Breaking Free from the Restraints: Transforming Colorado's Emergency Medical Services (EMS) Response to Behavioral Health Crises

Amber Viitanen, MPH, Eric Lucas, NR-P, MPH, Scott Beckley, PhD, Dale Knochenmus, and Jeff Beckman, MD, FACEP, FAEMS

Introduction

Ambulance transports cost patients anywhere from hundreds to thousands of dollars. Despite the high cost, Emergency Medical Service (EMS) providers are increasingly called to respond to all types of emergencies, including behavioral health crises. These patients experience high levels of emotional distress at the time they call 9-1-1, and often find themselves left with exorbitant bills and limited treatment options.

Objective

The purpose of this study is to examine this often overlooked population, the care they receive, and approaches for improving efficiencies in the EMS system to reduce costs, burden, and harm to both patients and providers alike.

Methods

This is a retrospective study using Colorado's EMS patient care data, from all licensed ambulance agencies, submitted to the state repository in 2018. Patients experiencing behavioral health crises were identified using the provider's documented primary and/or secondary impression. Descriptive statistics were used to understand the patient population as well as the types of interventions used to help stabilize these crises. Spatial analysis tools were used to map locations of behavioral health treatment resources in relation to where behavioral health incidents occur across Colorado in order to identify opportunities for improved resource management.

Results

During the study period, 51,424 of 609,650 EMS calls (8.4%) were identified as behavioral health crises based on the provider's documented primary and/or secondary impression. The median age was 37 years, 50.3% were male, and when primary insurance type was documented, Medicare/Medicaid was most frequently listed (39.1%). Of all calls identified, 68.5% were responses that were initiated by a call to 9-1-1 (911 responses), and 30.9% were responses to facilities to transport the patient to another facility (interfacility transport). When examining 911 responses only, data show 82.7% of patients were transported from the scene of the call by ambulance, but only 124 (0.4%) of those patients were taken to a behavioral health treatment facility (14,141 patients were taken to a hospital without behavioral health capabilities). Most of the patients who ended up in a behavioral health facility did so through an interfacility transport (95.9%), indicating they were first taken to a hospital, then transported via EMS to a behavioral health facility for appropriate care. When examining what treatment was provided to patients suffering from behavioral health emergencies, data show that only 12.2% of these patients received any medication, most frequently a chemical restraint or sedative such as Ativan, Haldol, Versed or Ketamine (46.8%), and 8.6% were placed in physical restraints. In total, treatment of behavioral health crises in Colorado required over 100,000 hours of EMS provider time, often a result of multiple transfers between facilities that increase patient cost and systemic burden.

Conclusion

Behavioral health emergencies consume a large portion of EMS resources in Colorado; however, new opportunities in reimbursement for alternate destinations or treatment in place can reduce the amount of unnecessary transports. These vulnerable patients would greatly benefit from an improved system of care that reduces cost by reducing ambulance transports, increasing availability of behavioral health facilities in resource-poor regions of the state, and providing innovative treatment options. Further studies should evaluate the benefits of changing the way EMS providers can manage and/or transport patients suffering from behavioral health emergencies.