

ACTIVITY 3: SPOT THE TREND

Vital Sign Interpretation — Reading the Story Across Time

SCENARIO FRAMING

You're back with Mary for another shift with Mr. Crabby. She pulls up the Vitals panel before rounds.

MARY: *"Any single vital sign can look fine — or look scary — depending on the moment you catch it. The real skill is reading the whole row, then reading the whole table. I want you to walk through M.C.'s vitals from admission to now and tell me the story they're telling. Not just numbers — the story."*

In Activity 2, you found the most recent set of vitals. This time, you're looking at all of them — the full trend from admission through the latest reading — and deciding what that trend means clinically.

YOUR TASK

Open the PAWS chart and go to the Vitals panel. Review the entire table, from the 02/14 1347 admission set through the most recent entry. For each vital sign below, describe the trend, explain what might be driving it, and decide what you'd do or report.

Estimated time: 10–15 minutes for Part 1, plus 5–10 minutes for Part 2.

PART 1: READING THE TRENDS

For each vital sign, answer all three prompts: what is happening, why it might be happening, and what you would do or report.

Q1. Temperature

Trace M.C.'s temperature from admission to the most recent reading. What is the pattern? Why might this be happening? What would you do or report?

[Text answer box]

Q2. Blood Pressure

Trace M.C.'s blood pressure from admission to the most recent reading. What is the pattern? Why might this be happening? What would you do or report?

[Text answer box]

Q3. Oxygen Saturation

Trace M.C.'s SpO₂ from admission to the most recent reading, including the oxygen device in use at each point. What is the pattern? Why might this be happening, given he's on supplemental oxygen? What would you do or report?

[Text answer box]

Q4. Heart Rate

Trace M.C.'s heart rate from admission to the most recent reading. What is the pattern? Why might this be happening? What would you do or report?

[Text answer box]

PART 2: REFLECTION

Take 5–10 minutes to think through these questions. Short answers are fine — 2–4 sentences each.

Q1. The Combined Picture

Looking at temperature, blood pressure, oxygen saturation, and heart rate together — not one at a time — what overall clinical picture do they paint? Is M.C. trending toward improvement or toward worsening?

[Text answer box]

Q2. The Tipping Point

At what point in this 18-hour window would you have wanted to notify the provider, if you hadn't already? What specific data point(s) would have triggered that call?

[Text answer box]

Q3. One Reading vs. the Whole Table

If you had only looked at the most recent set of vitals — without scrolling back through the rest of the table — what would you have missed?

[Text answer box]

Q4. Anything Else You Noticed?

While reviewing the full vitals table, did you notice anything about how the data itself was documented — not just what the numbers show, but how complete or consistent the entries were? If so, describe what you saw.

[Text answer box]

ACTIVITY 3: ANSWER GUIDE

Now that you've submitted your answers, here's the full trend picture — and why it matters.

PART 1: READING THE TRENDS — HOW'D YOU DO?

Q1. Temperature

✓ Compare Your Answer

Answer: Temperature rises across the window: 38.6°C at admission (1347) → 39.4°C at 2100 → 39.8°C at 0300 (the peak) → 39.6°C at 0700. The overall direction is a persistent fever that is climbing, not breaking, with only a slight pullback at the very end.

Why it might be happening: This pattern is consistent with an active, worsening infectious process — the body is mounting an ongoing immune response rather than resolving one. A rising fever over many hours, paired with the lab picture (elevated WBC, bands, CRP, procalcitonin), supports an infection that is not yet under control.

What you'd do or report: Continue antipyretic administration per order, monitor closely for further escalation, and report the sustained fever trend — not just the most recent reading — to the provider, especially since it has not meaningfully broken across nearly 14 hours.

Q2. Blood Pressure

✓ Compare Your Answer

Answer: Blood pressure rises steadily and consistently: 148/92 at admission → 152/94 → 158/98 → 162/102 at 0300 (the peak) → 160/100 at 0700. This is a slow, steady climb across the whole window, not a sudden spike.

