
Generative AI as Teaching Partner : Lessons from Teaching Psychiatry At Aston Medical School

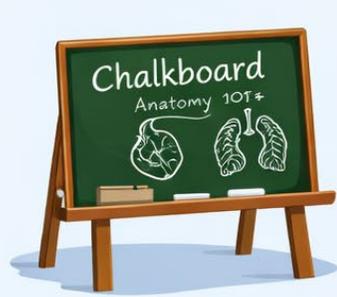
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The Evolution of Technology in Medical Education



Chalkboard & Lectures



Overhead Projectors



PowerPoint Slides



Generative AI

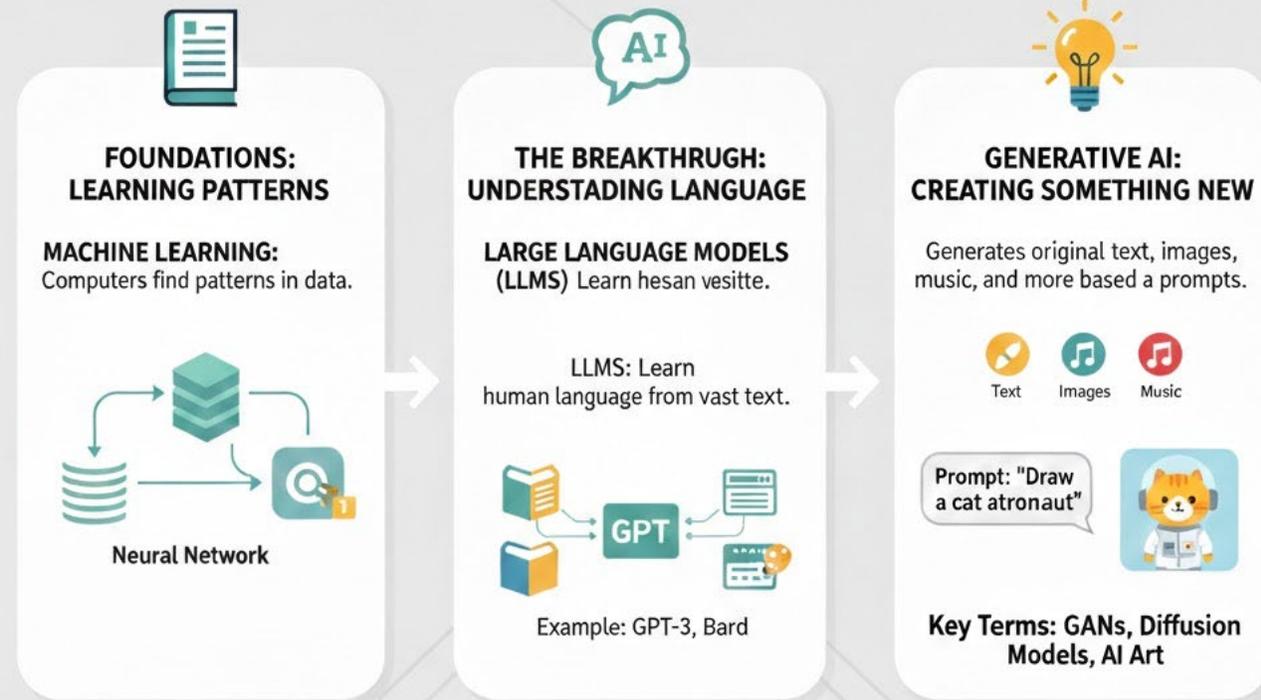
PAST

PRESENT

FUTURE

WHAT IS GENERATIVE AI?

The Evolution of Intelligent Creation



FROM DATA TO CREATION: AI THAT IMAGINES

THE "BLACK" OF AI: EXPLAINED

Understanding Opacity in Artificial Intelligence



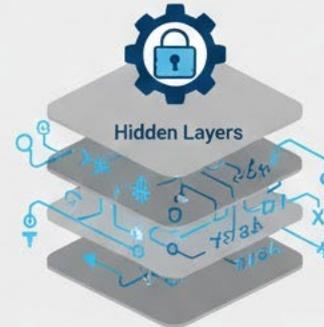
1. INPUT

Raw data (images, current) is fed AI model.



Raw data (images, text, numbers) is fed AI model.

2. THE BLACK BOX: UNKNOWNABLE COMPLEXITY



Massive neural networks make billions calculations. No human can easily trace the specific path from input to output. Logic is non-linear & opaque.

