The EM Shift Shield

10 Decision Cards for High-Stakes Moments — Cognitive Forcing Strategies for Emergency Physicians

Why Emergency Physicians Need Cognitive Armor

Diagnostic error in the emergency department causes an estimated 250,000 deaths annually in the United States. A 2022 systematic review in *BMJ Quality & Safety* found that cognitive biases contribute to 74% of diagnostic failures in emergency medicine. The most dangerous errors don't happen because physicians lack knowledge — they happen because fatigue, cognitive overload, and time pressure hijack the decision-making process.

These 10 Decision Cards are cognitive forcing strategies — evidence-based mental interrupts designed to pause automatic thinking at the moments it's most likely to fail you. Print them. Laminate them. Keep them in your scrub pocket. At 3 AM on hour 10 of a 12-hour shift, your System 1 thinking will betray you. These cards activate System 2 when it matters most.

> **How to Use These Cards:** Each card targets a specific high-risk cognitive failure point. Read the trigger scenario, apply the forcing strategy, and use the decision framework before acting. These are designed for the moments when you feel most certain — because certainty during fatigue is the most dangerous cognitive state in emergency medicine.

> ⚠️ **Clinical Disclaimer:** These decision aids supplement — never replace — clinical judgment, institutional protocols, and attending oversight. They are educational tools based on published cognitive science and emergency medicine literature. Always follow your department's specific clinical guidelines.

The 10 Decision Cards

CARD 1

🛑 The Diagnostic Timeout: "What Else Could This Be?"

Cognitive Bias Targeted: Anchoring + Premature Closure

Trigger: You've made a working diagnosis within the first 90 seconds of chart review or patient contact.

The Problem: Anchoring bias causes physicians to fixate on the first diagnosis that fits, then selectively seek confirming evidence. Premature closure — the most common cognitive error in EM — means stopping the diagnostic process when a "good enough" answer appears. Studies show that ED physicians generate their leading diagnosis within 30 seconds of presentation in over 60% of cases.

The Forcing Strategy:

1. **Pause after your initial impression.** Name your working diagnosis out loud or in your head.
2. **Generate three alternative diagnoses** that could explain the same chief complaint, including at least one life-threatening "can't miss" diagnosis.
3. **For each alternative, identify one test or finding** that would support it over your leading diagnosis.
4. **Ask yourself:** "If the next physician reviewed this chart after a bad outcome, what would they say I missed?"

> 💡 **Quick Application:** Patient presents with chest pain and you're thinking GERD after noting epigastric tenderness. STOP. Alternatives: ACS (get ECG + troponin), PE (check Wells score), aortic dissection (any tearing/radiation to back?). Only after actively excluding emergencies should you anchor on the benign diagnosis.

CARD 2

🔄 The Momentum Check: "Am I Treating Inertia or the Patient?"

Cognitive Bias Targeted: Diagnostic Momentum + Framing Effect

Trigger: The patient arrives with a diagnosis already attached — from EMS, triage, a referring physician, or their own internet research.

The Problem: Once a diagnostic label is applied, subsequent providers tend to accept it without independent verification. This is diagnostic momentum: the "transferred diagnosis" gains legitimacy simply through repetition. EMS says "asthma exacerbation" → triage accepts → you accept → nobody listens for the unilateral wheeze indicating foreign body or the new murmur suggesting acute heart failure.

The Forcing Strategy:

1. **Mentally "unlabel" the patient.** Pretend you have no prior information. What does your own assessment show?
2. **Perform your own focused physical exam** — do not rely on the triage assessment for clinical findings.

3. **Ask the patient directly:** "Tell me what's happening in your own words" rather than "So you're here for [transferred diagnosis]?"
4. **Challenge the frame:** "What doesn't fit?" If anything is inconsistent with the working diagnosis, pursue it.

> ⚠️ **High-Risk Scenario:** "Psychiatric patient" labels are the most dangerous momentum diagnoses. Medical clearance is not a rubber stamp. A 2019 study found 5.5% of patients brought in for psychiatric evaluation had acute medical conditions causing or contributing to their symptoms. Always examine the "psych" patient yourself.

CARD 3

⚡ The Zebra Pause: "Is This Atypical or Am I Pattern-Matching Wrong?"

Cognitive Bias Targeted: Representativeness Heuristic + Base Rate Neglect

Trigger: The presentation partially matches a common diagnosis but has 1–2 features that don't quite fit.

