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Active Learning Toolkit: Strategies for Dynamic Didactics

What Is This?

This is a tip sheet that can be referenced in the planning, creation, and refining of your didactics to include more active learning, which is a teaching method that increases the engagement of learners and the lecturer.

Why Bother?

Active learning is a form of engaging with material that promotes **greater participation, deeper understanding,** and **improved retention**. Incorporating active learning is a proactive way of improving as an educator.

Active Learning Checklist: Step-By-Step Goals for Better Didactics

This tip sheet is designed to spotlight the overarching goals that should guide the development of your didactics. You can find examples of how these tips have been implemented in the **Appendix**. Choose what you'd like to focus on: Content, structure, or both. Work through the goals in whichever order makes the most sense for you.

Content Goals

1. **Start with ≥ 3 learning objectives** that are active, observable, and measurable from Bloom's Taxonomy

2. **Choose at least 2 active learning activities** that work to achieve your learning objectives

3. **Choose at least 1 case example** that connects to the objectives and to lived experiences/practice

4. **All done?** Go back to pare down content that do not align with objectives or could provide asynchronously

Structure Goals

1. **Divide your didactic into sections** providing an overlying structure to reduce cognitive load

2. **Create a flow** of knowledge, starting at an appropriate level that builds throughout

3. **Use the 5-5-5 rule** of ≤ 5 bullet points, trying for ≤ 5 words each, and taking ≤ 5 min per slide

4. Getting crickets? See **Section 3: Live Engagement Techniques**

Updated: 12/9/2025

Quick Tips for Active Learning

This section provides a brief overview of the active learning tips covered in this toolkit. Select the section link in the right-hand column to read more information.

Area	Tips	How to Do This	Section & Link
Scope of Content	Match topic depth & breadth to residents' learning needs	• What do residents need to know **now** to succeed in their current & upcoming training, exams, & clinical practice? • Given their current level of knowledge, what's the logical next step in their learning?	
Learning Objectives	Ensure learning objectives are clear & relevant	• What do you want learners to be able to know, do, and/or believe by the end? How will you know to what extent the learners have achieved the objectives by the end? • Focus on 3-4 objectives that are active, measurable, & observable	Section 1: Writing Effective Learning Objectives
Learning Activities	Create opportunities for residents to apply content critically	• Align your agenda with your learning objectives: Use activities to boost engagement & check for understanding • Pick at least **2 learning activities** that would be "evidence" that your learning objectives were reached.	Section 2: Active Learning Methods Section 3: Live Engagement Techniques
	Structure your session to maximize engagement	• Keep lectures brief (<15 min, <30%) and prioritize active learning (>70%). • Before presenting new content, ask residents what they already know • Use varied response formats to keep residents engaged	Section 5: Fast Flip to Case-Based Learning Appendix 1. Didactic Agenda Example
	Frame new content with practical context	• Include at least one case example & use it to help teach didactic content • Ask residents for real-world cases instead of only discussing fictitious ones • Share your personal experiences: Positive & negative	Section 4: Creating Case Examples Appendix 3. Case-Based Didactic Example
Materials	Use best practices for PowerPoint	• Aim for one idea per slide • Use bullets or short sentences, & try to keep each to one line – no paragraphs • Try the 5-5-5 rule: ≤ 5 words/bullet point, ≤ 5 bullet points/slide, & ≤ 5 minutes/slide	Section 6: Reducing Text to Enhance Learning Appendix 2. Breaking Up Walls of Text: PowerPoint Examples
	Offer reference sheets for future use	• Identify information that works best as a reference sheet or one-pager instead of on a PowerPoint slide. • Consider providing data-rich charts or tables to be used as references for active learning activities & as a resource later.	Appendix 4. Using Reference Guides & Tip Sheets Example

Detailed Strategies and Examples

Section 1: Writing Effective Learning Objectives

The following approach ensures your objectives are learner-centered, measurable, and aligned with meaningful practice. Well-written objectives also support transparency and inclusivity by making your expectations visible and achievable for everyone.

