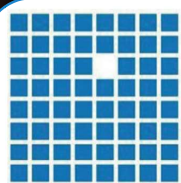


The ED Takedown

Jaron Raper, MD

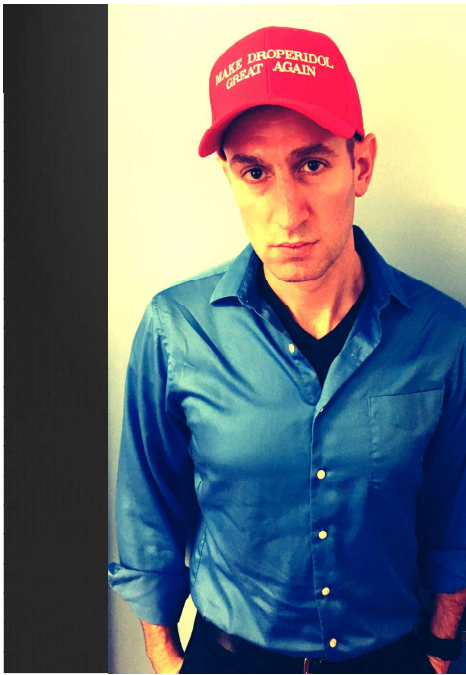
Financial Disclosures

Motivation



American College of
Emergency Physicians®

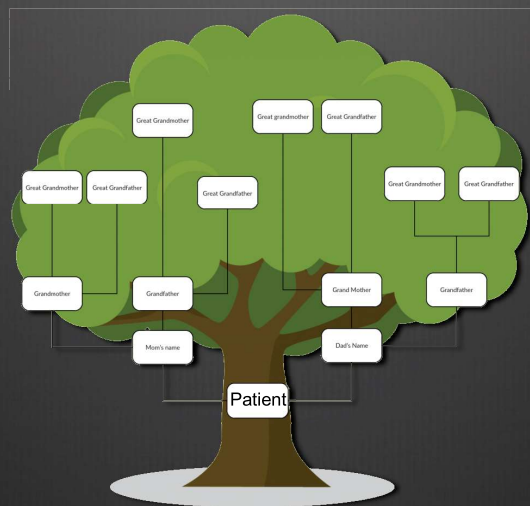
ADVANCING EMERGENCY CARE 



Reuben Strayer



Starting Point





The Goal



Assessment Cont.

Agitated/Cooperative **Hyperactive Delirium**



Agitated, but Cooperative?



No Dangerous Condition

No Danger to Staff

Verbal Deescalation

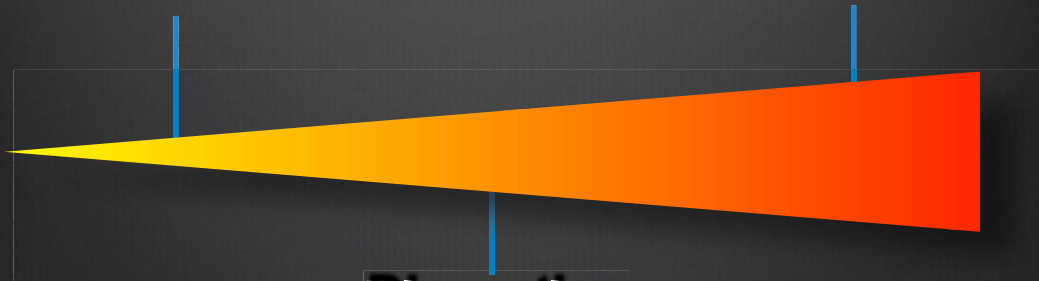
Use a Sitter/PO Ativan

Attempt to De-escalate



Assessment Cont.

Agitated/Cooperative Hyperactive Delirium



**Disruptive
Without Danger**

Disruptive Without Danger



Intoxicated, mostly
Can Converse/Engage
Brief Response to Suggestion
Minimal Concern for Emergency

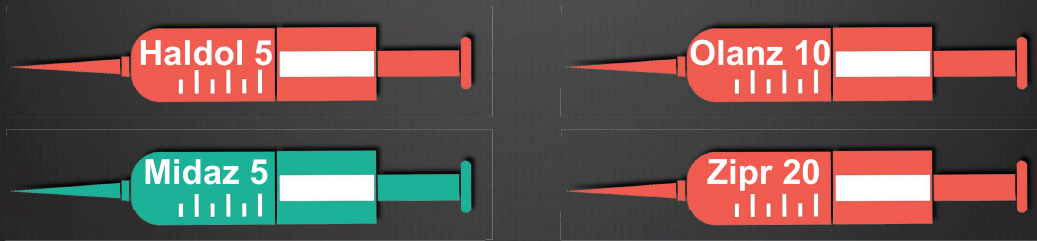
IM Haldol 5, IM Ativan 2
or IM Midazolam 5-10



IM Midazolam 5-10 mg



What about 2nd Gen?



