apply. The content on bullying is a must-read as well. I highly recommend this book to be read by new graduate nurses and applied at the bedside to help prepare you for practice.

Heather Squillacioti, RN
Normandale Community College graduate, 2012
Minneapolis, Minnesota

Introduction

Why This Book Was Written

Are You Afraid to Be a Nurse?

Though the title of my book is "Think Like a Nurse," would you be surprised to discover that fear is one of the most prevalent emotions that most nursing students experience when they contemplate the reality of being an autonomous professional nurse in practice? Fear that they don't have what it takes. Fear that they may hurt their patients. Fear that they might miss something. In addition to fear, new nurses admit to being unsure of themselves, uncomfortable, and nervous once they are off orientation and are now on their own for the first time. My goal in creating this resource is to empower any student or new nurse to face and conquer their fears. It comes to you from a nurse educator who remains current in clinical practice.

These emotions are not unusual but are normal. But like any emotion, fear, anxiety, and lack of self-confidence can also be debilitating if not faced head-on. In addition to this cauldron of emotions, depending on the shift you work and the clinical setting, you may be responsible for four to eight patients in an acute care setting (double this in transitional or skilled care setting). In nursing school, you were typically responsible for one to two patients in the clinical setting. How will you set priorities and manage your time to accomplish patient care needs with this new reality?

As a result of feeling unprepared for real-world practice, new nurses encounter high levels of stress, anxiety, burnout, and turnover in the first year of practice (Cho, Laschinger, & Wong, 2006). Many new graduate nurses leave the profession in the first year because of job stress, lack of organizational support, poor nurse-physician relations, unreasonable workloads, uncivil work environments, and difficulty transitioning to practice (Clark & Springer, 2012).

A Practical Guide and Mentor

Every new nurse needs a mentor to guide and smooth the often bumpy transition from nursing school to clinical practice. I have written *THINK Like a Nurse* to be this mentor and help students or new nurses transition successfully from academia to clinical practice and not only survive but THRIVE in the process! Knowing that too much information (TMI) is an ongoing concern in nursing education, the last thing nursing students need is another book! But the essence of *THINK Like a Nurse: Practical Preparation for Professional Practice* is very different from any other textbook you may have already purchased. It is not written as a textbook, but in an easy-to-read first-person narrative that will provide

practical strategies and approaches to prepare and help you transition successfully to autonomous professional practice.

To prevent you from being a workplace casualty and prepare you for real-world practice, I have written *THINK Like a Nurse* to highlight clinical reasoning and the most important content relevant to the bedside and why this information must be mastered and understood. Clinical reasoning is the nurse's ability to think in action and reason as a situation changes (Benner, Sutphen, Leonard, & Day, 2010). It is the essence of how a nurse thinks in practice, but it is not currently and consistently taught in nursing education. To develop this skill in your practice, I break down the complexity of clinical reasoning so you can understand this nurse thinking skill and incorporate it into your practice.

Building the "Living House"

To help you visualize the professional development you need as you transition to the responsibilities of the professional nurse, I will use the metaphor that student development while in nursing education mirrors the building of a house. This house is not a static structure, but a unique, vibrant "living" house that is a reflection of how you choose to build and add to it over time.

Nursing is a living and vibrant practice that requires your personal involvement and engagement to promote the well-being of those you care for. Just as a home often undergoes remodeling as a family grows over time, the same is true for the professional nurse. You may change practice settings or advance your education to "remodel" your practice setting to management, education, or nurse anesthesia. The "living" house of professional practice will be developed in the following chapters of this book.

A house must have a firm and stable foundation. The ethical comportment or the art of nursing is this foundation. Caring behaviors, nurse engagement, and professionalism in practice must be present or your nursing practice could be on shaky ground before it even begins. Once the foundation is laid it is time to build. The walls of professional practice are the applied sciences of nursing: pharmacology, fluid and electrolytes, and anatomy and physiology.

I will contextualize these essential sciences to the bedside so you can see the relevance of mastering this content and enhance your ability to recognize potentially dangerous clinical trends and provide the best possible care for your patients. Finally, the roof of professional practice consists of how a nurse thinks which includes critical thinking and clinical reasoning, which complete the house and tie everything together.

Though most students can write a three-part nursing diagnostic statement and use this as a priority for a written care plan, this emphasis will not always prepare you to transition to thinking like a nurse in practice. As a nurse in practice, you must be able to THINK IN ACTION, especially when the status of your patient changes. This is the essence of clinical reasoning and is an essential thinking skill that must be understood, incorporated, and practiced. The more you practice these activities you develop muscle memory and are able to react consistently and appropriately in the clinical setting.

The house of professional practice is in need of supporting structures that include safety, education, and expert practice. Safety is practically situated in all that a nurse does at the bedside. The nurse must also embrace the role of educator and realize how patient education can positively affect patient

outcomes and even prevent readmissions. Though it takes time to progress to expert practice, I will identify what it takes to get there so that you can be the best that you were trained and created to be!

Finally, I will tie the house together with real-world clinical scenarios to apply all that you have learned in your nursing education. You will be able to practice clinical reasoning by using the unfolding clinical reasoning case studies on COPD/pneumonia, heart failure, and sepsis, which place basic concepts and content in context for practice. Each case study has a fully developed answer key that thoroughly explains the rationale to promote your learning. This allows you to PRACTICE nurse thinking before you enter into practice.

Unique Content

Other books that I have read by clinical nurses to help prepare students for clinical practice emphasize their personal approach to nursing and what they have learned with almost no references from the nursing literature to support their perspective. *THINK Like a Nurse* is grounded in the literature of what is best practice with over 200 citations. I incorporate the theory and best practice recommendations from the literature and through my lens and filter as an expert nurse, as well as a nurse educator, make it practical and easy to apply and integrate into your practice.

The highlights of this unique resource include:

- Practical application exercises that will help make needed connections to strengthen understanding of essential content.
- Emphasis on the most important content and information. Reflection questions at the end of each chapter to facilitate professional growth.
- Additional resources at the end of each chapter that will encourage professional development.
- Clinical reasoning case studies that will strengthen your knowledge and help you practice nurse thinking on the topics of COPD/pneumonia, heart failure, and sepsis.
- Emphasis on real-world clinical practice derived from my more than 30 years of experience in the clinical setting.
- Clinical tools and handouts that will strengthen your knowledge of pharmacology, labs, and clinical reasoning that include:
    - ✓ Worksheet: Medications That Must Be Mastered
    - ✓ Handout: Most Commonly Used Categories of Medications
    - ✓ Worksheet: Lab Planning
    - ✓ Handout: Clinical Lab Values and Nursing Responsibilities
    - ✓ Handout: Clinical Reasoning Questions to Develop Nurse Thinking
    - ✓ Worksheet: Patient Preparation

Students who are ill prepared to think like a nurse will likely struggle once in clinical practice. This struggle can impact patient outcomes. If a new nurse is unable to think in action and clinically reason by recognizing a change in status, what will be the ultimate consequence if, for example, sepsis progresses to septic shock before it is recognized? A patient could die as a result.

I See Dead Patients

"I see dead people" was a famous quote by Cole Sears from the hit horror movie *The Sixth Sense* in 1999. Fortunately, it was only a movie. Unfortunately, I have seen clinical situations as a rapid response

nurse that foreshadowed a patient's death as a result of the primary nurse's "failure to rescue" because they did not recognize a change of status until it was too late. This is one scenario I will never forget.

Jenny was a newer nurse who graduated a year ago (some details changed to protect patient confidentiality). She had an elderly male patient named Ken. He had a perforated appendix, but it had been removed successfully two days prior and he was clinically stable. Around midnight, he became restless. His BP was slightly elevated at 158/90 and his HR was in the 100s. He had a history of mild dementia and was not able to readily communicate his needs, so Jenny gave him 1 tablet of Percocet, assuming he was in pain. Two hours later, he continued to be restless and Jenny thought that she heard some faint wheezing. She noted that he was now more tachypneic with a respiratory rate of 28/minute. He had a history of COPD and had an albuterol nebulizer prn ordered, so that was given.

Two hours later, Jenny called me as the rapid response nurse to come and take a look at her patient. She was concerned, but was unable to recognize the problem and wanted a second opinion. After Jenny explained the course of events that transpired to this point, I took one look at Ken and realized that he was in trouble. He was pale, diaphoretic, and his respirations had increased to 40/minute despite the nebulizer two hours ago. He was not responsive to loud verbal commands. The last BP was still on the screen and read 158/90. I asked, "When was the last BP checked?" Jenny stated it was four hours prior. While obtaining another BP, I touched Ken's forehead. It was notably cold, as were his hands. The BP now read 68/30.

Recognizing that Ken was in septic shock, and that IV fluids and vasopressors would be needed emergently, I looked for an IV and found only one, a 24 gauge catheter in the left hand. This is the smallest size IV catheter and is typically used with infants and small children. Realizing that Ken needed a central line and that there was little that could be done to initiate even the most basic life-saving treatments to rescue Ken on the floor, he was emergently transferred to ICU. Within thirty minutes Ken was intubated, a central line was placed, and three vasopressors; norepinephrine [Levophed], phenylephrine [Neosynephrine] and Vasopressin were required to get his systolic blood pressure greater than 90 mmHg.

