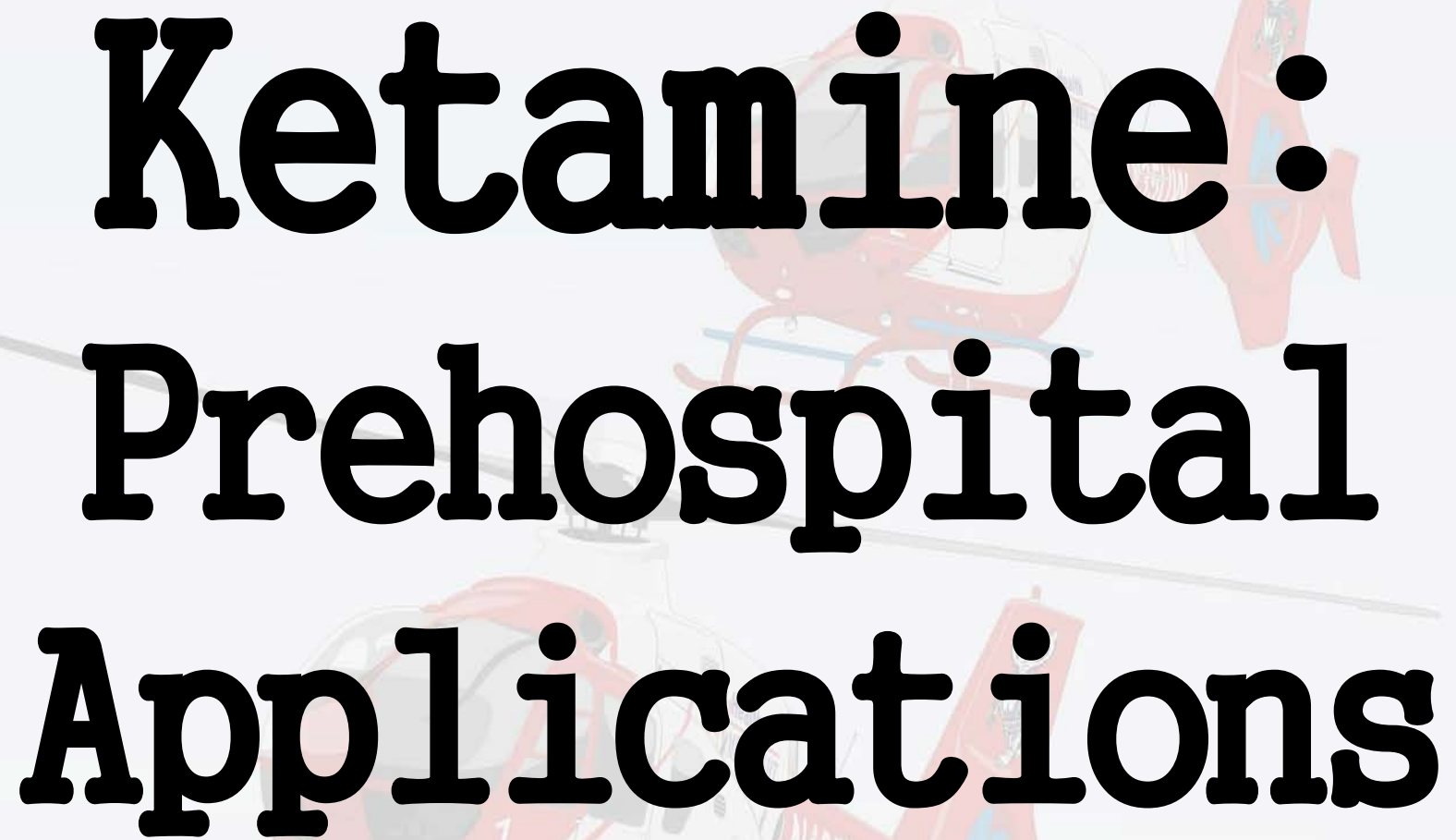


# **Ketamine: Prehospital Applications**

The background of the slide features a faded, semi-transparent image of two medical helicopters. The helicopters are primarily red with white accents and are positioned diagonally across the frame, one above the other. They have large rotors and landing skids, typical of emergency medical services aircraft.