The Problem: The representativeness heuristic causes physicians to match patients to the "textbook version" of diseases. But atypical presentations kill — women with MI don't always have chest pain (42% present without it), elderly patients with appendicitis may be afebrile, and young patients with stroke present with "dizziness." When you notice something doesn't fit and dismiss it, you are actively ignoring a diagnostic signal.

The Forcing Strategy:

1. **Name the discrepancy:** "Everything says X except for [this finding]. Why?"
2. **Apply the "Atypical Presentation Checklist":** Is the patient elderly, female, immunocompromised, diabetic, or on steroids? These populations present atypically for nearly everything.
3. **Run the "Reverse Rule-Out":** Instead of asking "does this fit my diagnosis?", ask "does my diagnosis explain ALL the findings?"
4. **If in doubt, test for the dangerous diagnosis** even if the presentation is atypical for it. Low-probability but high-consequence diagnoses deserve workup.

> **Key Data Point:** 30% of malpractice claims in emergency medicine involve atypical presentations of common diseases. The three most commonly missed: MI in women/young patients, stroke presenting as vertigo, and appendicitis in the elderly.

CARD 4

🎯 The Satisfaction Check: "Did I Stop Looking Too Soon?"

Cognitive Bias Targeted: Search Satisficing (Satisfaction of Search)

Trigger: You've found one diagnosis and are ready to move on to the next patient.

The Problem: Satisfaction of search occurs when finding one abnormality reduces the vigilance for additional abnormalities. Found the ankle fracture? You might miss the subtle knee effusion from the dashboard injury mechanism. Diagnosed the UTI? You might miss the concurrent ectopic pregnancy. The busier you are, the more susceptible you become to this bias — your brain craves closure so it can move to the next cognitive task.

The Forcing Strategy:

1. **After each diagnosis, ask:** "Is there a second problem?" Dual pathology is more common than we think — 5–10% of ED patients have two concurrent acute problems.
2. **Re-examine the chief complaint:** Does your diagnosis fully explain every symptom? If the patient came in with abdominal pain and vomiting, and you found a UTI, does a UTI explain the vomiting?
3. **Review all ordered tests, even after diagnosis.** Don't mentally check out after the positive result. The incidental finding on the CT you ordered for appendicitis might be the real emergency.
4. **Mechanism check for trauma:** If the mechanism could have caused more than one injury, actively look for them all. Use the "head-to-toe" forcing function.

CARD 5

🧠 The Availability Override: "Am I Thinking of This Because It's Common — or Because I Saw It Yesterday?"

Cognitive Bias Targeted: Availability Heuristic + Recency Bias

Trigger: Your leading diagnosis is something you've recently seen, recently read about, or recently missed.

The Problem: The availability heuristic causes us to overestimate the probability of diagnoses that come easily to mind. After you miss a PE, suddenly every dyspneic patient "might be a PE." After a colleague's malpractice case involving meningitis, you start doing LPs on patients with simple headaches. Conversely, diagnoses you haven't encountered recently are underweighted, even if they're epidemiologically common. Your cognitive probability estimates are corrupted by your recent experience.

The Forcing Strategy:

1. **Identify your emotional state toward the diagnosis.** Fear, excitement, or heightened awareness about a specific diagnosis = availability bias in action.
2. **Use base rates.** What is the actual prevalence of this diagnosis in this patient population? (e.g., PE prevalence in low-risk ED chest pain patients is 1–2%, not the 20% your gut says after your recent miss.)

3. **Apply validated decision rules** (Wells, PERC, Canadian CT Head, HEART score) to override subjective probability estimates with evidence-based risk stratification.
4. **Ask yourself:** "Would I be considering this diagnosis if I hadn't [seen that case / read that article / heard about that lawsuit] last week?"

CARD 6

🪫 The Fatigue Firewall: "Am I Too Tired to Trust My Judgment?"

Cognitive Bias Targeted: Fatigue-Related Cognitive Impairment

Trigger: You're past hour 8, it's between 2–6 AM, or you've had 3+ high-acuity patients in a row.

The Problem: Being awake for 17 hours produces cognitive impairment equivalent to a blood alcohol concentration of 0.05%. At 24 hours, it's equivalent to 0.10% — legally drunk. A landmark study in the *Annals of Emergency Medicine* demonstrated a 24% increase in diagnostic errors during overnight shifts compared to daytime shifts. Your brain doesn't alert you to its own declining function — in fact, fatigued physicians consistently rate their own performance as "unchanged" while objective measures show significant deterioration.