After this transfer was completed, I asked Jenny a simple clinical reasoning question: "What was the most likely complication that Ken could experience based on his reason for being hospitalized?" Jenny admitted that she hadn't thought about it because she was so focused on getting all of the tasks done with her four other patients.

Had Jenny asked herself this question while caring for Ken – and more importantly – answered it, she would have been thinking like a nurse. She would have vigilantly looked and assessed for EARLY signs of the most likely complication Ken could experience because of his perforated appendix…SEPSIS. Although early signs of sepsis were present at midnight, it was not recognized until it was too late for Ken. He died the next day.

I share this illustration not to frighten you or cause you to reconsider your choice to become a nurse, but to sober you with the incredible responsibility that is inherent in working as a nurse. Though I am in the twilight years of clinical practice, I remain passionate and highly engaged in caring for others because I continue to see the difference that excellent nursing care makes. This book is a labor of love to communicate to the next generation what is absolutely foundational and nonnegotiable to nursing care and practice.

It is only recently that I pursued my passion to teach and became a nurse educator. I care deeply about your professional success and want to do what I can to establish you on a rock-solid foundation as you transition to professional practice. One of my greatest frustrations as a nurse educator has been the

inherent difficulty of sharing the depth of my clinical experience with my students because I have been spread so thin as a clinical educator. Though I enjoy the dynamics of clinical education, I felt like a ping-pong ball bouncing from one “crisis” to the next. Now that I have put my thoughts in writing, I invite you to pull up a chair and let me share information that will help you to be practically prepared for professional practice.

Whether you are considering the nursing profession or are a student who has fulfilled all required prerequisites and have been admitted to the nursing program of your choice, in the next chapter, I want you to carefully reflect and take a simple quiz to help determine if you have what it takes to be a nurse.

Chapter 9

Clinical Reasoning Is Nurse Thinking

"Constant attention by a good nurse may be just as important as a major operation by a surgeon."
–Dag Hammarskjöld

Though the nurse must use all four "trusses" of thinking that include nursing process, critical thinking, recognizing clinical relationships, and clinical reasoning in order to think like a nurse, clinical reasoning is not consistently emphasized in nursing education. Yet it most closely mirrors how a nurse thinks in practice. Clinical reasoning complements these other aspects of nurse thinking and captures the essence of the thinking in action that is needed to make a correct clinical judgment.

Roof Truss #4: Clinical Reasoning

Patients do not stay static. Their condition can gradually improve or it can slowly or suddenly worsen. How well will you be able to think on your feet and recognize the nursing priority when the status of your patient changes? You must be able to THINK IN ACTION and be able to readily transfer classroom learning to the bedside.

The most important role of the professional nurse is NOT performing tasks. Nurses are knowledge workers who use the information they have been taught as well as what they have learned from clinical experience and translate this knowledge into action to deliver safe patient care (Porter-O'Grady, 2010). In order to think like a nurse, students must understand and incorporate clinical reasoning into their practice.

But in order to deeply understand and then apply clinical reasoning it must first be properly defined. The most descriptive and practical working definition of clinical reasoning is found in the work of pre-eminent nurse educator and scholar Patricia Benner (Benner, Sutphen, Leonard, & Day, 2010) and (Benner, Hooper-Kyriakidis, & Stannard, 2011).

CLINICAL REASONING DEFINED
Ability of the nurse to think in action and reason as a situation changes over time by: • Filtering clinical data to recognize what is most and least important • Capturing and understanding the significance of clinical trends • Grasping the essence of the current clinical situation • Identifying if an actual problem is present

Though recognizing and identifying a problem is an important aspect of clinical reasoning, the nurse must also be able to think globally and accurately INTERPRET the situation to identify possible reasons WHY the problem is present.

For example, if a nurse is caring for a patient who recently had an open hysterectomy who is beginning to complain of increasing lower abdominal pain, though pain is expected after surgery, what if the pain continues and even gets worse despite opiate narcotics that had controlled the pain earlier?

Is the problem increased pain that needs a higher dose of narcotics or does the nurse need to investigate and collect additional clinical data? Internal bleeding or ileus are common complications that could be present. If the nurse practices with tunnel vision and does not widen the funnel and use clinical reasoning, increasing the pain medication dosage if these problems are present will ultimately cause more harm than good.

Attitudes Required to Clinically Reason

In addition to being able to apply and use knowledge at the bedside, the nurse must bring the right ATTITUDE to the clinical setting in order to THINK like a nurse. Take a moment to pause and reflect to determine if these attitudes are a weakness or strength by answering the question that follows. Pesut & Herman (1999) identified six attitudes that are needed in order for the nurse to clinically reason:

1. **Intent.** Excellent and correct nurse thinking is not random and does not just happen by accident, but is intentional. When you are intentional in clinical practice, you understand the rationale of how nursing interventions will advance the plan of care. The nurse has a deliberate plan of thinking and reasons with the end in mind by having a clearly defined purpose or outcome guiding the plan of care.
    - *How well do you understand the rationale and reason for nursing care priorities with each patient in your care?*
    - *Do you have a clearly-defined outcome that you are working toward with each patient?*

2. **Reflection.** This is an essential skill that is foundational to clinical reasoning as well as making a correct clinical judgment. Everything that the nurse does in practice, must also be reflected upon by the nurse to determine if the actions and interventions are effective and working toward the outcome outlined by the plan of care. Clinical reasoning is strengthened and developed when you are able to reflect on past and current clinical experiences and situations and know WHY you are engaging and choosing specific nursing interventions. Stated another way, reflection is thinking about your thinking and determining what can be learned, affirmed, or done differently to grow and develop as a nurse.
    - *How well are you able to integrate reflection and learn while you care for patients?*

3. **Curiosity.** The nurse must be eager to ask questions and acquire needed information and knowledge. The origin of curiosity is "cura," which means to care. Reflection and curiosity are a perfect fit and need to be used together. Nursing is curiosity or care with a purpose. When the nurse is inquisitive about everything that takes place in the clinical setting including the ways that the patient acts, thinks, and presents, the less judgmental the nurse will be. The greater the level of curiosity, the more compassion the nurse will possess.
    - *Do you have a strong desire to deeply understand aspects of your patient that you do not understand?*

4. **Tolerance for ambiguity.** This is the ability of the nurse to feel comfortable even when the current situation is unclear and the best outcome is undefined or unknown. Since students are concrete, textbook learners (Benner, 1982), this aspect of practice can be difficult for them to adjust to. The textbook tends to be concrete and clinical situations are rife with ambiguity, moral and ethical conflict, as well as family dynamics that are interrelated and contribute at times to ambiguity and volatility in practice.
    - *What is your comfort level in the clinical setting when ambiguity is present?*

5. **Self-confidence.** The nurse must possess a certain amount of "mojo" that is balanced and healthy. Believe in yourself, feel good about your abilities as a nurse though you may be inexperienced. Be confident that you have what it takes to be a nurse! An important aspect of self-confidence is to know your strengths as well as weaknesses, and be willing to do what is needed to turn those weaknesses into a strength.
    - *Are you your own worst enemy or do you have a healthy sense of your abilities as a nurse?*

6. **Professional motivation.** The nurse must be committed to the vision, values, and mission of the nursing profession embodied in the code of ethics. These values must be known, assimilated, and lived out by the nurse. You must choose to act differently and hold yourself to the highest level of moral and ethical practice. This means that you become self-monitoring and will self-report if a medication error is made or other deficiency in practice occurs. By using the attitude and skill of reflection, you will learn from any error made and be the better as a result.
    - *Do you consistently hold yourself to the highest standards of ethical conduct and have a strong desire to be the best nurse possible?*

Key Components of Clinical Reasoning

The essence of clinical reasoning and how it must be used in bedside practice consists of four components. Just as a roof truss consists of multiple pieces of lumber that provide bracing for strength, the following four components are the pieces of lumber that represent and comprise the essence of clinical reasoning (Benner, Sutphen, Leonard, & Day, 2010):

- Priority setting
- Rationale for everything
- Identify and trend relevant clinical data
- Grasp the essence of the situation

Priority Setting

Setting priorities with your patient is determined by differentiating between problems that need immediate attention and problems that can wait. Once a problem has been identified, does it need to be documented in the medical record or does the physician need to be notified? Developing this aspect of practical priority setting in your practice is crucial. If you give equal attention to both major and minor problems, you will not have the time to manage what is most important (Alfaro-LeFevre, 2013).

As a novice nursing student, one of the challenges you will experience when establishing nursing care priorities is that all tasks and priorities seem to be of equal significance. Knowing which

interventions are a priority is not always readily apparent. A novice nurse has difficulty seeing the big picture and identifying what is clinically significant. Novice nurses are also TASK-oriented and focus on the tasks that need to be done, not necessarily what is most important (Benner, 1982).

Setting priorities is also a key component of Management of Care, the client need category of the NCLEX that comprises the largest percentage of the exam (17–23%). In order to be prepared for professional practice as well as the NCLEX, this aspect of clinical reasoning must be deeply understood. Practical priority setting is discussed in additional depth in chapter 10.

Rationale for Everything

You must be able to understand and answer the rationale or WHY of everything that is done in the clinical setting. As a clinical instructor, I have felt at times like a two-year-old asking the following "whys" of my students:

- WHY are you giving these medications?
- WHY will these nursing interventions advance the plan of care?
- WHY did the primary care provider order these labs, treatments, or medications?

