

## Abstract

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### **Identifying bias in the emergency department: A retrospective study of the relationship between race/ethnicity and initiation of physical restraints.**

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#### Objective:

Evaluating physical restraint use in the emergency department (ED) illuminates discrepancies in care associated with patient race/ethnicity as well as other patient characteristics. We examine the association between patient characteristics and physical restraint use for behavioral emergencies within Kaiser Permanente Northern California (KPNC) EDs.

#### Methods:

This was a cross-sectional, observational analysis of adults placed in physical restraints for behavioral issues between January 1<sup>st</sup>, 2016 to December 31<sup>st</sup>, 2019. We describe associations between self-reported patient characteristics, including race/ethnicity, as found in the EMR and initiation of physical restraints.

#### Results:

From 2016-2019, 1,806,507 individuals had 4,433,122 ED encounters. There were 5,585 (0.31%) individuals from 6,402 encounters requiring physical restraints for behavioral issues. Black, non-Hispanic patients comprised 15.3% of total encounters and 20.2% of physical restraint encounters. Proportions among non-Hispanic white patients were 44.2% and 47%; 10.7 and 5.8% for Asian patients; and 22.6% and 17% of Hispanic patients. The physical restraint group had a higher percentage of males (61.9% v. 43.9%), primary psychiatric (73.5% v. 58.7%) and substance use disorders (62.2% v. 53.2%); individuals presenting through emergency medical services, law enforcement, or social services (75.2% v. 17.4%); and presentations with higher ED acuity (76.7% v. 17.3 % for levels 1 and 2) when compared to the group without restraints.

#### Conclusion:

In a community ED setting, we note variations in the use of physical restraints related to race, ethnicity and other patient characteristics. Future research should target equity by emphasizing care that minimizes harm to these populations.

Advocacy for health and health education Assessment of individual and community needs for health education Diversity and culture Epidemiology Ethics, professional and legal requirements Social and behavioral sciences