The Forcing Strategy:

1. **Self-assess using the Quick Fatigue Check:** Can you easily perform serial 7 subtraction? Can you recall the names of your last 3 patients without checking? If either is difficult, your cognition is impaired.
2. **Lower your discharge threshold.** When fatigued, admit when in doubt. The cost of an unnecessary admission is lower than the cost of a missed diagnosis.
3. **Use checklists, decision rules, and protocols** — they exist precisely to protect patients when your cognitive reserves are depleted.
4. **Phone a friend.** Call the on-call specialist, discuss with a colleague, or activate your department's "cognitive second opinion" protocol if available.
5. **Document your clinical reasoning.** If you can't articulate why you're making a decision, you shouldn't be making it alone at 3 AM.

Quick Fatigue Self-Check

Score yourself honestly (1 = strongly disagree, 5 = strongly agree):

- I'm having difficulty concentrating on complex histories: ____/5
- I've re-read the same chart section more than once: ____/5
- I'm making decisions faster than usual to clear the board: ____/5
- I feel irritable with patients, nurses, or colleagues: ____/5
- I've caught myself making (or almost making) an order error: ____/5

Score >15: Your cognition is significantly impaired. Use maximum decision support and lower your thresholds for workup and admission. **Score >20:** Consider whether it's safe to continue making independent clinical decisions.

CARD 7

🏥 The Disposition Trident: "Admit, Observe, or Discharge?"

The 3 AM Decision Matrix

Trigger: You're uncertain whether to admit, place in observation, or discharge — especially during off-hours when consultants are less available.

The Problem: Disposition decisions at night are influenced by system pressures (bed availability, boarding, attending preference) rather than clinical factors alone. The "too sick to discharge but not sick enough to admit" gray zone is where most EM risk accumulates.

Factor	Favors Discharge	Favors Observation (6–24h)	Favors Admission
Vital sign trend	Normal and stable x2 readings	Abnormal but improving with intervention	Persistently abnormal or worsening
Diagnostic certainty	Confident benign diagnosis, workup negative	Awaiting results that will change management	Uncertain diagnosis with dangerous differentials still on the list
Functional status	Ambulatory, eating/drinking, self-care intact	Marginal — can manage with assistance	Cannot perform ADLs, unsafe at home
Social safety net	Reliable follow-up in 24–48h, someone at home	Follow-up uncertain but patient can return	No follow-up, homeless, no reliable transportation for return
Red flag symptoms	None present	One minor red flag, trending better	Any major red flag or multiple minor ones
Gut feeling	"I'd send my family member home"	"I'd want them watched for a few hours"	"Something doesn't feel right"

> 💡 **The "Teach-Back" Discharge Test:** Before discharging, ask the patient: "Tell me in your own words when you should come back." If they can't articulate return precautions, they're not safe to discharge — regardless of what your clinical judgment says about their medical condition.

CARD 8

📋 The Handoff Shield: Structured Communication for Shift Change

I-PASS+ Framework for EM Handoffs

Trigger: Any patient you're handing off to the incoming physician, especially "boarders" and patients mid-workup.

The Problem: Shift change is the most dangerous time in the ED. A 2017 study in *Annals of Emergency Medicine* found that patients present during a physician shift change had a 2.5% increase in mortality risk. The failure isn't usually missing information — it's failing to communicate uncertainty and pending action items clearly.

I-PASS+ Template for Each Patient:

I — Illness Severity: Stable / Watcher / Unstable
"This patient is a [watcher]. They could go either way."

P — Patient Summary: One-liner with key demographics and chief complaint.
"72-year-old male on warfarin presenting with GI bleeding, hemodynamically stable after 2L NS."

A — Action List: Specific pending tasks with expected timelines.
"Repeat H/H in 2 hours (due at 0800). GI consult called, awaiting callback. Type and screen sent."

S — Situation Awareness: What could go wrong and what to watch for.
"If H/H drops more than 2 points or vitals trend down, he needs a massive transfusion protocol. His INR was 4.2 — PCC was given but recheck pending."

S — Synthesis: The receiving physician reads back their understanding of the plan.
"So I'm watching for a repeat H/H at 0800, expecting GI to call back, and if he decompensates, I'm going straight to MTP."

+ (EM Addition) — Contingency Plan: Explicit if/then disposition.
"If H/H stable and GI says no scope needed, he can go to floor with GI follow-up. If H/H drops, he needs ICU."

