Disparate Utilization of Urine Drug Screen Nationwide in the Evaluation of Acute Chest Pain

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Background

Urine drug screens have low utility in most emergency department (ED) presentations. Previous analyses have shown disparities in clinician ordering of diagnostic testing from the ED. Given that drug use can confound ED presentations for chest pain, we hypothesized that urine drug screen (UDS) utilization would vary across race/ethnicity as well as sex.

Methods

This was a retrospective observation analysis of the 2011 to 2018 National Hospital Ambulatory Medical Care Survey. We identified UDS for each visit. For the purpose of modeling UDS utilization in a binary logistic regression, we included only black and white race because of small sample size for other races. Survey weights and complex sample design features were implemented to provide nationally representative estimates. All analyses were performed in R (4.0.2).

Results

We identified 12,114 unweighted adult visits from 2011 to 2018 with a reason for visit chest pain, representing 73 million weighted (nationwide estimated) visits in the 8-year timeframe. The rate of urine drug screen utilization in this patient population was 4.2% of visits (95% confidence interval [CI] 3.5% to 4.9%). White females had a rate of urine drug screen of 2.8% (95% CI 2.0% to 3.6%), with the UDS rate higher for black females 4.1% (95% CI 2.8% to 5.5%) white males 4.8% (95% CI 3.8% to 5.9%), and black males 8.9% (95% CI 6.0% to 11.9%). In a multivariable binary logistic regression model, including time trends and adjusted for age categories, male sex and black race were associated with increased odds of UDS (1.96 [95% CI 1.51 to 2.55], 1.45 [95% CI 1.05 to 2.00]). If black males exhibited the same rate of UDS as white females, there would be an estimated 48,000 fewer nationwide UDS performed each year on black males presenting to EDs with chest pain.

Conclusion

Given the poor test characteristics of UDS and the significant disparities in utilization by race and sex, clinicians should consider abandoning this as a tool for the evaluation of acute chest pain.

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