Am I just antagonizing my students, or do I have a rationale for asking these WHY questions? Understanding the WHY is the foundation for SAFE patient care. It is only when a student has a DEEP UNDERSTANDING of the rationale for everything that is done in practice, that the student is SAFE.

If a new order or medication does not make sense based on the student's understanding or rationale, it must be questioned and not followed blindly. The ability to use and apply classroom theory to the bedside is also the essence of critical thinking. Make the most of any down time in clinical to expand and develop your knowledge base so you can build your ability to DEEPLY understand the rationale for everything that is done in clinical practice.

Identify and Trend Relevant Clinical Data

Identifying the MOST important clinical data and trending it by comparing it to the most recent data is an essential component of clinical reasoning and thinking like a nurse in practice. Because students tend to see ALL clinical data as relevant, they will have difficulty sorting out the least from the most important (Benner, 1984). In order to "rescue" a patient with a change in status, the nurse must be able to recognize SUBTLE changes in a patient's condition over time.

It is the EARLY changes in a patient status that are subtle and, therefore, must be recognized before a problem progresses and an adverse outcome results. In addition to trending VS and nursing assessment data, nursing interventions and laboratory values must also be consistently compared and trended.

Nurse Collected Data that Must Be TRENDED

What clinical data needs to be trended? The short answer is just about everything! The following is a summary of the clinical data that must always be compared and trended with the most recent data in the chart:

Vital Signs

- Temperature
- Heart rate
- Respiratory rate

- Blood pressure
- O2 saturation
- Pain

Nursing Assessment

Respiratory

- Breath sounds
- Rhythm/character
- O2 amount/delivery (if applicable)

Cardiac

- Heart sounds
- Strength/regularity of peripheral pulses
- Cap refill
- Color/temperature extremities
- Telemetry rhythm (if applicable)
- Edema—location/amount/pitting vs. non-pitting
- Breath sounds
- Rhythm/character

Neuro

- Alert/oriented x 4 (person-place-time-situation)
- Level of consciousness (LOC)
- Movement/sensation in extremities

GI

- Appearance of abdomen
- Tenderness w/palpation
- Bowel sounds/flatus/LBM (last bowel movement)

GU

- Urine amount/color/clarity
- Foley—secured/urethral drainage?

Skin

- Color/temperature
- Skin integrity—redness/blanchable over pressure points if present

I&O

- Shift and 24-hour trends if relevant
- Daily weights. Remember, every 1 kg. of weight loss or gain represents 1000 mL of volume.

Psychosocial

- Cultural needs
- Emotional support/needs
- Spiritual care/needs
- Educational priorities

Determining Acceptable Ambiguity

To determine the relevance of each patient's clinical data and then trend this data over time, the nurse needs to develop the important understanding of the degree of acceptable ambiguity. To a new nurse in practice, it will soon become apparent that not all patients have textbook norms of clinical data. Depending on the patient's past medical history or current illness, she may have elevated heart rate, respiratory rate or high blood pressure.

For example, a patient with chronic COPD will have a lower than normal oxygen saturation and may be slightly tachypneic. The nurse must identify the normal baseline of all clinical data that is collected and determine the significance of any changes based not on textbook norms, but on the norm for this patient.

To determine acceptable ambiguity for each patient you care for, go back 24 to 48 hours in the medical record and compare and contrast textbook norms for vital signs and assessment parameters with your patient. Then ask yourself the following questions:

- What degree of ambiguity is present between textbook norms and your patient?
- What degree of ambiguity is expected and would be acceptable?
- When would you become concerned (Koharchik, Caputi, Robb, & Culleiton, 2015)?

If ambiguity is present, it is important to determine the clinical significance for the variations that are present and what is responsible for the ambiguity. The following are the most common reasons for abnormal clinical data:

- Past medical history
- Current problem
- Medications
- Abnormal diagnostics

The most difficult aspect of accurately interpreting the significance of clinical data when ambiguity is present is that since a deviation from what is normal is already present, when would the nurse become concerned and decide to intervene? For example, if your patient with COPD has a baseline respiratory rate of 22 and oxygen saturation of 88–90%, when the respiratory rate increases to 28 and his oxygen saturation drops to 84% with activity, is this expected, or a cause for clinical concern? It depends.

By completing a thorough physical assessment, if the patient is in distress and appears anxious with increased wheezing, the nurse must intervene. But if the patient is in no distress and there is no change in breath sounds, this may be his normal response to activity due to lowered pulmonary reserves.

Grasp the Essence of the Situation

Once the priority is identified, rationale for the plan of care understood, and relevant clinical data is trended the nurse should be able to grasp the essence of the current clinical situation. Essence is the ability of the nurse to identify the most significant aspect of the current clinical situation. But it is really much more. It is the ability to break down the patient and her current needs to the lowest common denominator of what is needed and what must be done to advance the plan of care. Essence is closely related to priority setting.

As I look back at my own professional development, being able to grasp the "essence" of a clinical situation is the skill that took the most time for me to develop. Unfortunately, it is not going to be

strongly developed in a typical five- to ten-week clinical rotation of any clinical unit in nursing school! This takes months and typically more than a year of clinical experience in the same practice setting. The ability to see the whole of patient care and grasp the essence is a characteristic of proficiency, the fourth stage of clinical competence (Benner, 1984). Essence is developed by repeatedly seeing patients with similar problems and the patterns that are seen with the typical chief complaint, nursing assessments, VS, lab values, and expected medical treatment.

Clinical Reasoning & Nursing Process

Though clinical reasoning has not been emphasized in nursing education as long as nursing process, these two important aspects of nurse thinking complement one another in clinical practice. Reviewing the five steps of nursing process will make this relationship apparent.

Assessment: Recognize RELEVANCE

As novice nurses, students tend to see EVERYTHING that is collected in the clinical setting as relevant and important (Benner, 1984). They do not have the experience to guide them to FILTER clinical data by what is most important or relevant. Make it a priority throughout each level of your program to APPLY classroom and clinical knowledge. When content is placed into context and applied to the bedside, this assessment will guide you to recognize what is most and least important so you can identify if an actual problem is present (Benner, Sutphen, Leonard, & Day, 2010).

Remember that clinical data does NOT need to be abnormal to be RELEVANT. Vital signs are ALWAYS vital, and even when normal, are always relevant. For example, consider a patient who just arrived to the floor from the OR who has a temperature of 98.6, HR of 80, RR of 20, BP of 120/80, and O2 sat of 95%. Though all normal parameters, each vital sign parameter is relevant because they support a nursing judgment of clinical stability.

Assess Systematically and Comprehensively

In order to systematically and comprehensively collect assessment data, the nurse must have a thorough and consistent approach in the clinical setting. In order to make a correct clinical judgment, the nurse must have thoroughly collected all patient assessment data. Missing or inaccurate assessment data will lead to an error in clinical judgment and decision making (Alfaro-LeFevre, 2013).

For example, if the nurse does not listen thoroughly to all auscultation sites in a respiratory assessment and fails to recognize new crackles in the bases of her patient with heart failure, this will result in progression of left-sided heart failure that will become insidiously worse over the course of the day until the patient becomes short of breath. This is the reason why a nursing assessment is often called a "head-to-toe assessment." It is meant to be done systematically from the top down! When this is done in practice, it will lead to a thorough and rich collection of data that will recognize clinical problems and advance the plan of care.

Nursing Priority: What Is My PRIORITY?

It is only when students are able to translate classroom theory to the bedside and identify relevant clinical data and prioritize its importance that they will be able to identify the presence of a problem and establish proper nursing priorities. Failure to rescue a patient with a worsening change of status is really a failure to apply clinical reasoning to the assessment and nursing priority steps.

To make priority setting practical, it is imperative that the nurse step back after preparing to assume patient care and ask:

What is the one thing (priority) that I can/must do today to advance the plan of care?

Outcomes/Planning: Think in ACTION

Unless the nursing priority is recognized through assessment of relevant clinical data and a correct judgment made, identified outcomes and planning will be inaccurate. Assessment is like the first of several dominos set upright. Get it right and the series of dominos will fall correctly and in the right direction.

But if the nurse misses relevant data and a problem goes unrecognized, the dominos will also fall, but in the wrong direction! This will ultimately lead to failure to rescue a patient with a change of status by making an incorrect judgment, leading to the wrong nursing priority, which will lead to an incorrect plan and implementation.

Implementation: Failure to Rescue

Implementation is only as good as the assessment, correct nursing priority, and resultant plan of care. If clinical reasoning has not been correctly situated, patient outcomes will be impacted by NOT implementing needed interventions. This will ultimately lead to failure to rescue. This chain of events can be readily seen during simulation when students are allowed to continue even when essential data is missed and the Sim-Man reflects a status change that can ultimately progress to a full arrest! Unfortunately, this can also happen in practice and can lead to the same outcome!

Evaluation: Think in ACTION

The ability to think in action is also the essence of evaluation. Clinical data is continually collected and response to the plan of care is evaluated by the nurse. But unless the nurse recognizes the relevance and significance of evaluative data that is collected, a change of status, if present, will remain unrecognized. This is why EARLY assessment findings of common complications must be identified so that students will recognize the significance of subtle but significant changes earlier vs. later, when it may be too late.

