



ACEP26
THE FUTURE OF EM IS NOW

CHICAGO

OCTOBER 5-8, 2026

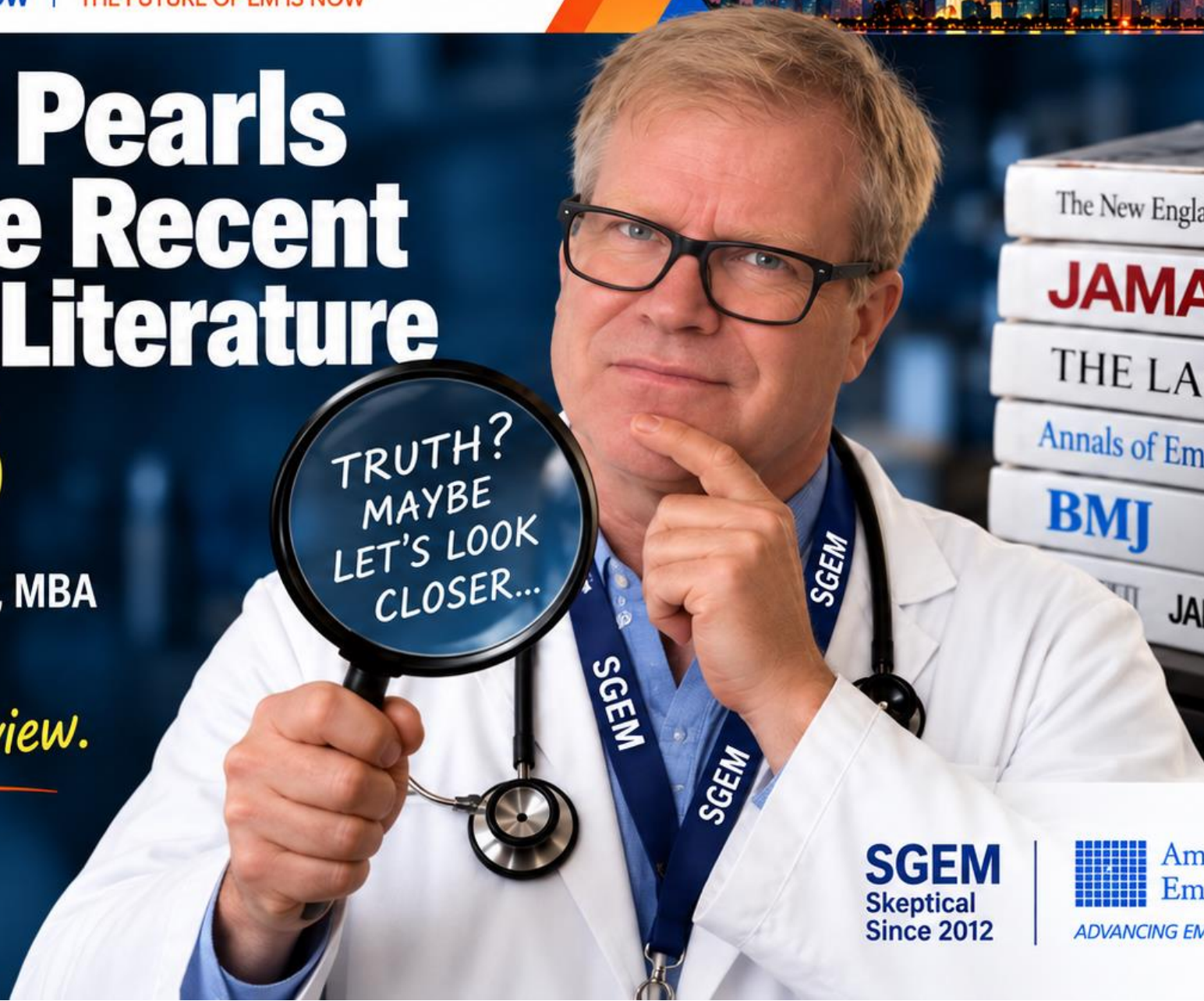
THE FUTURE OF EM IS NOW



Clinical Pearls From the Recent Medical Literature **2026**

Ken Milne MD, MSc, MBA

*Same evidence.
A more skeptical view.*



SGEM
Skeptical
Since 2012



American College of
Emergency Physicians®

ADVANCING EMERGENCY CARE

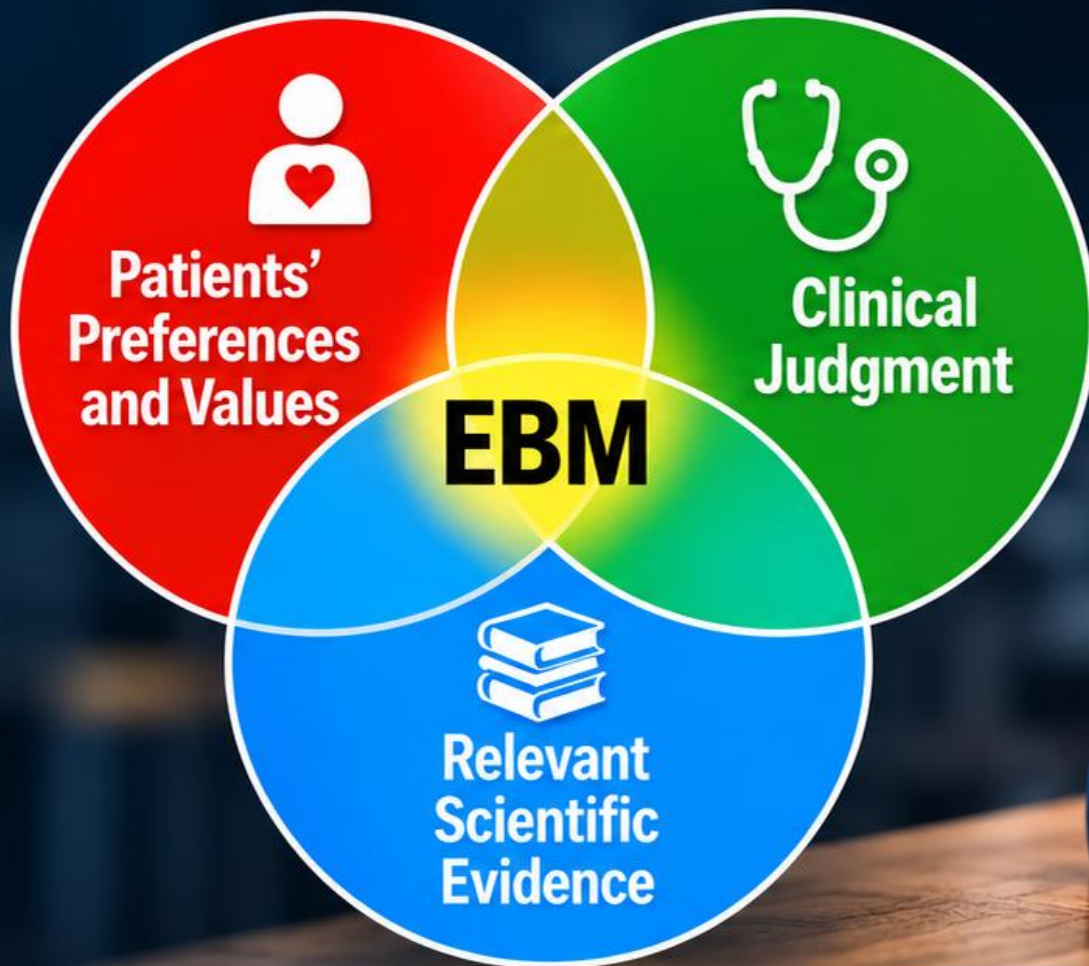


DISCLOSURES



Evidence-Based Medicine The Big Picture

*The best decisions happen
at the intersection.*



Our Process for **Each Paper**

*From question
to practice.*





The Warrior

Which pharmacologic interventions are **most effective** for the acute treatment of **hyperkalemia**?



Jessen et al.
Resuscitation
2025





CLINICAL QUESTION

what is the effectiveness of pharmacological interventions in the acute treatment of hyperkalemia compared to standard care, placebo, or other interventions in adults?



STUDY TYPE

Systematic Review and Meta-Analysis



101 studies included



KEY RESULT

Insulin + glucose and sodium zirconium cyclosilicate **most effectively lowered serum potassium within 4 hours.**

Other agents had limited short-term impact.