Medication	Min Single Dose	Max Single Dose	Max Dose (24H)	Peak Effect	Redose	Half-Life
Haloperidol	2.5 mg	7.5-10 mg	35-40 mg	10-20 min	60 min	20 hrs
Olanzapine	5 mg	10 mg	30 mg	15-45 min	120-240 min	30 hrs
Ziprasidone	10-15 mg	20 mg	50 mg	<60 min	120-240 min	2-5 hrs
Lorazepam	0.5-1 mg	2-3 mg	10-12 mg	20-30 min	30-60 min	13-18 hrs
Ketamine	4 mg/kg	6 mg/kg	6 mg/kg	3-5 min	None	1.5 hrs

Assessment Cont.

Agitated/Cooperative **Hyperactive Delirium**



Hyperactive Delirium

Dangerous
Disregard for Futility
Disregard for Pain
Will Not Fatigue
Can Not Engage
Medical Problem

Assemble Resources

6 = MEDS

2

4

5

7 = Restraints

3

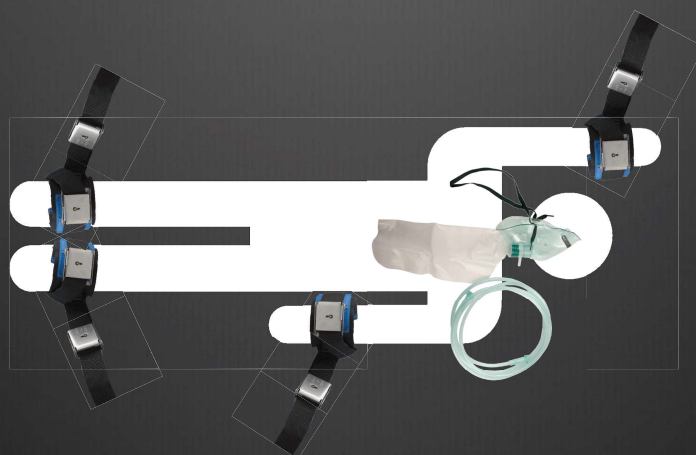
1

Options for Restraint



We Need Restraints!

How to Restrain



Not this.:



Definitely Not This:



How Long?



Meds in <1 Min

Off/Redose 20 Min

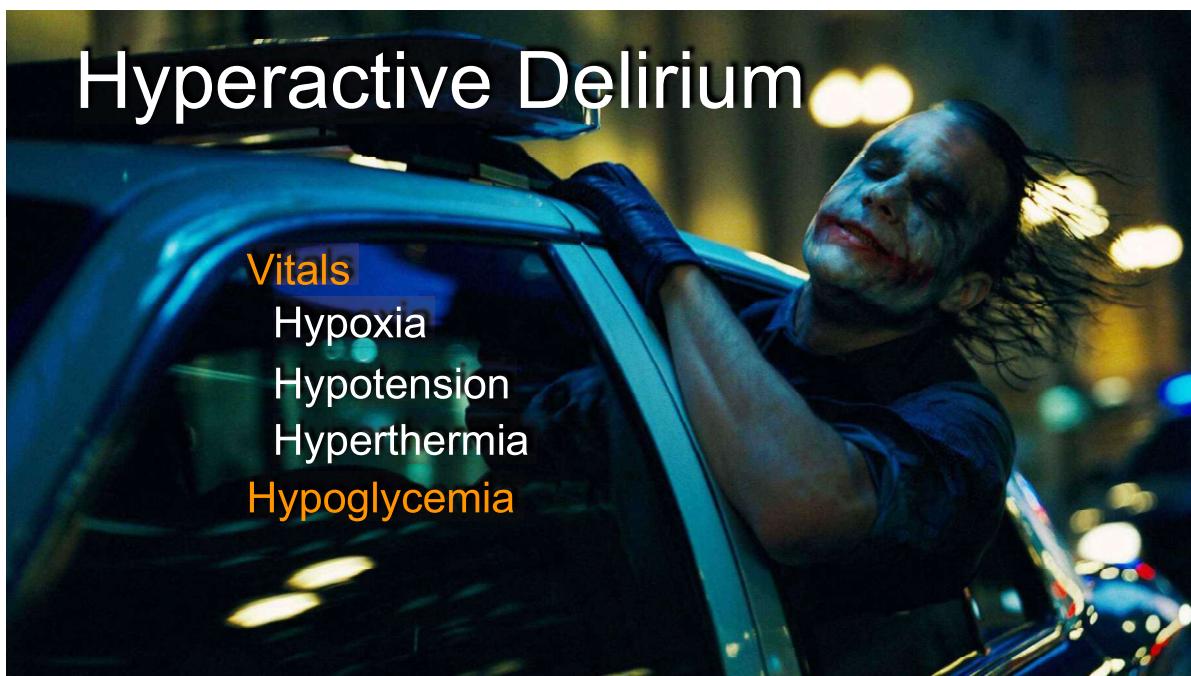
Which Med?