An excellent example of this principle in practice is when a patient develops sepsis. If early signs of sepsis that include tachycardia but a normal blood pressure are not recognized, when the nurse evaluates the next set of vital signs and finds that the blood pressure has dropped to 78/30, evaluation will identify that a problem is present. Unfortunately, it may be too late to prevent an adverse outcome.

“Five Rights” of Clinical Reasoning

As a nursing student you have memorized the five to ten “rights” of safe medication administration in order to safely administer medications. But are you aware that there are “five rights” of clinical reasoning (Levett-Jones et al., 2010)? These five rights are as important as the rights of safe medication administration to promote patient safety.

Familiarize yourself with these five rights. Incorporate and recite them just as fluently as the medication rights that your program emphasizes! Knowledge of these five rights will deepen your

understanding of applied clinical reasoning to practice. These five rights are another way to deeply understand the essence of clinical reasoning and are an easy acronym to guide nurse thinking in the clinical setting.

1. RIGHT Cues

This is the clinical data that is collected and clustered by the nurse. Recognizing the RELEVANCE and RELATIONSHIP of this data and contextualizing it to your specific patient is the essence of this "right." EARLY cues that are missed or not identified and allow a complication to progress is a classic example of "failure to rescue" by the nurse when this "right" is not used in practice.

2. RIGHT Patient

This "right" is not about checking the name and date of birth of your patient, but the ability of the nurse to identify a patient who is high risk for developing a potential complication. The nurse must be able to recognize that an 18-year-old with an appendectomy is not as likely to develop a complication as a patient with the same problem who is 88! Patients who are susceptible hosts due to chemotherapy, radiation, or medications such as prednisone also fall under this "right" as patients at risk.

3. RIGHT Time

This refers to the timeliness of identifying a change of status. Recognizing EARLY signs of a complication and then initiating nursing interventions at the RIGHT time and in the RIGHT sequence is imperative to prevent a bad outcome. Remember that "failure to rescue" occurs not only by missing a complication that develops, but also when nursing/medical interventions are implemented too late.

4. RIGHT Action

Once a clinical judgment is made, the right action or intervention must be initiated. Clinical data that suggest a potential complication must be acted upon. The consequences of an incorrect clinical judgment can make the difference between life and death. In one study, one-half of patients who had cardiac arrests on the hospital floor had clinical signs of deterioration 24 hours before the arrest. These signs were NOT recognized and acted upon by the nurse (Thompson et al., 2008).

5. RIGHT Reason

The right reason is not just making the correct reasoning that leads to a correct nursing judgment, but understanding the RATIONALE or WHY of everything that is done in practice. In order to do this consistently, the nurse must be able to apply key aspects of clinical reasoning, which include grasping the essence of the current situation to put the clinical puzzle together.

Clinical Example

In order to see the relevance of these five rights to clinical practice, I will use the clinical scenario I used in the introduction. Ken was an elderly male patient who had a perforated appendix and was post-operative day #2. Ken was a RIGHT PATIENT who was at high risk for a possible change of status

because he was elderly, had an invasive procedure, and his ruptured appendix spilled bacteria into a sterile peritoneum.

Ken developed the RIGHT CUES. He became restless for no apparent reason, his initial BP was normal but his HR was in the 100's. Tachycardia with a normal BP is a classic presentation of shock as the body compensates for a low output state by increasing heart rate.

If the nurse had correctly interpreted these clinical cues, she would have recognized the possibility of sepsis in the RIGHT TIME and contacted the primary care provider as a RIGHT ACTION to address this concern.

Instead, Ken was given pain medication for restlessness, albuterol neb for tachypnea, and the RIGHT ACTION for the RIGHT REASON did not take place. Had these five rights been correctly acted upon in this scenario, Ken would likely still be alive today.

Why the Patient's Story Matters

Each patient is unique and has a story that the nurse must know. It is not enough to know the primary medical problem and the pathophysiology of this problem. The expert nurse comes to know his or her patients through the stories they share about their health care experiences (Benner, Tanner, & Chesla, 1996). These stories are important because they are unique and represent the journey that gives context to the current clinical scenario. This is an important component of the art of nursing that involves making meaningful connections through listening to and learning from the patient's story (Pesut & Herman, 1999).

When the patient's story is known and understood by the nurse, the next step is to frame the patient's story. Framing creates meaning out of the patient's story and helps distinguish the central or core problem from those that are peripheral. Framing the current clinical situation is like having a lens through which the nurse views the patient's story and is best done through the use of reflection (Pesut & Herman, 1999).

If the nurse does not frame or view the patient's story correctly, the clinical reasoning and judgments that follow will be incorrect as a result. For example, a surgical patient who is in need of pain control may also have a past history of misusing narcotics. If the current story is not properly framed and identified, the nurse has the choice to view this scenario in two different ways.

The nurse could identify frequent requests for pain medications as possible drug-seeking behavior. Or the nurse could see the situation as an appropriate use of pain medications as a result of opioid tolerance and will do what is needed to control the pain.

Make it a priority to engage with and know the story of your patient. This will help you frame each patient appropriately and correctly enhance your ability to be thorough in your thinking and make the correct clinical judgment. This is an excellent example of how the art of nursing must be incorporated into every aspect of the nurse's practice and why it is relevant to everything that the nurse does in practice.

How to Obtain the Story

As an inexperienced or novice nurse, it is all too common to focus on the tasks of patient care and not be tuned in to the patient in your care. In order to frame your patient's current clinical scenario correctly, you must make an effort to engage person to person and allow this patient and his/her story to matter to you as a nurse. This was discussed at length in chapter 3.

The saying that people don't care how much you know until they know how much you care has relevance here. The patient's story can only be known and framed when caring and trust have been established and the patient feels safe sharing with the nurse.

In order to do this, you must avoid all assumptions or judgments that may have been made and come to this person with a clean slate. To obtain the story, while you are providing care or if you are able to sit at the patient's bedside, put down your stethoscope, make eye contact, and ask the following questions. Let the patient lead and share his/her story so you can frame the current situation.

- Tell me about your family (spouse, children, grandchildren, etc.)
- Tell me about your work and what you do (or did) for a living?
- Were there any contributing factors that may have influenced your need for care?
    - Financial
    - Personal stress
    - Chemical dependency (ETOH, etc.)

After collecting this information and framing the patient's story, you are now able to incorporate a framework of clinical reasoning that will guide the step-by-step thinking required to rightly interpret the clinical data that is collected.

Clinical Reasoning Step-by-Step

I have presented an overview of clinical reasoning applied to practice. Though understanding the "big" picture is needed, I have found that this theoretical knowledge does not readily translate to DEEP student understanding and practical application of clinical reasoning to the bedside. Let's make clinical reasoning practical and bring it to the bedside of the next patient you care for in the clinical setting.

I reflected on how I have prepared to care for any patient over my 30 years of clinical practice while collecting data from the chart and in report. What were my priorities when I saw a patient for the first time? From my lens of clinical practice and drawing from the literature, I created a handout (found in appendix I), "Clinical Reasoning Questions to Develop Nurse Thinking" that breaks down clinical reasoning step-by-step. It identifies how a nurse systematically sets and establishes care priorities when preparing for patient care as well as throughout the shift.

These twelve clinical reasoning questions have been derived and adapted from the work of leading nurse educators such as Patricia Benner, Linda Caputi, and Lisa Day, as well as observations from my practice. Therefore, it is grounded on a best practice theoretical foundation and filtered through my lens of extensive clinical experience.

This template is divided into two sections. First, there is a series of eight questions that represent the sequential thinking that is required BEFORE a patient is seen by the nurse. As the nurse reviews the chart and obtains reports, these eight questions must be answered. This section emphasizes the following aspects of clinical reasoning:

- Relevant data collection
- Care planning priorities/interventions
- Nurse vigilance by identifying the worst possible or most likely complication and what to do if it presents

The second half of my template has four questions to guide nurse thinking AFTER the patient is seen for the first time and the nurse has collected clinical assessment data firsthand. These four questions emphasize the following aspects of clinical reasoning:

- Relevance of VS, assessment data collected
- Nursing priority…has it changed?
- Priority educational needs to address
- Rationale of primary care provider's plan of care

These clinical reasoning questions can also be used to replace the traditional care plan (recommend at advanced level) because it combines care planning, nursing process, and clinical reasoning in one form. I have received numerous anecdotal reports from faculty who have successfully incorporated this template into their clinical setting with students instead of a traditional care plan.

Clinical Reasoning Step-by-Step

Formulate and reflect on the following BEFORE providing care:
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. Which 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), 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?
Formulate and reflect on the following WHILE 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?

To deepen your understanding of this step-by-step template of clinical reasoning and thinking like a nurse in practice, let me briefly explain what is most important and relevant for each of these questions. Then you will be able to incorporate this information into your practice.

Part 1: Reflect on the Following BEFORE Providing Care:

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

This is typically going to be the admission medical problem or diagnosis. The most important aspect of this question is your ability to truly UNDERSTAND the pathophysiology of the illness or the patient's problem. This understanding will lay the foundation for critical thinking by recognizing the clinical relationship and establishing correct nursing care priorities.

