

# Benzos for Frenzies...or On-Scene Ketamine

---

Dan O'Donnell, M.D.  
Medical Director IEMS/IFD/IMPD



---

INDIANA UNIVERSITY

School of Medicine  
Department of Emergency Medicine



INDIANA UNIVERSITY

# The Old Friend

- Benzodiazepines
  - Midazolam, Lorazepam, Valium
- The antipsychotics
  - Haloperidol, Droperidol



IU Department of Emergency Medicine



INDIANA UNIVERSITY

# The New Cool Kid

- Ketamine
- Huge uptick in use in Emergency Departments
- Seeing this transition into EMS
- Growing literature looking at its use



**IU Department of Emergency Medicine**



INDIANA UNIVERSITY

# BUT WHICH KID IS COOLER??





INDIANA UNIVERSITY

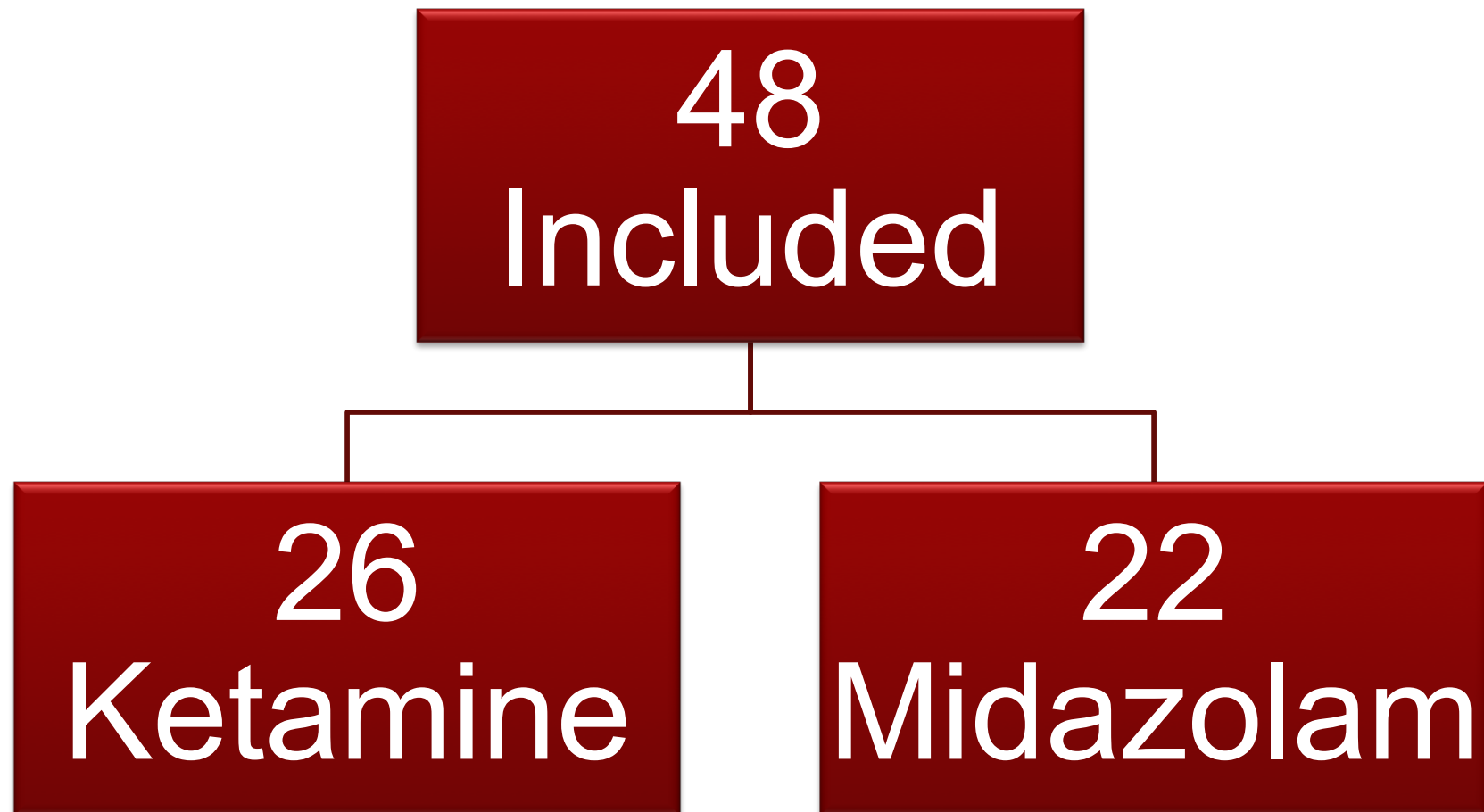
# Ketamine vs. Midazolam

- Head to Head
- Look at effect
  - Blood pressure
  - HR
  - RR
  - Need for Ventilatory support
    - BVM, SGA, Intubation



INDIANA UNIVERSITY

# What Did We Find





## What We Found

**Table 2: Student T-test results between Drug Groups (Midazolam vs. Ketamine).**



	Mean Difference	SE	<i>P-value</i>	95% CI Lower-Higher	
Age	-7.50	3.73	0.51	-15.01	0.19
Sex	-7.50	3.69	0.72	-.32	0.22
Delta SBP (mmHg)	1.66	4.93	0.43	-27.47	11.78
Delta DBP (mmHg)	-1.15	5.07	0.82	-11.35	9.05
Delta HR	1.66	4.99	0.74	-8.27	11.58
Delta O2 Sat	3.00	1.82	0.11	-0.67	6.67



**Table 3: Correlation between drug used and need for airway intervention**

	Value	<u>Df</u>	<i>P value</i>
Pearson Chi-Square	0.984	1	0.321



INDIANA UNIVERSITY

# What We Concluded

- No Significant difference in treatment groups with regards to vital signs
- NO DIFFERENCE IN NEED FOR AIRWAY INTERVENTIONS BETWEEN GROUPS
- Ketamine is a safe alternative to Midazolam in the prehospital environment



INDIANA UNIVERSITY

# Where It Needs To Go

- What about the hospital outcomes?
- Is there a difference in:
  - Efficacy
  - Need for airway maneuvers
  - Length of ED Stay
  - Need for Hospitalization