Effective Teaching in Practice

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Disclosures

• No financial disclosures
Topics

- Principles of Adult Learning
- Teaching Rapidly
- Operative Teaching Strategies
- Documenting your Efforts
Principles of Learning

Learning is more likely to stick when it is...

- Problem-Centered
- Supportive Environment
- Experience Oriented
- Active, not Passive
Principles of Learning

Set expectations and negotiate goals

Orient the learners

Hello! I’m going to rise to your expectations

Their goals

Your goals

Experience Oriented

Supportive Environment
Principles of Learning

Practical Tips:

- Tell real stories
- Put the learner in your shoes
- Be QUIET
- Think out loud

Problem-Centered
Active, not Passive
Principles of Learning

Based on this segment, what are things that you will:

START DOING

STOP DOING

CONTINUE DOING

- Problem-Centered
- Supportive Environment
- Experience Oriented
- Active, not Passive
Teaching Rapidly...

...aka “Five Micro-Skills for Teaching”
Teaching Efficiently

- Identify the learner’s needs
- Teach rapidly
- Provide feedback

Can it be done in 5 minutes?
Five Micro-Skills of Teaching

1. Get a commitment
   - What do you think is going on with this patient?

2. Probe for evidence
   - What led you to that conclusion?

3. Teach general rule
   - All adrenal nodules >4cm in size are referred for surgery, although you must rule out a functional tumor first

4. Reinforce positives
   - It’s great that you considered pheochromocytoma

5. Correct errors
   - Biopsy of an adrenal mass is almost never indicated

   - What investigations do you want?

   - What else did you consider?

   - Getting an adrenal protocol CT was the best next step

   - The most sensitive test for pheo is plasma metanephrines
Operative Teaching Strategies
Operative Teaching Strategies

This case needs to be quick

How much can I trust the resident?

“Set a Timer”

Pre-Briefing

De-Briefing
Operative Entrustment Framework

- **Asking questions**
  - Open-ended
  - Extend knowledge

- **Operative plan**
  - Ask steps and integrate suggestions
  - Follow resident’s plan when ready

- **Instruction**
  - Decrease step-by-step instructions
  - Whole case → Struggling → None

- **Problem-solving**
  - Problem solve with the resident
  - Follow their lead

- **Leadership**
  - Allow resident to lead the case
  - Non-critical → Critical → All
Documenting Your Efforts
Documenting Your Effort

On your CV

- Teaching in Courses
- Formal Teaching
- Clinical Supervisory/Training Responsibilities

Overview of your activities

- Include description, location, time
- Omits educational impact

### Teaching of Students in Courses

<table>
<thead>
<tr>
<th>Year</th>
<th>Course/Activity</th>
<th>Institution</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>Gross anatomy</td>
<td>Vanderbilt University</td>
<td>8 hours per week for 8 weeks</td>
</tr>
<tr>
<td>2012-2014</td>
<td>1st year medical students</td>
<td>Johns Hopkins University</td>
<td>4 hours per clerkship quarter</td>
</tr>
<tr>
<td>2013-2014</td>
<td>Surgical instrument review 2.4th year medical students</td>
<td>Johns Hopkins University</td>
<td>8 hours each year</td>
</tr>
<tr>
<td>2013-2015</td>
<td>Transition to Residency course 4th year medical students</td>
<td>Johns Hopkins Hospital</td>
<td>2 hours each year</td>
</tr>
<tr>
<td>2018-</td>
<td>Physician Assistant Residency orientation Surgical and Critical Care PA residents</td>
<td>University of Alabama at Birmingham</td>
<td>2 hours each year</td>
</tr>
<tr>
<td>2018-</td>
<td>Students as Teachers 4th year medical students</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Formal Teaching of Residents, Clinical Fellows and Research Fellows (post-docs)

<table>
<thead>
<tr>
<th>Year</th>
<th>Activity</th>
<th>Institution</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011-2015</td>
<td>Intern Pearls for Orientation 1st year residents</td>
<td>Johns Hopkins University</td>
<td>1 hour annually</td>
</tr>
<tr>
<td>2012-2013</td>
<td>OSATS Exam 1st year residents</td>
<td>Johns Hopkins University</td>
<td>4 hours annually</td>
</tr>
<tr>
<td>2016-2017</td>
<td>Endocrine Surgery Topics</td>
<td>Brigham and Women’s Hospital</td>
<td>4 hours annually</td>
</tr>
<tr>
<td>2017-</td>
<td>Endocrine Surgery Topics</td>
<td>UAB Hospital</td>
<td>8 hours annually</td>
</tr>
<tr>
<td>2017-</td>
<td>Endocrine Surgery Conference</td>
<td>UAB Hospital</td>
<td>2 hours weekly</td>
</tr>
<tr>
<td>2018-</td>
<td>General Surgery Intern Conference</td>
<td>UAB Hospital</td>
<td>4 hours annually</td>
</tr>
</tbody>
</table>

### Clinical Supervisory and Training Responsibilities

<table>
<thead>
<tr>
<th>Year</th>
<th>Activities</th>
<th>Institution</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009-2016</td>
<td>Supervision of medical students and residents on surgical rotations at Johns Hopkins Hospital</td>
<td></td>
<td>Daily teaching efforts on rounds Weekly small group teaching conference</td>
</tr>
<tr>
<td>2016-2017</td>
<td>Supervision of medical students and residents on the endocrine surgery rotation at Brigham and Women’s Hospital</td>
<td></td>
<td>Daily teaching efforts on rounds Weekly small group teaching conference</td>
</tr>
<tr>
<td>2017-2018</td>
<td>Supervision of medical students and residents on the endocrine surgery rotation at UAB Hospital</td>
<td></td>
<td>Weekly teaching efforts in the operating room and on rounds</td>
</tr>
</tbody>
</table>
Teaching Portfolio

- Education Philosophy
  - 2-3 paragraphs
- Educator Effectiveness Evidence
  - Teaching Activities
    - Include learner comments
  - Educational Scholarship
  - Educational Leadership
  - Curriculum Development
  - Program Development

More descriptive, includes evidence of impact
Key Points

- Learning is more likely to stick when it is:
  - Problem-centered
  - In a supportive environment
  - Experience-oriented
  - Active, not passive

- 5 Micro-Skills for Teaching:
  - Commit ➔ Probe ➔ Teach General Rule ➔ Reinforce ➔ Correct

- Operative Teaching Strategies:
  - Aim for next-level entrustment
  - Pre-brief, de-brief, and set a timer
Thank You!

Questions?