



Can I Pull You for a Consult?

The Hidden Costs of Hospitalization — Love Island Edition

Laura Bishop, M.D. · University of Louisville · Laura.Bishop@Louisville.edu

Disclaimers & Educational Need

Disclosures

No financial disclosures. I support evidence-based, equitable healthcare for all patients, regardless of background.

Why Are We Here?

Every day, we place orders driven more by habit than by evidence. Inertia prevents us from questioning practices that seem harmless — but carry real costs to patients, teams, and systems. This session is about changing that.

Learning Objectives

1

Identify

Common low-value inpatient practices and describe their financial, patient, team, and downstream diagnostic costs.

2

Apply

Evidence-based criteria to decisions about monitoring, testing, consultation, fasting, mobility, and other routine inpatient care.

3

Implement

Practical deimplementation strategies — clinical decision support, default changes, and interprofessional stewardship — to reduce low-value care in your practice.



Welcome to the Villa 🌴

Love Island rules apply. Every hospitalized patient enters the villa loaded up with orders — tests, treatments, monitoring, consults, and restrictions. Some couples are meant to be. Others... need to be dumped.

Each Round

A clinical scenario drops into your DMs. Your table huddles to discuss

Recoupling Ceremony

Lock in your choice:

♥ Keep it or ♥ Dump it.

Bombshell

The evidence enters the villa. We examine the hidden cost receipt together.

ROUND 1

I've Got a Text: Do Not Disturb

A **46-year-old woman** admitted with uncomplicated cellulitis is now clinically improving after transitioning to oral antibiotics. She has been afebrile for 36 hours, HR 72, BP 128/74, is eating and ambulating, and is expected to discharge tomorrow.

📄 **The situation:** Vitals are still ordered every 4 hours — including overnight.

Your table has 2 minutes. ❤️ **KEEP q4h vitals** or ❤️ **DUMP: Let Her Sleep?**

Why Do We Keep Doing It?

→ Fear

Anxiety about missing a deteriorating patient overnight drives reflexive monitoring.

→ Routine / Inertia

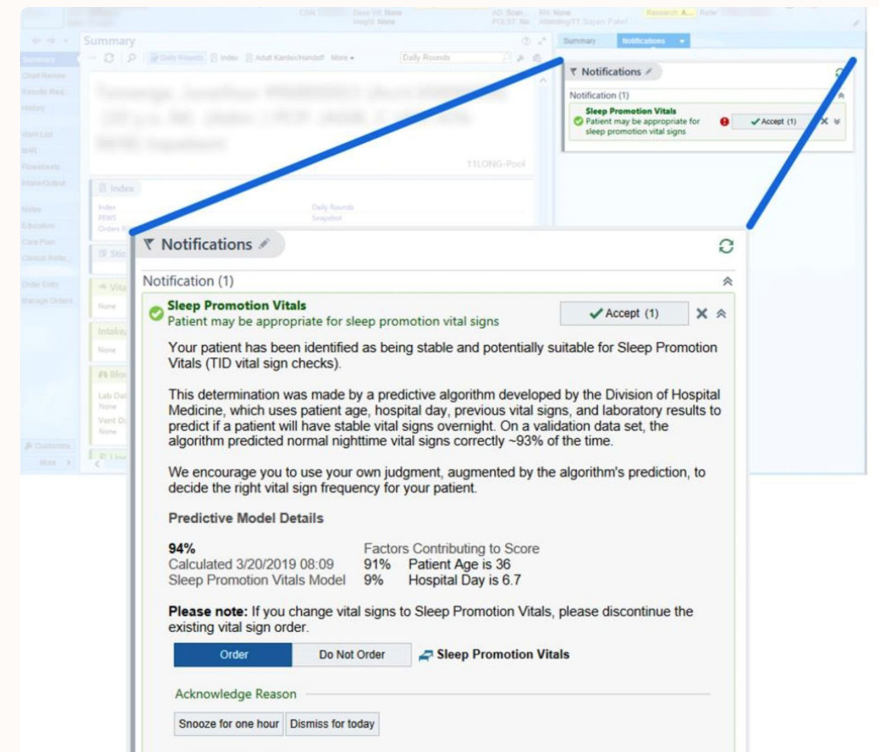
The q4h vital order gets placed on admission and nobody cancels it when the patient stabilizes.

It's a No From Me: Overnight Vitals on Stable Patients

1,930 patients randomized 1:1. Sleep opportunity increased
~23 min/night.

**31% reduction in overnight vital checks —
with no increase in ICU transfers, rapid
responses, or mortality.**

Najafi N, et al. JAMA Intern Med. 2022;182(2):172-177.



SIESTA PROGRAM

Sleep-Protective Orders in Action

SIESTA-enhanced unit vs. standard sleep-protective orders — 6 months pre/post.

44%

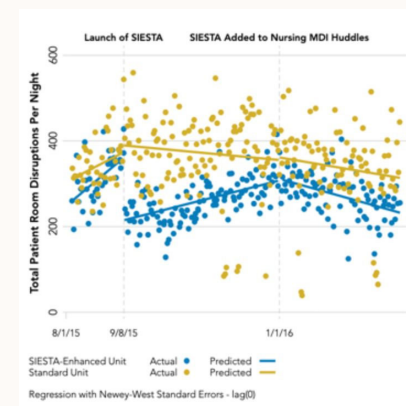
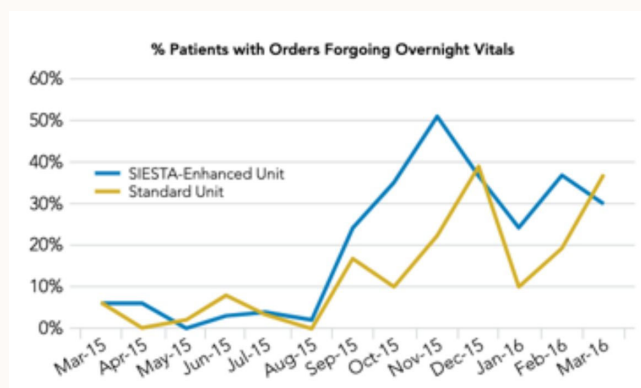
Fewer Nighttime Room Entries

vs. standard unit ($P < .001$)

31%

Reduction in Vital Checks

1.41 → 0.97 checks/patient-night



What Does a q4h Vital Really Cost?