*LOWER K+
SAVE LIVES*



3 NERDY POINTS THREATS TO VALIDITY

1



High risk
of bias

2



Heterogeneity

3



Small and
methodologically
limited studies



CLINICAL APPLICATION



Use insulin
+ glucose



Consider
beta-agonists



Arrange
definitive removal
(e.g. dialysis)



SGEM BOTTOM LINE

Insulin with glucose
and beta-agonists are
the **most effective**
pharmacologic options
for acute hyperkalemia.

Calcium and bicarbonate
do not appear to lower
potassium in the short term.

 **K⁺ 6.5**

RECOGNIZE.
STABILIZE.
TREAT.
REMOVE.



**LOWER K⁺
SAVE LIVES**





I Want a New Drug – One Not Associated with Neurodevelopmental Disorders



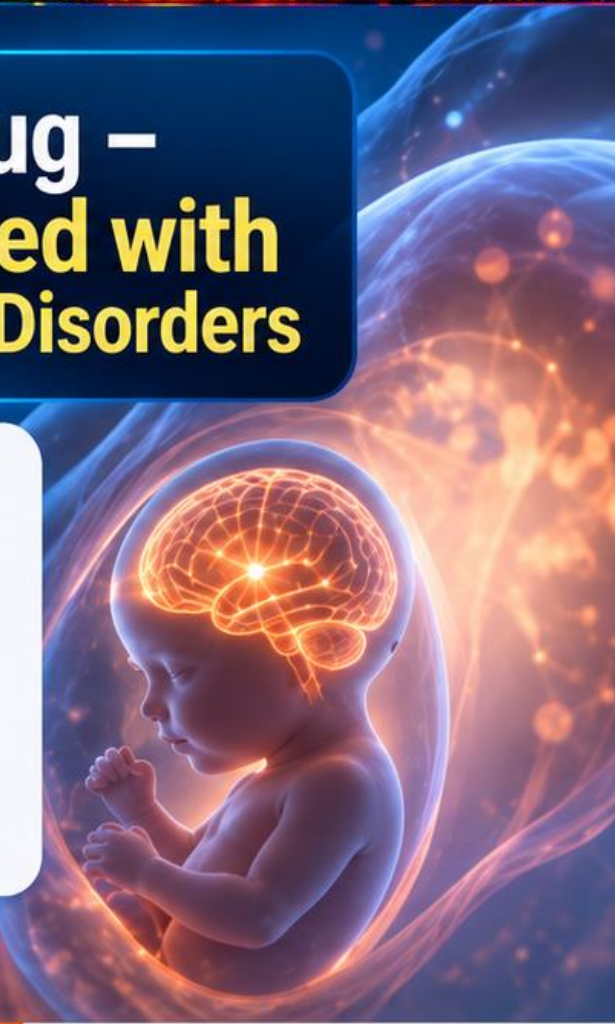
LEAD AUTHOR

Diddier Prada, PhD



PUBLISHED IN

Environmental Health
2025; 24:56





CLINICAL QUESTION

Is acetaminophen exposure during pregnancy associated with **ADHD, ASD**, or other neurodevelopmental disorders in children?



STUDY TYPE

Systematic review of observational studies



KEY RESULT

The majority of studies reported **an association between prenatal acetaminophen use and increased risk of neurodevelopmental disorders (especially ADHD and ASD).**





THREE NERDY POINTS

1



Residual confounding

2



Exposure misclassification

3



Heterogeneity in outcomes and study quality

** Other evidence*



CLINICAL APPLICATION



Use the lowest effective dose for the shortest durations.



Don't ignore fever or significant pain.



Talk to your clinicians.



SGEM BOTTOM LINE

There appears to be an **association** between prenatal acetaminophen use and neurodevelopmental disorders, but **causation is unproven.**



It's Just a Minor Stroke – Should We Still Lyse?



