Ideas for Promoting Critical Thinking

One of the primary goals of clinical education is to promote critical thinking and problem solving. "Critical Thinking" is a broad term that can encompass a variety of skills. Try to move beyond basic "recall" questions (name the rotator cuff muscles), and consider using some of these questions/strategies to facilitate a STRONG set of critical thinking skills in your students!

Comprehension (Understanding): to convert information into a form that is personally meaningful, i.e., that makes sense to the individual who is learning it.

Paraphrasing: How would you put _____ into your own words?

Illustrating: What would be an example of _____?

Application: to apply abstract or theoretical principles to concrete, practical situations.

How can you make use of _____?

How could _____ be put into practice?

Analysis: to break down or dissect information into its component parts in order to detect the relationship among the parts or the relationship between the parts and the whole.

Prioritization: What are the most important/significant elements of _____?

Deconstruction: What assumptions/biases underlie or are hidden within _____?

Compare/Contrast: What parts of _____ would be similar to/different than _____?

Synthesis: to build up or connect separate pieces of information to form a larger, more coherent pattern.

Integration: How can this idea be combined with _____ to create a more compete or comprehensive understanding of _____?

Classification: How can these different ideas be grouped together into a more general category?

Evaluation: to critically judge the validity (truth), morality (ethics), or aesthetic (artistic) value of ideas, data, or products by using relevant assessment criteria (standards for judging quality).

How would you judge the accuracy or validity of _____?

How would you evaluate the ethical (moral) implications or consequences of _____?

Deduction: to draw conclusions about particular instances that are logically consistent with or derive from general principles and premises.

What specific conclusions can be drawn from this general _____?

If this general _____ were true, then it would logically follow that _____.

What particular actions or practices would be consistent with this general _____?

Adduction: to make a case **for** an argument or position by accumulating supporting evidence in the form of logical arguments (rational thinking) or research evidence (empirical reasoning).

What are logical arguments for _____?

What research evidence supports _____?

Refutation: to make a case **against** an argument or position by accumulating contradictory evidence in the form of logical arguments (rational thinking) or research findings (empirical reasoning).

What are logical arguments against _____?

What research evidence contradicts _____?

Balanced Thinking: to carefully consider arguments/evidence **for and against** a particular position or viewpoint.

What are the strengths/advantages and weaknesses/disadvantages of _____?

What evidence supports and contradicts _____?

Multiple Perspective-Taking: to view an issue from a variety of viewpoints, standpoints, or positions in order to gain a more comprehensive and holistic understanding.

How might people from different cultures view this _____?

How might people who differ in age or gender react to _____?

Causal Reasoning: to identify cause-effect relationships between different ideas or actions.

How would you explain why _____ occurred?

How would _____ affect or influence _____?

Creative Thinking: to generate imaginative ideas, unique perspectives, innovative strategies, or novel (alternative) approaches to traditional practices.

What might be a metaphor/analogy for _____?

What could be invented to _____?

What might happen if _____?

Incorporating open ended questions such as these in a non-threatening way can take the critical thinking that occurs during a clinical experience to a whole new level. These questions (and their responses) also allow a CI and student to identify where errors in problem solving are occurring to effectively focus teaching.

Make it a personal CI growth goal to try at least one new category of critical thinking question with your student each week!