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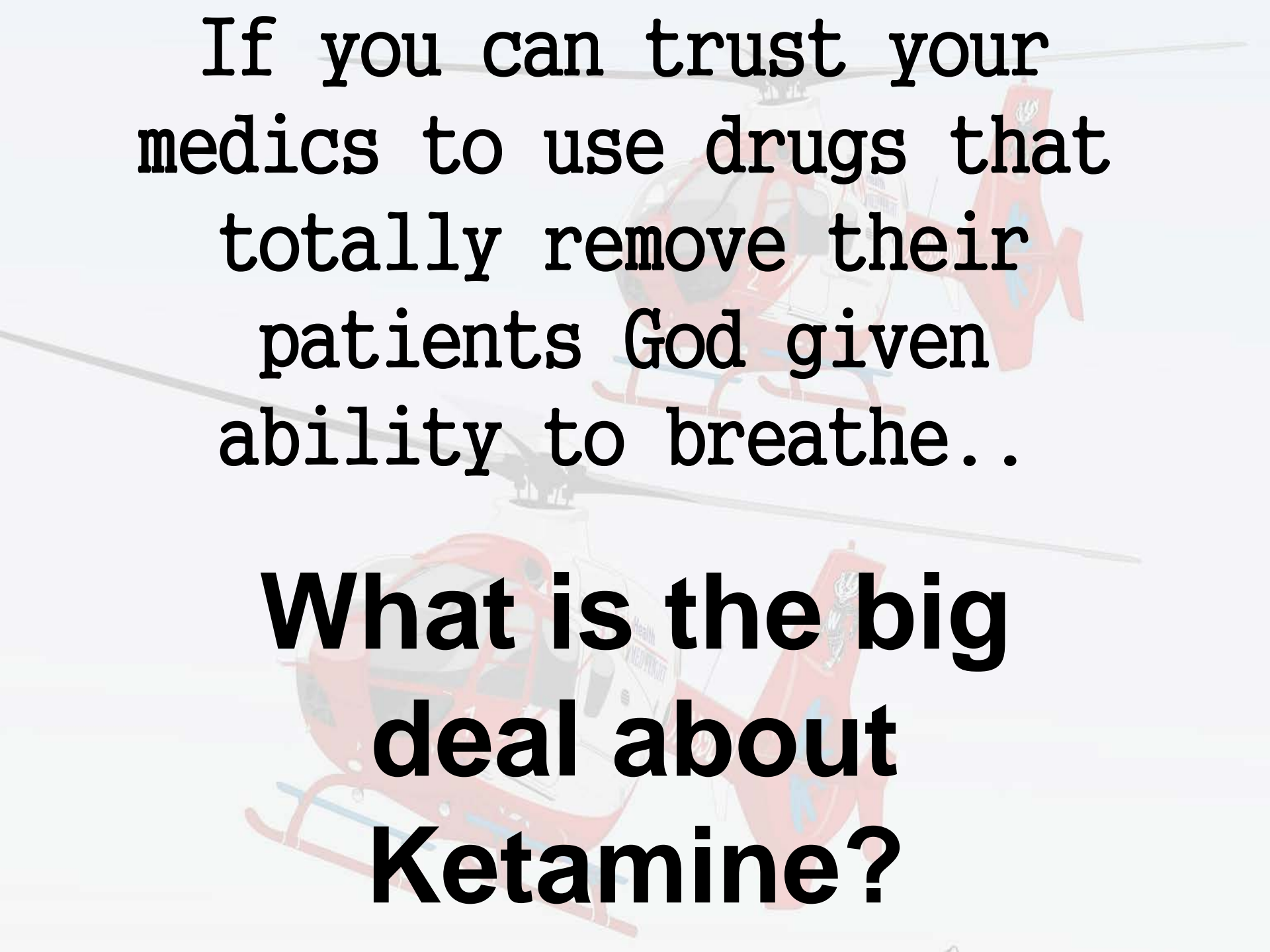


# Conflicts and Interests





**My 20 year history of  
prehosp & ED ketamine use**



If you can trust your  
medics to use drugs that  
totally remove their  
patients God given  
ability to breathe..