LEAD AUTHOR

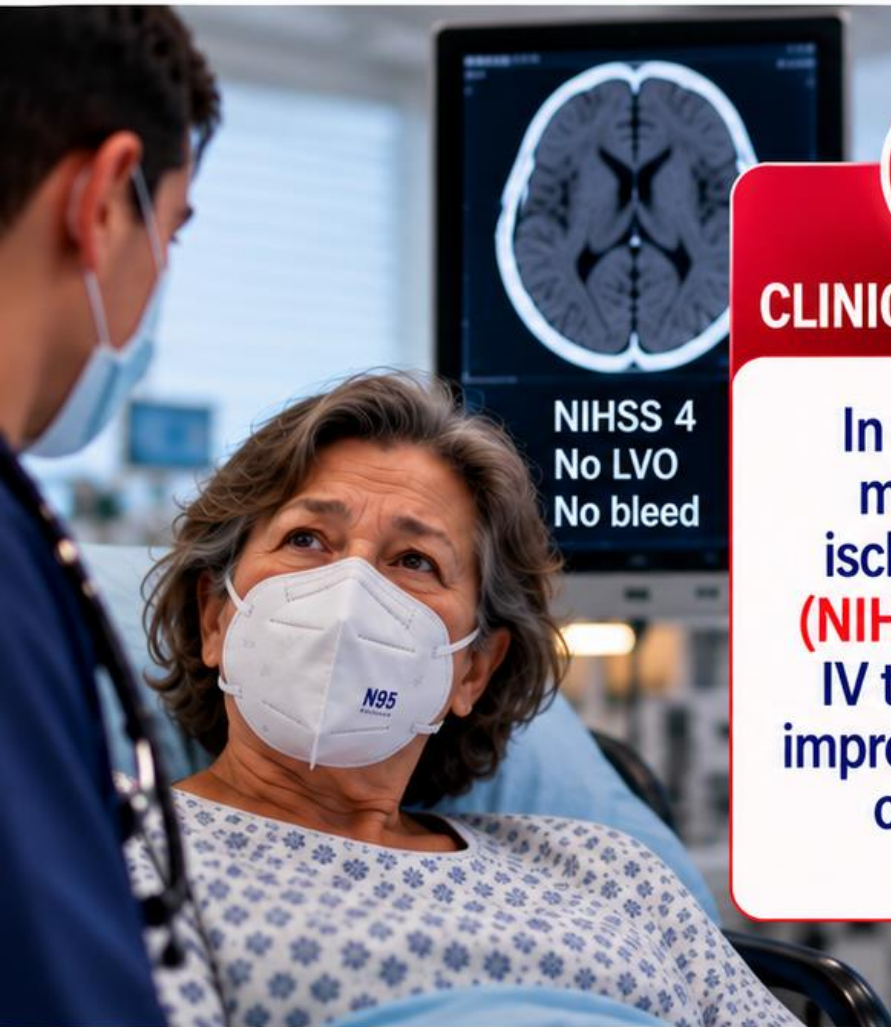
Mohamed F. Doheim, MD



PUBLISHED IN

Neurology

2025;105:e213863



CLINICAL QUESTION

In adults with minor acute ischemic stroke (**NIHSS ≤ 5**), does IV thrombolysis improve functional outcomes?



STUDY TYPE

SRMA of RCTs
(4 RCTs,
n = 3,364)



KEY RESULT

No significant improvement in excellent functional recovery and **higher risk of symptomatic ICH and mortality.**





THREE NERDY POINTS

1



Mostly
nondisabling
strokes

2



Heterogeneity
across trials

3



Underpowered
for key
subgroups



CLINICAL APPLICATION



Discuss
potential
benefits and
harms



Individualize
decisions



Consider if
deficit is
disabling



SGEM BOTTOM LINE

No clear functional
benefit of thrombolysis
for minor strokes,
with **higher risk of
symptomatic ICH
and mortality.**



Prevalence of Violence Against Health Care Workers Among Agitated Patients in an Urban Emergency Department



LEAD AUTHOR

Brian E. Driver, MD

Director of Clinical Research
Hennepin County Medical Center



PUBLISHED IN

Academic Emergency Medicine
2025 (Online ahead of print)

**RESPECT
HEALTH CARE
WORKERS**



**SAFETY
IS A TEAM EFFORT**





CLINICAL QUESTION

Among **agitated ED patients**, what is the prevalence of violent events against health care workers, and how does that compare with events formally reported to the hospital?



STUDY TYPE

Prospective observational study



KEY RESULT

Violence was **common and underreported** among agitated ED patients.

PEOPLE
CARE
FOR
PEOPLE

SAFE
EDS
STRONGER
COMMUNITIES





THREE NERDY POINTS

1



Single-center study

2



Specific population

3



Uncertain precision



CLINICAL APPLICATION



Anticipate risk



Use prevention and de-escalation strategies



Support reporting



SGEM BOTTOM LINE

Violence against health care workers is **common**, frequently **underreported**, and should not be considered “just part of the job.”



