

# A Descriptive Assessment of Prehospital Ketamine Administration Using a Statewide Data Repository

Authors

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## INTRODUCTION

- Ketamine is a powerful analgesic with a favorable risk profile.
- This study seeks to add to the available literature describing patients who receive prehospital ketamine.

### OBJECTIVE

- Describe patients who received prehospital ketamine in West Virginia (WV).

## METHODS

### DESIGN

- Retrospective Observational Study

### POPULATION & DATA SOURCE

- Prehospital patient care records from the WV EMS data repository maintained by ESO (Austin, TX).
- Study period was from January 1, 2019 to December 31, 2019.
- All 9-1-1 records submitted to the WV EMS data repository where the patient received prehospital ketamine were included.
- This study was determined to be exempt by the IRB at the University of North Carolina - Chapel Hill

### OUTCOMES & MEASURES

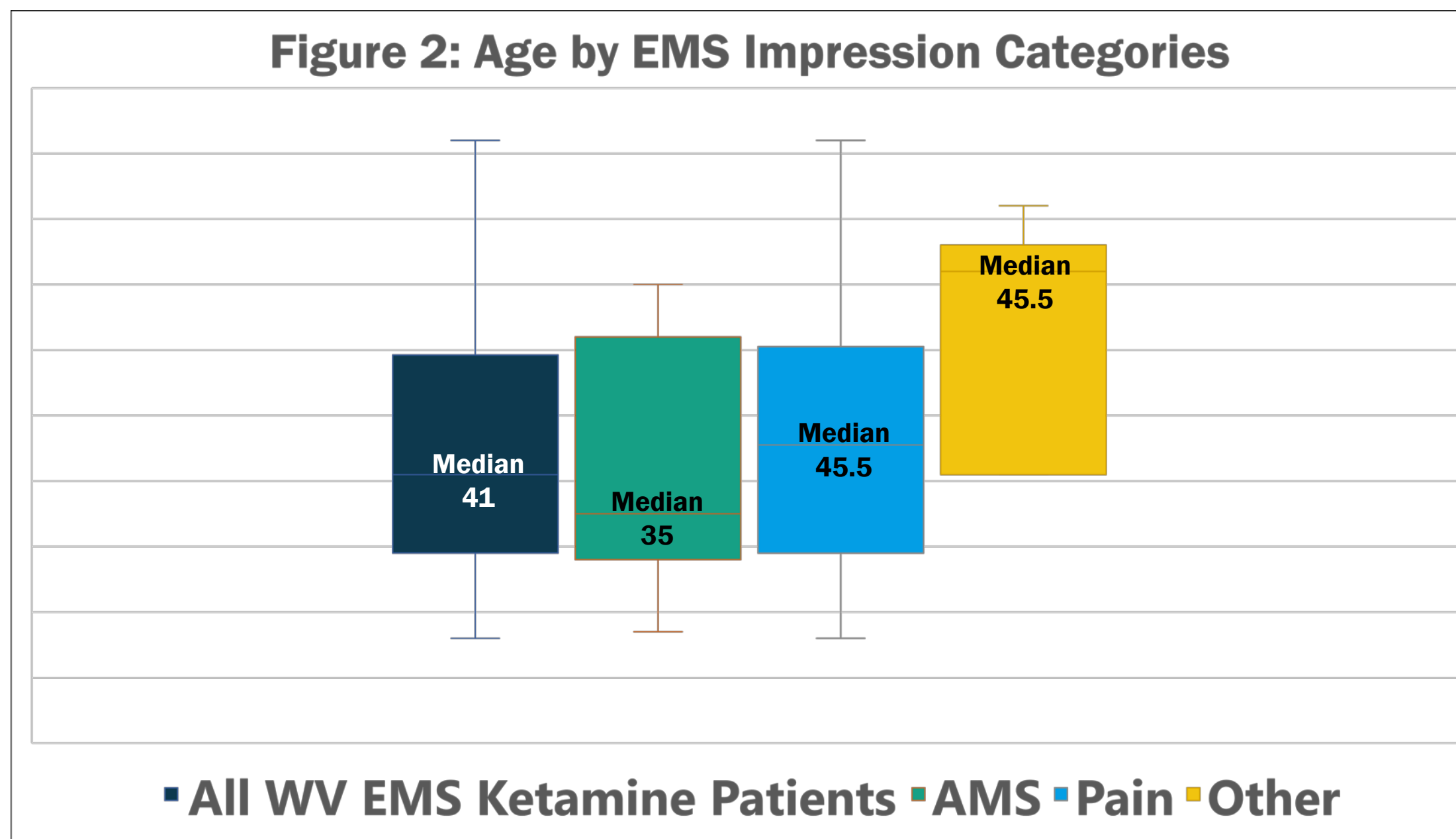
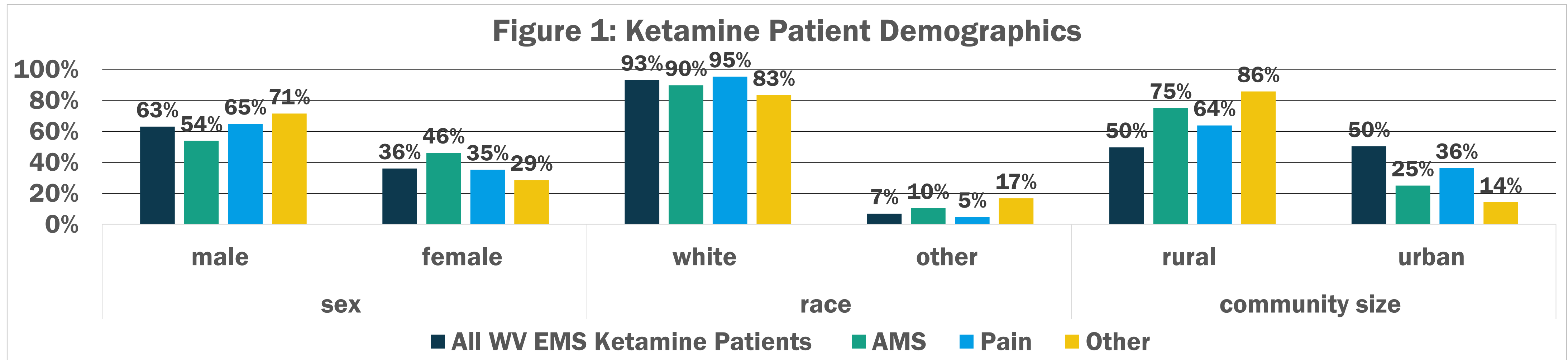
- WV protocols allow ketamine administration for pain and Excited Delirium (<https://www.wvoems.org/files/protocols/combined-paramedic-protocols>). Therefore, EMS provider impressions were categorized as pain/injury, altered mental status (AMS)/behavioral, and other.
- Patient primary symptom, demographics, and community size were evaluated.