Key Challenges:

- Lack Transparency
- Potential for Bias
- Difficulty in Debugging



3. OUTPUT

The AI generates the prediction, decision, or creative content.



Bridging the Gap: EXPLAINABLE AI (XAI)

- Visual Explanations
- Step of-Step Logic
- Feature Importance

FROM DATA TO DECISION: THE MYSTEROUS JOURNEY OF AI

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My Activities

My Activities [? View Walkthrough](#)

Open Activities

De-Escalation
Year 2

0% Not started
 Due in 20 days [Get Started](#)

Past Activities

No past activities.

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My Activities > De-Escalation

< Back to my activities

ACTIVITY

De-Escalation

DUE DATE: Feb 28, 12:00am COHORT: Year 2

Practise de-escalating an upset family member.

1	📄	Pre-Brief	View Attempts	↻ Retry Task
2	💬	Talk with Thomas' Family Member (Attempt #1)	View Attempts	↻ Retry Task
3	👁	Initial Reflection		▶ Start Task
4	💬	Talk with Thomas' Family Member (Attempt #2)		▶ Start Task
5	👁	Final Reflection		▶ Start Task

☰ My Activities > De-Escalation

[← Back to my activities](#)

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De-Escalation

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- 5 👁 Final Reflection [▶ Start Task](#)

Set up for psychological safety

A conversation task is the next part of your assignment. The purpose of the conversation you are about to have is to practise navigating a conversation requiring de-escalation.

During the conversation, you will be speaking with a simulated family member. Please treat this experience like you would with any real client or clinical encounter. After the conversation, you will receive feedback specific to your performance. This activity is designed for you to practise in a safe environment without any consequences. The feedback you receive is intended to help you improve and you will have the opportunity to repeat the conversation.

After reviewing your feedback, you will have the opportunity to reflect on the experience and share your thoughts. Some of the scenarios may be confronting, but please engage with each experience, making sure you take time to reflect on your emotions before, during, and after each interaction.

Before engaging with your patient, spend some time thinking about how you feel going into this conversation.



Background Information

You are a pharmacist working in a community pharmacy and managing a high workload. One of your patients, Thomas Lewis, has a history of dementia.

Thomas came in earlier today and believed that his blood pressure medication was supposed to have arrived already. You explained that his medication isn't due to be filled until early next week and that you will have it in stock for him by Monday. He was confused and became angry during your conversation with him. He walked out abruptly during your initial conversation.

Now Thomas has returned but is outside sitting in the passenger seat of a car, his son has come in to speak with you. He looks angry.

Your task is to navigate the conversation with Thomas' son, Andrew Lewis, and try to de-escalate the situation.

< Back to activity

> Start Task

TASK

Talk with Thomas' Family Member (Attempt #1)

DUE DATE

Feb 28, 12:00am

TASK TYPE

Conversation Task 



Andrew Lewis

Background Information

You are a pharmacist working in a community pharmacy and managing a high workload. One of your patients, Thomas Lewis, has a history of dementia.

Thomas came in earlier today and believed that his blood pressure medication was supposed to have arrived already. You explained that his medication isn't due to be filled until early next week and that you will have it in stock for him by Monday. He was confused and became angry during your conversation with him. He walked out abruptly during your initial conversation.

Now Thomas has returned but is outside sitting in the passenger seat of a car, his son has come in to speak with you. He looks angry.

Your task is to navigate the conversation with Thomas' son, Andrew Lewis, and try to de-escalate the situation.

Remember to practise de-escalation techniques such as avoiding use of escalating language, acknowledging the person's feelings, providing explanations, and brainstorming solutions.



time here, and you also have an image of the patient or the relative

De-Escalation > Talk with Thomas' Family Member (Attempt #1) > Attempt #1

< Back to transcript Print Return to activity >

De-escalation- Empathetic Communication Didn't Pass

3 sections needed to pass
2 sections passed

Sections (3)

Delivered a high quality Introduction ✔

1 item needed to pass

- ✔ **Introduced themselves**
The pharmacist introduced herself as Olivia, the pharmacist on duty.
- ✔ **Discovered key concern**
The pharmacist discovered that Andrew's key concern was his father's urgent need for blood pressure medication due to his dementia.