SAFER PEOPLE STRONGER TEAMS





YOU CAN'T HOLD ME DOWN... WITH SPINAL MOTION RESTRICTIONS



LEAD AUTHOR

Michael G. Millin, MD
and the NAEMSP Trauma Compendium Team



PUBLISHED IN

Prehospital Emergency Care
August 2025





CLINICAL QUESTION

Does **post-injury movement** cause delayed neurologic deterioration?

Do spinal immobilization or SMR provide more **benefit than harm**?



STUDY TYPE

Comprehensive literature review (no meta-analysis)



KEY RESULT

No evidence that spinal immobilization or SMR prevents delayed neurologic deterioration, and **multiple potential harms** were identified.



LESS
DOGMA.
BETTER
EVIDENCE.
**BRIGHTER
TOMORROWS.**



THREE NERDY POINTS

1



Observational
evidence only

2



Heterogeneous
studies

3



Limited direct
evidence on
movement →
neurologic harm



CLINICAL APPLICATION



Use selective
and time-limited
SMR



Focus on
oxygenation,
perfusion, and
rapid transport



Avoid routine,
prolonged collar
and backboard
use



SGEM BOTTOM LINE

There is **no evidence**
to support routine
spinal immobilization
or SMR, and there is
evidence of **potential
harm.**



MOVE
SMARTER

CARE
SAFER

STRONGER
TOGETHER





HIGH
BLOOD
PRESSURE
IS A SIGNAL.
NOT A
DISCHARGE
PLAN.

UNDER PRESSURE

TO START ANTIHYPERTENSIVES IN
HYPERTENSIVE ED PATIENTS AT DISCHARGE

- ✓ RECOGNIZE RISK
- ✓ CONSIDER THE EVIDENCE
- ✓ PLAN FOLLOW-UP
- ✓ BETTER PATIENTS TOMORROW



LEAD AUTHOR

Brett R. Todd, MD
and colleagues



PUBLISHED IN

JACEP Open
2024





SAME
NUMBERS.
DIFFERENT
QUESTIONS.
**BETTER
OUTCOMES.**



CLINICAL QUESTION

Does an ED
discharge prescription
for an antihypertensive
**reduce 30-day
adverse events?**



STUDY TYPE

Observational
cohort study



93,512 discharged
ED visits



KEY RESULT

Lower 30-day
risk of severe
adverse events
and ED revisits



TODAY:
HIGH BP
↓
TOMORROW:
HEALTHIER
TOMORROW



TODAY'S
BP.
TOMORROW'S
OPPORTUNITY.

☒ TREAT?
☒ FOLLOW-UP?
☒ BETTER
OUTCOMES?



THREE NERDY POINTS



Observational
study



Selection
Bias



Limited
Generalizability



CLINICAL APPLICATION



Reasonable to
start in some
patients



Focus on
follow up
and SDM



Not required
for everyone



SGEM BOTTOM LINE



An ED discharge
prescription for
antihypertensives is
**associated with lower
30-day severe events
and ED revisits**, but this
is observational evidence
with important limitations.

SAME
PATIENTS.

BETTER
QUESTIONS.

BETTER
CARE.

What Have You Done for Me Lately?

Oseltamivir for Hospitalized Patients?



LEAD AUTHOR

Murthy et al.



PUBLISHED IN

SSRN (Preprint)
2026





CLINICAL QUESTION

Does treatment with oseltamivir improve 90-day survival?



STUDY TYPE

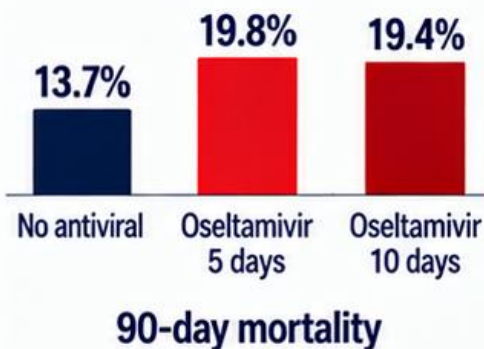
RCT

REMAP-CAP



KEY RESULT

Oseltamivir did not improve 90-day survival and was **likely harmful**.



INFLUENZA



Oseltamivir for Hospitalized Patients

Promising in theory.
Different in practice.