Why it might be happening: This rise tracks closely with the fever and tachycardia — it's consistent with a sympathetic nervous system response to fever, pain, and infection (the body's stress response), rather than a primary cardiovascular problem. The pattern doesn't look like an isolated hypertensive event — it's moving together with the other vitals.

What you'd do or report: Continue routine monitoring per protocol, and report the combined trend (fever + rising BP + tachycardia) as a cluster rather than reporting BP in isolation — the clinical story is stronger when these trends are connected.

Q3. Oxygen Saturation

✓ Compare Your Answer

Answer: SpO₂ starts at 92% on 3L NC at admission, rises slightly to 94% at 1700, dips to 93% on 3L NC at 2100, then declines to 91% on 3L NC at both 0300 and 0700 — the lowest points in the window. The overall trend is downward despite continuous supplemental oxygen at the same flow rate.

Why it might be happening: Declining oxygenation despite unchanged supplemental O₂ suggests his underlying respiratory status is worsening — the pneumonia and RLL consolidation are likely reducing effective gas exchange faster than 3L NC can compensate. This is one of the more clinically concerning trends in the table, since it isn't responding to the current intervention.

What you'd do or report: This is the trend most likely to require escalation. Per the active order, if SpO₂ drops below 90%, you would increase to 5L and notify the provider STAT. Even at 91%, this is worth flagging to the provider proactively given the trajectory — you don't have to wait until he crosses the threshold to start that conversation.

Q4. Heart Rate

✓ Compare Your Answer

Answer: Heart rate rises across most of the window: 104 at admission → 108 → 116 → 122 at 0300 (the peak) → 118 at 0700. M.C. is tachycardic at every single reading — he never has a normal heart rate in this table.

Why it might be happening: Sustained tachycardia alongside rising fever, rising BP, and declining SpO₂ fits a consistent clinical picture: the body working harder to compensate for fever, hypoxia, and the physiological stress of an active infection. It moves in the same direction as the other vitals, which strengthens the overall pattern rather than standing alone.

What you'd do or report: Continue cardiac monitoring per the active telemetry order, and include the tachycardia trend in your overall clinical picture when reporting to the provider — it reinforces, rather than complicates, the respiratory and infectious concerns already being tracked.

PART 2: REFLECTION — THE BIGGER PICTURE

Q1. The Combined Picture

✓ Compare Your Answer

Answer: M.C. is trending toward worsening, not improvement. Every major vital sign is moving in a concerning direction across this 18-hour window: temperature climbing, blood pressure climbing, heart rate climbing, and oxygen saturation declining despite supplemental oxygen. None of these trends has reversed by the most recent reading.

Why it matters: Individually, none of these numbers is necessarily an emergency — 91% on 3L NC, 162/102, HR 122 are each concerning but not immediately critical in isolation. Together, sustained across many hours and all moving the same direction, they tell a much stronger story: this patient's pneumonia is not yet responding to treatment, and close monitoring — not just routine Q4H checks — is warranted.

Q2. The Tipping Point

✓ Compare Your Answer

There's no single right answer here. Many students point to the 0300 set, where SpO₂ first drops to 91% alongside the peak temperature (39.8°C) and peak HR (122) — that's the point where three concerning trends converge at once. Others may reasonably argue for escalating earlier, at 2100, when the downward SpO₂ trend first becomes visible. Either answer is defensible if you can name the specific data point(s) driving the decision. The point of this question isn't to find the "correct" moment — it's to practice identifying a threshold and being able to justify it with data.

Q3. One Reading vs. the Whole Table

✓ Compare Your Answer

Answer: If you only looked at the 0700 reading, you'd see SpO₂ 91%, temp 39.6°C, HR 118, BP 160/100 — concerning, but you'd have no sense of direction. You wouldn't know whether M.C. was improving from a worse point overnight, or steadily declining from a better baseline at admission. Without the full table, you can't tell trajectory from a single snapshot.

Why it matters: This is the core lesson of this activity: a single set of vitals tells you a moment, but only the full trend tells you whether your patient is heading toward stability or toward a rapid response. Skipping the scroll-back is one of the easiest ways to miss a slow decline.