Dealing with a Difficult Learning Situation: *Prevention*

The vast majority of learning encounters proceed smoothly with significant benefit for the learner and often a sense of reward and accomplishment for the clinical instructor. On occasion, however, there is a learning situation where things do not run smoothly. The old adage "an ounce of prevention is worth a pound of cure" is as true in clinical teaching as it is in clinical medicine. It is generally much more efficient (and pleasant) to prevent a problem than to manage the negative impact once it has occurred. Approaches to prevention in teaching can be divided into categories of primary, secondary and tertiary prevention. In healthcare, as in education, primary prevention has the goal of avoiding the problem before it occurs. Secondary prevention has the goal of detecting an issue early and acting to minimize the effects of the problem. Tertiary prevention is the management of existing problems to limit the negative impact those problems may create. Each level of prevention has its own characteristics and strengths.
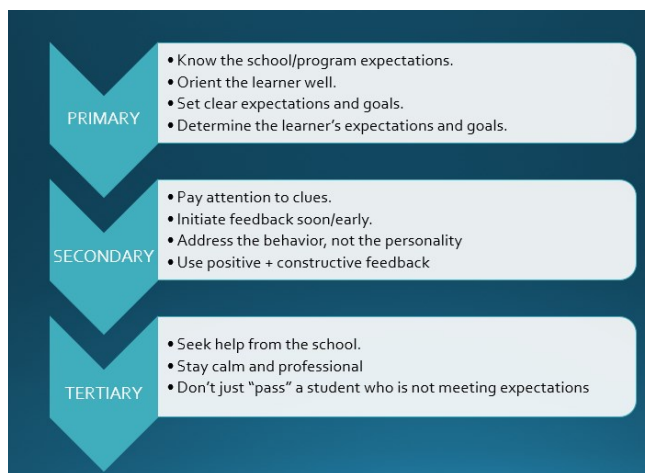
Primary Prevention:

As in healthcare, the prevention of problems before they occur is ideal. Fortunately there are strategies that can prevent difficult teacher/learner interactions. Those include being informed and clear about the **expectations** for the learning experience, taking the time to **orient the student** to those expectations, and setting clear expectations and goals and **role modeling t**hat behavior.

Consider the following when preparing for a student placement and throughout the student placement:
- What are the school/Program expectations and goals for the experience?
- What are the student's expectations for the experience? Ask the student how he expects the first week to go, how his previous rotations have progressed, how he feels he learns best, what he is most nervous about, and what his particular challenges are.
- What are your expectations for student performance/behavior? Have you expressed those to the student? Are you actively working to role model those behaviors (and are other staff in the department role modeling those)?

All too often problems emerge because the student and the CI were not on the "same page" with expectations. The CI may assume that the student "*should know*" what is expected but that is often an **unfair assumption**. Consider the following scenarios that might

have been avoiding by practicing primary prevention:

- **PRIMARY**
  - Know the school/program expectations.
  - Orient the learner well.
  - Set clear expectations and goals.
  - Determine the learner's expectations and goals.
- **SECONDARY**
  - Pay attention to clues.
  - Initiate feedback soon/early.
  - Address the behavior, not the personality
  - Use positive + constructive feedback
- **TERTIARY**
  - Seek help from the school.
  - Stay calm and professional
  - Don't just "pass" a student who is not meeting expectations

Student expected to be able to jump in and start treating patients by the end of the first week; CI thought that since this was a first rotation the student should mostly observe. Neither expressed that expectation, though, so both are frustrated.

Student arrives at clinic by 8:00 but is negatively perceived because she is not there early. No one indicated to the student, however, that she is expected to arrive by 7:50. Other PT department staff routinely arrive at 8:00 (or later).

Secondary Prevention:

If primary prevention has not succeeded then early detection of problems is essential. Be sure you're using these strategies to manage issues:

1. Be **alert for clues** (red flags/yellow flags) that there may be a problem. Don't use a "wait and see" approach which may result in an entire clinical experience going by without an opportunity to intervene and correct the issue.
2. Address problems as they arrive **explicitly** (don't just "hint" to the student that there is an issue). Putting expectations and goals for improvement in writing is the best approach.
3. Be sure that you are remaining calm and professional and that you are addressing the specific **observable behavior** and not critiquing the student personally (which will automatically elicit a defensive response).

Consider the following scenarios that might have been avoiding by practicing good secondary prevention:

Student likes to learn by asking questions throughout the treatment session. CI feels she has given "body language" that she prefers to answer questions at the end of the day. By the time the CI does discuss it with the student there is a tone of frustration in her voice.

CI notices her student on his cell phone and chatting with department staff when he should be attending to the patient in the PT gym. The CI decides not to address it just yet (maybe it won't happen again). The behavior continues, and by this point other staff have

noticed it and one comments to the student that he is "very unprofessional".

Tertiary Prevention:

Sometimes despite your best efforts as a CI, problems continue. Avoid the temptation to "just stick it out". This is the time (if you have not already done so) to DEFINITELY enlist the help of the school (ACCE/DCE). This individual can give you insights into the student's behavior, suggestions for documentation and feedback, can discuss expectations with the student, and can certainly (if needed) remove the student from your clinical setting.