Domain	The Question to Ask	Cost of Routine Overnight Vitals in a Stable Patient
 Financial	What resources or charges does this consume?	Low direct cost per check — but multiplied across thousands of patients nightly, nursing labor is significant.
 Patient	What does the patient experience because we did this?	High. Sleep disruption is strongly linked to delirium risk, patient dissatisfaction, and impaired recovery.
 Team	Who has to do something because I clicked this?	Moderate. Nursing workload, documentation burden, and room entries throughout the night.
 Cascade	What else might this order generate?	Moderate. One odd BP → repeat check → page resident → find manual cuff → repeat page → PRN IV med → hypotension risk.

The 4 E's of Deimplementation



Educate

Teach the evidence, the indications, the harms, and when a practice can safely be stopped. This is the foundation — but the weakest lever alone.



Empower

Give nurses, pharmacists, and other team members the authority and tools to stop low-value care when criteria are met.



Embed

Build the better choice into workflow: reminders, order defaults, indication-based ordering, automatic expiration dates.



Enforce

Hardwire stewardship when softer approaches fail — remove unnecessary defaults, limit duration, or require an indication at the point of order entry.

ROUND 2

I've Got a Text: One Tele Bed Left

There is **one telemetry bed** remaining on the unit. Three patients need it. Who gets it? Your table has 2 minutes.

Sam Sync

68-year-old with unexplained syncope.

Sudden loss of consciousness while standing, no prodrome, normal initial ECG, electrolytes normal. Admitted tonight for further evaluation.

Rachel Rate

74-year-old with atrial fibrillation with RVR. HR 150s on admission yesterday, now rate-controlled in the 70s–80s for >24 hours. Hemodynamically stable, no recurrent symptoms. Discharge likely tomorrow.

Tele Trevor

59-year-old with community-acquired pneumonia + hypokalemia. Clinically improving, on 2L O₂. K 3.2, being repleted. No known arrhythmia. Telemetry ordered "just in case."

Telemetry: Who Actually Needs It?

Duration	Indication / Event
24 hours	Critical electrolyte abnormality; severe sepsis
48 hours	Rule out MI; syncope; other (long QT, myocarditis, drug overdose)
72 hours	After cardiac arrest; acute coronary syndrome or post-PCI; acute pulmonary embolism
Indefinitely	Post-stroke arrhythmia workup; cardiothoracic/vascular surgery; pulmonary hypertension or advanced HF; arrhythmia as primary reason for admission

 **Prior literature reports as many as 43% of monitored patients lack a recommended indication.** Only 24% of telemetry-days meet AHA criteria. Reassess need every single day.

THE EVIDENCE

EHR Alerts Cut Telemetry — Safely

A **cluster-randomized clinical trial of 1,066 hospitalizations** tested EHR alerts triggered when a patient's telemetry order exceeded the guideline-recommended duration for the stated indication. Results:

62%

of the time, physicians chose to **discontinue monitoring** in response to the alert.

8.7 hrs

Reduction in mean telemetry hours per hospitalization (41.3 vs. 50.0 hrs, $P = .001$)

No difference

In rapid-response calls (6.0% vs. 5.6%) or medical emergency events (0.4% vs. 0.4%)

Najafi N, et al. Assessment of a Targeted Electronic Health Record Intervention to Reduce Telemetry Duration: A Cluster-Randomized Clinical Trial. JAMA Intern Med. 2019;179(1):11-15.

QI WIN

Hardwiring Telemetry Stewardship



01

Removed from Order Sets

Standardized telemetry ordering; removed from general admission order sets.

02

Indication Required

Clinicians required to choose a specific indication with a predefined, guideline-based duration.

03

Nurse-Driven Discontinuation

Embedded criteria allowing nurses to stop telemetry automatically when safe criteria were met.

The True Cost of Unnecessary Telemetry

Domain	Hidden Cost
 Financial	UK gross charge ~\$3,923/telemetry bed; discounted ~\$1,569. Monitoring resources, staff time, equipment maintenance.
 Patient	Wires restrict mobility; alarm fatigue disrupts sleep; increased risk of delirium; false sense of security can delay mobilization.
 Team	Alarm burden on telemetry monitoring staff; capacity limits who can access monitored beds — a real opportunity cost.
 Cascade	Incidental rhythm finding → echocardiogram → cardiology consult → cardiac catheterization → delayed discharge.

 **Opportunity cost is the hidden lesson:** only 24% of telemetry-days meet AHA criteria. Every unnecessary monitored bed is a bed unavailable to someone who truly needs it.

ROUND 3

I've Got a Text: Consult Tokens

Your table has been given **3 Consult Tokens**. Five patients are waiting. You do not have to use all three. Spend wisely — table huddle, 2 minutes.

