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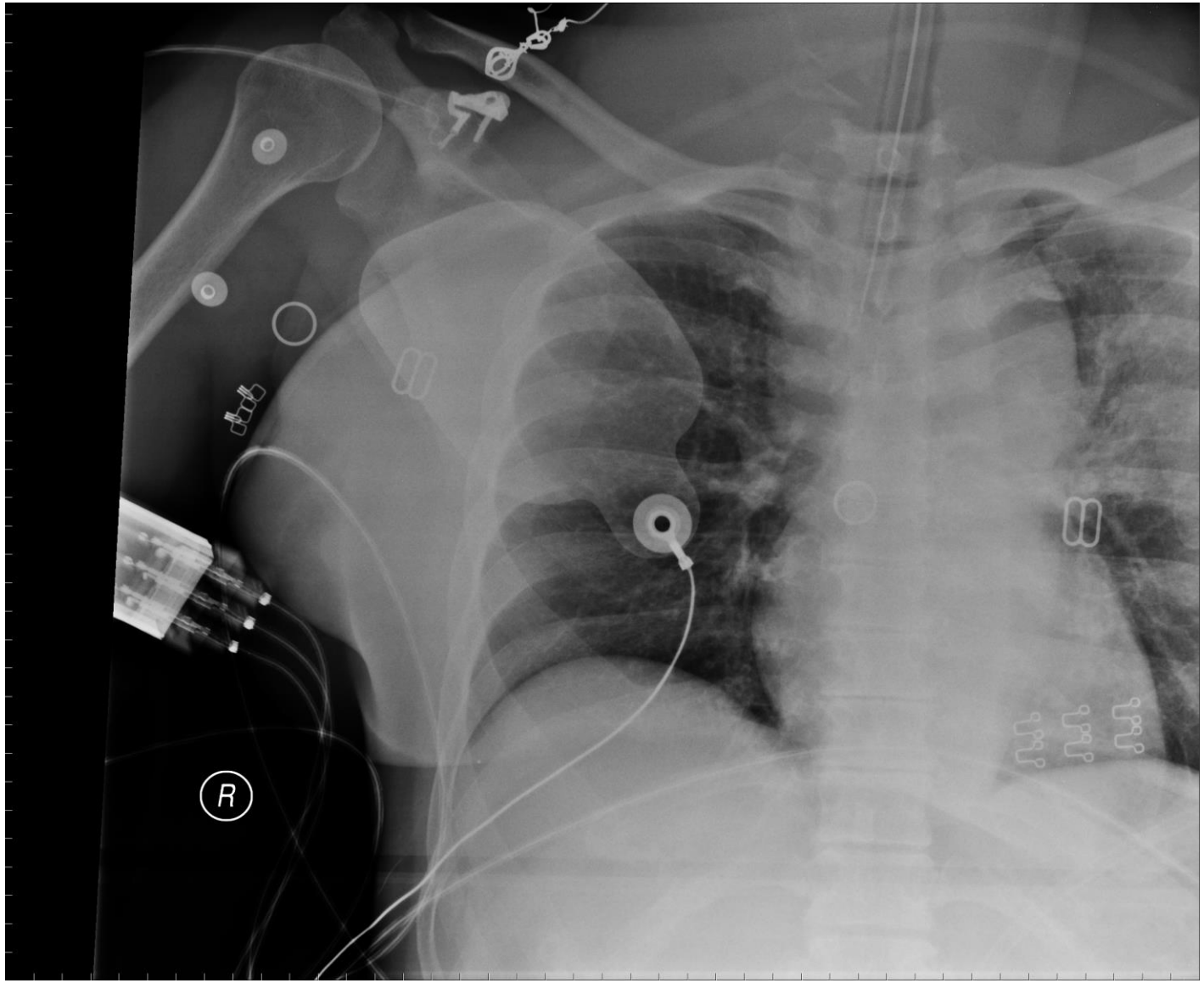
SOCIETY OF EMERGENCY MEDICINE PHARMACISTS