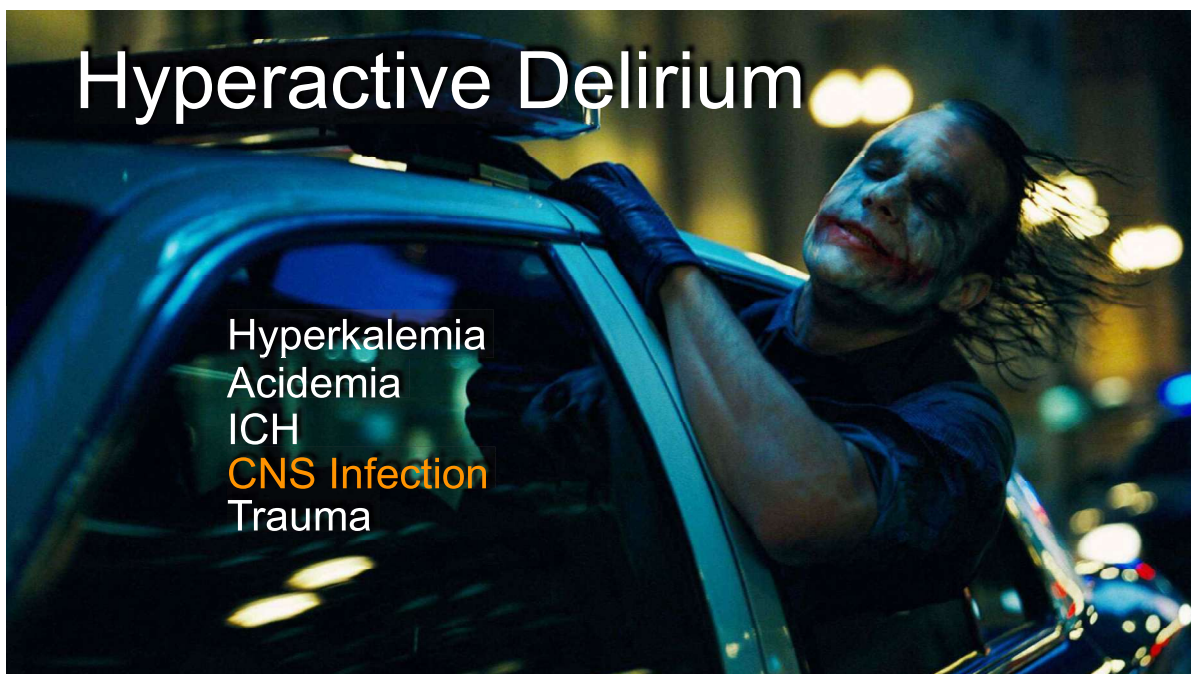
Need Speed? Try Ketamine

4-6 mg/kg IM
Mild Tachycardia/HTN
NO Hypotension
NO Resp. Depression
Onset <5 min



Hyperactive Delirium

Vitals
Hypoxia
Hypotension
Hyperthermia
Hypoglycemia



Hyperactive Delirium

Hyperkalemia
Acidemia
ICH
CNS Infection
Trauma

Hyperactive Delirium

Med Related
Thyrotoxicosis
Seizure/Postictal

What If They're Old?

More Likely Delirium
Lower Your Doses
Go **PO** or **IM** NOT IV

Hold the **Benzo!**



So What's the Future?