At every level of prevention, using the **SOAP approach** can be useful in documenting, preventing and managing identified problems.

S: Subjective—Be sure that you are getting all of the information. Are other staff in the department having any issues with the student? (Example: student may be nervous in interaction with CI affecting his performance, but does well in less stressful situations). What is the student's perspective? (Example: Student may be aware of the difficulty and may be actively working to improve… or may have been completely unaware that a particular behavior was perceived as a problem at all)

O: Objective—It is important to describe/list for the student the specific behaviors that are undesirable. (Examples: More than 20 mins late Mon and Tues this week. Taking 30+ mins to complete 2 patient notes. Unable to recall ACL precautions even after review. Observed speaking "over" patients on 3 occasions when listening would have been the appropriate/preferred action.)

A: Assessment—Diagnosing the cause of the behavior is an important step. Is it a cognitive issue (student needs to study and increase knowledge base)? Affective issue? (student is nervous/intimidated, student is not enjoying the setting/not motivated, student values or expectations are in conflict with CI or site)

P: Plan—Should be in writing and may include gathering more data, recommendations and goals for change, getting feedback and assistance from school, and opportunities for practice and improvement in the identified area of weakness.

Using these tools can help make a difficult situation manageable and will help prepare the student for success which is the ultimately the goal of clinical education!

Spring Crossword Puzzle

Hey Clinical Instructors!! Try this crossword just for fun but also to get an idea of what didactic content BPCC PTA students are covering during the <u>spring semester</u> of the PTA Program. Challenge your PT & PTA co-workers to brush the brain cobwebs off some of this information to help you finish the puzzle! Then feel free to quiz your spring PTA students about these subjects too!!
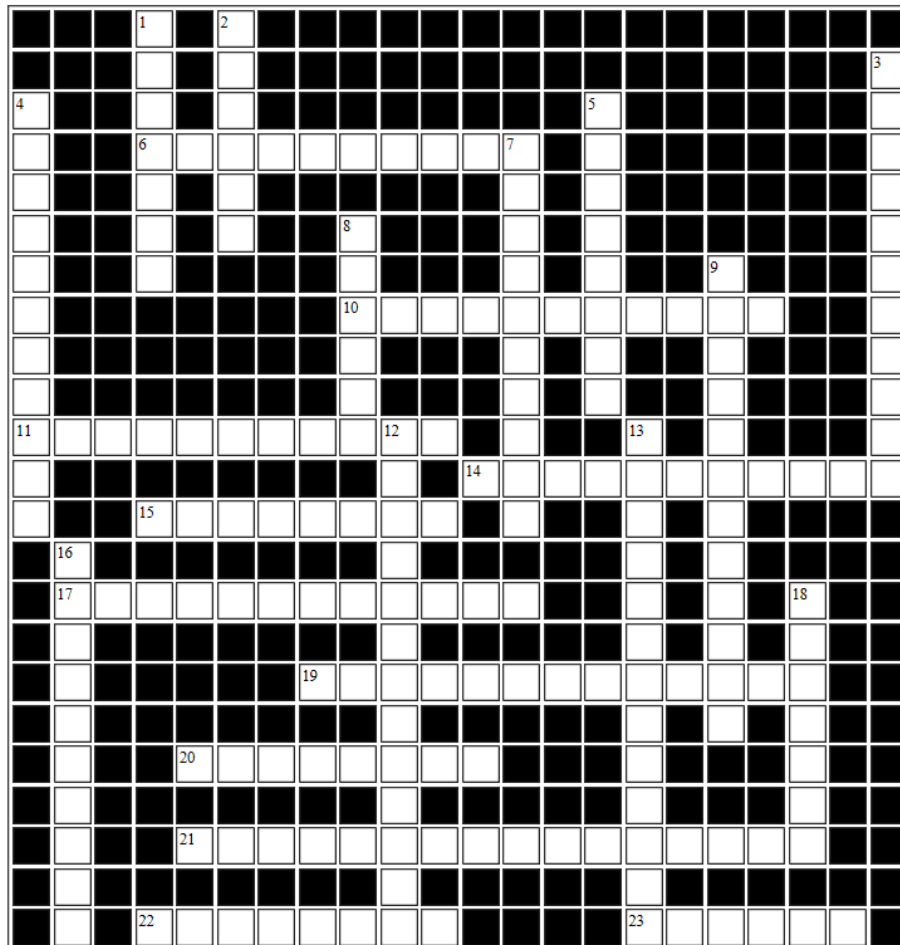
Across

