



Health Workforce Initiative

Hi-Touch Healthcare: The Critical Six Soft Skills

Grab-N-Go Independent Training Module:

Critical Thinking

HEALTH WORKFORCE INITIATIVE STATEWIDE ADVISORY COMMITTEE, CALIFORNIA
COMMUNITY COLLEGES CHANCELLOR'S OFFICE, AND ECONOMIC DEVELOPMENT PROGRAM



Critical Thinking

Grab-N-Go Independent Training Module

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Critical Thinking

Background Information

Every individual thinks but human nature and social filters cause our thinking to be biased, distorted, and even prejudiced. The quality of our life is built upon our individual thought processes and poor thinking can be costly, both financially and emotionally. When cultivated, enhanced critical thinking improves the thinker's ability to recognize and overcome bias and prejudiceⁱ thus potentially improving the quality of life for the individual and those around him/her.

Imagining thinking as a series of steps is one way to understand the critical thinking process. The first step is to differentiate between fact and opinion. The second is to understand the issue and possible solutions. The third step is to analyze the parts and determine how they are related and what might be a distractor. The fourth determining whether or not a solution is effective by predicting the possible outcomes and consequences. Finally, the last step is to evaluate. The individual should take a step back and evaluate whether or not the chosen solution was effective or desirable.

In healthcare situations, critical thinking can and does have lifesaving impacts. Accrediting agencies in healthcare have mandated that individuals are able to demonstrate competent critical thinking and reasoning.ⁱⁱ For example, nursing has emphasized critical thinking as an essential nursing skill for more than 50 years.ⁱⁱⁱ Critical thinking in nursing generally includes these qualities:



confidence, contextual perspective, creativity, flexibility, inquisitiveness, intellectual integrity, intuition, open-mindedness, perseverance, and reflection.^{iv}

This module will focus on critical thinking in general. The steps required for the development of critical thinking are the same for all health care employees including professions such as dietitians, physical therapists, nurses, certified nurse's aides, respiratory therapists, and paramedics. This module will present five distinct steps of critical thinking and allow practice along the way. Improved critical thinking skills and the implementation of those skills are linked to improved patient outcomes.^v



Training



Goal: This training provides participants with an understanding of the importance of critical thinking in the healthcare environment as well as activities to reinforce behaviors that depict critical thinking.

WIIFM: What's in it for me? Understanding and practicing critical thinking is imperative for all team members involved in the delivery of quality healthcare, regardless of job function or title. This module helps participants understand and practice critical thinking which can lead to improved patient outcomes.



Materials Provided:

- Critical Thinking Module PowerPoint
- Activity # 1 – What Is The Answer?
- Activity #2 – Doesn't Belong
- Activity #3 – Dr. Cross Inference Quiz and Answer Key
- “Dr. Cross Quiz” handout
- Activity #4 – Same and Different
- Activity #5 – Dare Dare



Directions for the Trainer: Activity preparation information is included in this document and/or within the PowerPoint presentation notes. Each PowerPoint slide, as appropriate, includes detailed explanations and instructions for the trainer. As with all Grab-N-Go Modules, you can use it all for a more detailed training, or simply use one or two of the many activities—a la carte style!



ACTIVITY #1

What is The Answer



Goal: This activity provides an opportunity to use critical thinking to determine an answer to a mathematical calculation. This activity serves as an introduction to critical thinking and how it differs from traditional thinking.