### ANALYSIS

- Descriptive statistics were calculated.

## RESULTS

- In 2019, there were 154,906 WV 9-1-1 records submitted to the WV EMS data repository. Among those, 173 (0.1%) had documented prehospital ketamine administration.
- There were 62% (74) of patients with pain/injury impressions, 33% (40) AMS/behavioral, and 6% (7) other.



Impression Category	Symptom	Percentage (Count)
AMS/Behavioral	Behavior, Strange and Inexplicable	46% (12)
	Behavior, Slowness and Poor Responsiveness	31% (8)
	Altered Mental Status	8% (2)
	Combative or Violent Behavior	8% (2)
	Restlessness and Agitation	4% (1)
	Suicidal Ideations	4% (1)
Pain/Injury	Pain, Unspecified	71% (48)
	Hemorrhage or Bleeding	21% (14)
	Behavior, Slowness and Poor Responsiveness	3% (2)
	Abdominal tenderness	1% (1)
	Abnormal Involuntary Movements, unspecified	1% (1)
	Dyspnea	1% (1)
	Nausea	1% (1)
Other	Pain, Unspecified	100% (1)

## CONCLUSIONS

- More WV 9-1-1 patients received prehospital ketamine for pain/injury than for AMS/behavioral impressions.
- Ketamine for pain/injury was administered more often in rural areas while ketamine for AMS/behavioral impressions was more frequent in urban areas.
- Those with pain/injury were older than those with AMS/behavioral impressions.
- Future research should evaluate the effectiveness of ketamine for pain/injury and AMS/behavioral impressions.