**What is the big  
deal about  
Ketamine?**

# Ketamine – Pharmacology

The background of the slide features a faded, semi-transparent image of two medical helicopters. The helicopters are red with white accents and are positioned diagonally across the frame. They appear to be emergency medical service (EMS) vehicles, with some text visible on their sides, though it is not legible. The overall tone of the background is light and airy.

- Dissociative anesthetic
- Sedative AND Analgesic
- Typically no respiratory depression
- Wide variety of effects depending on dosing (mild analgesic to general anesthetic)
- Huge LD50 ie safe at even 10-100x intended dosing



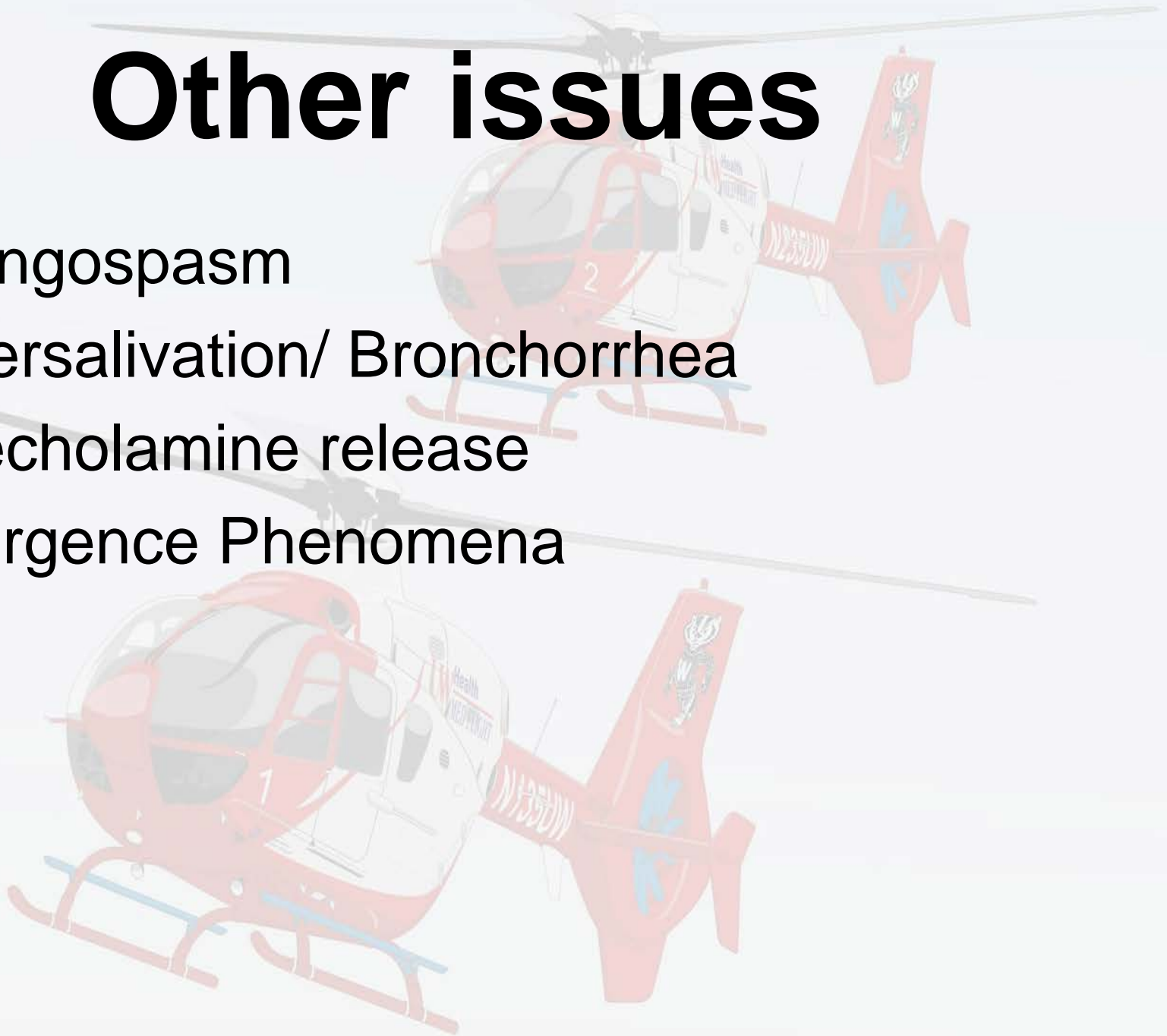
# **Medical Urban Legends – Myths**

## **Use in Patients with:**

- **Head injuries –elevated ICP**
- **Seizures**
- **Psych disorders**
- **Cardiac issues CAD**