Mild AKI

Clear hypovolemia, improving with fluids

New Cirrhosis

First presentation with ascites

Troponin Elevation

During sepsis, no ischemic symptoms

First Unprovoked PE

Hemodynamically stable, on anticoagulation

Persistent *S. aureus* Bacteremia

Day 3, still growing in cultures

- ☐ For every consult token you spend: **What are you expecting the consultant to add?** Diagnostic expertise? Procedure? Treatment change? Prognostic guidance? Longitudinal care? Risk reduction? **If you can't name the expected value — why are you calling?**

More Consults ≠ Better Outcomes

A **Medicare retrospective review of ~700,000 admissions** compared top-quartile consulting hospitalists to their peers (1.4 vs. 1.1 consults/patient):

Outcome	High-Consulting	Others	Adjusted OR / Difference
LOS (days)	6.1	5.8	OR 1.04 (1.03–1.05)
Spending	\$1,427	\$1,265	+\$137.90 adjusted
Discharge home	41.5%	42.9%	OR 0.96 (0.94–0.98)
30-day mortality	10.3%	10.3%	OR 1.01 (0.98–1.03)

⚠️ **Observational data ≠ proof that consults cause worse outcomes.** But more subspecialty visits added \$1.3B in 2014 Medicare spending. The signal warrants scrutiny.

Stevens JP, et al. JAMA Netw Open. 2020;3(2):e1921750.

Which Consults Add Value?

Selected evidence examples for high-value inpatient consultation

★ 1. Strong clinical benefit

High value		1. ID consult in <i>S. aureus</i> bacteremia	Evidence Systematic review / meta-analysis	Effect 30-day mortality RR 0.53 (95% CI 0.43–0.65)	 Vogel M, et al. <i>J Infect.</i> 2016;72(1):19–28.
High value		2. Orthogeriatric co-management (hip fracture)	Evidence Systematic review / meta-analysis	Effect In-hospital mortality RR 0.72; LOS decreased 1.55 days	 Van Hege A, et al. <i>Calcif Tissue Int.</i> 2022;110(2):162–184.
High value		3. Addiction medicine consult	Evidence RCT	Effect MOUD initiation 57.3% vs 26.7% (aRR 2.10)	 Ober AJ, et al. <i>JAMA Intern Med.</i> 2025;185(6):624–633.

🎯 2. Value depends on the goal

Targeted value		4. Early palliative care	Evidence Meta-analysis (economics)	Effect Direct hospital costs reduced ~\$3,237/admission	 May P, et al. <i>JAMA Intern Med.</i> 2018;178(6):820–829.
Targeted value		5. Default palliative care consult	Evidence Pragmatic cluster RCT	Effect No LOS reduction; increased hospice discharge and DNR orders	 Courtright KR, et al. <i>JAMA.</i> 2024;331(3):224–232.

⚠️ 3. Low-value example

Low value		6. Cardiology consult for elevated troponin without ACS	Evidence Retrospective cohort	Effect ↑ LOS, ↑ cardiac testing, ↑ new cardiac meds; no mortality benefit	 Kousa O, et al. <i>Am J Med Sci.</i> 2021;361(3):303–309.
-----------	---	---	---	---	--



Use the consult that matches the clinical question — not every valuable consult improves length of stay.

Consults With Nuance — and a Low-Value Example

Early Palliative Care

Meta-analysis (economics): direct hospital costs reduced ~\$3,237/admission. **But** a pragmatic cluster RCT found no LOS reduction — only increased hospice discharge and DNR orders. Value depends entirely on the goal of the consult.

May P, et al. JAMA Intern Med. 2018;178(6):820-829.

Courtright KR, et al. JAMA. 2024;331(3):224-232.

Cardiology Consult for Troponin Elevation Without ACS

Retrospective cohort: requesting cardiology for troponin elevation in the absence of ACS was associated with **↑ LOS, ↑ cardiac testing, ↑ new cardiac medications, and no mortality benefit.**

The question is never "Can I manage this myself?" It's: **"What value do I expect this consultation to add?"**

Koussa O, et al. Am J Med Sci. 2021;361(3):303-309.

-  Use the consult that matches the clinical question — not every valuable consult improves length of stay. Consultation has high value when specialist expertise changes important outcomes.

The Cost of the Reflexive Consult

Domain	Hidden Cost
 Financial	Professional fees + downstream testing. Subspecialty consults added \$1.3B in 2014 Medicare spending.
 Patient	More teams, more messages, potentially conflicting recommendations. Coordination burden falls on the patient and family.
 Team	Specialist workload, care coordination complexity, discharge delays awaiting consultant input.
 Cascade	Consult → tests/procedures → incidental findings → more consults → delayed discharge decisions.

✓ **Hidden lesson:** Resource stewardship is NOT avoiding expertise. Call ID for *S. aureus* bacteremia. Call palliative care early for goals-of-care conversations. Call addiction medicine for OUD. Consult for a defined question — not for reassurance.

ROUND 4

I've Got a Text: Feed Me or Leave Me

It's **7:30 AM** on the medicine service. All four patients were made NPO at midnight. Table huddle — 2 minutes — decide who gets breakfast.

"GI May Scope Later"

Stable patient with anemia, no active bleeding. No procedure time scheduled yet.

IR Biopsy at 3 PM

Procedure is scheduled and confirmed for this afternoon.

Possible Stress Test

Cardiology has not yet decided whether it will happen today.

TEE This Afternoon

Procedure time is confirmed for later today.

 **Bombshell just dropped** 📱 : GI texts — patient bumped to an add-on scope. Now what? Feed immediately? Wait for lunch? Keep NPO "just in case"? Change IVF/glucose orders?

The NPO Problem Is Bigger Than You Think

The Data

One year of retrospective data: at least one NPO order in **46.6% of admissions**. Median fasting duration: **~13 hours (2 missed meals)**.