Materials Needed: (quantities vary by group size)

- Critical Thinking PowerPoint slides #5-9



Procedures:

1. Instruct participants that they will be shown two slides with a question on each slide. Participants should figure out the answer for each question and not share their answers with other participants.
2. Show slide 6.
3. Slide 6 is “ $10 + 1 =$ ”
4. Leave slide 6 up for about 10 seconds.
5. Show slide 7.
6. Slide 7 is “A bat and ball cost \$1.10. The bat costs one more dollar more than the ball. How much does the ball cost? What is the answer?”
7. Leave slide 7 up for about 15 seconds.
8. Advance to slide 8. Allow participants to share their answers. Most participants should get the first one correct. There are likely to be multiple answers for the second question. Allow participants to explain how they arrived at their answers. Encourage them to share their method of critical thinking.
9. Advance to slide 9. Figuring out the first problem required simple addition to arrive at the correct answer. The answer to the second problem required critical thinking because it was more than just adding two numbers together. The problem required figuring out a number and then performing a mathematical calculation. This is an example of beginning critical thinking.
10. This exercise illustrates basic critical thinking and while it does not directly relate to healthcare, this type of basic critical thinking is the foundation of more abstract types of interpretation and problem solving.



ACTIVITY #2

Doesn't Belong



Goal: This activity provides an opportunity for participants to attempt critical thinking in a safe environment.



Materials Needed:

- Power Point slides #13 – 14



Procedures:

1. Instruct participants to look at the letters on slide 14 and determine which letter in the diagram doesn't belong.
2. Advance to slide 14 and allow participants a minute or so to determine which letter doesn't belong with the rest.
3. Allow various participants to explain their answers.
4. Then give the correct answer. The correct answer is the letter "t."
5. Most individuals don't even see the "t" because it is out of place. It is bigger, thinner, and in a different color and font than all of the other letters.
6. Explain that this is an example of critical thinking because the situation required thinking outside the box. It required creative thinking. The answer was something unexpected and was not predictable.
7. In healthcare we are continually looking for answers that are hidden in plain site or are not obvious. This exercise is an introduction to out of the box type of critical thinking.



ACTIVITY #3

Dr. Cross Inference Quiz



Goal: The first step in critical thinking is to be able to determine the difference between fact and opinion. This exercise will allow participants to practice and validate their stance on whether statements are fact or opinion.



Materials Needed:

- A copy of the “Dr. Cross” handout for each participant
- A writing utensil for each participant
- Slide #19 of the Critical Thinking PowerPoint



Procedures:

1. Pass out a copy of the handout to each participant.
2. Make sure each participant has a writing utensil.
3. Have the individual read the paragraph and then determine if each statement is true or false.
4. Allow 5-10 minutes for participants to complete the handout.
5. By show of hands, ask participants:
 - a. if anyone answered “True” to all questions.
 - b. if anyone answered “False” to all of the questions.
 - c. if anyone answered “?” to all the questions.

(Trainer: Write down how many participants raised their hand for each type of answer and note that rarely will anyone answer all “?” which is the correct answer.)

6. Ask participants to raise their hand if they answered “True” to question #2 (**write down the number**), raise their hand if they answered “True” to question #4 (**write down the number**).
 - a. *These two questions provide an opportunity to discuss gender bias.* Participants who answered “True” to question 2 inferred that the Dr. was a man and answering “True” to question 4 inferred that the nurse was a woman based on the use of the “he” and “her” pronouns. Nowhere in the paragraph are the gender of the characters identified.
7. Put participants into groups of 3-4 (a minimum of 4 -5 groups works best). Ask participants to share their answers and to make any changes if they believe they “inferred” an answer which was not provided. (In other words,



ACTIVITY #3

Dr. Cross Inference Quiz

factual information is NOT provided enabling a “True” answer. To reach a “True” conclusion, participants must be inferring from their previous experiences the answers).

8. Ask the same questions outlined in step one of the groups. Note whether or not any of the groups now have ALL “?” as their responses.
9. Review the Answer Key. This provides an opportunity to discuss the difference between good and bad inferences. Our brains are wired to think inferentially. We must be able to draw conclusions without questioning every step. For example, we don’t bother calling our local grocery store or gas station, or even our place of employment, before going to these establishments because we infer from past experience and that they will be open for business. However, we don’t KNOW they are open; and, once in a while, extenuating circumstances do cause the establishments to be unexpectedly closed. Make the point that in problem solving situations or situations that require interpretation, we must use critical thinking processes to determine whether or not we HAVE the facts or are drawing conclusions based on limited information and/or past experiences.