Q4. Anything Else You Noticed?

✓ Compare Your Answer

Good catch if you noticed something here. There are a few small documentation inconsistencies in this table — for example, one row is missing the oxygen device next to the SpO₂ value, one pain score is recorded without the "/10," and there's a gap in the Q4H schedule where an expected entry doesn't appear. These are exactly the kind of small, easy-to-miss documentation issues that show up in real charts.

What to do with it: Make a note of it. We'll come back to documentation quality and gaps directly in a future activity — for now, the important thing is that you noticed the chart isn't always perfectly complete, even when the clinical trend is still readable. If you didn't catch anything here, that's fine too — go back and look at the table again with fresh eyes once you've seen this note, just to build the habit.

ACTIVITY 3: INSTRUCTOR KEY & CANVAS BUILD NOTES

For Instructor Use Only — Do Not Distribute to Students

ACEN STANDARDS ALIGNMENT

Activity 3 continues to support ACEN Standard 4 (Curriculum) for pre-licensure nursing programs, with emphasis on appropriately scaffolded learning activities that build toward clinical reasoning.

Standard 4.1 — Curriculum Reflects Mission, Goals, and Expected Outcomes

Trend interpretation across a full vitals table mirrors a core daily task for working nurses — recognizing patient trajectory, not just point-in-time status — directly supporting the program's practice-readiness goals.

Standard 4.5 — Learning Activities Are Appropriate to Achieve Student Outcomes

This activity is an appropriate next step after Activity 2: students have already practiced locating individual data points quickly, and now apply that same panel to a slower, more analytical task — connecting multiple data points across time into a clinical narrative.

Standard 4.6 — Technology Integrated Throughout Curriculum

Students continue building fluency with the PAWS Vitals panel, now using its full historical table rather than just the most recent entry — a skill directly transferable to any EHR trend or flowsheet view.

Standard 4.7 — Clinical Learning Opportunities Are Adequate

Trend recognition in a low-stakes simulation environment builds the pattern-recognition skill students will need before they are expected to identify clinical deterioration in real patients.

CLINICAL JUDGMENT MODEL (CJM) ALIGNMENT

Activity 3 maps primarily to NCSBN Clinical Judgment Measurement Model Layer 1 — Recognize Cues — with substantial Layer 2 — Analyze Cues — work, since trend interpretation requires synthesizing multiple cues rather than simply locating them.

Layer 1 — Recognize Cues

Definition: What information matters? What is relevant?

Students must recognize each individual vital sign value across five timestamped entries before they can analyze the trend it forms. Part 1 trains this recognition across an unfamiliar amount of historical data, compared to Activity 2's single most-recent-entry focus.

Where this appears:

- Part 1 Q1–Q4 (locating each vital sign value across all five timestamped entries)

Layer 2 — Analyze Cues

Definition: What does this information mean? What is the clinical significance?

This is the primary cognitive demand of Activity 3. Students move beyond finding values to interpreting direction, connecting trends to underlying pathophysiology, and synthesizing multiple vital signs into a single clinical narrative.

Where this appears:

- Part 1 Q1–Q4 (the “why might this be happening” and “what would you do or report” prompts), Part 2 Q1–Q3 (combined-picture synthesis, tipping-point judgment, trend-versus-snapshot reasoning)

INSTRUCTOR DEBRIEF GUIDE

Recommended timing: 5–10 minutes at the start or end of the lab session following Activity 3 submission.

The Embedded Documentation Errors — Acknowledge, Don’t Resolve

The Vitals panel contains three intentional, unlabeled documentation issues: the 1700 entry is missing the oxygen device next to the SpO₂ value, the 2100 entry records pain as “6” without “/10,” and there is an unflagged gap in the Q4H schedule at 0100 (no entry exists between 2100 and 0300). Activity 3 is intentionally NOT built around finding these — the learning objective is trend interpretation, not error-spotting.

Part 2 Q4 gives students room to mention any of these if they noticed them. The Answer Guide acknowledges any catch here as a good find and explicitly tells students to set it aside for a future activity — do not resolve or fully unpack these errors during this debrief. The goal is to build the habit of noticing without derailing the trend-interpretation objective.