Droperidol is
Here...



Droperidol

5-10 mg im x 1

(No EKG)

(No Tele)

Take Home Message:

The collage includes several distinct elements: a green tree diagram with multiple nodes; a yellow octagonal sign with the text "SAFETY FIRST"; a photograph of a man in a suit speaking at a microphone; a photograph of a man in a light blue shirt sitting on the side of a dark car; a close-up portrait of a person with white face paint and red markings around their eyes and mouth; a black and silver analog stopwatch showing approximately 60 seconds; and a box of Kellogg's Special K Original cereal next to a bowl of cereal.



References

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6955008/#fig1-fig1>

Battaglia J, Moss S, Rush J, Kang J, et al. Haloperidol, lorazepam, or both for psychotic agitation? A multicenter, prospective, double-blind emergency department study. *Am J Emerg Med.* 1997 Jul;15(4):335-340

Berzlanovich AM, Schöpfer J, Keil W. Deaths due to physical restraint. *Dtsch Arztebl Int.* 2012;109(3):27-32.

Calver, Leonie; Page, Colin; Downes, Michael; Chan, Betty; Kinnear, Frances; Wheatley, Luke; Spain, David; Ibister, Geoffrey (September 2015). "The safety and effectiveness of droperidol for sedation of acute behavioral disturbance in the emergency department". *Annals of Emergency Medicine.* 66 (3): 231–238

Chase PB, Biros MH. A retrospective review of the use and safety of droperidol in a large, high-risk, inner-city emergency department patient population. *Acad Emerg Med* 2002; 9:1402 – 1410.

Hopper B, Vilke G, Castillo E, et al. Ketamine Use for Acute Agitation in the Emergency Department. June 2015. 48(6) 712-719

Klein LR, Driver BE, Miner JR, et al. Intramuscular Midazolam, Olanzapine, Ziprasidone, or Haloperidol for Treating Acute Agitation in the Emergency Department. *Ann of Emerg Med.* 2018 Oct; 17(4):374-385

Kao LW, Kirk MA, Evers SJ, Rosenfeld SH (April 2003). "Droperidol, QT prolongation, and sudden death: what is the evidence?". *Annals of Emergency Medicine.* 41 (4): 546-58

Krocak S et al. Chemical Agents for the Sedation of Agitated Patient in the ED: A Systematic Review. *Am Journal of Emerg Med* 2016. (34): 2426-2431

Lulla AA, Singh M, Koyfman A, et al. The Art of the ED Takedown. [emdocs.net/the-art-of-the-ed-takedown/](https://www.emdocs.net/the-art-of-the-ed-takedown/), 2019 March 26.

Richmond JS, Berlin JS, Fishkind AB, et al. Verbal De-escalation of the Agitated Patient: Consensus Statement of the American Association for Emergency Psychiatry Project BETA De-escalation Workgroup. *West J Emerg Med.* 2012;13(1):17-25.

Riddell J, Tran A, Benigamin R, Hendey GW, Armenian P, Ketamine as a first-line treatment for severely agitated emergency department patients. *Am J Emerg Med.* 2017 Jul;35(7):1000-1004. doi: 10.1016/j.ajem.2017.02.026. Epub 2017 Feb 13. PubMed PMID: 28237385.

Sharma ND, Rosman HS, Padhi ID, Tidwell JE, Torsades de Pointes associated with intravenous haloperidol in critically ill patients. *Am J Cardiol.* 1998 Jan 15;81(2):238-40. PubMed PMID: 9591913.

Scott Weinstein. Podcast 185 – Disruption, Danger and Droperidol by Reub Strayer. EMCrit Blog. Published on October 31, 2016. Accessed on March 31st 2019. Available at [<https://emcrit.org/emcrit/disruption-danger-droperidol/>].

Serrano K, Shenvi C. Understanding Haloperidol. *Emergency Physicians Monthly.* Published on Sept 30th 2016. Available at [<http://epmonthly.com/article/understanding-haloperidol/>].

Wilson MP, Pepper D, Curner GW, Holloman GH, Feifel D. The psychopharmacology of agitation: consensus statement of the american association for emergency psychiatry project Beta psychopharmacology workgroup. *West J Emerg Med.* 2012;13(1):26-34.

Wood B. Clinically Significant Acute Agitation: Consensus Update. *US Pharm.* 2010;35(11):HS-9-HS15.