- ~**23%** of reviewed NPO orders were avoidable
- ~**45%** of missed meals were potentially avoidable
- ~**20%** of procedures patients fasted for never happened

Why the "NPO After Midnight" Rule is Outdated

The rule originated from a 1940s report on aspiration risk under general anesthesia in pregnant patients — and was generalized to *all* patients by the 1960s. Gastric emptying studies show **clear liquids leave the stomach within 2 hours**. Times vary for solids.

The ASA published evidence-based guidelines decades ago. We just aren't following them.

Sorita A, et al. Mayo Clin Proc. 2015;90(9):1225-1232. Black MKM et al. J Hosp Med. June 2021.

ASA Fasting Guidelines: What You Actually Need

Test / Procedure	Required NPO Duration
CT Scan — with contrast	2 hours
CT Scan — without contrast	No fasting required
MRI Abdomen/Pelvis	4 hours
TEE	8 hours
Stress Test (ECG, Echo, Nuclear)	3 hours
TTE (Echo)	No fasting required
Upper Endoscopy / ERCP	6 hours
Colonoscopy	After midnight (clear liquids per prep protocol)
Cardiac Catheterization	2 hours (liquids only for 8 hours)
Lumbar Puncture (floor or fluoro)	No fasting required
Paracentesis (floor)	No fasting required
Paracentesis (US guided)	4 hours

 **ASA General Rule:** Clear liquids = 2 hrs; breast milk = 4 hrs; infant formula/nonhuman milk = 6 hrs; light meal (toast + clear liquids) = 6 hrs; fatty meal = 8 hrs.

What Unnecessary NPO Actually Costs

Domain	Hidden Cost
 Financial	Missed meals → unnecessary IV fluids → potential increased LOS. IV nutrition and fluids carry direct costs and nursing labor.
 Patient	Hunger, thirst, frustration. Malnutrition risk. Physiologic harm from prolonged catabolism, especially in elderly or cachectic patients.
 Team	Diet changes, calls to dietary, coordination with procedural teams, nursing time placing IV access and managing fluids.
 Cascade	NPO → IV fluids ordered → glucose checks added → insulin adjustments → electrolyte monitoring → additional labs → delay in discharge.

 **Hidden lesson — Order inertia:** NPO orders fire and nobody cancels them. Set fasting orders to expire automatically. Default to 2h clear liquids / 6h light meal per ASA guidelines.

ROUND 5

I've Got a Text: Daily Labs

Meet **J. Smith**, a 63-year-old woman admitted with community-acquired pneumonia. She's been afebrile for 24 hours, breathing on room air, eating, and ambulating. Discharge is likely tomorrow. Her morning labs from the past two days look like this:

Test	Day 1	Day 2	Normal Range
WBC (K/uL)	12.1	9.8	4.0–11.0
Hgb (g/dL)	11.4	11.2	12.0–16.0
Na (mEq/L)	137	138	135–145
K (mEq/L)	4.1	4.0	3.5–5.0
Cr (mg/dL)	0.9	0.9	0.6–1.2

 The morning lab order set is already queued: CBC, BMP, Mg, Phos. **Do you sign it?**

The Morning Labs Diner: Price Transparency Receipt

Lab Test	Full Price	Discounted
CBC	\$110.00	\$44.00
CBC w/ Diff	\$184.00	\$74.00
BMP	\$193.00	\$77.00
CMP	\$289.00	\$115.60
Magnesium	\$119.69	\$47.88
PT/INR	\$78.00	\$31.20
Total	\$1,176.69	\$470.88

Based on hospital price-transparency data.

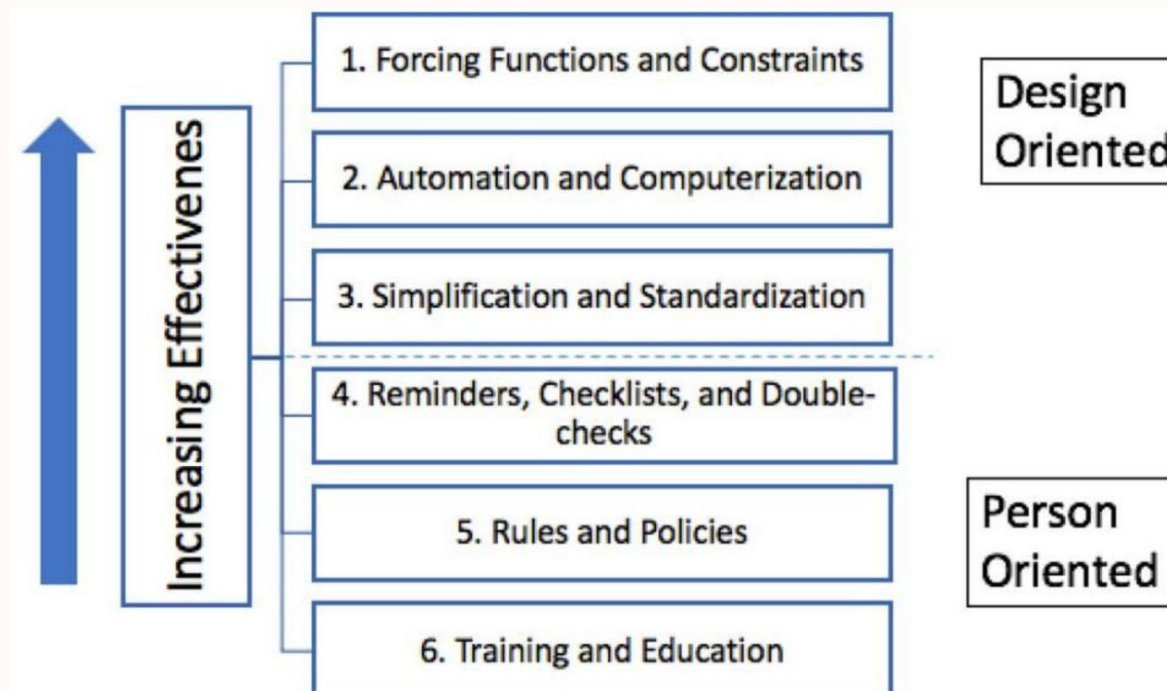
But Does Showing Cost Actually Change Behavior?

