Acquiring Critical Thinking Skills

What is Critical Thinking?
- Cognitive problem solving
- Logical reasoning
- Discipline-specific knowledge, skills and attitudes to solve real problems
- Critical thinking merges the principles of logical reasoning, problem solving, judgment, decision making, reflection and lifelong learning

Essential Critical Thinking Skills for Effective Respiratory Care Practice

Prioritizing
- The ability to arrange work according to the importance of the task
- "Organized think" - prioritizing the expected
- "Rapid think" - prioritizing the unexpected
- How will I get first rounds done in 2 hours - how will I get everything done in 12 hours?
- Do I have patients who do not need therapy?
- Do I have patients who could do well on 2 treatments this shift instead of 3?
- Do I have patients whose therapy should be evaluated for possible discontinuance?
- Do I have patients whose therapy should be evaluated for changes in frequency, medications, new modalities?
Prioritizing
- In both the expected and unexpected, you must have the ability to adapt
  - Patients' conditions
  - Emergencies
  - New patients
  - This requires you to be both organized and flexible

Anticipating
- The ability to think ahead and envision possible problems
  - "Future think" - a continuous and total approach to resolving a situation that includes the ability to "see the big picture"

Anticipating
- Anticipating differs from prioritizing

Anticipating
- The ability to anticipate is necessary whenever you make modifications in a patient's care

Anticipating
- This foresight also helps you to evaluate the efficacy of the intervention
  - By comparing the patient's response to the expected response
  - Primary aspects of anticipating

Anticipating
- You also use the skill of anticipating when waiting for a new patient and planning ahead for needed equipment, when you prepare a list of topics to discuss with a physician, etc.
  - Anticipation requires that you know as much as possible about your patients, the data, the technology and the situation - to either prevent problems or find early solutions when problems do arise

Troubleshooting
- The ability to locate and correct technical problems
  - "Technical think" - includes all the technical aspects of respiratory care that require CT
  - 
  - 
  -
Troubleshooting

- Resources you might find helpful include manufacturer’s manuals, online technical assistance and other RTs who may be more familiar with the equipment.
- Troubleshooting may range from simple problems (is the machine turned on?) to more complex problems (why does an error message continue to appear after proper corrective measures have been taken?)
- Not everyone will understand that an ABG is late due to equipment error - you are expected to properly maintain and use equipment for both therapeutic and diagnostic procedures

Troubleshooting

- Proper maintenance and quality controls will help to avoid malfunctions.
- Nurses and physicians expect you to be able to respond quickly and knowledgeably to alarms or problems involving mechanical ventilators, pulse oximeters and other respiratory therapy devices.
- Not only are you responsible for responding immediately to technical problems, you need to have a calm, systematic approach in assessing, identifying and correcting the malfunction.

Troubleshooting

- No matter what the problem, patient and equipment must be assessed, IN THAT ORDER! - always ensure your patient is well cared for while addressing equipment problems.

Communicating

- The ability to exchange information with other people
- "People think" - gathering and disseminating appropriate and sufficient information to analyze, evaluate and make judgments in clinical practice.
  - Effective communication is dependent on having good working relationships with other members of the health care team.
  - Communication is practitioner-specific and situation-specific.

Communicating

- You should communicate in a way that is comfortable for you.
- The ability to communicate clearly, concisely and convincingly.
- Communication style, duration and frequency vary greatly and depend on

Communicating

- Critical thinking in clinical practice is very much dependent upon.
- You need to be able to share information.
- If you cannot precisely communicate clinical parameters and their meaning to physicians and nurses, effective patient care may be jeopardized.
Communicating
- For example, you may obtain anomalous or conflicting patient data and need to speak to a physician - if you cannot communicate competently, you will not be able to think critically in clinical practice.
- If an insufficient amount of information is exchanged, you may be unable to interpret, analyze and evaluate a patient’s condition.