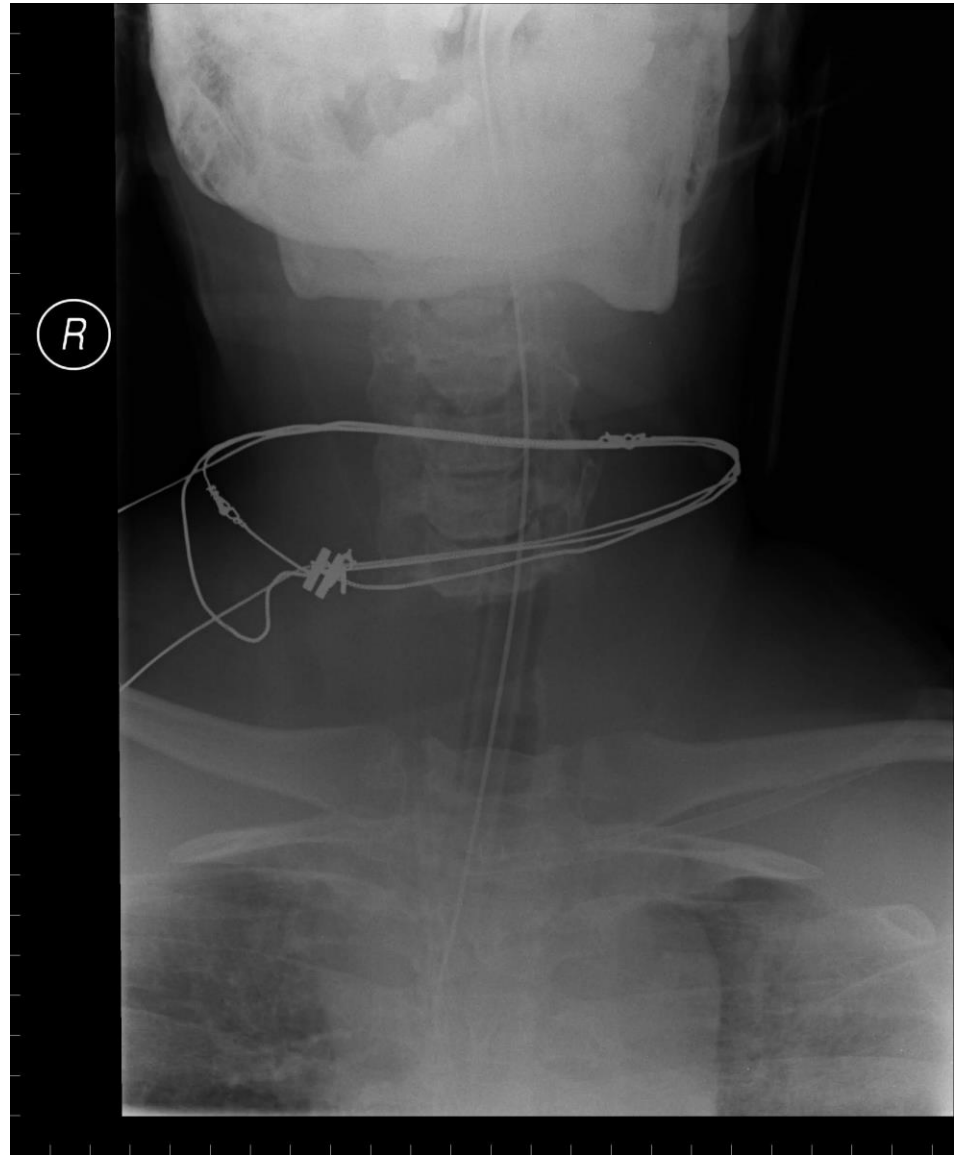
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