THREE NERDY POINTS



Observational study



Selection Bias



Limited Generalizability



CLINICAL APPLICATION



Reasonable to start in some patients



Focus on follow up and SDM



Not required for everyone.



SGEM BOTTOM LINE

**No proven benefit and potential for harm.
Be selective.**





Hit Me with Your Best Shot?

Is IM ketorolac better
than oral ibuprofen for
acute musculoskeletal
low back pain?



THE STUDY

Sharabun et al.

Journal of Pharmacy Practice
2026



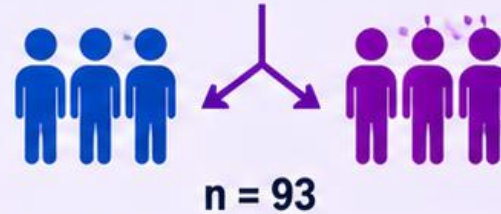
CLINICAL QUESTION

In adults with acute musculoskeletal low back pain, does **oral ibuprofen 400 mg** provide similar pain relief to **IM ketorolac 10 mg** at 60 minutes?



STUDY TYPE

**Randomized
Controlled Trial**



KEY RESULT

**Similar pain reduction
at 60 minutes.**

35 mm
ibuprofen
(400 mg PO)

32 mm
ketorolac
(10 mg IM)

Mean difference 3 mm
(95% CI -8 to 15)



MOVE
BETTER
SOONER





2 NERDY POINTS THREATS TO VALIDITY

1



Small, single
centre study

2



Not an
equivalence trial



CLINICAL APPLICATION



Either option
is reasonable



Consider patient
preference



Avoid unnecessary
injections



SGEM BOTTOM LINE

The Toradol shot
is **not better**
than oral ibuprofen
for acute back pain.



Ibuprofen
400 mg



Ketorolac
10 mg/mL
IM Use Only

SAME
PAIN.
DIFFERENT
ROUTE.



Vasopressors

Can You Run Them Peripherally?

Zhang Jian et al.
JAMA Network Open • 2026





 CLINICAL QUESTION

In critically ill adults requiring vasopressors, what is the incidence of adverse events and CVC avoidance with **peripheral vasopressor administration**?



STUDY TYPE

SRMA



KEY RESULTS

Minor AEs: **2.3%**

Major AEs: **0-1.4%**

CVC avoidance: **59.7%**





3 NERDY POINTS THREATS TO VALIDITY

1



Mostly
observational
studies

2



Heterogeneity

3



Event
definitions



CLINICAL APPLICATION



OK to start
vasopressors
peripherally



Monitor closely



Perfect is the
enemy of good



SGEM BOTTOM LINE

Peripheral vasopressors
appear to be **safe**, with a
low rate of adverse events,
and **can help avoid central
lines** in many patients.





Substitute?

**NPs *for* MDs or DOs
in the ED?**



Chan and Chen

American Economic Review
2026; 116(8): 2883–2927



*SAME
PATIENTS.
DIFFERENT
PROVIDERS.
DIFFERENT
OUTCOMES?*



CLINICAL QUESTION

In ED patients, does being treated by an NP rather than a physician affect resource use and outcomes?



STUDY TYPE

Observational study with a quasi-experimental design



1.1 million ED visits



KEY RESULT

NPs used **more resources** and had a **higher 30-day preventable hospitalization rate** than physicians.

PATIENTS

RESOURCES

OUTCOMES

- ☒ SAME PATIENTS
- ☒ BETTER EVIDENCE
- ☒ STRONGER CARE

DIFFERENT PROVIDERS.
SAME GOAL.
BETTER PATIENT CARE.



THREE NERDY POINTS

1



Residual confounding

2



Limited generalizability

3



Average effects mask large within-profession variation



CLINICAL APPLICATION



NPs are valuable members of the ED team.



Consider patient complexity, support, and system factors when using NPs.



Focus on the right clinician for the right patient.



SGEM BOTTOM LINE

NP care was associated with **more resource use and a higher 30-day preventable hospitalization rate**, but results are nuanced and should inform — not end — the debate.

EMERGENCY



BETTER
EVIDENCE.
BETTER
PATIENT CARE.

Thanks for Joining Me!

I hope you found some
clinical pearls from the
recent literature.



Be skeptical of anything you learn,
even if you heard it from me.



Dr. Milne
Emergency Medicine