The **PRICE Trial** randomized 30 lab groups to display Medicare allowable fees in the EMR vs. 30 controls. Result: **No significant change** in test ordering behavior (4.01 vs. 2.34 tests/patient-day) or associated fees.

Showing clinicians the price tag alone doesn't work. **Education is the weakest lever.**

Sedrak MS, et al. JAMA Intern Med. 2017;177(7):939–945.

Education Isn't Enough: The Intervention Hierarchy



Adapted from the Institute for Safe Medication Practices. The most effective interventions are **design-oriented** — forcing functions, automation, and standardization. Training and education alone sit at the bottom. If your de-implementation strategy is just a lecture... this is why it doesn't stick.

ISMP Medication Safety Alert! 1999 (June 2). Adapted from Silverstein WK, et al. JAMA Intern Med. 2024;184(3):322-323.

BOMBSHELL 🧨

What Actually Works for Daily Labs

A **stepped-wedge quality improvement study covering 125,854 patient-days across nearly 12,000 unique encounters** tested a multifaceted intervention to reduce routine lab ordering. The approach removed indefinite recurring labs and required a deliberate daily choice to reorder:

14%

Fewer Routine Tests

Statistically significant reduction in unnecessary daily lab ordering across all patient populations.

20%

More Lab-Free Days

Increased proportion of patient-days without any routine labs drawn — better for patients and staff.

\$1.15

Saved per Patient-Day (CAD)

Modest direct savings, but the bigger story is downstream cascade reduction.

✓ No worsening of any measured safety outcomes. **Stopping standing daily labs in stable patients is safe.**

Ambasta A, et al. BMJ Qual Saf. 2023.

The Real Cost of Daily Labs

Domain	Hidden Cost
 Financial	Cumulative charges add up fast. Annual phlebotomy costs exceeded \$15M (or \$2,500/admission) at one academic center — and that's just the draw, before downstream costs.
 Patient	Phlebotomy disrupts sleep. Up to 20% of inpatients develop iatrogenic anemia (avg 0.7 g/dL drop per 100 mL drawn). Prolonged LOS waiting for "one more trend."
 Team	Lab technicians, phlebotomists, nurses reviewing results, physicians acting on borderline values — all generate labor from one order.
 Cascade	False-positive / borderline result cascade. Labs are <5% of hospital spending but drive 60–70% of downstream clinical decisions.

 **Hidden lesson: Diagnostic cascade is the biggest cost.** Every draw can start a cascade. Stop standing daily labs once stable — order labs with a clear clinical question in mind.