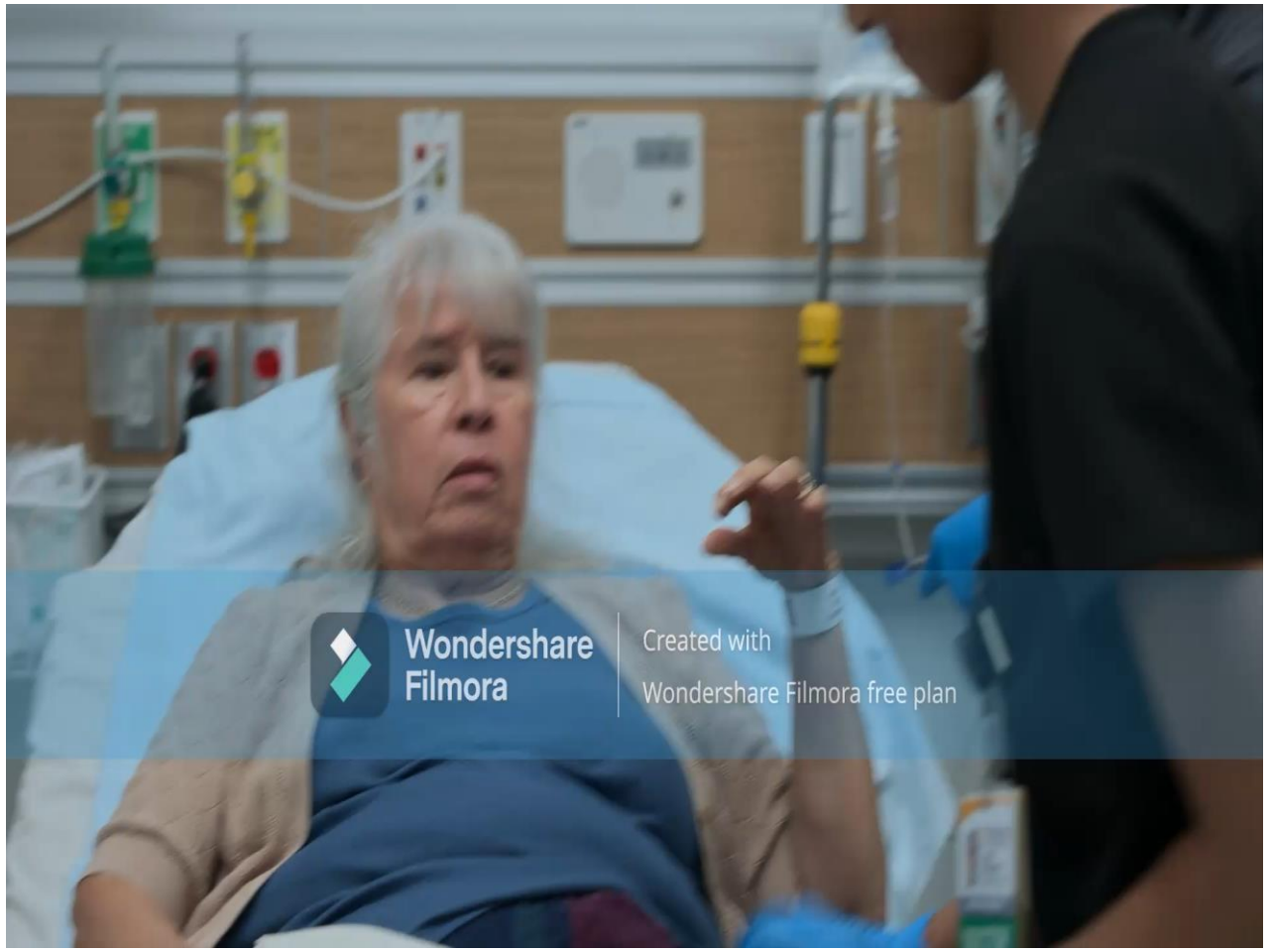
Three Controversies in Emergency Pharmacotherapy

