



INPATIENT GRAND ROUNDS · 20 MINUTES

Seizures & Status Epilepticus on the Wards

Three things you'll do differently on Monday.

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THE FRAME

We're not covering epilepsy. We're changing three decisions.



1

Give enough benzo — fast

Status epilepticus is under-treated. The fix is full doses, early.



2

The patient who won't wake up

Think nonconvulsive status. Get continuous EEG.



3

When NOT to start a drug

Provoked seizures rarely need lifelong therapy. Skip the prophylaxis reflex.

One patient. One hospital journey. Every teaching point hangs on a decision she forces.

10:42 — THE ED PAGES YOU

“She's still seizing.”



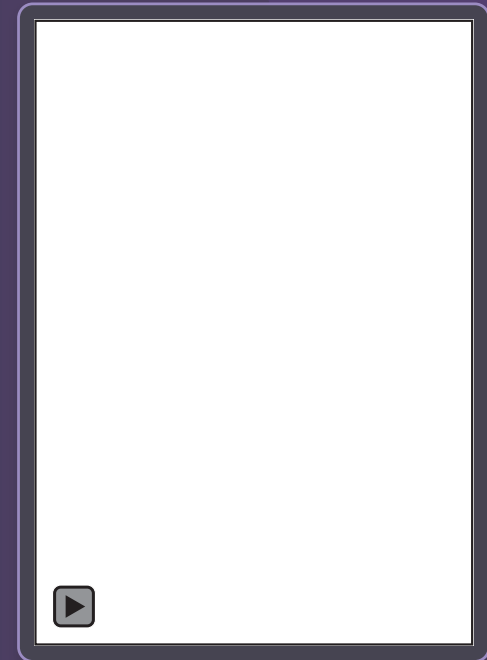
THE PATIENT

28-year-old woman, witnessed generalized convulsion.

EMS gave IV lorazepam 2 mg × 2.

Now 12 minutes of continuous activity. IV in place. BP 148/90, SpO₂ 93%.

What's your next move?



Her seizure: focal onset → secondarily generalized

LIVE POLL • DECISION 1

Hands up — what do you do next?

A

Give more lorazepam now (full dose)

B

Load fosphenytoin / levetiracetam first

C

Intubate, then figure it out

D

Send labs & a level, observe

(No wrong hands. We resolve it on the next slide.)

01

Status epilepticus

Give enough benzo. Give it fast.



ANCHOR 1 • THE DOSE & THE CLOCK

Under-dosing and delay are the failure.



5 min

of continuous seizure
= treat NOW



IV lorazepam 0.1 mg/kg

Up to 4 mg per dose — don't stop at 2. May repeat ×1.



No IV? IM midazolam 10 mg

Single fixed dose. As fast and effective as IV in the field (RAMPART).



Then reassess at 5 min

Still seizing → straight to a second-line agent. Don't re-dose endlessly.

ANCHOR 1 • SECOND-LINE

Three drugs. One coin flip. Stop agonizing.

Levetiracetam

60 mg/kg

~52%

seizure cessation

Fosphenytoin

20 mg PE/kg

~49%

seizure cessation

Valproate

40 mg/kg

~52%

seizure cessation

Statistically equivalent (ESETT, NEJM 2019). Pick by the patient and what's on your shelf — liver disease, pregnancy, interactions, stock. The fastest drug you can actually push wins.



WAR STORY

The status that went sideways from underdosing.

Your spot: the case where 2 mg → 2 mg → “watch and wait” turned a 10-minute seizure into an ICU month. Name the moment the dose should have been bigger.

02

She's intubated — but not waking up

Think nonconvulsive status. Get continuous EEG.

Convulsions stop. The brain may not.

Suspect NCSE — and get cEEG — when:

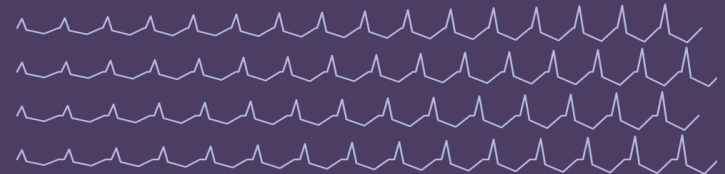
- Not back to baseline 10–20 min after a convulsion stops
- Unexplained coma or altered mental status in the ICU
- Subtle signs: eye deviation, nystagmus, face/hand twitching
- Fluctuating exam after sepsis, hypoxia, or structural injury

One line that earns gratitude: *“She's not waking up — can we get continuous EEG?”*

~1 in 5

comatose ICU patients without overt movements are seizing on EEG

WHAT NCSE LOOKS LIKE



The diagnosis is on the EEG — not the exam.

03

She wakes up. Now what?

Provoked or unprovoked changes everything.



A seizure is not a prescription for life.

Provoked (acute symptomatic)

Hyponatremia, alcohol withdrawal, hypoxia, fever, drug effect. Fix the cause. Often NO long-term ASM — this is not epilepsy.

Unprovoked

No reversible trigger — or a structural lesion / abnormal EEG. Higher recurrence risk; treatment and a neurology referral make sense.

Drop the prophylaxis reflex:

Ischemic / hemorrhagic stroke

No ASM without a clinical seizure. Prophylaxis isn't indicated.

Brain tumor

No seizure, no prophylaxis — even peri-op, taper off if seizure-free.

Traumatic brain injury

7 days only. Reduces early seizures; does NOT prevent epilepsy.

Two drugs failed? That's the referral.



Drug-resistant epilepsy

= 2 appropriately-chosen, tolerated ASMs have failed. Now the odds of a 3rd drug working are low — send to a comprehensive epilepsy center.

There's more than another pill:

- Resective surgery — potentially curative
- RNS · DBS · VNS neuromodulation
- Full presurgical / video-EEG evaluation



~17 years

the average delay from drug-resistance to referral. That's the scandal. If two drugs have failed, don't wait — send her.

BEFORE SHE LEAVES

Discharge in 90 seconds.



Driving

Counsel on your state's seizure-driving rule before discharge. Document it. NJ: report-and-restrict — know your local law.



Adherence

Missed doses are the #1 cause of breakthrough seizures. Simplify the regimen; name the barriers out loud.



Say “SUDEP”

Sudden unexpected death in epilepsy is real and reduced by adherence + seizure control. Saying the word builds trust.

Three sentences. Every epilepsy discharge. Every time.

MONDAY MORNING

Three things to take to the floor.

1

Full-dose benzo at 5 minutes.

Lorazepam 0.1 mg/kg (up to 4 mg) — not 2. No IV? IM midazolam 10 mg. Then a second-line agent; all three are equal.

2

Not waking up = get cEEG.

Nonconvulsive status hides in the altered ICU patient. Order continuous EEG before you blame the encephalopathy.

3

Provoked ≠ lifelong.

Skip the prophylaxis reflex after stroke, tumor, and TBI (7 days only). Two drugs failed → send her to an epilepsy center.



Questions — and a standing invitation.

Drug-resistant, uncertain, or just not waking up? Call us. Two failed drugs is the referral — we'll take it from there.

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