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Descriptive Analysis of Drug Overdose Deaths in Northeast Tennessee in 2014

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BACKGROUND

From 1999-2014, deaths from drug overdose (OD) in Tennessee increased more than 300%.

OBJECTIVES

To establish baseline death rates from drug overdose for the Northeast Region of Tennessee (NER; 7 counties, 2014 population estimate 350,642) and to explore patterns of prescription substance use in overdose deaths.

METHODS

Data for all OD cases in NER was obtained from the Tennessee Controlled Substances Monitoring Database (CSMD), autopsy, death certificate and medical records from January 1 through December 31, 2014. Epi Info 7 was used to analyze data.

RESULTS

There were 71 cases, with a mean age of 44.7 years, 97% White, and 70% male. Crude death rate in NER was 25 per 100,000, versus 16 per 100,000 for TN. Manner of death was determined to be accidental in 56 (82%), suicidal in 10 (15%), and undetermined in 2 (3%). Multi-drug overdose (91%) was the most common cause of death, with opioids involved in 55 (83%) cases. The most frequent combinations were an opioid and a benzodiazepine (58%), followed by an opioid and an antidepressant (33%). CSMD data were available for 54 (92%) cases, of whom 36 (68%) overdosed on the medications prescribed to them, 8 (15%) filled prescriptions from ≥ 5 pharmacies and 19 (36%) had prescriptions from ≥ 5 prescribers.

CONCLUSIONS

Crude drug-overdose death rate among adults in NER in 2014 was 59% higher than in Tennessee. Multidrug overdose involving prescription opioids was the most common cause of death, with diversion and doctor shopping a potential source of prescription substances.