Translating Evidence into Real-Time Decisions

Daniel P Hays, PharmD, BCPS, FASHP


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“Morphine = Vomiting” (Clinical Dogma)

- Opioids can activate the chemoreceptor trigger zone
- Historically assumed high emesis risk
- ED incidence of nausea ~2–20%
  - Vomiting incidence 1.5–2.4%; Nausea ≤9.3%, MAJORITY MILD[1]
- Emesis is rare → Most patients do NOT vomit



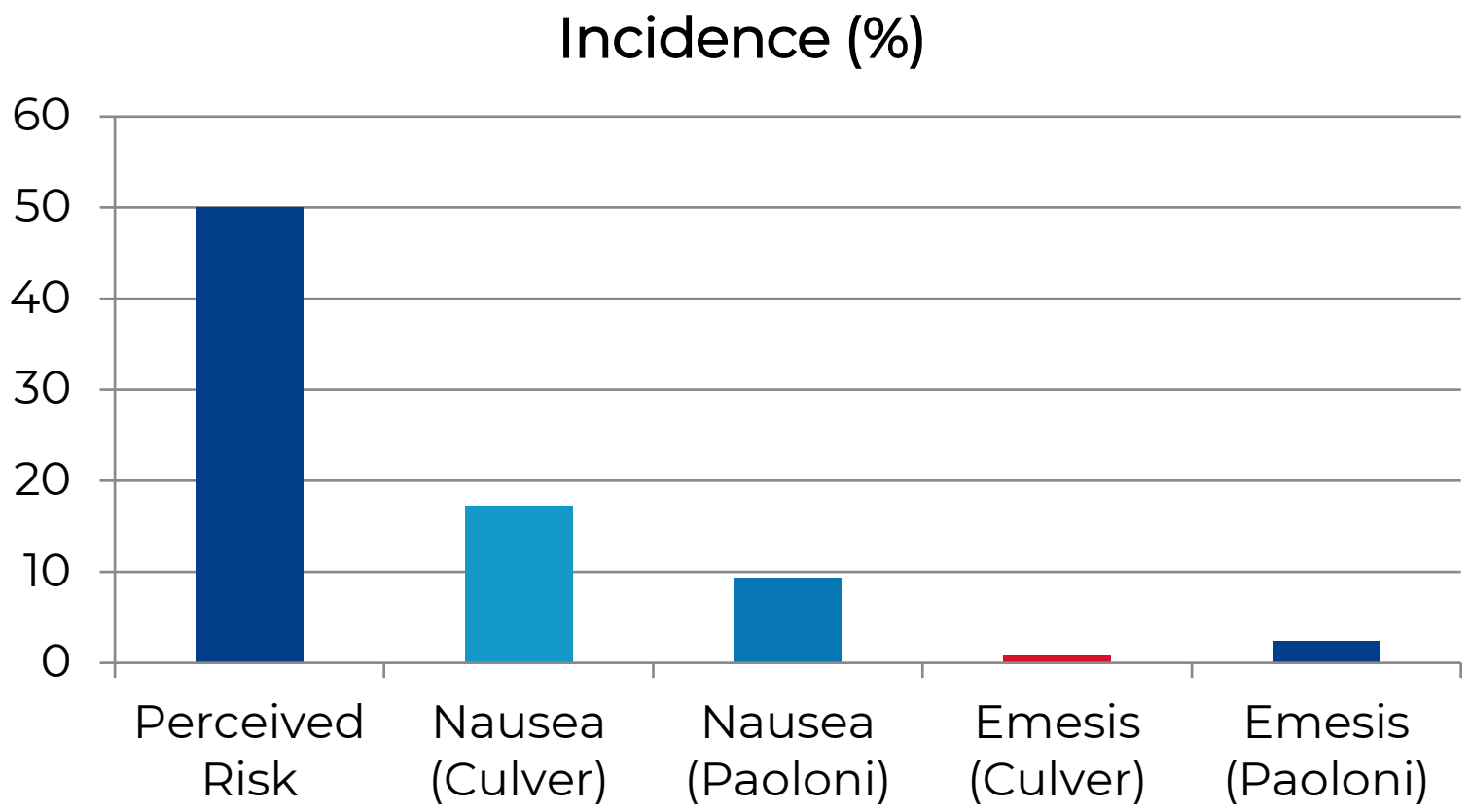
Paoloni R, et al. Am J Emerg Med. 2002;20:604-608.
Culver MA, et al. J Emerg Med. 2017;53:629-634.

Historical Practice

- Promethazine + opioids (sedation strategy)
- ↓ Mental status, ↓ throughput
- Transition → ondansetron
- Practice evolved without strong evidence

Paoloni R, et al. Am J Emerg Med. 2002;20:604-608.
Culver MA, et al. J Emerg Med. 2017;53:629-634.

Perception vs Reality



Culver MA, et al. *J Emerg Med.* 2017;53(5):629-634.
Paoloni R, et al. *Am J Emerg Med.* 2002;20(7):604-608.

Prophylaxis: Does It Work?

- Multiple studies: no benefit vs placebo
- Some show trend toward more nausea
- Antiemetics ≠ prevention

Braude D, et al. *Ann Emerg Med.* 2006;47(6):548-554.

Prospective ED Study

- N=133 ED patients
- Nausea: 17.3%
- Emesis: 0.75%
- No difference with ondansetron prophylaxis

Culver MA, et al. *J Emerg Med.* 2017;53(5):629-634.

Treat vs Prevent

- Ondansetron effective for treatment
- No benefit for prophylaxis
- Use only when symptoms develop

Sussman G, et al. Clin Ther. 1999.
Culver MA, et al. J Emerg Med. 2017.

Practice Change

- NO routine prophylaxis
- Treat symptomatically
- Use lowest effective dose
- Reassess instead of reflex/preemptive ordering

Culver MA, et al. J Emerg Med. 2017.
FDA Drug Safety Communication. 2012.

Dose Matters

- 1 mg ≈ 4 mg ≈ 8 mg efficacy
- No meaningful dose-response
- Use lowest effective dose

Sussman G, et al. Clin Ther. 1999.