As a nurse in practice, you will routinely encounter diseases you barely remember covering in school or not at all. Treating the clinical experience as a puzzle that needs to be solved or viewing the nurse as a detective who needs to understand and uncover the clinical mystery will encourage "clinical curiosity" that must be a central part of every student's practice. Make it a priority to promote your learning by using any available resources or the Internet to research what you do not know or understand about your patient's primary problem. (http://emedicine.medscape.com/ is my favorite resource for this purpose.)

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

This was addressed at length earlier. But one observation I have made as a nurse educator is that students will take as much time as you give them in the clinical setting to collect data on their patient from the medical record. As novice nurses, students do not have an experiential base to recognize relevant clinical data and, therefore, will tend to write down any and everything that is present in the medical record. The ability to filter clinical data and focus on what is RELEVANT takes time and clinical experience to develop. This question is also one of the five "rights" of clinical reasoning, the importance of the nurse to recognize the right cues of clinical data, when a complication begins to become evident (Levett-Jones et al., 2010).

3. List all relevant nursing priorities. What nursing priority captures the "essence" of your patient's current status and will guide your plan of care?

Make a list of all relevant nursing care priorities based on your patient's primary medical problem. With most patients, you should be able to identify at least five relevant care priorities. For example, a patient admitted to the med/surg floor with an acute COPD exacerbation would likely have the following nursing priorities:

- Fatigue
- Anxiety
- Activity intolerance
- Impaired gas exchange
- Self-care deficit
- Risk for impaired skin integrity

Once you have made a list of all relevant nursing care priorities, which one captures the essence of the current medical problem? You can use two approaches to make this determination.

Identify a nursing priority/diagnostic statement that is related to an ABC priority. When the primary medical problem is understood, and resultant relationship of the nursing diagnosis of impaired gas

exchange is interpreted as a clear "B" breathing priority, this nursing priority would be the best to center the plan of care around because none of the other nursing priorities are a "B" or even "C" priority.

Another way to frame the nursing priority is to identify the relationships between these six care priorities. Which of these nursing priorities have a relationship, connection, or association with one another? The nursing diagnostic statement of impaired gas exchange has a direct relationship to the other diagnostic statements of fatigue, anxiety, activity intolerance, and self-care deficit. This approach will identify impaired gas exchange as the PRIMARY nursing priority with the most direct connections or relationships.

Though not clearly stated in this question, the nurse addresses not only the primary priority and resultant plan of care, but the other nursing care priorities remain relevant and must be included in the plan of care for that day.

I have seen my students struggle with establishing appropriate care priorities in the clinical setting when NANDA-I has been the only way that establish nursing priorities has been taught. There are some NANDA-I statements that do capture the essence of the nursing priority such as "acute/chronic pain" or "fluid volume excess/deficit", but NANDA-I must not be the only way to establish nursing care priorities for your patient. Nurses in practice don't think this way exclusively and neither should you! There are numerous clinical situations where NANDA-I does not "fit" or even come close to describe the care priority.

I use applied clinical reasoning. I allowed my students to use a concise statement that captures "the essence of the current clinical situation" (Benner, Hooper-Kyriakidis, & Stannard, 2011) that may or may not be a NANDA-I nursing diagnostic statement.

4. *What nursing interventions will you initiate based on this priority and what are the desired outcomes?*

It is important to recognize that questions 2–4 integrate the essence of nursing process by expecting the student to:

- Identify relevant assessment data (assessment)
- Identify correct nursing priority (nursing diagnosis/ priority)
- Initiate nursing interventions (implementation)
- Identify desired or expected outcomes

This is the essence of the nursing care plan, but it is positioned within the framework of applied clinical reasoning. Another aspect of clinical reasoning that is inferred but not clearly specified is the importance and expectation that students are able to identify the RATIONALE for every intervention that is implemented. Correctly stating the rationale ensures safe practice.

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?*

Though students are taught to perform a systematic head-to-toe assessment for every patient they care for, they must also be able to identify the priority body system as well as psychosocial needs that must be more thoroughly assessed, based on the patient's primary problem or nursing care priority. This is the first step of a two-step process.

Once the priority body system(s) have been identified, the second step is to identify the specific key assessments. This is an essential skill that nurses use in practice, especially when caring for multiple

patients. For example, in a patient who is anxious with heart failure exacerbation, the nurse would identify the following priority body systems and perform these key assessments:

Respiratory

- Anterior/posterior breath sounds
- Work of breathing/presence of retractions
- RR/O2 sat

Cardiovascular

- Cardiac rhythm
- BP/HR
- Color
- Cap refill/strength of peripheral pulses
- Edema

Holistic care is the hallmark of nursing practice. Psychosocial needs that include emotional as well as spiritual needs must be considered as no less significant than the physical needs that demand immediate attention. Any physiologic problem can cause anxiety, fear, and stress. How is your patient coping as a result of requiring medical and nursing care? This must be considered and assessed as well as the more pressing physical needs. In this same scenario of heart failure exacerbation, the following psychosocial assessments:

Psychosocial

- Encourage verbalization of feelings/anxiety to assess underlying influencing factors
- Determine if anxiety is related to SOB or primary problem

6. What is the worst possible/most likely complication(s) to anticipate based on the primary problem?

Identifying the most likely or worst possible complication BEFORE patient care is assumed is an essential critical thinking skill applied to practice. This is the importance of being PROACTIVE vs. REACTIVE and it can make a difference in improving patient outcomes. When a problem is anticipated and identified EARLY in practice, the nurse is one step ahead. But when the nurse is caught completely off guard by a sudden change of status, they are caught "flat-footed" and are one step behind. The problem will likely be more serious because it has been recognized LATER. Sepsis that progresses to septic shock is a common clinical occurrence with potential life-threatening consequences if treatment is delayed.

7. What nursing assessments will identify this complication EARLY if it develops?

Once the worst possible/most likely complication is identified, the specific assessments to recognize it correctly must be determined. EARLY recognition of any complication is essential to good patient outcomes. If early signs that tend to be more subtle go unrecognized, an adverse outcome and even death is possible.

For example, if sepsis/septic shock is the most likely complication, the EARLY assessments that the nurse would need to cluster to confirm its presence and then initiate "rescue" are

- Temperature: fever >100.8 or <96.8

- HR: >90
- BP: downward trend with mean arterial pressure (MAP) <65
- WBC <4,000 or > 12,000

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

If you look at these last three questions (6–8) closely, they follow the pattern of putting nursing process and nursing plan of care in the context of the most likely/worst possible complication. The potential PRIORITY complication is identified, assessments to conclusively recognize are listed so this problem does not remain hidden, and then nursing interventions to initiate "rescue" can be implemented if needed. This is another "nurse thinking" skill that is not typically taught in nursing education, yet it captures the essence of how nurses in practice prioritize and provide safe care.

Nurse as Lifeguard

Have you ever thought of the similarities that a nurse has with a lifeguard? Just as a lifeguard continually and vigilantly scans the water for signs of a struggling swimmer, the nurse must also look vigilantly assess for a deteriorating change of status, in order to rescue a patient who may be experiencing a complication. TRENDING all clinical data and assessing EARLY signs and symptoms must be done so that a complication is not allowed to needlessly progress. There is a short distance and time frame between the body's ability to compensate and the "swirl" of decompensation (Scott, 2009). For example, in sepsis that progresses to septic shock, the body can briefly compensate by elevating heart rate and maintaining blood pressure – but not for long before the bottom literally falls out!

A distinction between a novice and more experienced nurse is that a more experienced nurse anticipates potential problems, recognizes the significance of clinical cues, and practices PROACTIVELY to PREVENT a possible patient complication (Levett-Jones et al., 2010). Novice nursing students tend to practice REACTIVELY. They don't anticipate potential problems, and react to them after they have already developed (Levett-Jones et al., 2010).

Because of clinical inexperience, there is a lack of clinical reasoning skills by the novice nurse. This can contribute to adverse patient outcomes that can progress to a bad outcome and even patient death. The primary reason for these adverse outcomes include failure to properly identify the problem after it develops, failure to initiate appropriate nursing interventions, and inappropriate management of the complication once it is present.

When analyzing a new graduate's ability to think critically, especially in the context of a change of status, del Bueno (2005) identified the following four questions that help a nurse anticipate a change of status. You will see that there is some overlap and correlation to these questions and the essence of clinical reasoning. Following each question are additional subtopics that will practically situate this content:

1. Can the nurse recognize there is a problem?

Until the problem is recognized, no action will be taken by the nurse. To recognize a problem, the nurse must do the following:

- Recognize RELEVANT clinical data.
- INTERPRET clinical data correctly (Tanner, 2006)
- Identify medical/nursing PRIORITY
- Identify the most likely WORST POSSIBLE COMPLICATION for your patient.
- Intentional vigilance. LOOKING for this complication and trending all RELEVANT clinical data and required assessments over time.

2. Can the nurse manage the problem safely and effectively?
    - Proper nursing interventions initiated based on current problem once identified.
3. Does the nurse have a relative sense of URGENCY?
    - Lack of clinical experience often causes students to not recognize the need for urgency. I have seen new nurses have a patient with a status change of sepsis, yet have no sense of urgency when his BP has dropped to 70/30!
4. Does the nurse take the right action for the right reason?
    - Once the problem is identified the RATIONALE for nursing/medical interventions is able to be stated.
    - Nurse contacts the physician promptly to initiate needed interventions.