⚠️ **Never hand off uncertainty without naming it.** "I'm not sure what's going on with this patient" is the most important thing you can say during handoff. The incoming physician needs to know what you're worried about, not just what you've done.

CARD 9

The Fatigue-Proof Physical Exam: Red Flags You Must Not Miss

High-Yield Exam Findings When You're Running on Fumes

Trigger: You're fatigued and tempted to do a cursory exam, or the patient "looks fine."

The Problem: When fatigued, physicians unconsciously shorten their physical examination, relying more on history and testing. But certain physical exam findings are diagnostic and cannot be replaced by labs or imaging. Missing them means missing the diagnosis entirely.

System	Red Flag Finding	What It Suggests	Action Required
Neuro	Asymmetric pupils (>1mm difference)	Uncal herniation, CN III palsy, aneurysm	Emergent CT head, neurosurgery consult
Neuro	Cerebellar signs (HINTS exam positive)	Posterior stroke vs. vestibular neuritis	MRI/MRA, stroke team activation
Cardiac	New murmur + fever	Endocarditis	Blood cultures x2, echo, admission
Cardiac	JVD + hypotension + muffled heart sounds	Cardiac tamponade (Beck's triad)	Bedside echo STAT, prep for pericardiocentesis
Vascular	Unilateral leg swelling + tenderness	DVT (proximal = high PE risk)	Duplex ultrasound, consider empiric anticoagulation
Abdominal	Peritoneal signs (rebound, guarding, rigidity)	Surgical abdomen	Surgery consult BEFORE CT — don't delay for imaging
Skin	Non-blanching purpura + fever	Meningococcemia, DIC, TTP	Immediate antibiotics, don't wait for LP
Skin	Rapidly expanding erythema with crepitus	Necrotizing fasciitis	Emergent surgical debridement — imaging delays death
MSK	Passive range of motion pain in a joint	Septic arthritis until proven otherwise	Arthrocentesis, empiric antibiotics
Psych	Acute confusion + vital sign abnormality	Medical (not psychiatric) cause of AMS	Full medical workup before any psychiatric label

> **The 60-Second Fatigue-Proof Exam:** Even when exhausted, never skip these: (1) Pupils, (2) Heart sounds, (3) Lung sounds bilaterally, (4) Abdomen palpation, (5) Skin survey. These five take 60 seconds and catch the diagnoses that kill overnight.

CARD 10

💊 The High-Risk Medication Safety Net

Dosing Quick-Reference for Error-Prone Medications in EM

Trigger: You're ordering any high-alert medication, especially during off-hours when pharmacy verification may be delayed.

The Problem: Medication errors in the ED occur at a rate of 5.4 per 100 patients, with the highest risk during resuscitations and overnight hours. Wrong-dose errors account for 37% of all ED medication errors. Fatigue-related calculation mistakes are common, especially for weight-based dosing in patients whose weight you're estimating.

Medication	Common Error	Correct Dosing	Safety Check
Heparin (IV)	Bolus/infusion rate confusion	80 units/kg bolus, 18 units/kg/hr infusion	Verify weight. Use actual body weight. Double-check rate vs. concentration.
tPA (Alteplase)	Wrong total dose, bolus miscalculation	0.9 mg/kg (max 90mg), 10% as bolus over 1 min, remainder over 60 min	Use actual weight. Independent nurse double-check. Clock the infusion time.
Insulin (IV drip)	Units vs. mL confusion	Regular insulin 0.1 units/kg/hr for DKA	Always verify concentration on bag. "Units" must be written out — never "U."
Epinephrine	1:1,000 vs 1:10,000 concentration	Anaphylaxis: 0.3–0.5 mg IM (1:1,000). Cardiac arrest: 1 mg IV (1:10,000)	IV epi in anaphylaxis = potential cardiac arrest. Route determines concentration.
Fentanyl	Microgram vs milligram error (1000x)	1–2 mcg/kg IV (typical 50–100 mcg)	Always think in micrograms. A milligram of fentanyl can be lethal.
Diltiazem	Bolus given without monitoring setup	0.25 mg/kg IV over 2 min (max 20 mg initial)	Continuous cardiac monitoring. Have pressors at bedside. Second dose: 0.35 mg/kg.
Ketamine (procedural)	IM dose given IV (10x relative overdose)	IV: 1–2 mg/kg. IM: 4–5 mg/kg	ALWAYS verify route before drawing up. IV and IM doses are drastically different.

