Is there a continental divide? Geographic distribution of sympathomimetic drug exposures

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Background
- Anecdotally, many health care providers believe cocaine is predominantly an “East Coast” drug of abuse while methamphetamine and amphetamine represent “West Coast” drugs of abuse.
- We sought to determine whether this observation is accurate and to determine whether additional demographic features are associated with an increased use of one drug of abuse versus the other.

Methods
- National Poison Database System (NPDS) data was obtained and queried by state for the years 2005-2011 for exposures to cocaine, methamphetamine, and amphetamine.
- An average case exposure rate (number of cases/100,000 persons) by state was calculated for each drug of abuse over the study period.
- States were then categorized as either “East” or “West” of the Mississippi River.
- A two sample T-test assuming unequal variance was performed between “East” and “West”.
- Multiple regression was performed to determine if the following were associated with an increased use of one drug of abuse versus the other.

Results
- A statistically significant difference was observed in the reported case exposure rates for:
  - Cocaine (1.32 v 2.41; p<0.001)
  - Methamphetamine (1.12 v 0.42 ; p<0.001)
- Cocaine exposures are more commonly reported to NPDS from states east of the Mississippi River.
- Methamphetamine exposures are more common in states west of the Mississippi River.
- Additional demographic factors such as state average yearly income, unemployment rates, # of violent crimes/1000 persons, and percentage of state population that is Caucasian were not predictive of case exposure rates (p>0.05) for cocaine, methamphetamine or amphetamine.

Conclusion
- Over a six year period of time:
  - More cases of exposure to cocaine were reported from states east of the Mississippi River.
  - More cases of exposure to methamphetamine were reported from states west of the Mississippi River.
  - There was no observed difference in amphetamine exposures.
  - Additional demographic features were not predictive of sympathomimetic drug exposure.

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Additional tables and figures are not included here for brevity. The presented information includes the geographic distribution of sympathomimetic drug exposures, with states color-coded to indicate exposure rates.