Del Bueno's research identified the importance of a nurse's ability to RECOGNIZE a problem before rescue can take place. It is only when a problem is recognized that the nurse will intervene and do something about it. How does one not only identify a problem but at the same time specify the desired outcome? Problems and outcomes are complementary and need to be considered concurrently. When the desired outcome is juxtaposed with the current clinical status, this will create a contrast that will guide nursing interventions and progression in the plan of care (Pesut & Herman, 1998).

To help you DEEPLY understand the importance of early identification of a complication and initiate "rescue" if needed, I will use a metaphor of "Jason," the serial killer from the "Friday the 13th" horror movie series. Remind yourself that Jason is still out there…

Looking for "Jason"…the Worst Possible Complication

Do you remember "Jason" from the original *Friday the 13th* slasher/horror movies from the 1980s? Teenagers are murdered one by one as they attempt to reopen an abandoned campground. Since I graduated from high school in 1981, and the first of many in this series started in 1980, I remember all too well the classic ending from the original when it first came out.

Only Alice survived the terrifying night at Camp Crystal Lake. As morning came, she was on a small boat in the middle of the lake. All is calm and quiet, the birds are singing and she has no reason to be concerned. Out of nowhere, Jason leaps out of the water and grabs Alice and takes her down…but it was only a dream and a movie.

No reason to fear and look for Jason any longer, right? WRONG! Jason is still out there and lurks around the corner of every clinical setting! Who is "Jason"? He is a metaphor for the worst possible/most

likely complication any patient may experience. “Jason” is still very deadly, and he has new identities such as sepsis, septic shock, post-op bleed, pulmonary embolism, and cardiac arrest, to name only a few.

Clinical vigilance is required to keep “Jason” from harming your patients. If you are looking for him, you will recognize the “Jason” of the worst possible complications before it is too late! It is only when the nurse loses this sense of vigilance and forgets that “Jason” is still out there that complications go unnoticed until it is often too late.

Even if everything appears uneventful and your patient appears stable, just like Alice on the boat, things can change quickly. That is why nurse vigilance is always required in practice.

Sepsis is the most common “Jason” and hides early with subtle changes such as a low-grade temperature, slight hypotension, and tachycardia. When the nurse does not recognize the significance of these findings, tachycardia will persist as “Jason” continues to have his way and sepsis progresses to septic shock. It is only when “Jason” is RECOGNIZED that his power to destroy is broken and your patient can be RESCUED from an adverse outcome.

Most Common “Jasons”

At the large metropolitan hospital where I practice there is a “Rapid Response Team” (RRT) that rounds the hospital 24/7, circulating and responding to calls from nurses who identify a possible change in status that may indicate a need to rescue. Based on statistical data compiled where I practice as to why a RRT is paged, students can anticipate these most common changes of status in the acute care setting (see table).

In addition to discussing the implications for each of these most common changes in patient status, I will highlight the most important assessments that I use in practice to quickly identify the scope of the potential problem.

Most Common Patient Complications
1. Chest pain
2. Increased respiratory distress
3. Hypotension
4. Change in level of consciousness (LOC) or neurologic status
5. Falls

Top Five Change of Status in Order of Frequency

1. Chest Pain

Regardless of the practice setting, the nurse needs to evaluate and assess chest pain in such diverse settings as phone triage, outpatient clinics, and community health clinics. In acute care, this is by far the most common reason an RRT is paged. The good news is that most chest pain is NOT cardiac. However, it can still be a potential problem because pneumonia and a pulmonary embolus can also cause this complaint. I encourage the use of mnemonics such as W-I-L-D-A or P-Q-R-S-T (these will be discussed later) to help you concisely and systematically assess and document any complaint of pain.

If a patient has a complaint of chest pain, it is essential to perform the following assessments to differentiate cardiac vs. noncardiac chest pain. If available in your practice setting, a 12-lead EKG is a standard tool to determine if there are new changes consistent with ischemia. What are these changes? In early ischemia, the T waves that are normally rounded and upright may be flattened or inverted. The ST segment after the QRS complex may be elevated or depressed more than 1 mm.

In addition to the EKG, remember to look at your patient! Does he look as if he is in distress? Has his color changed from pink, warm, and dry to pale, cool, and diaphoretic? Is he anxious, restless? Are other subtle but apparent changes present? If present, this validates that his current complaint is likely more serious. In addition to an EKG, the following nursing assessments must be implemented to put this clinical puzzle together and differentiate the primary problem.

Take a deep breath

- If taking a deep breath causes the pain to dramatically increase, then this chest pain is most likely noncardiac. But pleurisy, pneumonia, and a pulmonary embolus also cause pleuritic chest pain. The next assessment to help clarify the cause of this chest pain is palpation.

Palpate the area of pain for reproducible tenderness

- Gently but firmly palpate the location of where the pain is present. If the pain is reproducible with palpation, this is most likely noncardiac and is likely pleurisy, an inflammation of the pleura that is non-emergent.

Location of the pain

- There are gender differences of cardiac chest pain. For example, women tend to have a higher likelihood of nonclassic symptoms that include epigastric pain as well as referred pain with no anterior chest pain. For most patients though, cardiac chest pain will be anterior chest pain in a large, general area of the chest. If the pain is localized to a very small area that the patient can point to, this is typically NOT associated with angina.

Presence of other complaints consistent with cardiac ischemia

- In addition to the primary location of chest pain, cardiac chest pain typically consists of referred pain to the neck, back, jaw, or arms. It is important for the nurse to determine the presence of this referred pain. Shortness of breath (SOB) is also a common component of cardiac chest pain related to coronary artery disease, myocardial ischemia, or pulmonary embolus.

Length of pain

- This will help differentiate cardiac from noncardiac chest pain because angina will typically last longer than five minutes. If the patient reports that her pain lasts for just a few seconds at a time, or less than a minute, this pain is likely noncardiac.

Character of pain

- It is important to distinguish if the nature or character of this pain is similar to any prior history of heartburn or GERD. If it is, this again is likely noncardiac. Cardiac chest pain is most commonly a diffuse pressure, tightness, squeezing, or achiness.

2. Increased Respiratory Distress/O2 sat <90%

If a patient complains of shortness of breath and/or has decreased oxygenation, immediate intervention and relevant assessments are required. Use the same principle of, "How does my patient look?" If he looks like he is in distress, he most likely is! In addition to general appearance, the following are the most relevant assessments that must be closely trended over time:

Respiratory rate

- Rate > 20 is a clinical RED FLAG and likely represents distress, anxiety, or both!

Heart rate

- Rate >100 is a clinical RED FLAG and will be elevated with physiologic distress caused by sympathetic nervous system stimulation. The nurse must be able to situate knowledge and determine the most likely reason WHY!

O2 saturation

- Saturation <90% is a clinical RED FLAG that is reflecting hypoxia in a non-COPD patient. With any complaint of SOB, immediately obtain the oxygen saturation to determine the baseline with this change of status, and then administer supplemental oxygenation and titrate to oxygen saturation greater than 92%.

Breath sounds

- Posterior auscultation FIRST if possible, then anterior. There is less subcutaneous fat posterior and you'll be able to detect adventitious breath sounds more readily. Listen carefully to all lobes, especially the bases. Compare each lobe right to left.
- Rales or crackles typically represent fluid seen in the alveoli with heart failure. Rhonchi is most commonly seen with pneumonia. Wheezing or very-diminished aeration is typical with asthmatic or COPD exacerbation. However, an audible wheeze may be present in heart failure due to fluid in the alveoli causing bronchial constriction. This is referred to as cardiac asthma.

3. Hypotension

This can be caused by many things, but the most common is fluid volume loss/deficit related to bleeding, dehydration, or sepsis. If the nurse has been carefully trending the systolic blood pressure and it is running 30+ points lower than baseline, or if the systolic blood pressure is less than 100, this is a clinical RED FLAG. If the systolic blood pressure has been trending 130–140 consistently and now it is 100–110, though not less than 100, this is still a RED FLAG. The nurse must step back and ask WHY?

Remember the relevance of this formula of cardiac output to clinical practice:

CO=SVxHR

With any shock or volume-depleted state, the earliest compensatory response by the body is to INCREASE heart rate in response to DECREASED cardiac output. The finding of low blood pressure with tachycardia demands an immediate response. When a low blood pressure trend is identified, the following priority assessments must be clustered and trended with the current blood pressure to determine the most likely complication that is beginning to manifest.

General appearance

- Does he appears in any distress or is the patient tolerating the decrease in BP? The nurse needs to make a clinical judgment if the patient is unstable. This finding will help determine the urgency you need to have in this clinical situation.

Skin

- If he is in distress with sympathetic nervous system stimulation, he will likely be pale, cool, and diaphoretic. In early shock, his extremities will be cooler when compared centrally by touching

his forehead. If a patient is cool centrally and this is a new finding, this is an urgent situation and must be recognized as such.

Pulses

- The pulses must be taken while assessing the coolness or warmth of the extremities. If the pulses are already more difficult to palpate than a prior assessment, this is a critical RED FLAG. It most likely represents a shock state as the body shunts volume centrally from the periphery. Palpate pulses together at the same time to assess any significant differences.