Potassium (IV)	Rate too fast → cardiac arrest	Max 10 mEq/hr peripheral, 20 mEq/hr central	Never bolus KCl. Verify rate on pump. Cardiac monitoring for rates >10 mEq/hr.

> ⚠️ **The 3 AM Medication Safety Rule:** After midnight, independently verify every high-alert medication dose yourself — don't rely on memory. Use a dosing app, calculator, or reference. Pharmacist may not catch the error before the medication reaches the patient at 0300.

The Overwhelmed Protocol: When Everything Hits at Once

There will be shifts where the department is on fire. Multiple critical patients, boarding, short-staffed, and your cognitive bandwidth is maxed out. This is when the worst errors happen — not because any single patient is complicated, but because cognitive overload degrades performance across all patients simultaneously.

The STOP-BREATHE-PRIORITIZE Protocol

Step 1 — STOP: Physically stop moving for 10 seconds. You feel like you can't afford to pause — this is exactly when you must.

Step 2 — BREATHE: Three slow breaths. This is not wellness theater — it physiologically activates the parasympathetic nervous system, reducing cortisol-driven cognitive narrowing. Research in *Psychoneuroendocrinology* shows that 90 seconds of controlled breathing restores prefrontal cortex function during acute stress.

Step 3 — PRIORITIZE: Mentally sort your patients into three categories:

- 🔴 **Dying right now** — active resuscitation, decompensating vitals, or time-sensitive diagnosis (STEMI, stroke, septic shock). This gets ALL your cognitive resources until stabilized.
- 🟡 **Could get worse** — abnormal vitals but stable, pending results that could change management, undifferentiated complaint with dangerous differentials. These need reassessment on a timer.
- 🟢 **Stable and can wait** — stable vitals, benign diagnosis established, awaiting disposition or results that won't change immediate management. These get attention last.

Step 4 — DELEGATE: What can you hand to your team? Nurses can reassess vitals, residents can gather histories, techs can run ECGs. You do not need to personally execute every task.

Step 5 — COMMUNICATE: Brief your charge nurse: "I'm overloaded. Rooms 4 and 7 are my critical patients. Please hold new patients if possible and redirect anything non-urgent." Speaking the overwhelm

out loud is not weakness — it's a safety behavior.

Cognitive Impairment Self-Assessment for Physicians on Shift

Use this tool every 4 hours during overnight shifts, or whenever you recognize cognitive warning signs. Be brutally honest — no one sees this but you.

1 **Serial 7s: Can you subtract 7 from 100 five times smoothly? (100, 93, 86, 79, 72)**

- ☐ Yes, without hesitation
- ☐ Yes, but it took deliberate effort
- ☐ I made an error or had to restart

2 **Can you name your last 4 patients (name or chief complaint) without looking at the board?**

- ☐ Yes, all 4
- ☐ 2–3 of them
- ☐ Fewer than 2

3 **Are you reading sentences or paragraphs in charts and realizing you didn't absorb them?**

- ☐ No — I'm tracking well
- ☐ Occasionally
- ☐ Frequently — I keep re-reading the same things

4 **Are you making decisions faster than usual to "clear the board"?**

- ☐ No — I'm being thorough
- ☐ Possibly — I've caught myself cutting corners
- ☐ Definitely — I just want this shift to end

5 **Have you felt irritable with a patient, nurse, or colleague in the past hour?**

- ☐ No
- ☐ Mildly
- ☐ Yes — and I know it's the fatigue, not them

Scoring Your Cognitive Impairment

Score: First option = 0, Second = 1, Third = 2. Maximum score: 10.

- **0–2 (Green):** Cognitive function intact. Continue normal practice with standard vigilance.
- **3–5 (Yellow):** Mild impairment detected. Increase use of checklists, decision rules, and protocols. Lower your discharge threshold. Discuss complex cases with a colleague.
- **6–8 (Orange):** Significant impairment. Use maximum decision support for all patient decisions. Do not make complex disposition decisions alone. Ask your charge nurse to help triage your cognitive load.
- **9–10 (Red):** Severe impairment. You are operating at a level equivalent to legal intoxication. If your department has a "tap out" protocol, use it. If not, communicate your impairment to your charge nurse and co-residents and minimize independent high-stakes decision-making.

Handoff Communication Templates

Use these fill-in templates for every patient handoff during shift change. Force yourself to complete every field — skipping a field is how critical information gets lost.