Demonstrated empathy ✔

3 items needed to pass

- ✘ **Actively asked questions to gain the patient's thoughts/issues**
The pharmacist did not ask any questions to gain Andrew's thoughts or concerns. Instead, the pharmacist was focused on explaining the situation and reassuring Andrew that they were working as fast as possible to prepare his father's medication.
- ✔ **Acknowledged that the person had been heard**
The pharmacist acknowledged Andrew's concerns and frustration by apologizing for the wait and reassuring him that they are working as fast as possible to prepare the medication.
- ✔ **Used reflective comments**
The pharmacist acknowledged Andrew's frustration and apologized for the delay, stating that they are working as fast as they can to prepare the medication.
- ✔ **Provided explanations**
The pharmacist explained the situation and apologized for the delay, reassuring Andrew that they are working as fast as they can to prepare his father's medication.
- ✘ **Allowed space for the person to vent**
The pharmacist did not give Andrew the opportunity for further venting. Instead, she focused on reassuring him that they were working as fast as possible to prepare his father's medication and apologized for the delay. She did not ask if there was anything else he needed or wanted to express more of his concerns or

on your conversation, which is a fantastic tool for learning because

Question

What do you think went well with the conversation? Why do you think those things went well?

Response *

Question

What do you think didn't go well with the conversation? Why do you think those things didn't go well?

Response *

Question

What would you like to do differently when you engage in the conversation again?

Response *

Question

Please write out a brief plan on how you will improve your skills before revisiting the conversation.

Response *

☰ My Activities > De-Escalation

[← Back to my activities](#)

ACTIVITY
De-Escalation

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 **Aston University: Medicine**

 My Activities

 My Cohorts

AUTHOR

 Characters

 Rubrics

 Sections

 Activities

ADMINISTER

 Settings

 Cohorts

Assessed capacity

1 item needed to pass

0 mandatory items needed to pass

Identified cognitive impairment or disturbance

Achieved by asking questions to assess the patient's orientation such as if they know the date, year, or where they are or identifying that the patient is experiencing confusion or hallucinations. Did the clinician identify that the patient is impaired?

Assessed understanding of information relevant to the decision

Achieved by asking the patient questions about their understanding of their current health or the risks to them if they do not receive treatment. Did the clinician assess the patient's understanding of their current health status or risks of not receiving treatment?

Assessed retention of information

Achieved by asking the patient to repeat back what has been discussed or explain their understanding of options. Did the clinician ask questions in order to determine the patient's retention of information?

Assessed ability to weigh consequences

Achieved by the clinician asking the patient about their understanding of the risks or benefits of not receiving or receiving treatment. Did the clinician ask the patient's understanding of the risks or benefits?

Assessed ability to communicate decision by any means

Achieved by the clinician asking the patient about their decision on receiving treatment. Did the clinician ask about the patient's decision?

Decided best interests

4 items needed to pass

0 mandatory items needed to pass

Encouraged participation

Achieved by explaining treatment options and asking the patient questions to involve them in the decision making. Did the clinician encourage the patient's participation in decision making?

Considered the person's views and wishes

Achieved by stating understanding of the patient's concerns or views or asking about any cultural or religious factors that may impact their care. Did the clinician consider the patient's views or wishes?

Identified whether ADRT exists

Achieved by asking the patient if they have an Advanced Decision or ADRT established. Did the clinician ask about an ADRT or Advanced Decision?