# Other issues

- Laryngospasm
- Hypersalivation/ Bronchorrhea
- Catecholamine release
- Emergence Phenomena



# Laryngospasm



# Hyper-salivation







# Catecholamine Release

# The Dreaded Emergence Phenomena



# Prehospital applications

The background of the slide features two medical helicopters, likely from the Canadian Air Rescue Service, rendered in a semi-transparent, faded style. One helicopter is positioned in the upper right, and the other is in the lower left, both angled towards the left. They are red with white accents and have the number '2' and '1' visible on their sides respectively.

- Analgesic
- Procedural sedation & Extrication
- Induction Agent for RSI
- PISA = Post Intubation Sedation & Analgesia
- Behavioral Emergencies - ExDs

# Ketamine comes in multiple concentrations – A med error waiting to happen

**Stock only  
the 100mg/ml  
concentration  
for prehosp**

**Why?**





# EMS CALL

- Approx 30 y/o male – In local bar “ Acting strange and then just snapped” Screaming and violent. Throwing chairs and bar glasses
- Tased 4 times, 2 officers injured in takedown and restraint (pt weighs 70 kg)
- Pt hogtied facedown on EMS gurney, given 10 Haldol IM, little effect. Still agitated, kicking-bleeding from wrists and ankles ( BG 140)
- Will be at your door in 3 minutes.

# On Arrival to ED

- Truly out of control – 4 officers holding him on gurney as it is wheeled by
- IV ? Vital Signs – Sure Buddy! HR 145
- Pt incoherent, screaming. No response to any outside stimuli
- He will injure himself or someone else unless something is done quickly
- YOUR CALL



# Options ? Route ?

The background of the slide features two red and white medical helicopters in flight. The helicopter in the foreground is slightly lower and to the left, while the one in the background is higher and to the right. Both helicopters have the number '1' on their sides and a blue caduceus symbol on their tails. The rotors are blurred, suggesting motion.

Narcs?

- Benzos?
- Neuroleptics?
- RSI –intubation
- Or.....



# Ketamine

## Behavioral Emergencies



# Ketamine –Behavioral Emergencies

- First choice when things are getting dangerous - Define dangerous
- Nothing works faster IM (Typically no IV)
- Dose 4-6 mg/kg IM
- Always use 100mg/ml concentration



