Background
Beginning in 2009, drug poisoning deaths outnumber traffic fatalities in the US.

Aims/Objectives/Purpose
The goal of this study is to examine drug poisoning death rates by degree of urbanisation and geographic region.

Methods
The US National Vital Statistics Multiple Cause Mortality files from 1999–2009 were analysed. Drug poisoning deaths were defined by ICD-10 UCOD: X40-X44, X60-X64, X85, Y10-Y14. Metropolitan counties were assigned to 4 levels: large core and large fringe (population >1 million); medium (population 250 000–999 999); and small (population<250 000). Nonmetropolitan counties were assigned to micropolitan or noncore. Age-adjusted death rates (AADR) were calculated by urbanisation and many factors (not shown). Average annual percent change (APC) in rates and trends were tested using Joinpoint regression.

Results/Outcome
In the US from 1999–2009, the drug poisoning AADR nearly doubled, from 6.1 per 100 000 population to 12.0. Increases were seen at each urbanisation level. However, AADR in rural areas increased more rapidly than the metro areas with an APC in rates of 12% while the urban core increased slower at 4.4%. Rates varied by region of the county, for instance in the Appalachia the AADR (15.6) was 34% higher than the rate for the rest of the US.

Significance/Contribution to the Field
The variability in magnitude and trend by degree of urbanisation and region suggest that societal and structural factors are influencing drug poisoning death rates. Prevention efforts typically focus on more urban areas; however, rural areas should join forces to prevent these deaths using regionally appropriate strategies.