

Perfusionist interview questions

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What to expect

Perfusion is a small, tightly credentialled workforce, so interviews tend to be about judgement and safety rather than volume of applications. Panels are usually made up of a senior perfusionist, a cardiac surgeon or anaesthetist, and a theatre or clinical services manager, and they are weighing up whether you can be trusted with a circuit when things go wrong.

- **Technical and clinical:** Questions on bypass physiology, anticoagulation, cardioplegia, blood gas interpretation and the specific equipment you have used, often in the form of a case or a viva.
- **Scenario and crisis judgement:** A deteriorating or failing circuit is described and you are asked what you would do, in what order, and who you would call.
- **Process and preparation:** Walk-throughs of how you set up, prime, check and document a circuit, and how you hand over.
- **Behavioural:** Stories about times you caught a problem early, worked under pressure, or had to speak up.
- **Safety and governance:** Questions about aseptic technique, incident reporting, blood management standards and credentialing.
- **Teamwork and communication:** How you work with surgeons, anaesthetists, nurses and students in a small theatre team, including when you disagree.

A typical process starts with a short phone or video screen covering your training pathway, ANZCP status and availability for on-call. The main panel interview runs for about 45 to 60 minutes and usually moves from your background and training, to a technical discussion of a bypass case, to one or two scenario questions, then behavioural questions, and finally your questions about the roster and the service. Some hospitals add a tour of the theatre complex or a short technical session at a circuit or simulator, and most finish with reference checks and confirmation of credentialing before an offer.

1. Walk us through how you prepare a bypass circuit from the start of the day through to going on pump.

Why they ask

This is the core of the job and the panel wants to hear a repeatable, disciplined routine rather than a general description of what a heart-lung machine does.

How to structure your answer

Answer as a chronological walk-through with the checkpoints and people involved at each stage. Finish with what tells you the circuit is ready.

Example answer

"I start by confirming the case with the surgeon's list and checking the patient's details, weight, blood results and any known antibodies or previous cardiac surgery. Then I select the circuit components, including the oxygenator, tubing, cannulae and any cell salvage or vent setup, and check every pack is in date and intact. I prime with the agreed solution, de-air carefully, and confirm there are no bubbles sitting in the arterial line or the oxygenator. I pressure test the circuit and check all connections by hand, then run through the pre-bypass checklist with the anaesthetist and the scrub team, covering heparin dosing, the target activated clotting time, cardioplegia plan and how we will communicate through the case. Just before cannulation I confirm the ACT is therapeutic and that the perfusion record is open and ready. My rule is that nothing goes on pump until the checklist is done out loud and everyone has agreed."

2. During bypass the venous drainage drops suddenly and the reservoir level starts falling. What do you do?

Why they ask

The panel wants to see how you reason under pressure, and whether you act in a safe order rather than jumping straight to a fix.

How to structure your answer

Use a recognise, respond and escalate structure: what you see first, your immediate actions in order, then who you tell and how you document it.

Example answer

"First I would confirm what I am seeing rather than reacting to a single number: I check the actual reservoir level, the venous line for kinks or a clamp left on, the patient's position and whether the surgeon has moved a retractor or cannula. I reduce arterial flow or go to a lower flow state as needed to protect the reservoir, and I tell the surgeon immediately so they know the drainage has changed. Common causes are a kinked venous line, a cannula sitting against the wall of the vessel, or a drop in circulating volume, so I work through those with the anaesthetist, checking pressures, blood loss and whether volume or blood products are needed. Throughout it I keep oxygenating, keep the patient safe, and once it is resolved I note the timing, the cause and what was done in the perfusion record and hand it over at the end of the case."

3. Tell me about a time you identified a problem with a circuit or a patient's parameters before it became critical.

Why they ask

This tests vigilance and whether you act on detail early, which matters more in perfusion than reacting heroically later.

How to structure your answer

Use STAR: situation, task, action, result. Keep the result factual and describe the impact in terms of the case, not numbers.

Example answer

"I was running bypass on a redo cardiac case and noticed the ACT was not holding where I would expect after the heparin dose, and the oxygenator pressures were starting to drift. My task was to work out whether this was a dosing issue or something about the patient, so I took a fresh sample, checked the dose against the patient's weight and recent results, and raised it with the anaesthetist rather than waiting for the next scheduled reading. We gave additional heparin, rechecked the ACT, and the surgeon reviewed the field for any unexpected bleeding. The case continued safely to separation. Afterwards I documented the timing and the changes, and it reinforced for me that a single reading is never the whole picture and it is worth speaking up early."

4. You notice just before bypass that a colleague's prime does not match the protocol for this patient. How do you handle it?

Why they ask

Perfusionists work in small teams where speaking up is essential, and the panel is testing whether you can raise a concern without either staying silent or causing a scene.

How to structure your answer

Use a graded assertiveness approach: check your own reading first, ask a clarifying question, state the concern clearly, and escalate if needed.

Example answer

"I would check my own understanding first, because it is easy to misread someone else's setup from across the theatre. If it still looks wrong, I would ask them a genuine question, something like: can we double check the prime on this one, I want to make sure we are aligned on the patient's weight and

the potassium. That gives them room to spot it themselves. If it was not resolved and we were minutes from cannulation, I would say plainly that I am not comfortable going on pump until it is checked, and I would bring the senior perfusionist or the surgeon into the conversation rather than let it go. The patient's safety comes before any awkwardness, and I would rather have an uncomfortable minute in theatre than a preventable complication. Afterwards I would keep it professional and not make it about the person."

5. How do you manage communication with a surgeon or anaesthetist who disagrees with your read on the patient's status during a case?

Why they ask

Perfusion is a team sport with a steep hierarchy, and the panel wants to know you can hold a clinical position while staying collaborative.

How to structure your answer

Answer in three parts: how you frame the information, how you keep the decision with the right person, and how you behave afterwards.

Example answer

"I try to give the information rather than an opinion first, so I will say what I am seeing: the mixed venous saturation has dropped, the flows are at this level, and the last blood gas was at this time. That lets the surgeon and anaesthetist work with the same picture I have. If they read it differently, I will say clearly what my concern is and what I would suggest, and then accept that the decision sits with them, while making sure my position is on the record in the perfusion notes. If I genuinely believed the patient was at risk, I would escalate to the senior perfusionist or the duty manager, because there is a line between a difference of view and an unsafe situation. After the case I would follow up with the team when things are calm, because those conversations are easier when nobody is under pressure."

6. What does staying credentialled and current look like for you, and how do you keep your skills sharp on a small roster?

Why they ask

The workforce is small and services depend on people maintaining competence, so employers want to know you take credentialing and continuing education seriously.

How to structure your answer

Answer with the concrete mechanisms you use, then how you apply them in practice.

Example answer

"I keep my ANZCP certification and hospital credentialing current, which means keeping up the required continuing professional development, completing the mandatory training for the health service, and making sure my scope of practice matches what I am actually rostered to do. Practically, I review the equipment and techniques our unit uses, including any changes to circuit components or anticoagulation monitoring, and I ask to be involved when we introduce something new so I can be signed off properly rather than learning on a case. I also attend the perfusion conferences and unit education sessions, and I take part in morbidity and mortality review, because the lessons from other people's cases are as useful as my own. On a small roster, being reliable with credentialing is part of being reliable on call."