Temperature

- A complete set of vital signs, including the temperature, is essential with a low blood pressure. The most common complication that must be ruled out is SEPSIS. An elevated temperature with a low blood pressure is a classic finding with sepsis. With the elderly, it is not uncommon to have a temperature less than 96.8 when septic. This is a clinical RED FLAG that must be recognized.

Heart rate

- The expected physiologic response to volume depletion and a low blood pressure is tachycardia, which is an early sign of physiologic compensatory mechanisms. If the patient is NOT tachycardic with a low blood pressure, it is important for the nurse to look at his daily medications. What medication will influence the finding of a normal heart rate in a shock state? Any beta blocker will prevent the heart rate from being elevated, even when the sympathetic nervous system is activated!

Respiratory rate

- It is important to note the respiratory rate because of its relationship to shock. If your patient is in any form of progressive shock state, he will likely be tachypneic.

Blood pressure

- The most important finding related to blood pressure is the current trend and the direction it is going. Remember that even if the SBP is >100 but has dropped by 30+ mm/Hg recently from prior assessments, the nurse should recognize this as a clinical RED FLAG.

4. Change in LOC or Neurologic Status

Whenever there is a change in neurologic status, it is important for the nurse to determine the most obvious reason. For example, if a patient just received a dose of IV hydromorphone (Dilaudid) and now is more lethargic and difficult to arouse, narcotic over-sedation is the most likely cause. Instead of beginning with the assumption that this is a stroke, begin with this obvious assumption and cluster clinical data from there. Since the brain is dependent on adequate blood pressure for optimal function, a change in LOC and even confusion can result from a sudden decrease in blood pressure from the patient's norm or low blood glucose.

Though narcotic over-sedation is the most common reason for a clinical change and altered level of consciousness, the nurse must also be vigilant for the possibility of a stroke with any of the following NEW assessment findings:

Facial droop

- This is always a clinical RED FLAG. If facial droop is present, a complete neuro assessment must be immediately initiated. This finding can be subtle; just the corner of the mouth may be

level while the other side moves or is elevated in comparison. If the nurse is suspicious that this is present, simply have the patient smile BIG and show their teeth. It will be obvious if a droop is present.

Hemiparesis

- Weakness on either side of the body that may or may not involve both upper and lower extremities is also a clinical RED FLAG. It is not uncommon for an upper extremity to have weakness, but the lower extremity of the impaired side to have normal strength.

Slurred speech

- If the patient has slurred speech or expressive or receptive aphasia, this is a clinical RED FLAG that is consistent with a stroke. The nurse must recognize the significance and the need to make this patient NPO until this has been ruled out.

Confusion or disorientation

- This finding can be generalized to other problems besides a stroke, but if present and no medications have been given that would alter the patient's level of consciousness, this becomes more concerning and a thorough neurologic assessment must be initiated by the nurse. This is also an early sign of ETOH withdrawal.

Cincinnati Pre-Hospital Stroke Scale

A simple, focused neurologic assessment that students should be taught and can quickly determine the possibility of a stroke is called the "Cincinnati Pre-Hospital Stroke Scale" (Kothari, Pancioli, Liu, Brott, & Broderick, 1999). It consists of three assessments that may indicate a patient is having a stroke. Though designed for emergency medical staff in pre-hospital care, it can guide nurses in any clinical setting if there is cause for concern with any new neurologic changes.

Patients with one of these three findings as a new event have a 72 percent probability of an ischemic stroke. If all three findings are present, the probability of an acute stroke is more than 85 percent. Even if students may not be confident in their comprehensive neuro-assessment skills, this will simplify what is NEED TO KNOW in this context of a change in neurological status.

Three Essential Assessments

1. **Facial droop:** Have the patient smile or show his or her teeth. If one side doesn't move as well as the other or it seems to droop, this is clinically significant and a possible stroke.
    - *Normal:* Both sides of face move equally.
    - *Abnormal:* One side of face does not move as well as the other.
2. **Arm drift:** Have the patient close his or her eyes and hold his or her arms straight out in front, palms up for about 10 seconds. If one arm does not move, or one arm drifts down more than the other, this is clinically significant and a possible stroke.
    - *Normal:* Both arms stay level and do NOT drift.
    - *Abnormal:* One arm does not move, or one arm drifts down compared with the other side.
3. **Speech:** Have the patient say, "You can't teach an old dog new tricks," or some other simple, familiar saying. If the person slurs the words, gets some words wrong, or is unable to speak, this is clinically significant and a possible stroke.
    - *Normal:* Patient uses correct words with no slurring.

- *Abnormal:* Slurred or inappropriate words or mute.

F–A–S–T

FAST is an easy to remember mnemonic that will also help students to recognize a neurological change of status using the same assessment data used in the Cincinnati Pre-Hospital Stroke Scale ("Spot a Stroke," n.d.).

Face

- Facial droop present?

Arm

- Arm drift?

Speech

- Slurred or aphasic?

Time

- Time is of the essence if any of these symptoms present! Get medical assistance immediately!

5. Falls

The most important nursing PRIORITY is to determine the MECHANISM OF INJURY related to the fall. If the patient fell in such a way that he has complaints of pain, or may have hit his head, he may require cervical spine immobilization by the RRT nurse. He must be kept perfectly still until this immobilization takes place and a cervical spine injury is ruled out. Additional relevant neurologic assessments that can be made by the nurse include

- Level of consciousness (LOC)
- Movement of all extremities
- Numbness, weakness, tingling in any extremity

Part 2: Reflect on the Following WHILE 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?

As novice nurses, students consistently struggle with recognizing what is clinically relevant or MOST important. In addition to recognizing relevant data, the student must also consistently compare or TREND the data that was collected and put it side by side with data received in report or last recorded in the chart. Has anything changed? Were any of the findings unexpected? Do they require further assessment or an SBAR to the physician? Because patients rarely stay static but can change quickly, trending all clinical data will encourage nurse vigilance, and trigger the need to "rescue" if there is a change in status.

10. Does your nursing priority or plan of care need to be modified in any way after assessing your patient (include psychosocial priorities)?

Clinical reasoning is the ability of the nurse to think in action and reason as a situation changes (Benner, Sutphen, Leonard, & Day, 2010). Nurse thinking is fluid and NOT rigid. Continually reevaluate the nursing priority and plan of care based on the data that was just collected. VS and nursing assessment must never be seen as a TASK to check off a list, but an opportunity to THINK in action and make a nursing judgment regarding the CURRENT status of your patient.

In order to advance the plan of care, the nurse must know the desired outcome(s). Once the desired outcome from the nursing priority is identified, the nurse must compare and contrast this desired outcome with clinical data that is assessed to determine clinical progression. This systematic approach will make it clearly evident if the patient is progressing as expected or not. It is then the nurse's responsibility to implement interventions to move the patient from the current problem state to the desired outcome (Kautz, Kuiper, Pesut, & Williams, 2006).

11. After reviewing the primary care provider's note, what is the rationale for any new orders or changes made?

Though the nurse is not the primary care provider, it is essential to understand the essence of the primary care provider's plan of care and the rationale for any changes in orders that have been made. The daily progress note or most recent documentation by the primary care provider is a "must read" by the nurse to clearly understand these priorities and benefit from the primary care provider's perspective on the patient. When the primary care provider note is understood and this knowledge dovetails with the data the nurse has collected, the clinical puzzle begins to come together.

12. What educational priorities have you identified and how will you address them?

The professional nurse is also an educator. Embrace the responsibility of this role. This is NOT just another task. When done in a way that promotes patient learning and understanding, it can improve patient outcomes and even prevent hospital readmissions. You cannot teach what you do not fully understand. Make this an incentive to deeply learn content so it can be taught effectively to your patients.

Every patient has a need for education to promote his/her health and care. A practical approach to assess patient knowledge when administering medications is to ask, "Do you know what this is for?" If the patient is unable to answer, you can reinforce or choose to address any knowledge deficits another time during that clinical. Additional practical information to effectively educate your patients and families will discussed be in chapter 10.

Clinical Judgment: End Result of Nurse Thinking

Making a correct clinical judgment is a complex process that is directly influenced by the clinical experience of the nurse and by what the nurse brings to the patient care scenario, including the ability of the nurse to use knowledge and grasp the essence of the current clinical scenario by using the skill of clinical reasoning. Clinical judgment is influenced by how well the nurse knows the patient based on prior clinical experience and the level of engagement that leads to recognizing subtle differences that are clinically significant (Cappelletti, Engel, & Prentice, 2014).

Though clinical reasoning has been emphasized in this chapter so it can be incorporated into your practice, it is NOT the end point of nurse thinking. It's a critical component in the equation of clinical

practice to make a correct clinical judgment. What do you decide to do with the data you have collected? Will you act now, or wait? The decision the nurse makes when interpreting clinical data is the essence of making a clinical judgment.

The following summarizes the equation of nurse thinking that is required for safe clinical practice (Alfaro-Lefevre, 2013):

Critical Thinking + Clinical Reasoning = Correct Clinical Judgment

Because clinical judgment is the end result and hallmark of professional practice, it must be properly defined and understood. Tanner (2006) defines clinical judgment as an interpretation or conclusion about what a patient needs and/or the decision to take action or not. Good clinical judgment requires the nurse to be flexible, recognize what is most important, interpret the meaning of this clinical data, and respond appropriately.