Take-Home Message

- Emesis risk is overestimated
- Prophylaxis does not work
- Ondansetron = treatment, not prevention
- Treat the patient, not the myth

Culver MA, et al. J Emerg Med. 2017.

Why This Matters

- Emergency care balances speed, safety, throughput
- Many practices persist without strong evidence
- Opportunity: improve outcomes and reduce harm

Chemical restraint : THE b52



Why This Matters

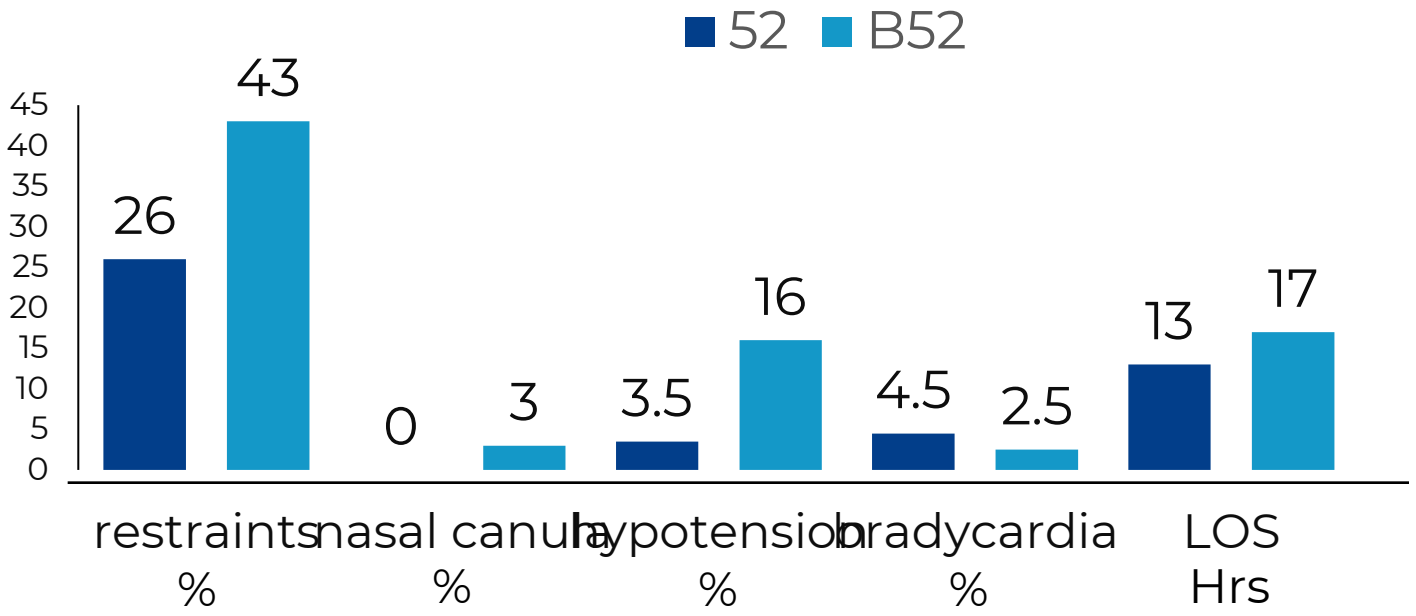
- B52 widely used for acute agitation
  - Benadryl 50 mg + haloperidol 5 mg + lorazepam 2 mg IM
- Rationale: sedation + EPS prevention
- Evidence supporting diphenhydramine is limited

B52 vs 52 – Study Overview

- Multicenter retrospective cohort (N=400)
- Primary outcome: need for additional sedation
- Secondary outcomes: safety, LOS

Jeffers T, et al. J Emerg Med. 2022;62(4):516-523.

THE DATA SPEAKS...



Jeffers T, et al. J Emerg Med. 2022;62(4):516-523.

Agitation Takeaway

- Simplify regimen when possible
- Avoid unnecessary polypharmacy
- 52 provides similar efficacy with better safety

Jeffers T, et al. Emerg Med. 2022;62(4):516-523.