Discussion Questions

- “Walk me through M.C.’s vitals like you’re giving report — not reading numbers, telling the story.”
- “If you were only allowed to look at one vital sign to decide whether to call the provider, which one would you pick, and why?”
- “Did anyone pick a different ‘tipping point’ than their classmates? What made you choose that moment?”
- “Did anyone notice anything odd about how the vitals table itself was filled in?” (If raised: affirm the catch, note it’s intentional, and tell students to hold onto it — it will come back in a future activity. If not raised: no action needed; this is not the primary objective of Activity 3.)

Common Student Errors

Error	Teaching Response	Follow-Up
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Describes each vital sign in isolation; never connects them	“You listed four trends. Do they have anything in common?”	“If one patient process explained all four, what would it be?”
Says SpO ₂ is “fine” because 91% isn’t below the alarm threshold	“He’s on oxygen already. Should 91% on supplemental O ₂ reassure you the same way 91% on room air would?”	“What does it mean if a number is ‘acceptable’ but still trending the wrong way?”
Picks the most recent (0700) row as the automatic “tipping point”	“Is 0700 actually the worst point in the table, or just the most recent one?”	“Compare 0300 and 0700 directly — which is worse, and by how much?”
Tries to fully resolve the documentation gaps instead of noting them for later	“Good eye — hold onto that. We’ll dig into documentation quality in a future activity.”	(No further follow-up needed in this activity — redirect, don’t resolve.)

CANVAS BUILD SPECIFICATIONS

Module Placement

Add directly beneath Activity 2 in the existing module:

NUR 11 Deliberate Practice — Patient Chart Activities

Part 1: Reading the Trends Quiz

- Canvas Item Type: Quiz (ungraded / practice quiz)
- Title: Activity 3 — Part 1: Spot the Trend
- Instructions: Copy from Student Activity section — include Scenario Framing and Mary’s opening line. Embed PAWS chart link labeled “Open M.C. PAWS Chart.”
- Questions: 4 short-answer (essay type) | Points: 0 | Allowed attempts: Unlimited | Time limit: None
- Shuffle questions: No
- Feedback: Release Student Answer Guide after submission

Part 2: Reflection Assignment

- Canvas Item Type: Assignment (text entry submission)
- Title: Activity 3 — Part 2: Reflection
- Questions: 4 reflection questions (Q1–Q4) | Points: 0 | Submission type: Text entry
- Expected length: 2–4 sentences per question — note this in instructions
- Available after: Part 1 submitted (optional prerequisite)

- Feedback: Release Student Answer Guide after submission

Student Answer Guide — Release Settings

Same approach as Activities 1–2: post the Answer Guide (Section 2 of this document) as a Canvas Page or PDF, set to unlock after Part 2 submission using prerequisites, or placed as a module item appearing after the final submission.

Module Flow — Student View

NUR 11 Deliberate Practice — Patient Chart Activities

- Activity 3 — Part 1: Spot the Trend (Quiz) — Submit to unlock Part 2
- Activity 3 — Part 2: Reflection (Assignment) — Submit to unlock Answer Guide
- Activity 3 — Answer Guide (Page — unlocks after Part 2 submission)

Suggested Canvas Announcement

Numbers tell a story — if you know how to read them. In this activity, you'll review M.C.'s full vitals history with Mary and figure out what his trends are really saying. Is he getting better, or worse? At what point would you pick up the phone and call the provider? Open the PAWS chart and review the entire Vitals table, not just the most recent entry. Walk through each vital sign, and don't just report the numbers — explain what they mean and what you'd do about them. The Answer Guide unlocks after you submit Part 2.

Accessibility & Technical Notes

- PAWS chart is the same single HTML file used in Activities 1–2 — no additional setup required
- Works in any modern browser; no login required
- Canvas submissions are text-entry — no special software needed
- Students with extended time accommodations: no time limits are set in Canvas; the “10–15 minute” framing is guidance only, not an enforced limit