# Difficult Extrication





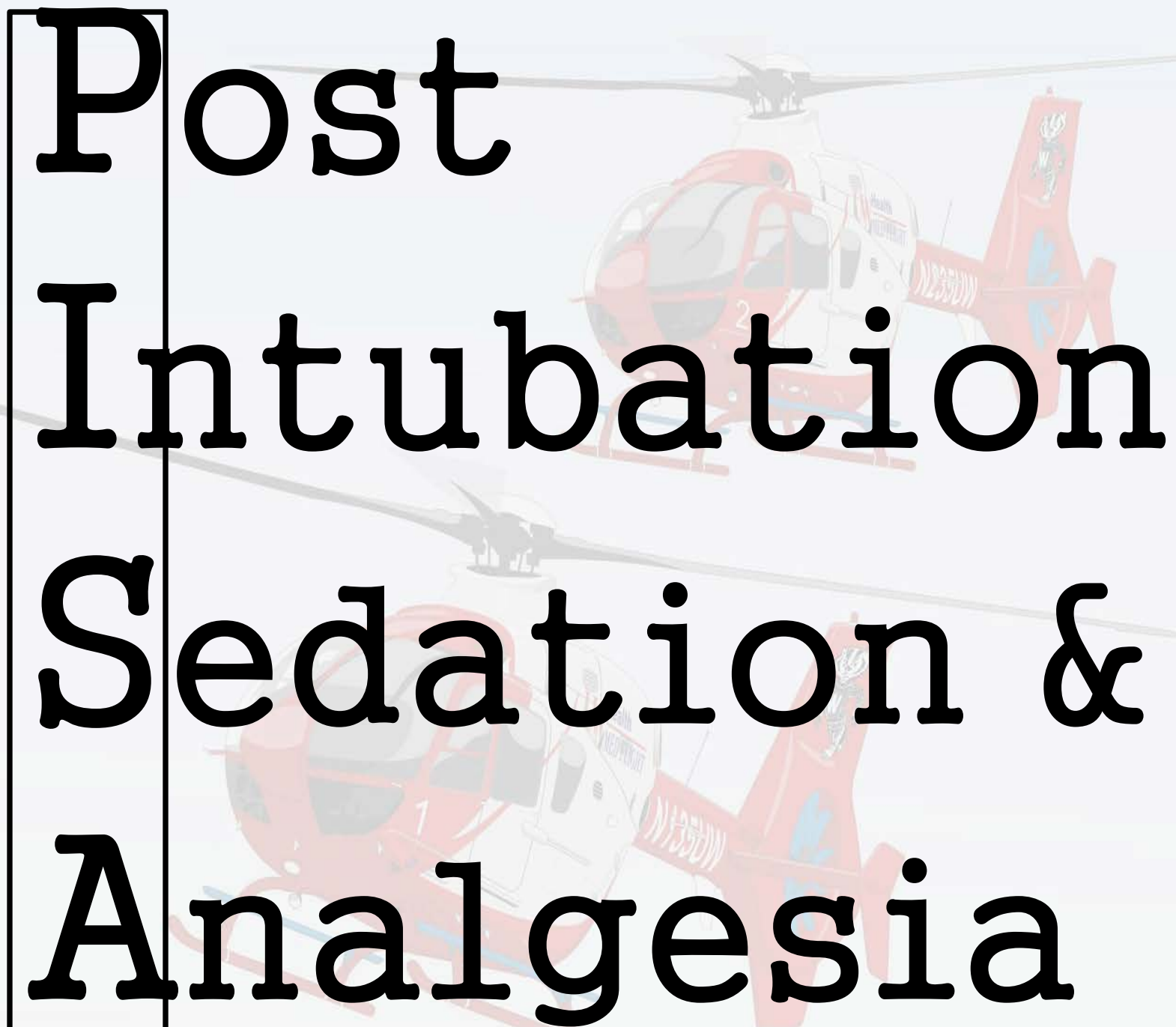




The background of the slide features two red and white helicopters in flight. The helicopter in the foreground is slightly lower and to the left, while the one in the background is higher and to the right. Both helicopters have the number '1' on their sides. The text is overlaid on this background.

# **Induction Agent for RSI**

**1.5- 2.0 mg/kg**

The background of the slide features two red and white medical helicopters, likely Air Medics, flying in a staggered formation against a light blue sky. The helicopters have "AIR MEDICS" written on their sides. The text "Post Intubation Sedation & Analgesia" is overlaid on the image in a large, black, serif font. The first letter "P" of "Post" is enclosed in a black rectangular box.