- **Start with the end in mind:** Effective learning objectives focus on what residents will be able to **do** by the end of a session (not what you'll cover during the lecture) and serve as the outline for your didactics' structure and assessments.
- **Use Bloom's Taxonomy:** Select action verbs align with the desired level of cognitive engagement.[1,2]
  - Lower-order thinking: e.g., ***identify*** or ***describe***
  - Higher-order thinking: e.g., ***analyze*** or ***design***
- **Make outcomes observable:** Pair each verb with a clear, observable outcome so you can select learning activities that allow you to actually see and measure those outcomes in practice.
  - Instead of: "*Cover the strategies for managing burnout.*"
  - Try: "***Apply*** *two evidence-based strategies to support colleagues experiencing burnout.*"

Example: Revising Learning Objectives

Equity, Diversity, & Inclusion Didactic: "Global Mental Health"

Before:	After:
1. Understand Global Mental Health and its impact 2. Understand current aims of Global Mental Health 3. Apply the tools of Global Mental Health to your clinical practice	*At the end of this session, learners will be able to:* 1. **Discuss** ways in which global mental health initiatives and research may impact local practice 2. **Apply** global mental health tools to case examples 3. **Explain** the WHO Mental Health Gap Action Programme (mhGAP) to nonspecialist providers in a clinical setting

Bloom's Taxonomy: Measurable Verbs

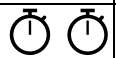
Bloom's Taxonomy offers a helpful way to think about different kinds of learning goals, whether they focus on knowledge, skills, or attitudes/affect. **The verbs you choose matter**: they signal what learners are expected to do and help you design activities that make those outcomes observable.

The table below provides examples of stronger, action-oriented verbs you can use when writing learning objectives. Notice that verbs like Remember, Understand, and Learn are not observable behaviors, so they should be avoided. Instead, choose verbs that make it clear how learners will demonstrate their progress.

Knowledge-Related Learning Objectives			Skill-Related Learning Objectives	Attitude/Affect-Related Learning Objectives
✕ **Instead of:**	✓ **Try:**			
Remember*	Define Identify Name Outline	Recall Recognize Show	Follow Organize Reproduce Practice Respond Start Conduct Use Demonstrate Refine Adapt Formulate Modify Design Manage	Listen Clarify Contribute Interpret Question Study Accept Adapt Value Compare Contrast Relate Embody Internalize Validate
Understand*	Classify Compare Demonstrate Describe	Explain Identify Summarize		
Learn*	Conclude Construct Differentiate Formulate Generate Illustrate	Produce Question Recommend Simplify Solve		
*Verbs like ***Remember***, ***Understand***, and ***Learn*** are not observable behaviors and should not be used for learning objectives[3]				

Section 2: Active Learning Methods

Active learning shifts the cognitive work to the learners. Integrating opportunities to analyze, apply, and reflect creates space for deeper understanding, critical thinking, and skill building. These methods also create moments for **formative assessment**, giving insight into learners' understanding, misconceptions, and readiness to move forward.

