

AI at the Bedside: Should You Trust the Alert?

A clinical decision-making case study exploring automation bias, AI-generated risk alerts, and the nurse's role as the final safeguard in patient care.

FORMAT

Case Study + Faculty
Guide

SETTING

Medical-Surgical / Acute
Care

FOCUS

Automation Bias & Clinical
Judgment

"An AI alert can call your attention to the patient. It cannot assume responsibility for what you do next."

PATIENT SCENARIO

AI-Generated Clinical Alert Critique

You are caring for a patient admitted with community-acquired pneumonia. Review the assessment trend below before reading the AI-generated alert on the next page.

Mr. James Carter, age 72

Admitted yesterday with community-acquired pneumonia · History of hypertension, type 2 diabetes, and COPD · Normally independent at home, no supplemental oxygen at baseline

ASSESSMENT FINDING	0700	1000
Temperature	38.1°C (100.6°F)	38.4°C (101.1°F)
Heart Rate	96 bpm	112 bpm ▲
Respiratory Rate	22 breaths/min	30 breaths/min ▲
Blood Pressure	132/76 mmHg	104/62 mmHg ▼
SpO ₂ (2 L NC)	93%	89% ▼
Neuro / Mentation	Alert and oriented	Increasing restlessness; “I just don’t feel right.”
Urine Output	—	60 mL / 3 hours
Respiratory	Productive cough, thick yellow sputum; diminished breath sounds with crackles, right lower lobe	Findings persist and worsen

HOLD THAT PICTURE IN MIND.

Before you form an opinion, turn the page and read the alert exactly as it would appear in your EHR.

AI-GENERATED ALERT

The Alert Appears On-Screen

Your organization's EHR uses an AI-supported clinical decision system that analyzes patient data and generates alerts for the healthcare team. As you review Mr. Carter's chart at 1000, the following alert appears.

EHR CLINICAL DECISION SUPPORT

Moderate Risk for Respiratory Deterioration

This patient demonstrates worsening respiratory status based on increasing respiratory rate, decreasing oxygen saturation, and underlying COPD with active pneumonia.

RECOMMENDED ACTIONS

- Increase supplemental oxygen per current orders or protocol
- Position patient upright to promote ventilation
- Encourage coughing and deep breathing
- Administer scheduled respiratory medications and antibiotics
- Reassess respiratory status and SpO₂ within 30 minutes
- Notify provider if SpO₂ remains below target or symptoms worsen

RISK LEVEL: MODERATE — Continue close monitoring.

The alert sounds reasonable. Several recommendations are appropriate.

But you are the nurse caring for Mr. Carter.

BEFORE YOU ACT

Critique the Alert

The alert sounds reasonable, and several recommendations are appropriate. But you are the nurse caring for Mr. Carter — work through each question using his actual assessment trend.

1 Do you agree with the alert?

Would you classify Mr. Carter as being at moderate risk for respiratory deterioration? Use specific assessment findings and trends to support your answer.

2 What did the AI recognize?

Identify the findings the AI appears to have considered. Which recommendations are reasonable based on those findings?

3 What did the AI miss?

Look beyond the respiratory findings. Consider cardiovascular status, neurologic status, urinary output, temperature, and the overall trend since 0700. What clinical picture emerges?

4 Would you reassess in 30 minutes, as recommended?

Explain your decision. What would you do now, and what findings support taking — or not taking — more immediate action?

5 What would you verify?

Before relying on the alert, what additional data, orders, labs, or assessments would help you determine the patient's true level of risk?

6 Does the risk label “Moderate” matter?

If the alert had instead read **HIGH RISK — Immediate Clinical Evaluation Recommended**, would that change what you do? Should the AI's classification determine the urgency of your response — or should your nursing assessment?

Make the Clinical Decision

Standing at Mr. Carter's bedside, and based on your assessment — not simply the AI-generated alert:

- What is your priority concern?
- What action would you take first?
- What information would you communicate when escalating?

Defend your decisions using the patient's assessment findings and trends.

Teaching Notes & Debrief

Everything you need to run this case study and lead the discussion.

STUDENT LEARNING OUTCOMES

- Analyze trends in patient assessment data to recognize clinical deterioration.
- Critically evaluate an AI-generated clinical alert rather than relying solely on its risk classification.
- Integrate AI-generated information with independent nursing assessment and clinical judgment.
- Prioritize nursing actions based on changes in patient condition.
- Communicate and defend a decision to escalate patient care.

What's Wrong With the Alert?

The alert isn't entirely wrong – it appropriately recognizes worsening oxygenation and suggests reasonable interventions. The problem is that it frames the situation primarily as respiratory deterioration and classifies the risk as moderate, when the full trend over three hours suggests more.

Heart rate increased from 96 → 112 bpm

Respiratory rate increased from 22 → 30/min

Blood pressure dropped from 132/76 → 104/62

SpO₂ decreased despite supplemental O₂

Restlessness newly developed

Urine output declined; fever persisted

Taken together, these findings suggest clinical deterioration warranting prompt nursing assessment and escalation – not routine respiratory interventions and a 30-minute wait. Depending on learner level, faculty may also explore concern for sepsis and worsening tissue perfusion.

The Bigger Teaching Point: Automation Bias

The most important error isn't one incorrect recommendation – it's the *framing*. Once the AI labels the patient as moderate risk for respiratory deterioration, there is a danger the clinician begins viewing every subsequent finding through that frame. This is automation bias: the tendency to place too much trust in a computerized recommendation, particularly when its output appears authoritative.

Would the words “MODERATE RISK” make you feel more comfortable waiting?

If your assessment says the patient is deteriorating, should a moderate AI rating make you question your assessment – or question the AI?

Suggested Debrief

Remind students that an AI-generated alert is another source of information — not a replacement for nursing assessment. The nurse still has access to something the alert cannot fully capture: the patient in front of them, changes from baseline, the meaning of findings considered together, and the professional responsibility to act when something does not look right.

PAIR THIS CASE STUDY WITH

AI Safety Pause™ for Nurse Educators

Apply the three-question framework to this case — or any bedside AI alert.

Faculty Meeting AI Discussion Guide

Bring automation bias into your next faculty conversation.

KEY TAKEAWAY

An AI alert can call your attention to the patient. It cannot assume responsibility for what you do next.

AI informs. The nurse decides.