



Zombie Idea

EPINEPHRINE FOR OUT OF HOSPITAL CARDIAC ARRESTS

Ken Milne

*Skeptics' Guide to
Emergency Medicine*

RESUS^{af}NL

ZOMBIE IDEA

“A zombie idea is a view that’s been thoroughly refuted by a mountain of empirical evidence but nonetheless refuses to die, being continually reanimated by our deeply held beliefs”. Krugman 2013 NYT



ZOMBIE IDEA
Epinephrine in
adults with OHCA
results in better
patient-oriented
outcomes (POO).





OHCA
Challenge
Time Sensitive
Survival < 10%
Intervention Bias



MULTIPLe LInes OF EVIDeNce

Before-After

OPALS 2005

Observation

Olaveengen 2009
Hagihara 2012

RCT

Jacobs 2011

Epi not improve good neuro (POO)



PARAMEDIC-2

Epi v Saline

Survival at 30 days

Survival Good Neuro

Perkins et al
NEJM 2018



PARAMEDIC-2

0.8% Better Survival

NNT = 112

No Stat Difference In
Good Neuro Function

SGEM#238



STILL NO HIGH-QUALITY EVIDENCE OF EFFICACY



IV or IO
PARAMEDIC 3
RCT
Stopped Early



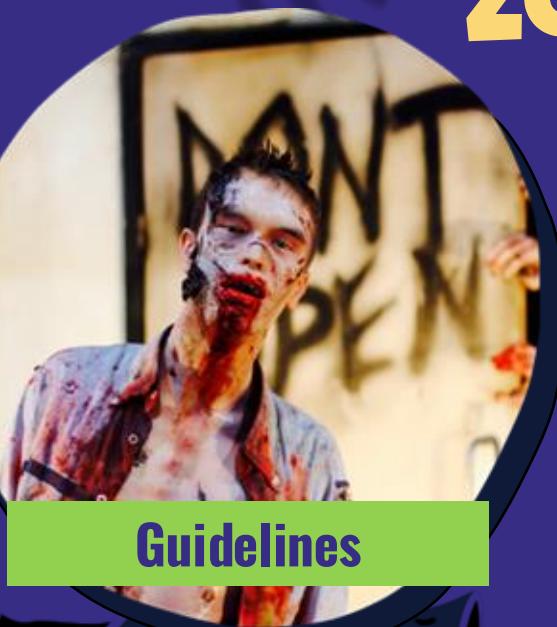
IM or IV/IO
Palatinus 2024
Before-After
Single Centre



IO Up/Down
Tanner 2024
Retro-Obs
Loss to F/U



WHO'S KEEPING THE ZOMBIE ALIVE?



Guidelines



Patient Expectations



Intervention Bias

WHAT SHOULD WE DO INSTEAD?

- ✓ Bystander CPR Training
- ✓ Community Defibrillators
- ✓ Robust EMS System





EM DOCS CAN CHASE THE ZOMBIE AWAY

**Teach trainees the truth.
Set patient/family expectations.
Talk to our pre-hospital colleagues.
Advocate for EBM protocols.
Don't just do something, stand there.**

**BEST WAY
TO KILL A
zombie
IDEA?**



**STOP
BelIEVING
IN IT.**



THANK YOU!

Ken Milne

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