Activity or Technique	Example	Prep	Benefit
Brainstorm: Ask residents to list concepts or ideas & share **before** showing & reading off from PPT slide.	• Use a whiteboard, paper, or Poll Everywhere to capture ideas. • "*What are some off-label uses of this medication that you've heard of or prescribed for?*"		• Identifies what learners already know and where they need support, helping prioritize key content.
Think-Pair-Share 1. Ask residents to individually think about question prompts (e.g., case questions) & write down answers 2. In groups of 2-4, share thoughts & discuss 3. Discuss questions as a large group	• "*What medication would you try next for this patient and why?*" • *"What are some other diagnostic considerations? What information would you need to rule in or out these diagnoses?"*		• Fosters real-time application, inclusive participation (**especially for quieter learners**), and immediate insight into learner understanding.
Pre/Post Quiz In first & last 5 minutes, residents answer 2-3 questions about content	• Use paper, Canvas, or Poll Everywhere		• Activates prior knowledge, reveals learning gaps, and offers feedback on both learner progress and teaching effectiveness.
Guided Questions Show video examples & ask guided questions at beginning	• "*As you watch this short video clip, think about this patient's thought process and see if you notice any abnormal movements*."		• Provides learner with a task or goal for more engagement
Role Play Divide into groups of 2-4 to practice a new skill or technique.	• "*In groups of 3, read the case then write a safety assessment for this patient as you would document it in a note*." • "*In pairs, take turns interviewing each other asking only open-ended questions. How many can you ask in a row before swapping?*"		• Provides a safe, hands-on space to apply knowledge, practice skills, and receive timely feedback before real-world use.
Quick Chalk Talk Pick a circumscribed topic & write on the board while the learners participate. *Digital options: Zoom Whiteboard, Excalidraw	• Draw a table with rows for "bio", "psycho", & "social" aspects of formulation, & 4 columns representing the 4 Ps. Have learners fill out table based on a case example.		• Shifts learning from passive to active while helping you assess understanding and address confusion in real time.
Problem-Based Cases Use a case to illustrate a problem & learners break into groups to solve it.	• Ex: Patient with treatment-resistant depression who tries multiple medications. Case asks questions along the way.		• Allows you to assess if they understand the content & follow up where there's confusion

Section 3: Live Engagement Techniques

Framing your didactic to support in-person engagement is a best practice, regardless of how actively learners are participating. Techniques like offering varied response formats and intentionally inviting verbal input help ensure that all residents, whether vocal or quiet, have meaningful ways to contribute. These strategies become especially valuable when engagement feels low, offering a structured way to re-center learners and spark interaction.

Technique	Example	Benefit
Add response variety: • Ask all participants to write down their answer before asking a volunteer to share out.	*"Everyone write down what you would say to this patient before we discuss as a group."*	• Gives all learner styles opportunity to construct an answer; prevents discussions from being dominated by 1-2 learners • Lets learners respond in a low-effort and low-stakes way, and allows you to quickly assess everyone's understanding
• Ask learners to show # of fingers to correspond with multiple choice options on a slide	"*What do you think would be the best response to this patient? 1, 2, 3, or 4? Hold up the number of fingers for the matching answer*."	
• Use anonymous polling software (e.g., Poll Everywhere)		
• Create a handout for learners to fill in during the didactic		
Optimize verbal participation • Pause for 5 seconds when asking for verbal responses **and say that you are pausing.**	*"What does this bring to mind for you? Let's pause for a few moments to let everyone think of their answers before we start sharing."*	• An increase of wait time is correlated to an increase of response length[4]
• Encourage volunteers to share their thoughts first. If you decide to call on learners directly, give the group a heads up.	*"I'm going to call on a few people who haven't spoken yet, just to get us thinking."*	

Section 4: Creating Case Examples

- Look at your learning objectives: What kinds of cases could help demonstrate these areas? What could you vary to make different points? **Example**: Diagnosis & Psychopathology: Choose a more straightforward case for an Intro lecture & think of a way to alter the case to change the differential. For advanced, choose a more complicated case with comorbidities that they may see in real life.
- Consider creating one in-depth case to guide the whole lecture vs. creating short cases to make certain points. **Section 5: Fast Flip to Case-Based Learning** describes how you can do this.
- Consider: What patients come to mind when you think about this differential diagnosis? Or patients/cases that taught you? Then create an anonymized amalgam
- An example of how another lecturer incorporated case examples into their didactic is provided in **Appendix 3. Case-Based Didactic Example**.

