

CDE4301 VR-431 Post-Learning Test

Applicable to both VR intervention and traditional intervention participants

This test will assess the student's problem-solving processes according to Polya's problem-solving framework:

1. Understand the problem.
2. Devise a plan.
3. Execute the plan.
4. Evaluate the result.

Scenario 1: Retained Placenta

Stage 1: Understand the Problem

Interviewer: A postpartum patient is experiencing excessive bleeding. Which steps and instruments would you use to diagnose the cause? Please talk me through your thought process.

Model answer:

Student: Given the heavy bleeding, my first step would be to check if the uterus is contracting properly, as uterine atony is the most common cause of PPH. I would manually palpate the abdomen just above the pubic bone to locate the fundus (top of the uterus). If the uterus feels soft and boggy on palpation, this would potentially suggest uterine atony.

Interviewer: Alright. The uterus feels soft and boggy on palpation.

Student: The uterus feeling soft and boggy on palpation suggests that uterine atony is the cause.

Stage 2: Devise a Plan

Student: I would perform fundal massage to encourage the uterus to contract and administer oxytocin intramuscularly (IM) to sustain the contractions. I would expect that after these interventions, the uterus would feel hard and round, like a grapefruit.

Interviewer: After performing fundal massage and administering oxytocin IM, bleeding continues and the uterus still feels soft and boggy.

Student: If the uterus feels soft and does not contract properly despite massage and oxytocin, I would start to suspect retained placenta as it is the next most common cause of PPH. After applying a generous amount of ultrasound gel on the patient's lower abdomen, I would use an ultrasound probe on the lower abdomen to examine the uterine cavity for any retained fragments or membranes. If the ultrasound shows bright (echogenic) areas, this would confirm the presence of retained placenta.

Interviewer: Upon performing ultrasound, bright (echogenic) areas are found.

Student: The presence of bright (echogenic) areas is indicative that the reason for PPH in this particular patient is retained placenta.

Stage 3: Execute the Plan

Student: I would manually remove the placenta by placing my non-dominant hand on top of the patient's lower abdomen to stabilise the uterus. Then, I would carefully insert my dominant hand into the uterine cavity and feel for soft, loose tissue inside the uterus. I would then use a gentle, sweeping motion to separate it from the uterus. I would also immediately administer oxytocin to help the uterus contract and encourage expulsion of placental fragments. To administer oxytocin, I would need a 10mL vial of oxytocin, and a syringe and needle. I would administer the oxytocin to the vastus lateralis muscle.

Stage 4: Evaluate the Result

Student: I would look out for a significant reduction in the patient's bleeding. If bleeding continues, it could indicate that some fragments are still present.