Clinical Teaching Effectiveness:
Promoting Self-Efficacy and Metacognition

February 2016

Arvind Srinath
Melissa Tavarez
Noel Zuckerbraun
Workshop Objectives

• Understand self-efficacy and its importance to trainees’ learning

• Recognize importance of helping trainees become more metacognitive

• Apply at least 1 strategy to help promote:
  – Self-efficacy
  – Metacognition
Self-Efficacy
Self-Efficacy

Belief in one’s capacity to organize and execute a course of action (Bandura, 1986)
Importance of Self-Efficacy for Success

- Higher Goals → Self-Efficacy
- Self-Efficacy → Persistence
- Persistence → Success
- Success → Higher Goals
Self-Efficacy is often Task-Specific

High

Low
Sources of Self-Efficacy

- Mastery experiences
- Observation of others
- Verbal persuasion
- Physiologic/Emotional
How to Promote Self-Efficacy?

THE POWER OF SMALL WINS
How can we set up “Small Wins”?

Group brainstorm:
Self-Efficacy built on Small Wins

- Most useful/important
- Provide feedback
Back to Our Scenario...

- You are in your clinic and have a patient with a common complaint in your scope of practice
- When you ask the student/resident to go see the patient, they look like a “deer in the headlights”
Another Scenario…

• On the floor, you have a patient with a straightforward diagnosis.

• When you ask the student/resident/fellow for a differential and plan, they say, “I’m not sure.”
One More Scenario...

• You are about to perform a common procedure in your specialty

• Your student/resident/fellow states, “I’ve never done that before.”
Self-Efficacy built on Small Wins

Most useful/important

Provide feedback
What is Your Reaction?

• You are in your clinic and have a patient with a common complaint in your scope of practice

• When you ask the student/resident to go see the patient, they say, “this is probably nothing serious.”
Calibration of Self-Efficacy through Metacognition
“Thinking about one’s own thinking process”
Common Metacognitive Processes

• Self-assessment

• Cognitive control

• Monitoring
### Practice-based learning &

Identify strengths, deficiencies, and limits in one's knowledge and expertise.

<table>
<thead>
<tr>
<th>Not yet Assessable</th>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>Prompted by a self-directed goal of improving the professional self, the practitioner anticipates hypothetical clinical scenarios that build on current experience and systematically addresses identified gaps to enhance the level of KSA; elaborate questioning occurs to recognize gaps and...</td>
</tr>
</tbody>
</table>

**Children's Hospital of Pittsburgh of UPMC**
How to Promote Metacognition?

• “What else do you need to know or do?”

• “What if?” – provide alternative/refute

• 5 “Why’s”
Metacognition

- Self-Reflection
- Alternatives/Refute
- Self-monitoring
Back to Our Scenario...

• You are in your clinic and have a patient with a common complaint in your scope of practice

• When you ask the student/resident to go see the patient, they say, “this is probably nothing serious.”
Another Scenario...

• You are about to perform a common procedure in your specialty

• Your student/resident/fellow states, “I’ve done a lot of these before.”
One More Scenario...

- You are on the floor and have a patient with a straightforward diagnosis.

- When you ask the student/resident/fellow for a differential and plan, they provide a single diagnosis confidently without elaboration.
Self-Efficacy
Small Wins

- Most useful/important
- Provide feedback

Metacognition

- Self-Reflection
- Alternatives/Refute
- Self-monitoring
Summary

• Self-Efficacy linked to success and resilience

• Metacognitive strategies allow deeper insight and practice-based learning and improvement

• Commit to apply at least 1 strategy to:
  – Cultivate self-efficacy
  – Promote metacognitive processes
“Knowledge and skill [are] not enough... need will (self-efficacy) and ability to self-monitor (metacognition)”