

## **Trends in Methamphetamine Use in California: Characteristics of a Drug Epidemic**

Methamphetamine abuse is a serious public health problem that has grown dramatically over the past two decades. The number of methamphetamine cases treated in the United States increased from 41,045 to 149,215 incidents per year from 1996 through 2006 - a 364% increase. A recent study has shown that the growth of methamphetamine abuse and dependence has progressed in ways similar to an epidemic of an infectious disease, restrained from year to year by legal changes that made illicit manufacture of the drug more difficult.

### **Growth in Methamphetamine use in Western States**

The use of methamphetamine has been much more common in the western United States, and its reach has gradually expanded eastward. For example, methamphetamine use among arrestees has been shown to be much greater in western cities (30% to 37% across Honolulu, San Jose, San Diego, and Sacramento) than eastern ones (1% or less across Washington, D.C., New York City, and Philadelphia). One national study noted that methamphetamine use was 5.4 times higher in the west than in the northeast United States.

A study recently carried out by the Prevention Research Center of the Pacific Institute for Research and Evaluation in Berkeley, California examined how methamphetamine abuse and dependence has changed in California. Researchers used historical data on methamphetamine-related arrests and hospital discharges in California between 1980 and 2006 to observe changes over time and in different geographic areas. The study found that hospitalizations for amphetamine or methamphetamine abuse increased 18-fold from 1983 to 2005.

### **Impact of “Precursor” Laws**

While the use of methamphetamine grew rapidly, it is important to note that four major federal laws restricting sales and distribution of products used in the manufacture of methamphetamine significantly restrained expansion of methamphetamine abuse. These laws limited the availability of chemicals and over the counter sales of pseudoephedrine products used to prepare methamphetamine. When each law was implemented, the use of the drug dropped temporarily. These laws slowed but did not stop the growth of methamphetamine abuse in California.

### **Growth of Drug Use Similar to Epidemic of Contagious Disease**

The data also supported the view that the patterns of spread of drug abuse are similar to those of a contagious disease. The researchers examined methamphetamine hospital discharges for abuse and dependence per 10,000 people between 1995 and 2005 for zip code areas in California. The data showed that methamphetamine related hospitalizations increased dramatically but this growth was particularly concentrated in certain areas of the state. When arrests for methamphetamine possession were studied

from 1980 to 2006 for 330 cities in California, similar patterns were seen. There were dramatic increases across the state, but much more rapid growth in particular cities. This is the kind of pattern that would be expected for a contagious disease in which current users influence others to try drugs and to continue to use them.

One feature that is unique to drug abuse as compared to some other contagious diseases, drug addiction is a chronic relapsing disease and many former users will relapse back to use over time. Therefore, treatment of abusers will probably be insufficient to halt the epidemic, since even treated users are likely to relapse, at least for a period of time. Epidemic outbreaks arise as drug availability and social influences reach a tipping point leading to rapid expansion of use.

### **Changes in Drug Markets**

Changes in the growth of the epidemic over time are confirmed by observations of law enforcement agencies regarding drug markets during this period. In the early phase of the epidemic, most growth was observed in rural northern and southern areas of the state, places where domestic methamphetamine production was taking place. During the middle phase, as the Mexican drug cartels became more active, the fastest growth took place in the central valley areas of California, and in the late phase these activities began to move into urban areas.

### **Characteristics of Abusers and Addicts**

Additional analysis supports the findings of previous research regarding the characteristics of methamphetamine abusers and addicts. They tend to be young, Non-Hispanic white, unemployed males with low incomes living alone. They also tend to be concentrated more in rural than urban areas. While this pattern is consistent in California, analysis of changes over time suggests that more recently the epidemic is growing and diversifying into new areas of the state with higher incomes and more Hispanic population.

### **Conclusions**

Findings of these studies show that policy changes had a substantial impact on methamphetamine abuse but were not sufficient to halt the growth of abuse. Illegal drug markets continue to “infect” at-risk populations with the use of meth. Users continued to “infect” non-users by influencing them to try the drug. Prevention, education, and enforcement efforts are essential to reduce initiation and relapse.

*Information drawn from:*

Gruenewald, P.J., Gorman, D., Waller, L., Zhu, L., Remer, L., and Ponicki, W.R. Economic and disease models of the methamphetamine epidemic in California. In B. Deeds (ed.), Crime, Space and Health: Intersections of Criminal Justice and Public Health Concerns. New York: Springer, in press, 2010.

And

Assessing Correlates of the Growth and Extent of Methamphetamine Abuse and Dependence in California,  
by Paul J. Gruenewald, Fred W. Johnson, William R. Ponicki, Lillian G. Remer and Elizabeth A. Lascola,  
in *Substance Use & Misuse*, 45:1948–1970