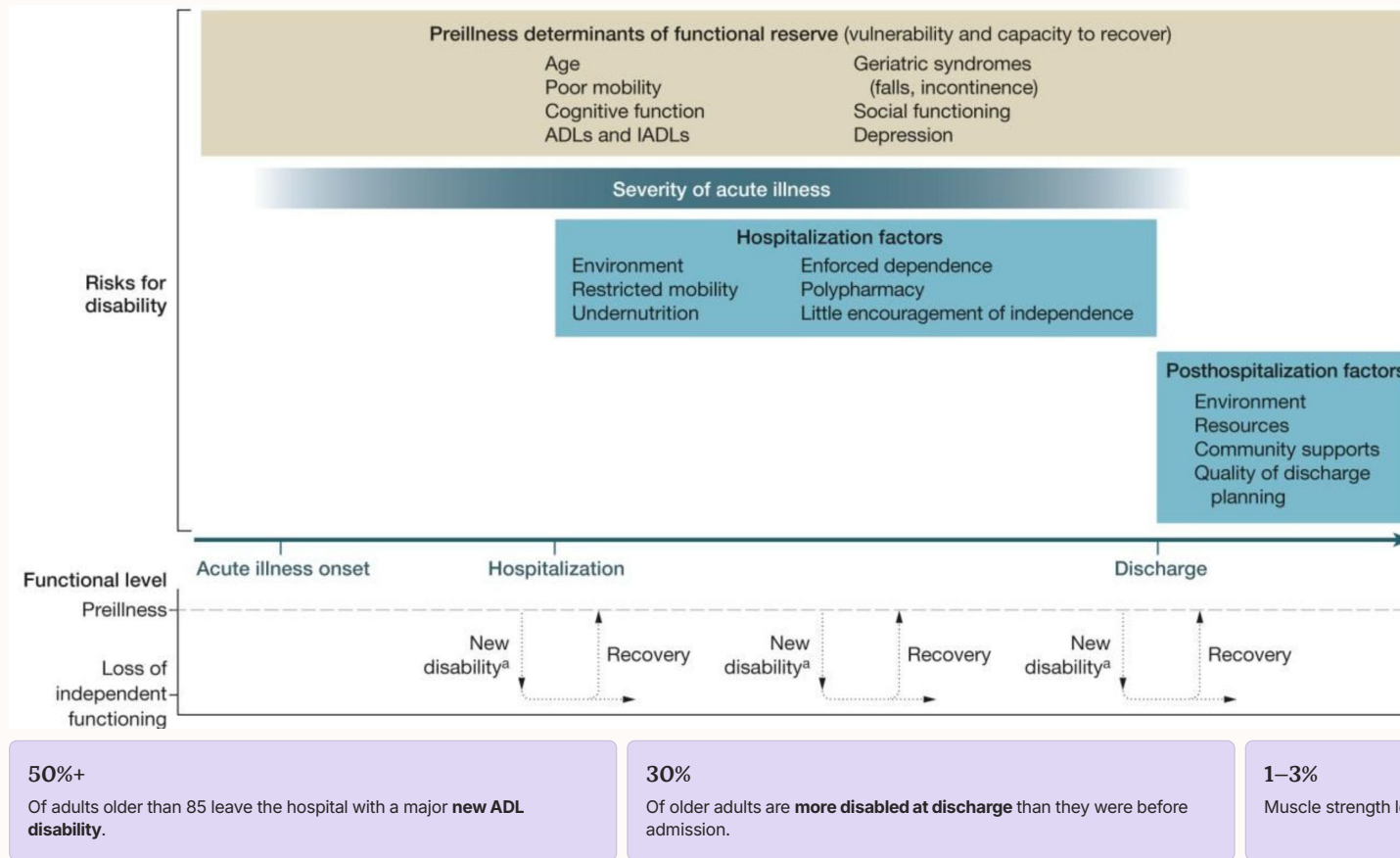
ROUND 6

I've Got a Text: Standing Ten Toes Down 🚶

An **81-year-old woman** admitted with an uncomplicated UTI is medically improving and at her cognitive baseline. At home, she ambulates with a walker independently. On admission she was labeled "high fall risk," placed on a **bed alarm**, and limited to a **bedside commode only with assistance** — while awaiting PT evaluation that already left the floor for the day.

📋 **Table huddle — 2 minutes:** Stay in bed until PT clears her? Keep the bed alarm? Bedside commode only? Or staff-assisted ambulation now?

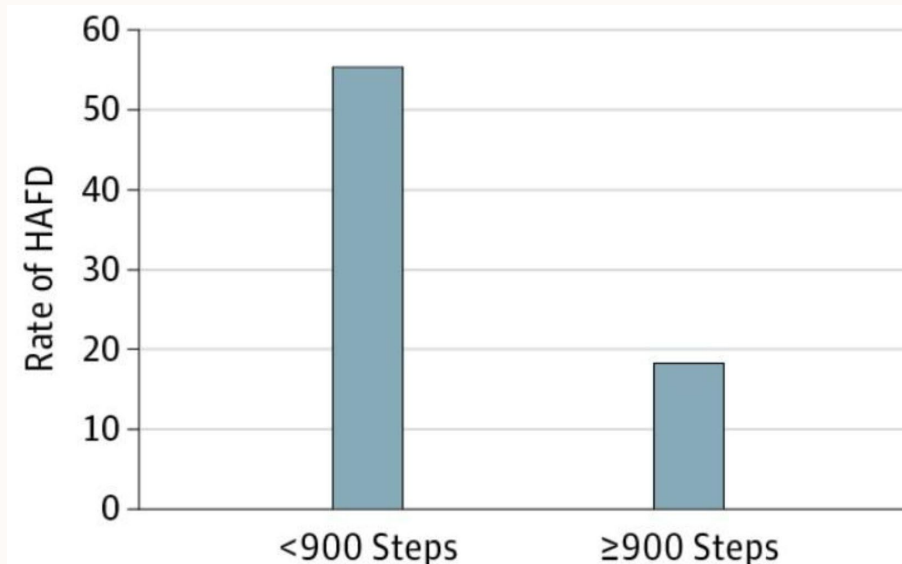
Hospitalization-Associated Disability Is a Crisis



Bed rest is not a neutral default. Restricted mobility, enforced dependence, and polypharmacy during hospitalization are *hospitalization factors* — modifiable risks that we create.

THE 900-STEP CHALLENGE

Walking Fewer Than 900 Steps Changes Everything



What the Data Shows

During acute hospitalization, walking fewer than **900 steps per day** — roughly the equivalent of walking around a 500-meter unit — is strongly associated with hospitalization-associated functional decline (HAFD), even after controlling for baseline functional status and major personal risk factors.

The rate of HAFD in patients walking <900 steps/day: **~55%**. In those walking ≥900 steps/day: **~18%**. That's a 3-fold difference from simply *moving*.

Bed rest causes substantial losses in strength, power, and aerobic capacity in older adults. Mobility programs such as STRIDE have demonstrated feasibility and safety, while general-medicine mobility QI has improved mobility and been associated with shorter LOS.

The Hidden Cost of Keeping Patients in Bed

Domain	Hidden Cost
 Financial	Prolonged LOS, discharge to SNF instead of home — post-acute care costs dwarf the inpatient episode. Not something to monetize casually, but the downstream burden is real.
 Patient	Deconditioning, loss of independence, pressure injury, delirium, and — the cruelest irony — increased fall risk from weakness acquired during admission.
 Team	PT evaluation demand, discharge placement complexity, family meetings about new functional limitations that didn't exist on admission day.
 Cascade	Immobility → delirium → prolonged LOS → HAI exposure → SNF discharge → readmission risk.

 **Hidden lesson — Competing harms:** Preventing one visible harm (fall) can create another hidden harm (deconditioning, delirium, loss of independence). Mobilize early and often.

CASA AMOR RAPID FIRE

New Orders Have Entered the Villa



10 seconds each. Fast votes, fast evidence. For each order — ♥ Couple Up, ❤️ Dump, or 🤖 It's Complicated?

Round 1

Foley catheter for convenience / urine output monitoring in a hemodynamically stable patient.

Round 2

Stress ulcer prophylaxis (PPI) in a low-risk medical patient not in the ICU.