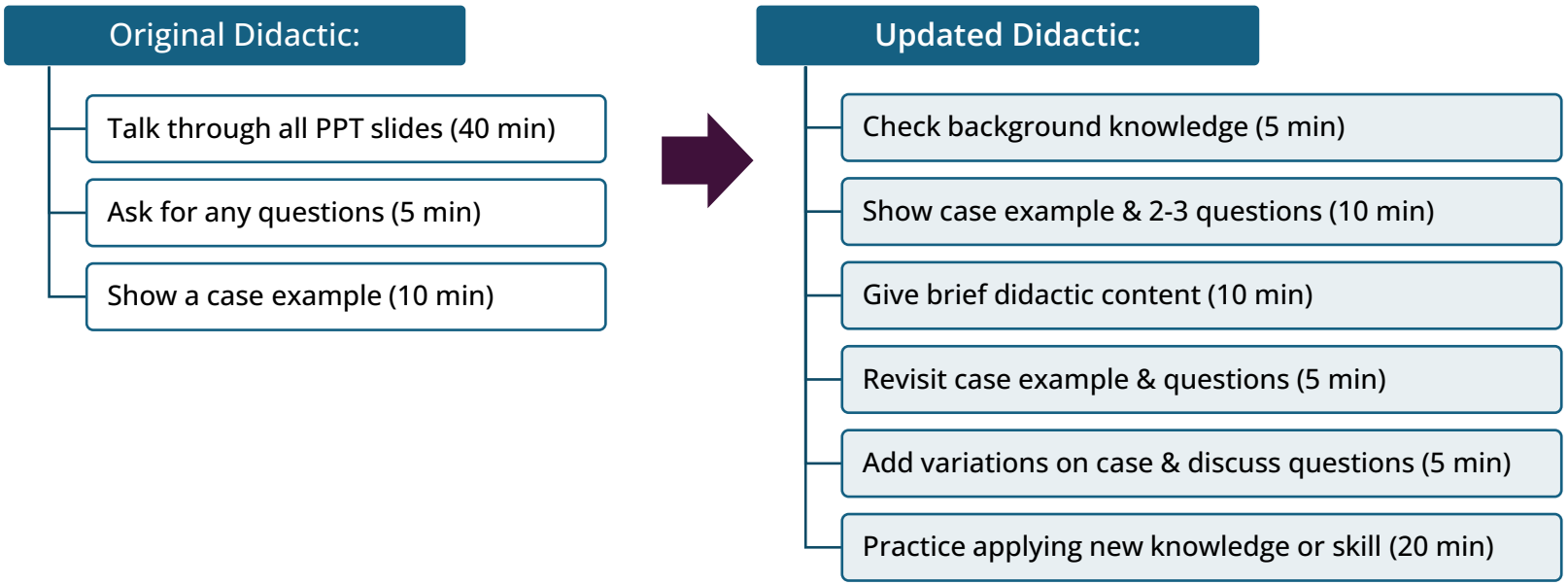
✗ Don't:		✓ Do:
✗ Create case examples that only represent dominant culture features	→	✓ Think about different identities and SDOH (e.g., ethnicity, education, access to care, religion language, gender, SES): How might these affect the case?
✗ Use 1-2 "textbook" cases with no comorbidities or over-simplified cases with obvious diagnoses	→	✓ Use nuanced, real-world case examples with complexity tailored to level of training Ex: Advanced topics have cases that demonstrate how to use subtle information to shift diagnostic thinking ✓ Think about some common factors or situations that residents may see with these cases ✓ Add a twist to a case example Ex: "What if this patient had a history of mania?" or "What if the patient has already failed this medication trial?"

Section 5: Fast Flip to Case-Based Learning

Integrating problem-based learning (PBL) with a case-based learning approach means using the case as the thread that runs through the session. Introduce the case at the start, revisit and expand it as you add didactic content, and vary details to deepen analysis.

Don't:		Do:
Use a case example just at the beginning or at the end	→	Introduce a case at the beginning to frame the entire didactic, revisit it, expand on or vary the case with more details or changing some key details, and tie active learning strategies to it

The example below contrasts an original lecture format with a case-driven structure: Both use the same total time, but the revised approach is far more engaging, creating multiple opportunities for application, critical thinking, and collaborative problem-solving. Examples of lecture agendas and integration of PBL & cases can be found in this toolkit's **Appendix**.



Section 6: Reducing Text to Enhance Learning

Slides should serve as visual anchors rather than full manuscripts, guiding learners toward the central ideas without overwhelming them with detail. By reducing text density, educators enhance clarity and create space for active engagement with the material. Breaking up large blocks of text is a practical strategy that minimizes cognitive overload and helps learners maintain focus on the concepts that matter most.