Clinical decision making is when the nurse selects interventions that move the patient from their current state toward progression to the desired goal or outcome (Pesut & Herman, 1999). Another way to define nursing clinical judgment is to use clinical reflection to contrast the present clinical status and the desired state. Utilize specific criteria to identify if the desired outcome state has been achieved, and then make a conclusion or clinical judgment if the desired outcome has been attained (Kautz, Kuiper, Pesut, & Williams, 2006).

To make a correct clinical judgment, clinical reasoning selects from all alternatives, understands the rationale for each alternative, collects and recognizes the significance of clinical data, processes this information to understand the current problem, and identifies the current care priority and plan of care (Levett–Jones et al., 2010).

Clinical judgments are made on a continual and ongoing basis in practice. In one study, on a typical med/surg floor over an eight-hour shift, the nurse engaged in an average of 50 significant clinical reasoning concerns that required a clinical judgment (Thompson, Cullum, McCaughan, Sheldon, & Raynor, 2004).

Clinical Judgment Step-by-Step

Tanner (2006) has developed a model that breaks down clinical judgment in four steps. This can help students strengthen their ability to make correct judgments by identifying breakdowns and using reflection to identify areas of growth.

The four steps Tanner identified are:

1. *Noticing*

   Can the nurse identify the most relevant clinical data and why? Though this can be part of nursing assessment, it is really much more. It emphasizes the nurse's expectations of the current clinical situation. If the patient is presenting in a way that is expected or unexpected, a decision can be made based on the nurse's textbook knowledge that is used and applied as well as prior clinical experience. When the nurse contrasts and juxtaposes the desired outcome with the

present status, this will help to facilitate the ability to notice what clinical data is relevant (Pesut & Herman, 1998).

2. *Interpreting*

   Once the essence of the current clinical situation is grasped and relevant clinical data identified, this data must now be interpreted. What does this data mean and what is its significance? Unless a nurse has a deep understanding of the applied sciences, especially pathophysiology, the ability to correctly interpret data will be impacted.

3. *Responding*

   Based on the correct interpretation, does the nurse need to ACT or rescue, or is further monitoring warranted?

4. *Reflecting*

   A nurses needs to develop two aspects of reflection. Reflection-IN-action is the ability of the nurse to "read" the patient and her response to CURRENT nursing interventions and adjust what is done based on the patient's response.

   Reflection-ON-action is done AFTERward. It completes the four-step cycle by determining what can be learned from what was just experienced and how that experience will contribute to ongoing clinical knowledge development. This is especially important if an error in judgment occurred. The nurse needs to learn and grow from her mistake.

In order to understand these two important aspects of nurse reflection, let's take a closer look at each of these principles to strengthen your ability to use reflection to strengthen your ability to think like a nurse.

Reflection-IN-Action

Reflection-IN-action is the nurse's ability to accurately interpret the patient's response to an intervention in the moment as the events are unfolding. You have just administered narcotic pain medication to your surgical patient and have just reassessed the response. This is the essence of reflection-in-action. It is the ability of the nurse to interpret the patient response to CURRENT nursing interventions and adjust what is done based on the evaluation of the patient's response. The medication's effectiveness of pain relief would determine your next step in making a clinical judgment.

Though this was a simple scenario, the nurse will make numerous clinical judgments throughout the shift based on every intervention that is utilized to advance the plan of care. To strengthen the ability of the nurse to accurately reflect in action and to make consistently correct clinical judgments, the nurse can use these three questions to reflect and transfer learning from each clinical experience to the next. Whenever the nurse is required to make a clinical judgment, ask:

1. What can I learn from this?
2. What would I do differently (if applicable) in this situation?
3. How can I use what has been learned from this situation to improve patient care in the future?

Reflection-ON-Action

Reflection-ON-action refers to the nurse's ability to reflect upon a situation that required a clinical judgment and identify what can be learned from it retrospectively and after the fact. This typically involves a more thorough and comprehensive reflection on a significant event in the clinical setting.

This level of reflection is needed when the nurse may have misinterpreted clinical cues that led to an adverse outcome or when an error in practice is made. Nurses will at times make mistakes in practice. This is expected, but the nurse must make it a priority to learn as much as possible from errors made in practice so it does not happen again! To guide this level of reflection that will lead to strengthening the thinking and clinical judgment of the nurse, use the following framework:

- **Description.** Describe the patient situation.
- **Feelings.** How did you feel? What were you thinking and feeling?
- **Evaluation.** How did you or others react? What problems did you experience? What challenged you?
- **Analysis.** Explore details by determining the real problem. Why was the problem encountered? What did you base judgments on? Were these assumptions accurate?
- **Conclusion.** Make a decision to determine what really happened. What was done well? What could have been differently? Could you have responded differently?
- **Action plan.** Where do you go from here? Make a plan to do what is needed to maximize learning. Is additional knowledge or training is needed? (Koharchik, Caputi, Robb, & Culleiton, 2015)

Strategies to Develop Clinical Judgment

Just as it takes time and clinical experience to develop and progress from a novice to the next stage of professional development as a nurse, the same is true with your ability to develop clinical judgment (Alfero-LeFevre, 2013). Be fully engaged in the clinical setting to maximize your learning and the clinical experience for all its worth. The following are some practical strategies to grow in your ability to make correct clinical judgments:

- **Become familiar with what is "normal" so the abnormal becomes readily apparent.** This principle is not only true for nurses but also for bank tellers! One effective strategy bank tellers are taught to identify counterfeit bills is to handle the original bills that represent what is authentic and normal. Once they become familiar with the feel and appearance of a normal bill, the abnormal counterfeit is easily recognized.

  In the same way in the clinical setting, make it a priority to establish and compare normal lab values, vital sign parameters, and assessment findings so that abnormal data collected in practice is immediately recognized. For example, once you know and understand the normal heart tones of S1S2, you compare this to every set of heart tones you listen to with your patients. Abnormal heart sounds such as murmurs and S3,S4 gallops are readily recognized when compared to what is normal.
- **Know your pathophysiology.** Once the pathophysiology of a problem is deeply understood, clinical data is correctly interpreted and signs and symptoms of a worsening progression or improvement become readily apparent. Once the pathophysiology of sepsis is understood, the

significance of an elevated temperature, tachycardia, and elevated WBC and neutrophils are recognized as clinical concerns. Conversely, when the temperature, WBC, and tachycardia return to normal ranges, this clinical data can be correctly interpreted for the clinical improvement that is clearly evident.

- **Reflect on all clinical data that you collect and record.** As a novice nurse, resist the temptation to see vital signs and nursing assessments as just another task to complete and document in the chart. REFLECT on what you have collected and compare it to the most recent data to establish trends. Is the data collected expected or unexpected based on your report and the primary problem? By taking the time to REFLECT, you will be much more likely to accurately INTERPRET the data, which will make it much more likely that it will lead to a correct clinical judgment.
- **Authentically care.** When the nurse is engaged and empathetically cares, this personal/professional engagement results in heightened vigilance or attentiveness that will lead to better patient outcomes.

CHAPTER 9 HIGHLIGHTS

- The definition of clinical reasoning is the nurse's ability to think in action and reason as a situation changes over time by capturing and understanding the significance of clinical trajectories and grasping the essence of the current clinical situation.
- Clinical reasoning can be broken down into four components that include identifying the priority, rationale for plan of care, and trending relevant clinical data, which allows the nurse to grasp the essence of the current clinical situation.
- Though nursing process and clinical reasoning are separate components of nurse thinking, they complement one another in the clinical setting.
- By utilizing clinical reasoning, the nurse functions as a lifeguard in the clinical setting by recognizing a potential complication early before it is allowed to needlessly progress.
- There are 12 sequential questions that the nurse can use to clinically reason, regardless of the clinical setting.
- The most common complications in the acute care setting include chest pain, increased respiratory distress, hypotension, change in level of consciousness, and falls.
- In order to make a correct clinical judgment, the nurse must be able to utilize both critical thinking and clinical reasoning.
- The four steps that the nurse must use to make a correct clinical judgment include noticing a potential problem, interpreting clinical data, responding appropriately, and reflecting in action taken as well as reflecting on action.
- Reflection-in-action is simply the nurse's ability to interpret accurately the patient's response to intervention.
- Reflection-on-action refers to the nurse's ability to reflect upon a situation that required a clinical judgment and identify what can be learned from it.

Additional Resources

- Book: *Clinical Wisdom and Interventions in Acute and Critical Care, Second Edition: A Thinking-in-Action Approach* (2011) by Patricia Benner, Patricia Hooper Kyriakidis, & Daphne Stannard
- Book: *Critical Thinking, Clinical Reasoning and Clinical Judgment 5th ed.* (2011) by Rosalinda Alfaro-LeFevre

Chapter Reflections

1. To capture the essence of clinical reasoning, define clinical reasoning in your own words.

2. What does a nurse have in common with a lifeguard?

3. What are the most common "Jasons" in your clinical setting?

4. For those complications most commonly seen in your clinical setting, what nursing interventions will you initiate if this complication develops?

5. What nursing assessments will identify this complication EARLY if it develops?

Since I have become a nurse I triage my laundry and have decided that none of it requires immediate attention.