6. Interferential e-stim waveform can be described as pulsed _____.
10. A "collapsed lung" caused by alveolar damage or blockage
11. Cranial nerve XII
14. A PT conducts a research study using her current population of patients as the subjects. The study used _____ sampling.
15. Type of rigidity in which there is uniform resistance to passive movement throughout the ROM
17. Term for increased white blood cell count
19. Ascending pathway in the spinal cord that carries pain/temperature sensation
20. Abnormal posture associated with tight hamstrings and weak hip flexors
21. Stroke volume divided by total volume of blood in left ventricle before systole
22. Gait deviation seen in prosthetic wearer with poor prosthetic suspension
23. Fractures of this classification typically caused by a twisting/torsion force

Down

1. Type of transmission based precautions used when treating a patient with meningitis
2. Number of inches of "run" that must be present for every inch of "rise" in an ADA compliant ramp
3. Specific structure in the heart commonly affected by Endocarditis
4. Type of wound caused by/associated with decreased sensation (such as in a diabetic patient)
5. Lasix is an example of this classification of drug
7. Method of heat transfer associated with diathermy
8. Disease associated with hyperactivity of the thyroid gland
9. Muscles innervated by ulnar nerve commonly end in this phrase
12. PNF element that can be facilitory or inhibitory
13. Separates the frontal lobe of the brain from the parietal lobe
16. Modality contraindicated for use over a growth plate
18. Special test used to identify ACL tear

BPCC

It's About You!

[PTA PROGRAM UPDATE—SPRING 2017]

Just some of the things BPCC PTA students have been up to this year.....

Right: BPCC PTA students volunteered during BPCC athletic physicals. August 2016

Left: BPCC PTA students volunteered their time to help with decorations and serving during the BPCC/City of Bossier Community Christmas Show. December 2016

Right: PTA students collected supplies and assembled flood buckets to assist in the south Louisiana flood relief efforts. Fall 2016

Way to Go!!

The BPCC PTA Program is very fortunate to have a large community of skilled and dedicated clinical instructors who not only model excellent technical skills but who also devote time to and energy to teaching. PTA students are asked to give feedback to the question "**What did your CI do well to facilitate learning?**" at the end of each rotation — See just some of the great things our CI's are out there doing!!

"My CI gradually increased my independence with patient care, planning, and prioritizing the case load. This helped me gain confidence in my own skills and gave me an opportunity to see my weaknesses while providing an environment for constructive feedback on how to make improvements."

Andrea Claytor PTA
University Health
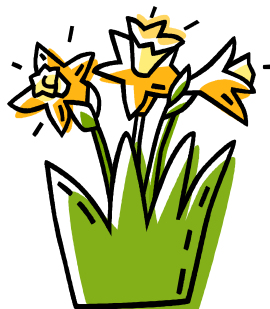
"My CI would demonstrate exercises on me before I would have my patient complete them so I knew exactly what muscles were working and how it should feel. My CI also would let me brainstorm and figure out solutions for myself instead of jumping in and telling me the answers."

Lydia Ingram, PT
WK IP Rehab

"Lori printed articles for me to read with the latest research to support the type of interventions we were using with many of our patients. This really helped me better understand the importance of evidence based practice."

Lori Wheat, PT
Wheat Physical Therapy

"I loved this rotation! I have learned so much! My CI would stand outside the patient's room while I treated them, but was still close enough if I needed her. She gave me feedback throughout the day and would sometimes quiz me. Katie explained material in a way that was easy for me to understand, which was super helpful. She was really sweet to the patients too. They all loved her! She's an awesome PTA and I'm so glad I was able to have her as my CI! :)"

Katie Smith, PTA
WK Bossier

"Great instructor! Really admired her for always putting the patient's care first above productivity levels and treatment minutes. She never displayed a "that's not my job" attitude and was always there to give an extra hand."

Courtnei Doolittle, PTA
Alpine Rehab Ruston