Below are some best-practice strategies for making your slides clear, engaging, visually balanced, and focused on the concepts that matter most. A slide transformation example (before and after) can be found in the appendix: **Appendix 2. Breaking Up Walls of Text: PowerPoint Examples**.

Strategies for Creating Learner-Centered Slides

Content

- ✓ **Keep It Short:** Limit text to key phrases or bullet points rather than full sentences.
- ✓ **Signal Importance:** Use consistent visual hierarchy (headings, subheadings, and spacing) to signal importance.
- ✓ **Keep it Singular:** Avoid clutter by limiting each slide to one main idea or concept.

Delivery

- ✓ **Show & Tell:** Pair text with visuals or diagrams to reinforce understanding and appeal to multiple learning styles.
- ✓ **Teach Beyond Text:** Align slide content with your spoken explanation by keeping slides focused on the essentials and reserving elaboration for verbal delivery.

Design & Access

- ✓ **Ensure Accessibility:** Apply accessible formatting (legible fonts, sufficient contrast, alt text for images) to ensure inclusivity.
- ✓ **Use Negative Space:** Maintain adequate negative (white) space so slides feel open and readable

Appendix

Appendix 1. Didactic Agenda Example

The example agenda below shows how breaking a didactic into shorter segments helps sustain attention and maximize learner engagement. By limiting lecture time and weaving in active strategies, learners are given the opportunity to think, apply, and interact throughout the didactic.

Psychopharmacology Didactic: "Prescribing During Pregnancy"

8:00 – 8:15am	Present a case example on the white board. Have the audience ask questions to flesh out the case and develop a preliminary treatment plan.
8:15 – 8:30am	Brief didactic on the principles of prescribing during pregnancy.
8:30 – 8:45am	Hand out and briefly review a table of medications and their risks during pregnancy. Show residents how to access Reprotox and LactMed. Answer questions.
8:45 – 9:00am	Small Group Activity. Divide into groups of 3 and use the resources given to update a more detailed treatment plan for the original case.
9:00 – 9:15am	Large group share-out and questions Reminder: Please end on time to allow residents a break between didactic sessions

Appendix 2. Breaking Up Walls of Text: PowerPoint Examples

Example A (Before)

This slide (Figure 1) illustrates a common challenge: presenting too much information in a single block of text. When slides are text-heavy, learners must work harder to extract the main ideas, which increases cognitive load and reduces engagement.

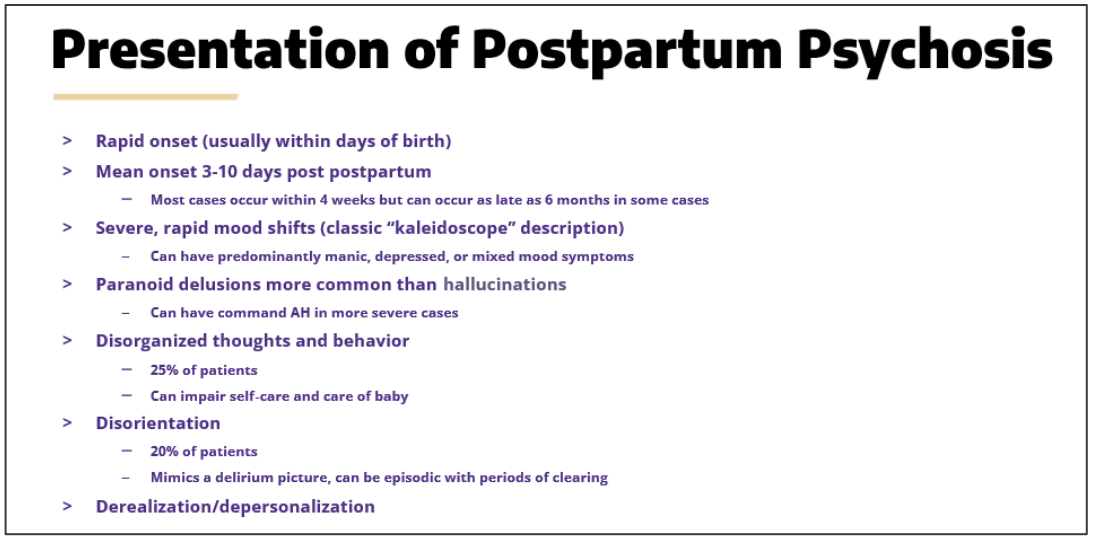


Figure 1: Example A (Before)