Identified if anyone who can be consulted

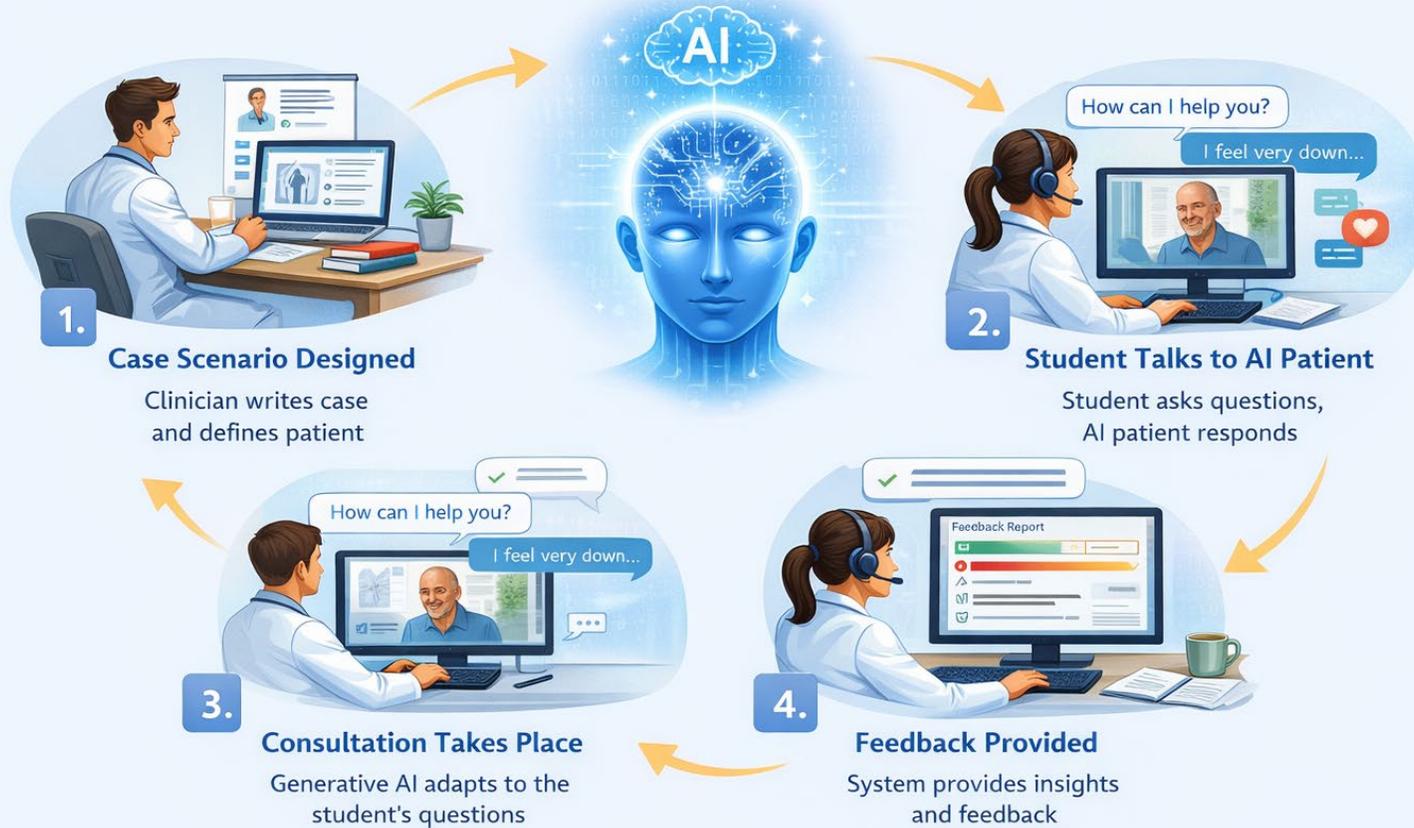
Achieved by asking the patient if there are any friends or family or others who can help them in their decision making. Did the clinician ask about others who can help with decision making?

Reviewed risks and benefits

Achieved by explaining risks and benefits of treatment. Did the clinician explain the risks and benefits?

Learners will be graded according to this rubric.

How Generative AI Works



Next, we'll hear...

Student Feedback

on the Generative AI experience



Dr. Anis Ahmed
Psychiatrist Educator



Let's hear from the users.

Student User Perspective

Shahnoor Adil

- Personal experience using AI based simulation
- Informal, anonymised peer discussions
- Third and fourth year clinical students



How students experience AI

- Students not opposed to AI simulation
- Engagement depends on implementation
- Most useful when reinforcing learning



Timing Matters

- Alignment with placements is key
- Less effective as first exposure
- More useful after teaching



Learning without context

- Simulations set before clinical exposure
- Variable rotation schedules
- Limited foundational knowledge



Assessment trust

- Checklist based pass criteria
- Limited transparency for students
- Impact on trust and confidence



Feedback and marking

- Detailed AI generated feedback
- Emphasis on expected phrases
- Reflection became less meaningful

8 pages of feedback/marking criteria

and the clinician confirmed this was regular.

- ✔ **Asked about age at first menstrual cycle**
The clinician explicitly asked about age of menarche with "what age did you start your periods?" and received a clear response indicating onset at age 11.
- ✔ **Asked about previous treatment for STIs**
The clinician explicitly asked about previous STI treatments with the question "have you ever had any STI treatments?" which elicited a clear negative response.

Obtained an obstetric history

- ✔ **Asked about conditions during previous pregnancies**
The clinician explicitly asked about conditions during previous pregnancies with "have you had any conditions during your previous pregnancies?" which fulfilled the requirement to screen for pregnancy-specific complications.