Round 3

Routine daily chest X-ray without any clinical change since yesterday.

Round 4

Repeat blood cultures in uncomplicated gram-negative bacteremia with clinical improvement.



Rapid Fire Evidence: Foleys & SUP

♥ Foley for Convenience

Meta-analysis of reminder and stop-order interventions found a **53% reduction in CAUTI rate**, without evidence of harm from removal strategies.

- Catheter reminder interventions work.
- **Stop orders work better.**
- **Nurse-directed stop orders work best of all.**

Meddings J, et al. BMJ Qual Saf. 2014;23(4):277-289.

♥ SUP in Low-Risk Medical Patients

Stress ulcer prophylaxis in non-ICU patients has little evidence of benefit. A microsimulation found new PPI initiation produced **net increased hospital mortality** in ~90% of non-ICU medical inpatients.

Observational data link PPIs to C. diff (OR 1.8–2.6) and HAP (OR 1.3). And **54% of in-hospital PPI starts are continued at discharge without indication.**

Rapid Fire Evidence: CXR & Blood Cultures

💖 Routine Daily CXR Without Clinical Change

Meta-analysis of **8 ICU trials involving >7,000 patients**: no mortality or LOS benefit for routine vs. on-demand chest X-ray. After chest-tube removal, 55–58% show abnormalities but reintervention is <2%.

Image for symptoms, not by reflex.

Oba Y, Zaza T. Radiology. 2010;255(2):386-395.

🧑‍🔬 Repeat Cultures in Uncomplicated GNB

Follow-up cultures in uncomplicated gram-negative bacteremia are generally low yield (NNT = 17 in GNB vs. NNT = 5 in gram-positive cocci). A study of **34,000 patients** found no mortality benefit, but longer LOS from extended culture monitoring.

Reserve for GPC, Candida, ESRD/HD patients, intravascular devices, MDR organisms, or clinical deterioration.

Why Do We Keep Doing This? 🤔

What keeps low-value care alive at your hospital? Let's be honest with ourselves.



Habit & Culture

The dominant provider-level driver. Most low-value care isn't even a conscious patient-facing choice — it's what fires by default at 6 AM.



Defensive Medicine

Near-universal (pooled prevalence 75.8%). Prior litigation predicts it (OR 1.65). Fear of missing something drives orders that evidence doesn't support.



EHR Defaults

Across 5 EHRs, there was *no correlation* between a service's clinical value and how easy it is to order. Opt-out defaults drive systematic overordering.



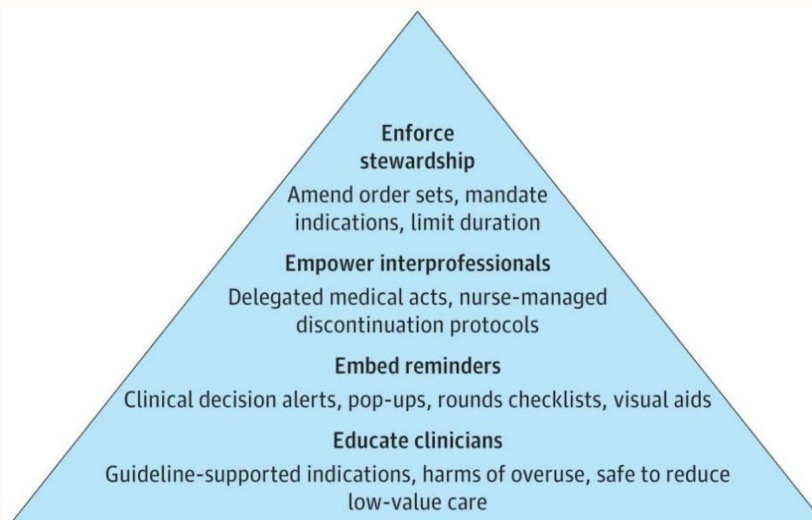
Team Expectations

"Someone else will stop it." Diffusion of responsibility + cognitive load + time pressure = nobody cancels the order that was placed on day 1.



A 2024 cluster randomized trial found behavioral-economic approaches can reduce low-value care while preserving clinician and patient choice — overuse is partly a **choice-architecture problem**, not merely a knowledge problem. *Kullgren JT, et al. JAMA Intern Med. 2024;184(3):281-290.*

How to Dump Low-Value Orders From the Villa



Educate

Guideline-supported indications, harms of overuse, safety of reducing low-value care. Necessary — but the weakest lever alone.

Empower

Delegated medical acts and nurse-managed discontinuation protocols. Give the team the authority to act, not just the information.

Embed

Clinical decision alerts, order defaults, rounds checklists, expiration dates, indication-required ordering. The choice architecture that wins at 6 AM.

Enforce

Amend order sets, mandate indications, limit duration. Remove the default — don't just remind people to choose differently.

Your 4 E's Action Plan by Topic

Practice	Key Embed/Enforce Move	Metrics to Watch
Overnight Vitals	Stable-patient sleep promotion protocol; EHR predictive alert; auto-downgrade at 36h afebrile	% patients with sleep-promoting vitals; nighttime room entries
Telemetry	Indication + predefined duration required at order entry; expiration/renewal prompts; nurse-driven discontinuation	Telemetry-days; patients awaiting tele beds; duration beyond indication
NPO	Procedure-specific fasting defaults; automatic expiration/reassessment; real-time procedure-team communication	NPO hours, missed trays, canceled procedures, IV fluids while NPO, POC glucose checks
Daily Labs	Remove indefinite recurring lab orders; require deliberate daily reorder; peer feedback dashboards	Lab tests/patient-day; lab-free days; phlebotomy-associated anemia rate
Consults	Name the clinical question before ordering; consult rate audit by hospitalist; indication-based ordering prompts	Consult rate/hospitalist; LOS after consult; specialist variation
Mobility	Empower nurses and mobility techs; mobility goal on rounds checklist; remove unnecessary mobility restrictions	Steps/day if available; PT eval timing; LOS; discharge to SNF vs. home