Example B (After)

In contrast, this revised version (Figure 2) distills the content into concise, high-level points. The streamlined text makes the slide easier to scan, supports retention of key concepts, and allows learners to focus on discussion rather than transcription.

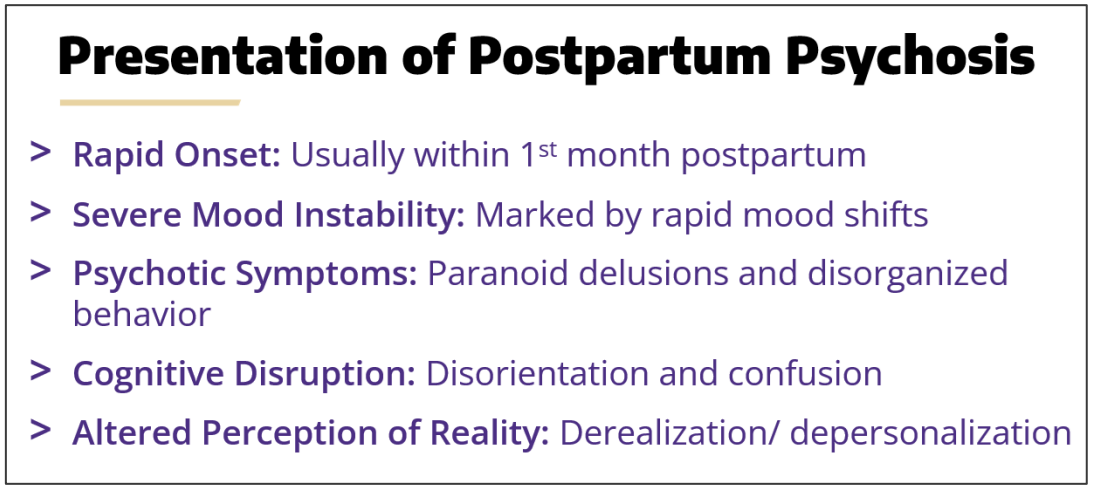


Figure 2: Example B (After)

Appendix 3. Case-Based Didactic Example

The examples below show a before-and-after shift in a diagnosis and psychopathology didactic, highlighting how case-anchored, problem-based teaching better supports engagement and clinical reasoning. Note that in the revised Case-Based Format example (Example B), the longest uninterrupted activity is a Think-Pair-Share. In this revised format, the priority of didactic time shifts toward active learning and application, ensuring that learners spend more time engaging with cases and practicing clinical reasoning rather than passively absorbing information.

Diagnosis & Psychopathology Didactic: "Anxiety Disorders"

Example A: Traditional Format

Activity	Time
1. Introduction	**5 min.**
2. Lecture (PowerPoint): Lecturer reads through slides that describe the elements of anxiety disorders. • Definitions, epidemiology, diagnostic criteria and clinical features, differential diagnosis, & assessment tools	**55 min.**
3. Questions	**10 min.**
4. Clinical pearls & wrap-up	**5 min.**

Example B: Case-Based Format

Activity	Time
1. **Introduction & background knowledge check** • 2-3 multiple choice questions – *Disorders often misdiagnosed as major depression?* – *Symptoms of panic disorder rather than GAD?* – *Interview questions best helps clarify PTSD versus other anxiety disorders?*	**10 min.**
2. **Case example part 1** • Brief vignette & 2-3 questions about epidemiology – *Which anxiety disorder has the highest prevalence in young adults, and how might that inform your initial impression?* – *What is the likelihood that systemic inequities (e.g., access to care, cultural stigma) contribute to delayed diagnosis in patients like this?*	**5 min.**
3. **Brief didactic:** Epidemiology	**5 min.**
4. **Case example part 2** • Revisit case & questions • 1-2 new questions about diagnostic criteria – *How do you determine whether the anxiety is excessive or out of proportion to the situation?* – *Which criteria do you want to clarify first?*	**5 min.**