Communicating
- Communicating effectively with patients
- You must communicate with patients
- Communication needs to fit the situation

Communicating
- Communication is an essential skill for CT
- CT is essential
- Effective communication skills include

Negotiating
- The ability to carry on discussion in an attempt to influence others
- “Shared think” - we negotiate with others when we do not have sole authority in determining patient care
- Negotiating requires communication skills
- Negotiating differs from communicating

Negotiating
- Sometimes you will have to negotiate to obtain the power you need to do what you believe is best for the patient
- Negotiating is
- Negotiating requires good communication skills

Negotiating
- Successful negotiators often phrase their suggestions as questions
- Effective listening
- It is through negotiation that therapists can expand their opportunities for improving patient care based on their expertise
Decision Making

- The ability to reach a judgment or conclusion or decide on a course of action
- “Personal think” - you must be able to make good clinical decisions if you are to deliver safe and effective patient care
  - You make decisions on your own
  - You should continually ask questions of one another

Decision Making

- You participate in decision making
- ...
- ...
- ...
- You are the best informed

Reflecting

- The ability to “think about thinking” in order to explore your own assumptions, opinions, biases and decisions
- “Inward think” - reflection helps you to learn from previous mistakes and problems

Reflecting

- Reflection will change as you grow in your career and assume different roles and responsibilities
- As you become more experienced and make fewer mistakes
- You will become more aware

Characteristics of Critical Thinkers

- The critical thinker has an understanding of and an ability to formulate, analyze and assess the following:
  - the problem or question at issue
  - the purpose or goal of thinking
  - the frame of reference or point of view involved
  - assumptions made
  - central concepts and ideas involved
  - principles or theories used
  - evidence, data or reasons advanced
  - interpretations or claims made
  - inferences, reasoning and lines of formulated thought
  - implications and consequences involved

Characteristics

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Characteristics

• The critical thinker usually has these characteristics
  – inquisitiveness
  – a concern about being well informed
  – alertness to opportunities to use critical thinking
  – trust in the process
  – self-confidence
  – flexibility
  – tolerance for the opinion of others

Characteristics

• fair-mindedness
• honesty
• prudence
• slow to judgment until all the facts are in
• willingness to reconsider position

Components in the Process of Critical Thinking: The THINKER Approach

THINKER

• The process of CT is complex, involving many large and small steps
• The critical thinker has the ability to formulate, analyze and assess problematic elements
• The acronym THINKER is used as an aide to remember the important components in the CT process

THINKER

• Time-Out
  – The first thing to do when dealing with any situation is to take time-out to ascertain the main problem, issue, point or question
  – You can waste a lot of valuable time if you do not focus on the real problem, issue or question - ask yourself questions such as
    • What is this all about?
    • What is really going on here?
    • What matters most in this situation?
    • What do I need to accomplish?

THINKER

• In high-stress situations, a realistic time-out may only be a few seconds to collect your thoughts and frame the problem - whenever possible, take sufficient time to think about what you are thinking
• A time-out will help you enhance and reinforce your use of reflective thinking rather than reflexive thinking
**THINKER**

- **Hesitation**
  - After taking time-out to focus your thoughts, you should hesitate before making any hasty conclusions.
  - Hesitating will allow you to call into question your reasons for thinking what you think.
  - When formulating any argument, formulate your own reasons.
  - When making any decision, search for reasons to support as well as contradict your initial inferences and premise.

- **Inference**
  - Inference refers to the process of going from a valid reason to a conclusion.
  - When you take time-out, you are focusing on the issues and identifying the reasons – you must then evaluate those reasons.
  - When you hesitate, you are determining the reasons and ascertaining whether or not they are true.
  - When you go on to make inferences, it means you have accepted the reasons as true and are now determining if the reasons are adequate to reach the conclusion. You should ask yourself “Since my reasons are true, is it logical or reasonable to now reach the conclusion I have come to?”
  - Inferences are made after examining evidence to support reasons.

- **Notions**
  - Notions are any form of beliefs, opinions, views, plans or intentions.
  - Notions are generally formed after making inferences.
  - Notions are usually based on a particular situation, context or circumstance.
  - Context includes the people and environment that influence what the thinker is doing or judging.
    - The people we interact with in a certain situation have their own beliefs, experience, knowledge, emotions, predispositions, interests and purposes.
    - The environment includes the physical and social variables, e.g. religion, social norms and families.

- **Knowledge**
  - Knowledge is the body of facts and principles accumulated within a society over time.
  - We acquire knowledge by individually and collectively examining the factual basis for what we think.
  - Knowledge is achieved after we carefully examine our notions.
    - Knowledge can be described as the state of knowing or understanding.

- **Expression**
  - Critical thinking involves clearly expressing what you know.
  - Validation of knowledge requires expression and critical discourse with others.
  - Critical discourse forms the basis of our knowledge.
    - It is important to be precise when you write or speak – you must clearly and plainly say what you mean.
THINKER

- Reflection
  - Reflection should be the end point of your thinking process – and the beginning of the critical thinking process
  - Reflection is "thinking about thinking" and helps you to learn from previous mistakes and successes