Conducted a medical history

3 items needed to pass

- ✔ **Asked about diagnosed medical conditions**
The clinician explicitly asked "Do you have any other medical conditions that have been diagnosed?" which directly addresses diagnosed medical conditions. The patient disclosed she has a history of asthma and the clinician appropriately followed up regarding medication management.

- ✔ **Asked about previous surgeries**
The clinician explicitly asked "Have you had any surgeries in the past?" which fulfilled the requirement. The patient provided a clear negative response indicating no previous surgeries.

- ✔ **Asked about prescription medications**
The clinician explicitly asked about medications with "are you on any medications at all for anything else?" which directly addresses prescription medications. The patient provided a clear negative response indicating no current medication use.

- ✔ **Asked about drug allergies**
The clinician asked about allergies broadly, and the patient's response indicated no drug allergies. Since the clinical purpose was to check for allergies, the general allergy question, even though the exact phrasing wasn't used, fulfilled the requirement.

- ✔ **Asked about over the counter medications or supplements**
The clinician explicitly asked about over-the-counter medications and supplements with "do you take any over-the-counter medications or supplements?" which elicited relevant information about the patient's use of supplements.

- ✔ **Asked about prenatal vitamin use**
The clinician explicitly asked about prenatal vitamin use with "Do you take any prenatal vitamins?" which directly addresses the rubric requirement. While the patient indicated she does not take them, the clinician fulfilled their duty by asking about prenatal vitamin use.

Conducted a social history and assessed support

4 items needed to pass

- ✔ **Asked about living situation**
The clinician explicitly asked about living situation with "are you living with your partner?" and received a clear response indicating she lives with her husband.

- ✔ **Asked about relationship status**
The clinician effectively established the patient's living situation with "are you living with your partner?" which elicited the information needed to assess her relationship status.

- ✔ **Asked about primary support person**
The clinician directly asked about support person with "do you have anyone you rely on for support?" which elicited the information needed to assess her support system.

- ✔ **Asked about occupation**
The clinician explicitly asked about occupation with "what do you do for a living?" which fulfilled the requirement to assess her occupation.

- ✔ **Asked if the patient feels safe at home**
The clinician explicitly asked about feeling safe at home with "do you feel safe at home?" which fulfilled the requirement to assess her sense of safety.

- ✔ **Asked about any financial or practical concerns**
The clinician addressed both financial and practical concerns with "do you have any financial or practical concerns?" which elicited information about her living situation.

- ✔ **Asked about concerns for domestic violence**
The clinician explicitly asked about domestic violence with "do you experience any domestic violence?" which fulfilled the requirement to assess her safety.

Assessed mental health and well-being

2 items needed to pass

- ✘ **Asked how they feel about their weight**
The clinician did not explicitly ask about weight concerns, but the patient volunteered information about her weight gain during pregnancy, which provided the opportunity to explore her concerns.

- ✔ **Asked about experiencing any symptoms**
The clinician explicitly asked about symptoms with "do you have any symptoms?" which fulfilled the requirement to assess her well-being.

Assessed sexual health and reproductive intentions

5 items needed to pass

- ✔ **Asked about Hepatitis B and C screening**
The clinician explicitly asked about Hepatitis B and C ("Hep B or Hep C") as part of a broader sexual health screening question. While the patient indicated uncertainty about their status, the clinician fulfilled the requirement by including Hepatitis B and C screening in their assessment.

- ✔ **Asked about vaccination status**
The clinician explicitly asked about vaccination status with "Have you had any up-to-date vaccinations?" and received confirmation from the patient. This directly fulfills the requirement to assess vaccination status.

- ✔ **Asked about chemical or radiation exposure at work or home**
The clinician directly addressed chemical/radiation exposure by including it in their question about workplace exposures. While they could have been more specific about types of chemicals, they did address the core requirement by screening for occupational exposure risks.

- ✔ **Asked about cleaning products or pesticide use**
The clinician explicitly asked about both cleaning products and pesticides with the question "Do you use any cleaning products or pesticides?" which directly addresses the rubric requirement. While the patient's response focused only on pesticides, the clinician fulfilled their duty by including both types of substances in the question.

- ✔ **Asked about pets in the home**
The clinician explicitly asked about pets in the home with "do you have any pets at home?" which fulfilled the requirement to assess her living environment.

Assessed lifestyle and healthy behaviors

5 items needed to pass

- ✔ **Asked about diet**
The clinician clearly fulfilled this requirement by asking "What do you eat?" which elicited information about her diet. The patient's response included additional diet-related questions about cravings and special dietary needs, providing the opportunity to explore her eating habits and potential challenges.

