**Goals and Objectives**
- Describe methods that preceptors can use to develop learners’ critical thinking and problem-solving skills.
- List the stages of learning.
- Define the four roles of the preceptor in developing the learner’s clinical skills.
- Summarize practice-based strategies to teach critical thinking and problem-solving skills.
- Describe one way that feedback can effectively develop clinical problem-solving skills.

**Importance of Critical Thinking and Problem-Solving Skills**

**Critical thinking and problem-solving skills**
- Important for student pharmacists and pharmacy residents

**WHY?**
- Pharmacists need these skills every day
  - Resolving drug therapy problems
  - Supervising employees and managing teams
  - Evaluating the medical literature
  - Communicating with patients and providers
  - Evaluating drug therapy choices
  - Prioritizing medication-related problems
  - Determining which medication is best for a patient given socioeconomic factors

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**Preceptor CE: Teaching Critical Thinking and Problem-Solving in Practice: Tips and Strategies**

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  - Supported entirely by subscriptions
But it's not easy...

- Critical thinking and problem-solving skills
  - Cannot be learned from textbooks alone or assessed through traditional exams
  - Require time and practice to achieve mastery
- Learners must:
  - Integrate knowledge from multiple sources
  - Communicate effectively
  - Prioritize problems and solutions
  - Evaluate and apply evidence
  - And much more...

Importance of Precepting

The Challenge

- Pharmacy practice is
  - Busy
  - Unpredictable
  - Filled with commitments that you must keep
  - Providing quality care to patients
  - Maintaining good relationships with other providers and staff
  - Ensuring financial sustainability
  - Building new services

The Solution: A Stepwise Approach

- Step 1: Where are your learners starting?
- Step 2: Where do your learners need to go?
- Step 3: How are they going to get there?

Different Stages of Learning

- Introductory Pharmacy Practice Experience
- Advanced Pharmacy Practice Experience
- PGY1 Resident
- PGY2 Resident
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Learning Needs Assessment

Step 2: Where do your learners need to go?

Choosing the Destination

• Where is your learner starting? (Point A)
• Where do they need to go? (Point B)

Choosing the Destination

Dreyfus Model of Skill Acquisition

Step 3: How are they going to get there?

Bridging the Gap

• Novice (student)
  – Do not have a conceptual scaffolding for applying pharmacy knowledge
  – Lack a consistent strategy
  – May focus only on generating “correct” answer

• Expert (preceptor)
  – Recognize problems
  – Sort relevant from irrelevant information
  – Use automatic process
  – Possess vast experience
Optimal Teaching Strategy
- Geared towards the learner’s needs
- Is designed to help them reach the appropriate endpoint
- Is efficient, effective, and practical for YOU

Teaching Strategies
1. Engage learners in your practice
2. Match teaching to learner stage
3. Use self-assessment and feedback
4. Employ precepting models: One-Minute Preceptor Method
5. Use questions effectively

Engage Learners in Your Practice
- Involve the learner in your daily activities
  - Practice explaining why and how you make decisions/take actions to help the learner understand your process
- Integrate learners into meaningful activities
  - Increases their value to your practice
  - Increases the value they place on their activity
- Have an organized plan for learner activities
  - Allow learners to take on progressively increasing levels of responsibility

Engage Learners in Your Practice
- Involve patients in the teaching process
  - Helps explain the WHY
  - Introduces the patient care problem as the FIRST step in the learning process
- Seize “teaching moments”
- Demonstrate that you are a lifelong learner
- Rely on others on your team

Match Teaching to Learner Stage
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**Match Teaching to Learner Stage**

<table>
<thead>
<tr>
<th>Stage of Learning</th>
<th>Preceptor’s Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Culumning Integration</td>
<td>Facilitating</td>
</tr>
<tr>
<td>Practical Application</td>
<td>Coaching</td>
</tr>
<tr>
<td>Foundation Skills and Knowledge</td>
<td>Modeling</td>
</tr>
<tr>
<td></td>
<td>Direct Instruction</td>
</tr>
</tbody>
</table>

**Match Teaching to Learner Stage**

- **Lecture**
  - Case-based discussion
  - Structured format
- **Direct Instruction**
  - Direct learner to specific content (assigned reading)
  - Teach how content relates to big picture
  - Introduce content in the context of patient care

**Match Teaching to Learner Stage**

- **Modeling and Coaching**
  - “Prime” the learner before talking to the patient
  - Brief explanation or assigned pre-visit preparation
  - Outline a plan for the patient encounter
  - Model skill(s) that you want the learner to achieve
  - Communicate with learners regarding actions/reasoning
  - De-brief afterwards

**Use Self-Assessment and Feedback**

- **Self-assessment**
  - What went well?
- **Feedback**
  - When you did/said ______ I was [pleased, relieved, impressed] because __________________
  - Self-assessment
    - On the flip side, what could be improved?
- **Feedback**
  - When you did/said ______ I was [concerned, upset, annoyed] because __________________

- **Label your discussion as feedback**
  - “To give you some feedback,...”
- **Prioritize your feedback**
- **Be objective and specific**
  - Describe the behavior that you observed
  - Avoid general statements like “Great job!”
  - Be honest (feedback vs. feeding)
  - Describe the potential outcomes of a behavior
Use Self-Assessment and Feedback

- Develop improvement plan
  - What could you do differently next time?
  - Here’s my suggestion....

- Apply plan to current or future problems
  - What will you do next time?
  - OK, show me how you will do this

Precepting Models: One-Minute Preceptor Method

Step 1: Get a commitment
- What do you think is going on with the patient?

Step 2: Probe for supporting evidence
- Why do you think that?

Step 3: Teach general rules
- Always do this when you see a similar case.

Step 4: Reinforce what was done right
- Here’s what you did right, and this is why it’s important.

Step 5: Correct mistakes
- You might be more successful next time this happens if you try...

Use questions effectively

- Ask learners to elaborate
- Can they relate the issue or content to their own knowledge and experience?
- Can they give examples to clarify or support what they have said?
- Can they make connections between related concepts?
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**Summary**

- Step 1: Where are your learners starting?
- Step 2: Where do your learners need to go?
- Step 3: How are they going to get there?

**Polls/Questions**