Key Takeaways

Overnight Vitals

Only ~4% of overnight vitals in low-risk patients prompt any action (NNT ~1,856). No signal of more codes or transfers when reduced. **Order sleep-promoting vitals in stable patients.**

Telemetry

Only 24% of telemetry-days meet AHA criteria. Life-threatening arrhythmias in unindicated monitored patients: ~1 in 2,645. **Reassess telemetry need every day.**

NPO

1 in 4 NPO orders is avoidable; ~20% of procedures patients fast for never happen. **Set fasting orders to expire; default to 2h clear liquids / 6h light meal.**

Consults

High-consulting hospitalists: 4% longer LOS, \$138 more/admission, no mortality benefit. **Consult for a defined question — not reassurance.**

Daily Labs

Labs drive 60–70% of downstream decisions. Up to 20% of inpatients develop iatrogenic anemia. **Stop standing daily labs once stable — every draw can start a cascade.**

Mobility

Patients lose 1–3% muscle strength per day of bed rest; ~30% of older adults leave more disabled than they arrived. **Mobilize early and often — competing harms of bed rest outweigh its convenience.**

What Will You Change Tomorrow?

Every topic in this talk is an inertia problem — **the order that fires by default wins**. Sustainable de-adoption needs all four E's layered together. Change the default, don't just remind people to choose differently.

One Order to Stop	One Default to Change	One Team Member to Empower
Pick one standing daily lab, one reflexive overnight vital, or one Foley you'll actively discontinue on your next shift.	Identify one order set, default, or admission template at your institution that enables a low-value practice — and bring it to your QI committee.	Tell a nurse, pharmacist, or APP: "If you see this situation, you have my support to stop this order." That conversation is stewardship.

High-value care is not about doing less. It's about doing what matters — and having the courage to stop what doesn't. 🌹

References

Overnight Vitals / SIESTA

- Najafi N, Robinson A, Pletcher MJ, et al. Effectiveness of an analytics-based intervention for reducing sleep interruption in hospitalized patients: a randomized clinical trial. *JAMA Intern Med.* 2022;182(2):172-177.
- Arora VM, Machado N, Anderson SL, et al. Effectiveness of SIESTA on objective and subjective metrics of nighttime hospital sleep disruptors. *J Hosp Med.* 2019;14(1):38-41.

Telemetry

- Najafi N, Cucina R, Pierre B, Khanna R. Assessment of a targeted electronic health record intervention to reduce telemetry duration: a cluster-randomized clinical trial. *JAMA Intern Med.* 2019;179(1):11-15.
- Dressler R, et al. Altering overuse of cardiac telemetry in non-intensive care unit settings by hardwiring the use of American Heart Association guidelines. *JAMA Intern Med.* 2014;174(11):1852-1854.

NPO / Fasting

- Sorita A, Thongprayoon C, Ahmed A, et al. Frequency and appropriateness of fasting orders in the hospital. *Mayo Clin Proc.* 2015;90(9):1225-1232.
- Black MKM et al. *J Hosp Med.* June 2021.

Consults

- Stevens JP, Nyweide DJ, Maresh S, et al. Association of variation in consultant use among hospitalist physicians with outcomes among Medicare beneficiaries. *JAMA Netw Open.* 2020;3(2):e1921750.
- Vogel M, et al. *J Infect.* 2016;72(1):19-28. | Van Hege A, et al. *Calcif Tissue Int.* 2022;110(2):162-184.
- Ober AJ, et al. *JAMA Intern Med.* 2025;185(6):624-633. | May P, et al. *JAMA Intern Med.* 2018;178(6):820-829. | Courtright KR, et al. *JAMA.* 2024;331(3):224-232. | Koussa O, et al. *Am J Med Sci.* 2021;361(3):303-309.

References (cont.)

Daily Labs / CXR / Cultures

- Ambasta A, et al. Repurposing the ordering of routine laboratory tests in hospitalized patients: a stepped-wedge quality improvement study. *BMJ Qual Saf.* 2023.
- Sedrak MS, et al. Effect of a price transparency intervention in the electronic health record on clinician ordering of inpatient laboratory tests: the PRICE Randomized Clinical Trial. *JAMA Intern Med.* 2017;177(7):939-945.
- Oba Y, Zaza T. Abandoning daily routine chest radiography in the intensive care unit: meta-analysis. *Radiology.* 2010;255(2):386-395.

Mobility / Foley / Deimplementation

- Meddings J, et al. Reducing unnecessary urinary catheter use and other strategies to prevent CAUTI. *BMJ Qual Saf.* 2014;23(4):277-289.
- Hoyer EH, Friedman M, Lavezza A, et al. Promoting mobility and reducing length of stay in hospitalized general medicine patients. *J Hosp Med.* 2016;11(5):341-347.
- Kullgren JT, Kim HM, Slowey M, et al. Using behavioral economics to reduce low-value care among older adults: a cluster randomized clinical trial. *JAMA Intern Med.* 2024;184(3):281-290.
- Silverstein WK, Leis JA, Moriates C. "4 E's" ways that clinicians can reduce low-value care on medical wards. *JAMA Intern Med.* 2024;184(3):322-323.
- Cho HJ, Smith D, Hart A, et al. Choosing Wisely in adult hospital medicine. *J Gen Intern Med.* 2022;37(10):2454-2461.