Template 1: Active Resuscitation / Critical Patient

Patient: [Name/Age/Sex] | Room: [____]
Illness severity: 🔴 UNSTABLE
One-liner: [____]-year-old [M/F] with [presenting complaint], currently [clinical status].
Key interventions done: [List all: fluids, meds, procedures, imaging]
Pending results: [Specific tests + expected time: "Trop at 0400, CT read pending"]
Active drips/devices: [Pressors, ventilator settings, blood products running]
What I'm worried about: [Specific deterioration scenario]
IF [X happens] THEN [Y action]: [Explicit contingency plan]
Consultant status: [Who was called, their recommendation, pending callbacks]
Family status: [Who's aware, what they've been told, who's decision-maker]

Template 2: Observation / Mid-Workup Patient

Patient: [Name/Age/Sex] | Room: [____]
Illness severity: 🟡 WATCHER

One-liner: [____]-year-old [M/F] with [presenting complaint], workup in progress.
Working diagnosis: [Primary] | Dangerous alternatives still on differential: [List]
Pending results that will change plan: [Test → If positive: ____ | If negative: ____]
Reassessment due at: [Specific time]
Disposition plan: [If workup negative → discharge with: ____ | If positive → admit to: ____]
Return precautions given: □ Yes □ No — needs to be done

Template 3: Stable / Awaiting Disposition

Patient: [Name/Age/Sex] | Room: [____]
Illness severity: 🟢 STABLE
One-liner: [____]-year-old [M/F] with [diagnosis], ready for [discharge/admission].
Pending for disposition: [Bed assignment / ride home / prescription / follow-up scheduled]
Time-sensitive? □ No □ Yes — [Reason: boarding, family waiting, etc.]

Quick-Reference: Validated Decision Rules for Common EM Presentations

When fatigued, don't rely on gestalt — use these evidence-based tools to support your decisions.

Clinical Scenario	Decision Rule	Key Components	Purpose
Chest pain — ACS risk	HEART Score	History, ECG, Age, Risk factors, Troponin (0–10)	0–3: safe for early discharge. 4–6: observation. 7+: admit/intervene
Pulmonary embolism	Wells + PERC	Wells criteria for pretest probability; PERC to rule out in low-risk	Low Wells + PERC-negative = no further testing needed
Head CT after trauma	Canadian CT Head Rule	GCS <15, suspected skull fracture, signs of basal fracture, vomiting ≥2, age ≥65, amnesia, dangerous mechanism	100% sensitivity for neurosurgical intervention
C-spine imaging	NEXUS / Canadian C-Spine	Midline tenderness, focal deficits, alertness, intoxication, distracting injury	Clear c-spine clinically when all criteria met
Ankle/foot fracture	Ottawa Ankle/Foot Rules	Bone tenderness at specific landmarks + inability to bear weight	Sensitivity ~98% for significant fractures — safe to defer imaging if negative
Syncope risk	Canadian Syncope Risk Score	ED diagnosis, predisposition, troponin, QTc, ED systolic BP	Low risk = safe for outpatient evaluation
Subarachnoid hemorrhage	Ottawa SAH Rule	Age ≥40, neck pain/stiffness, witnessed LOC, onset during exertion, thunderclap, limited neck flexion	100% sensitivity — any positive = CT head needed

Final Principle: The Anti-Ego Mindset

The most dangerous cognitive bias in emergency medicine isn't anchoring, availability, or premature closure. It's overconfidence. The physician who says "I've been doing this for 20 years, I know what this is" is the physician most likely to miss the atypical presentation. Experience builds pattern recognition — which is powerful — but it also builds false confidence in those patterns.

The best emergency physicians share three traits:

1. They are **systematically paranoid** — they assume every patient might be trying to die until proven otherwise.
2. They are **intellectually humble** — they know what they don't know, and they're comfortable saying "I'm not sure."
3. They are **cognitively disciplined** — they use decision support tools not because they're weak, but because they understand the limitations of the human brain under stress.

These 10 cards won't prevent every error. But they create structured moments of reflection at the exact points in clinical reasoning where cognitive biases are most likely to cause harm. Use them. Teach them to your residents. Make them part of your shift routine. Because the shift where you think you don't need them is the shift where you need them most.

💡 **Implementation Tip:** Print cards 1–5 (cognitive biases) on one laminated card and cards 6–10 (clinical tools) on another. Keep them in your scrub pocket. Reference them during the first and last hour of every shift — the transition periods when errors cluster.