

# Cardiovascular Assessment: The Truth Beyond Textbooks

The first time I listened to heart sounds as a student, I nodded sagely like I knew what I was hearing. I didn't. I heard thumping. That was about it. Was it normal thumping? Who could say?

Cardiovascular assessment can be particularly intimidating because, unlike a blood pressure reading, much of it feels subjective. But after years in critical care, I've found that the most important aspects aren't what nursing school emphasized.

## Heart Sounds: Developing Your Ear

Auscultation has four standard locations that matter: • Aortic area: 2nd intercostal space, right of sternum • Pulmonic area: 2nd intercostal space, left of sternum • Tricuspid area: 4th intercostal space, left of sternum • Mitral area: 5th intercostal space, midclavicular line

The "lub-dub" you hear represents S1 and S2 heart sounds. But in the MICU, what really matters isn't perfectly identifying every sound on your first try. It's recognizing when something changes from the patient's baseline.

I struggled with heart sounds until an experienced cardiac nurse gave me simple advice. "Close your eyes when you listen." It worked immediately. Removing visual distractions helped me focus entirely on the sounds. Now I teach all my orientees to do the same.

In critical care, we're particularly watching for: • New murmurs that weren't present before • Extra heart sounds like S3 gallops, which can indicate heart failure • Friction rubs, which might suggest pericarditis • Changes in rate or rhythm

One patient taught me the importance of serial assessments. His heart sounds were unremarkable on admission, but twelve hours later, I noticed a new murmur. The echo revealed acute mitral regurgitation from a ruptured chordae tendineae. That change in heart sounds was the first indication, appearing before any hemodynamic instability.

## Hemodynamics: The Circulatory Story

In the MICU, perfusion assessment becomes crucial. We're watching for signs of compromised circulation:

Skin temperature gradients tell us about peripheral perfusion. Warm proximally but cool distally? That's a classic sign of poor perfusion. I check this by running my hand from the patient's knee down to their foot, feeling for where warmth transitions to coolness.

Capillary refill should take less than 3 seconds. Slower refill often indicates reduced cardiac output or vasoconstriction. In shock states, this simple test can help us gauge the effectiveness of our interventions.

Edema patterns matter. Is it generalized or localized? Symmetric or asymmetric? Pitting or non-pitting? Heart failure typically causes bilateral pitting edema, while unilateral swelling raises concerns about DVT. In critically ill patients, we're often balancing fluid resuscitation against the risk of pulmonary edema, making these assessments vital.

## **Pulse Assessment: Beyond Presence or Absence**

In critical care, pulse assessment goes deeper than "present or absent." We're looking at: • Quality. Bounding pulses might indicate high output states like sepsis, while weak, thready pulses often signal poor cardiac output. • Equality. Differences between bilateral pulses or upper and lower extremities can indicate vascular problems. • Rhythm. Irregularly irregular rhythms suggest atrial fibrillation, while regularly irregular patterns might indicate other dysrhythmias.

A crucial MICU consideration is pulse pressure, the difference between systolic and diastolic readings. Narrowing pulse pressure can indicate increasing vascular resistance or decreasing stroke volume. Widening pulse pressure might suggest sepsis or aortic regurgitation.

When I assess a critically ill patient, I always compare their radial, femoral, and dorsalis pedis pulses. The differences tell me about their hemodynamic status in ways that numbers alone can't.

## **The Monitors Don't Tell You Everything**

Despite our technology, direct patient assessment remains irreplaceable. I've seen patients with "normal" vitals on the monitor who were clearly deteriorating based on skin changes, mental status, and other clinical findings.

A critically ill patient once had stable numbers but felt cool to the touch with delayed capillary refill. The arterial line showed adequate pressure, but my assessment suggested the perfusion wasn't reaching the periphery. We started vasopressors before the numbers deteriorated, likely preventing organ damage.

Modern critical care units have incredible monitoring capabilities. But they complement rather than replace your hands, eyes, and ears. The most sophisticated cardiac output monitoring system can't tell you if a patient's skin is cool and clammy or if their pulse character has changed.

## **When Minutes Matter**

Some cardiovascular findings demand immediate action: • New onset of chest pain • Significant changes in heart rate or rhythm • Hypotension unresponsive to fluid bolus • Mottled skin or significantly delayed capillary refill • New asymmetry in pulses or extremity temperature • Sudden dyspnea with cardiovascular changes

In the MICU, we don't just call the provider for these findings. We simultaneously prepare for potential interventions like fluid boluses, vasopressors, or cardiac medications while continuing to closely monitor the patient.

## **Learning Through Repetition**

The secret to mastering cardiovascular assessment isn't brilliance. It's repetition with attention. Each time you place your stethoscope, check a pulse, or assess skin temperature, you're building a mental library of normal and abnormal findings.

I made a habit of listening to different patients' heart sounds whenever I had downtime during my orientation. With each new patient, I'd try to identify the heart sounds and then ask my preceptor to confirm. This accelerated my learning far faster than just reading about heart sounds.

Your cardiovascular assessment skills will develop over time, but only if you approach each assessment with genuine curiosity rather than just going through the motions. The difference between a good nurse and a great one often lies not in knowing more but in noticing more.

What aspect of cardiovascular assessment do you find most challenging? I'd love to hear your experiences.