Migraine



Refractory Migraine in ED

- Common, high LOS burden
- Standard therapies often slow
- Need faster, reliable options

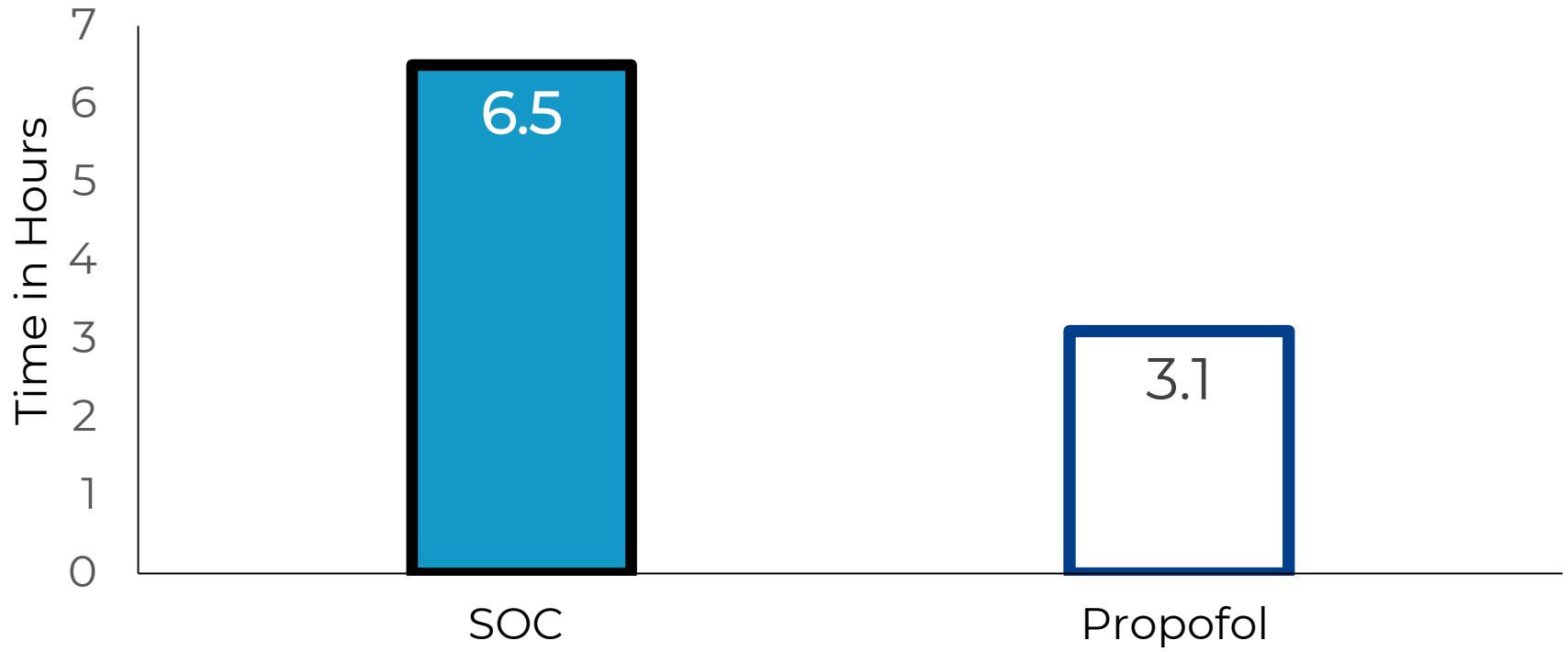
Mosier J, et all. *West J Emerg Med*. 2013;14(6):646-649.

Propofol Case Series

- Sedation-dose propofol (1 mg/kg IVP)
- Rapid symptom resolution
- LOS reduced vs baseline
  - 3 hours vs 6 hours
- No major adverse events observed

Mosier J, et al. *West J Emerg Med*. 2013;14(6):646-649.

Propofol vs Standard Therapy Length of Stay



Mosier J, et al. *West J Emerg Med*. 2013;14(6):646-649.

2013 vs today….

- **PubMed search : propofol and migraine : 51**
  - **Filter – clinical trials : 5**
  - **Results**
    - Effective
    - Safe
    - Decrease time to discharge
  - **Filter – case reports : 10**
  - **Results**
    - Effective…

Migraine Takeaway

- Propofol is a viable rescue option
- Requires monitoring and protocol
- Can improve ED throughput

Mosier J, et al. *West J Emerg Med*. 2013;14(6):646-649.

Clinical Consequences for all scenarios

- Unnecessary meds → cost + risk + LOS
- Reinforces practices lacking evidence



Closing Thoughts

- Emergency pharmacotherapy requires critical thinking
- Best practice evolves through evidence and experience

Questions?