Dr. Cross Quiz:

1. Chris Cross is a medical doctor who works at St. Luke's Hospital. T F or ?
 - *Type of degree is not provided – could be a Ph.D., for example.*
2. Dr. Cross is a man in a hurry.
 - *Gender not specified.*
3. Yoshi Yamamoto, who is Japanese, was lying in bed. T F or ?
 - *Name does not necessitate race.*
4. Pat Sinclair was in room #314 when Dr. Cross entered and found her fluffing bed pillows. T F or ?
 - *Story doesn't state which room Pat Sinclair was in when Dr. Cross entered.*
5. Dr. Cross was irritated with Nurse Sinclair because the bed was not straightened.
T F or ?
 - *Irritated is an interpretation of his statement and not a stated fact.*
6. Yoshi Yamamoto is a patient at St. Luke's Hospital. T F or ?
 - *She was lying in the bed which does not necessarily mean she was a patient.*
7. Nurse Sinclair's face reddened because Dr. Cross was stern with her. T F or ?
 - *No information is provided for why her face reddened.*
8. When entering the room, Dr. Cross became the third person in room #314. T F or ?
 - *The information about how many people were in the room was not provided.*
9. This story takes place at St. Luke's Hospital. T F or ?
 - *The story states where Dr. Cross works, but not where the story takes place.*
10. This story concerns a series of events in which only three persons are referred to: Dr. Cross, Nurse Sinclair, and Yoshi Yamamoto. T F or ?
 - *The story does not does indicate whether or not Nurse Sinclair and the charge nurse and the same person.*



ACTIVITY #4

Same and Different



Goal: To help participants practice evaluating possible outcomes to complex questions by determining points that are the same and points that are different. In critical thinking situations, evaluating the similarities and differences of possible options by what allows the best option to be chosen.



Materials Needed:

- Slide #21 of the Critical Thinking PowerPoint



Procedures:

1. A pair of words will appear on the slide, one set at a time.
2. Participants will find and share similarities and differences within the pairs of words.
3. Ask the participants to discuss how determining how items are the same and different helps with critical thinking.
4. Point out that looking for how different things either work together or are different is a step in developing critical thinking skills.
5. It is important in healthcare to be able to determine how options are the same and how they are different so the correct intervention can be determined.



ACTIVITY #5

Dare Dare Activity



Goal: This activity helps participants implement the steps to critical thinking discussed so far in this module. Participants are encouraged to comprehend and analyze the presented material in order to find a solution to the problem presented.



Materials Needed:

- Slide #23 - 26 of the Critical Thinking PowerPoint



Procedures:

1. Example word puzzle: What is Dare Dare? (It is a double dare.)
2. The next three slides will show word puzzles. Instruct participants to try to figure out what the word puzzle means using the steps of critical thinking discussed thus far.
3. Show slide 24. Display for about 30 seconds.
4. Ask if anyone knows what it means. The answer can either be shared by someone if the majority of the group seems to have solved the word puzzle, or the group can be given more time to ponder before allowing someone to share the answer. If no one knows the answer, then it can be given to the group.
5. Show slide 25. Display for about 30 seconds.
6. Ask if anyone knows what it means. The answer can either be shared by someone if the majority of the group seems to have solved the word puzzle, or the group can be given more time to ponder before allowing someone to share the answer. If no one knows the answer, then it can be given to the group.
7. Show slide 26. Display for about 30 seconds.
8. Ask if anyone knows what it means. The answer can either be shared by someone if the majority of the group seems to have solved the word puzzle, or the group can be given more time to ponder before allowing someone to share the answer. If no one knows the answer, then it can be given to the group.
9. After sharing the final word puzzle ask the participants how figuring out these word puzzles compares to critical thinking. Point out that finding new and unique solutions require analysis of the puzzle as distinct parts.



References

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