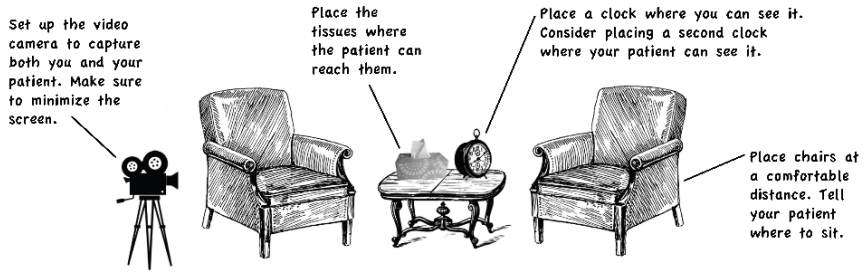
Activity	Time
5. **Brief didactic:** Diagnostic criteria and clinical features	**5 min.**
6. **Case example part 3** • Revisit case & questions • 1-2 new questions about differential diagnosis – *What other psychiatric and/or medical conditions could present with similar symptoms, and how would you distinguish them?* – *How do systemic factors (e.g., access to care, cultural context) influence the differential diagnosis process?*	**5 min.**
7. **Brief didactic:** Differential diagnosis	**5 min.**
8. **Case example part 4** • Revisit case & questions • 1-2 new questions about assessment tools – *What are some interview and screening questions you should include in your assessment?* – *What screener(s) would you consider administering?*	**5 min.**
9. **Brief didactic:** Screening & assessment	**5 min.**
10. **Case example wrap up** • Revisit case & questions	**5 min.**
11. **Activity: Think-Pair-Share** • Read & discuss new case examples	**15 min.**
12. **Wrap up**	**5 min.**

Appendix 4. Using Reference Guides & Tip Sheets Example

Psychotherapy Didactic: "Starting Supportive Therapy: Setting the Frame"

STARTING THERAPY

OFFICE ARRANGEMENT



SETTING THE FRAME

Establish:

1. **Who you are (resident physician)**
2. **Where, when, and how often you will meet**
3. **Contact information**
4. **That sessions are video taped**
5. **Confidentiality and its limits**

Sample pager voicemail:

"You have reached the voicemail of Dr. [last name], in the department of psychiatry. If you are another provider, please leave a numerical page. If you are a patient, please leave a voice message and I will get back to you within 2 business days. If you are calling with an emergency please call 911 or go to the nearest emergency department."

TIPS FOR STARTING

Initial consult session(s)

- Let the patient know you've reviewed their chart and they don't need to repeat everything
- Try to figure out "why now"
- Inquire about past experience with therapy, including what worked and didn't work
- Ask the patient what they hope will be different if therapy is successful
- Set goals or areas of focus
- Assess safety
- Elicit feedback

The first few sessions are data-gathering. You already know how to do this.

"Let's meet for a few sessions to get to know each other, and then we can decide how to proceed"

"How has it been for you meeting with me today?

Ongoing therapy

- After initial data-gathering, orient the patient to the ongoing therapeutic process

"So far I've been asking you a lot of questions. From now on, I'm going to let you decide what you'd like to talk about in therapy. I'll be a bit more quiet, and you can assume that if I'm quiet, you're doing fine. I'll jump in when I have something to add."

Remember to take your time – outpatient work benefits from a slower pace

Resources & Additional Reading

Active Learning

- University of Waterloo Centre for Teaching Excellence. *Bloom's Taxonomy Learning Activities and Assessments.* University of Waterloo. Accessed October 23, 2025. https://uwaterloo.ca/centre-for-teaching-excellence/resources/teaching-tips/blooms-taxonomy-learning-activities-and-assessments
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Authorship & Acknowledgements

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Acknowledgement: Serena Heung, MD

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