- ✔ **Asked about food allergies**
The clinician explicitly asked about food allergies as part of a broader question about diet. The patient provided a clear negative response indicating no food allergies.

- ✔ **Asked about cravings or aversions**
The clinician explicitly asked about cravings and aversions with "do you have any food cravings or aversions?" which fulfilled the requirement to assess her eating habits.

Conducted a family history

1 item needed to pass

- ✔ **Asked about medical conditions in the family**
The clinician explicitly asked about genetic disorders running in the family, which directly addresses family medical history. The patient provided a clear negative response indicating no known family history of genetic conditions.

- ✔ **Asked about drinking alcohol**
The clinician explicitly asked about alcohol consumption as part of a substance use screening question, and the patient disclosed relevant information about consuming alcohol before pregnancy recognition.
- ✔ **Asked about smoking**
The clinician explicitly asked about smoking history in combination with other substance use questions, and received clear information that the patient quit smoking years ago. This fulfilled the clinical requirement to assess smoking status during pregnancy.
- ✔ **Asked about recreational drug use**
The clinician explicitly asked about recreational drug use in their comprehensive substance use screening question, which included alcohol, smoking, and recreational drugs. The patient's response addressed her smoking history but did not specifically address recreational drug use, though the clinician fulfilled their obligation by asking about it.

Assessed cultural and religious considerations

1 item needed to pass

- ✔ **Asked about cultural considerations that may affect pregnancy care**
The clinician explicitly asked about cultural considerations affecting pregnancy care, which fulfilled the requirement. The patient's response revealed no specific cultural practices that would impact her care, but the question effectively elicited this information.
- ✔ **Asked about religious considerations that may affect pregnancy care**
The clinician explicitly asked about religious considerations in their social history taking, providing a clear opportunity for the patient to disclose any religious practices that might affect pregnancy care. The patient's response indicated no religious factors affecting her care.
- ✔ **Asked about preference for the gender of their healthcare provider**
The clinician explicitly asked about the patient's preference regarding the gender of their healthcare provider, and the patient clearly indicated a preference for female providers. The clinician appropriately

- ✔ **Asked about breastfeeding plans**
The clinician explicitly asked about breastfeeding plans with "And do you plan to breastfeed?" and received a clear affirmative response from the patient. This direct questioning fulfilled the clinical requirement to assess breastfeeding intentions.

- ✔ **Asked if the patient has considered birth plan preferences**
The clinician explicitly asked about birth plan preferences with "Have you had any plan preferences with the birth plan?" which directly addresses the rubric requirement. The patient's response indicated she was open to discussing different options, demonstrating effective communication about this topic.

- ✔ **Asked if the patient has considered contraceptive options after delivery**
The clinician directly asked about contraceptive consideration with "Have you considered any options for birth control after delivery?" which addressed the general concept of post-pregnancy contraception planning. While the question wasn't specifically focused on post-delivery contraception, it achieved the clinical purpose of introducing the topic for future discussion.

Closed the encounter

2 items needed to pass

- ✔ **Provided the opportunity for questions**
The clinician provided multiple opportunities for questions throughout the consultation, including explicitly asking "Do you have any questions or concerns?" which led to the patient raising their weight gain concern. The clinician then appropriately addressed this concern and followed up to ensure nothing else needed discussion.

- ✔ **Asked about any concerns that haven't been discussed**
The clinician explicitly asked about concerns twice - first with "Do you have any questions or concerns?" and later with "Is there anything else you'd like to talk about?" These questions effectively gave the patient multiple opportunities to raise additional concerns, which led to the patient sharing their worry about weight gain.

- ✔ **Discussed next steps**
The clinician clearly communicated next steps by offering a complete physical examination including weight check, blood sugar test, blood pressure measurement, and general evaluation. They provided specific details about what would happen in the next appointment and explained why these checks are important for pregnancy monitoring.

Delivery format

- Mandatory in person sessions
- Repetition of feedback
- Preference for teaching or tutorials

Flexibility and deadlines

- Fixed deadlines reduced autonomy
- Limited opportunity for reinforcement
- Task forced engagement

When AI works well

- OSCE styled rehearsal
- Acute and high risk scenarios
- Safe, structured practice

Reframing the role of AI

- Augments teaching
- Reinforces learning
- Not a primary assessment tool

AI based simulation is most effective when aligned with teaching, placement timing and student autonomy