# Post Intubation Sedation & Analgesia



**From the standpoint  
of analgesia :**

**You should be treating  
your intubated patient  
the same as the trauma  
with a shattered femur**



# Ketamine–PISA

- IVP 1mg/kg q 15 mins or
- Infusion – 1-3mg/kg/hr



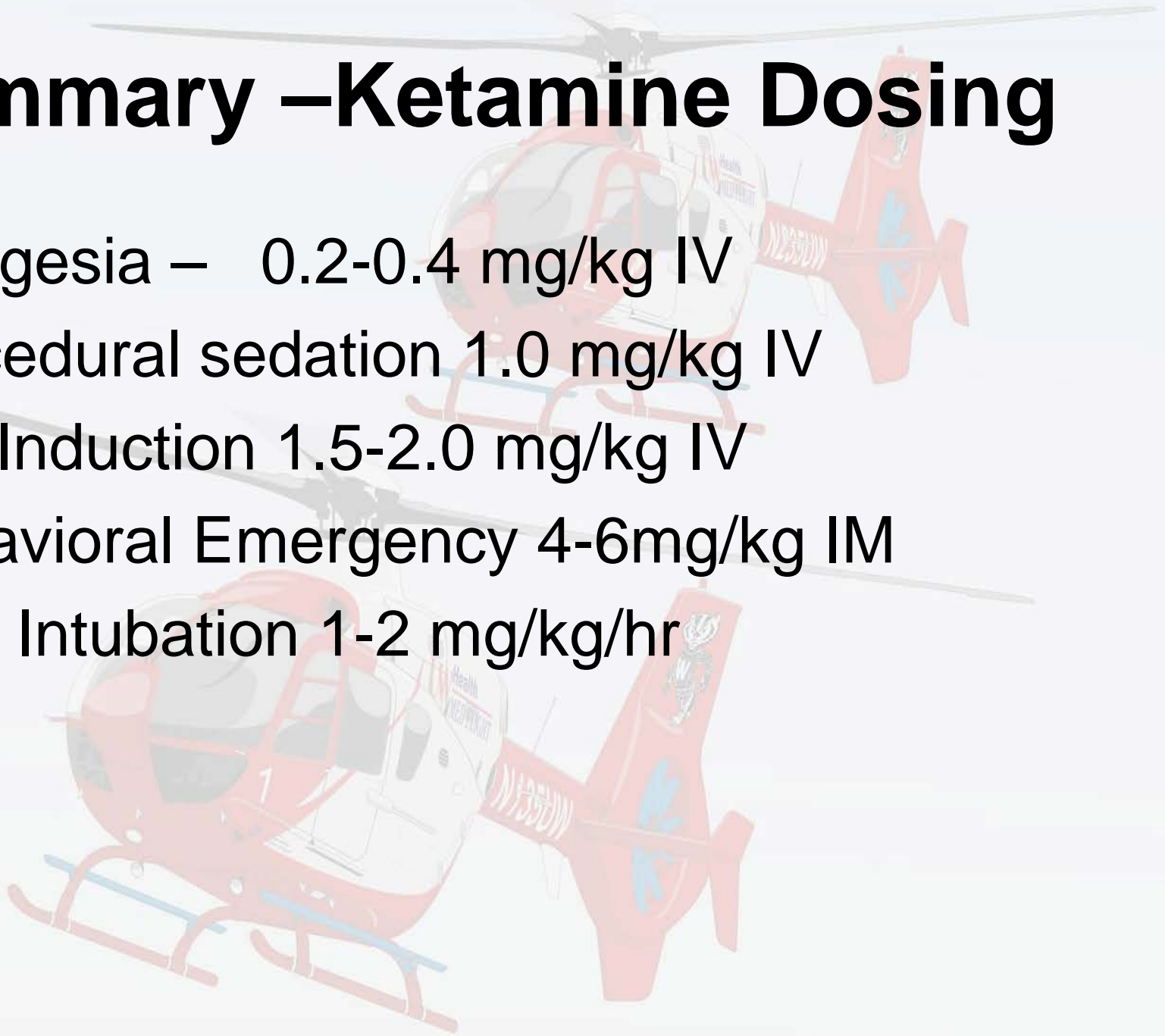
# Ketamine – Low Dose for analgesia

- Poorly defined: 0.1 to 0.5 mg/kg
- Consider for opioid tolerant
- Again – synergy with narcotics
- Decrease in side effects, better analgesia with IV infusion over 30 mins compared to IVP
- Typical dosing 0.2-0.4mg/kg
- Psych/ antidepressant effects



# Summary –Ketamine Dosing

- Analgesia – 0.2-0.4 mg/kg IV
- Procedural sedation 1.0 mg/kg IV
- RSI Induction 1.5-2.0 mg/kg IV
- Behavioral Emergency 4-6mg/kg IM
- Post Intubation 1-2 mg/kg/hr



A promotional image for the TV show MacGyver. It features a close-up of the main character, a man with light brown hair, looking directly at the camera. The background is a fiery, orange and yellow explosion. In the top right corner, there are two red and white capsules. In the bottom left corner, there is a silhouette of a biplane. The word 'KETAMINE' is written in large, bold, black letters across the top. The word 'MACGYVER' is written in large, bold, red letters with a yellow outline across the bottom.

# KETAMINE

# MACGYVER

# Questions



