The National Institute on Drug Abuse (NIDA) partnered with the National Institute of Justice (NIJ) on a research initiative to address one of the nation's drug priorities—methamphetamine. The purpose of the initiative is to integrate epidemiology with behavioral and economic studies of the composition and dynamics of drug markets, including drug manufacture, sale and use. Findings from these four grants awarded in fiscal year (FY) 2007 increase our capacity to address the needs of drugs and crime research, practice and policy. Publications are expected in FY 2010.

DYNAMICS OF RETAIL METHAMPHETAMINE MARKETS IN NEW YORK CITY
Travis Wendel, Ric Curtis, Kirk Dombrowski and Bilal Khan

Using Internet recruitment and respondent-driven sampling, researchers interviewed 132 methamphetamine users, buyers and sellers in New York City for a social network analysis. They found that the retail methamphetamine market is bifurcated between two submarkets: a smaller market that overlaps with powder cocaine/crack markets where the drug is seen as a cheaper or more cost-effective form of cocaine, and a larger, closed, sexual-network-based market among men who have sex with men around use of methamphetamine as a sex drug. Participants reported almost no experience of violence connected with methamphetamine, and had few encounters with law enforcement.

THE DYNAMICS OF METHAMPHETAMINE MARKETS:
A SYSTEMATIC APPROACH TO THE PROCESS
Henry Brownstein, Timothy Mulcahy, Bruce Taylor and Johannes Fernandes-Huessy

Research based on a survey of 1,367 law enforcement agencies, and WebEx/telephone interviews using interactive maps with narcotics police in 50 jurisdictions, suggests that the organization, operation and consequences of methamphetamine markets can be understood according to drug sources, U.S. geographic region and market maturity. Newer markets based on local home-based production are organized around informal social networks. Mature markets based on imported methamphetamine operate as formal business models. Market stability, price, purity, availability, competition and violence

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vary by market mix. Areas with no methamphetamine markets had the fewest problems; areas with predominantly local markets had few problems; areas with methamphetamine predominantly imported from Mexico or other U.S. states had more problems; and areas with mixed markets including local production and imported methamphetamine had the most problems. Law enforcement observed a shift from local to import markets as a result of legislative changes concerning over-the-counter pseudoephedrine.

**DRUG MARKET CHARACTERISTICS: ANTECEDENTS AND SEQUELAE ON THE U.S.-MEXICO BORDER**

Steffanie Strathdee, Robin Pollini, Remedios Lozada and Tom Patterson

This project studies retail drug markets in relation to drug use patterns, medical consequences of drug use and cross-border mobility among injection drug users (IDUs) on the western U.S.-Mexico border. The sample drawn from ongoing studies on both sides of the border (Proyecto El Cuete in Tijuana and EDGE and FASTLANE in San Diego) was supplemented by a San Diego community-based convenience sample. A majority of IDUs in Tijuana injected heroin alone, while a majority of San Diego IDUs injected methamphetamine alone. Although virtually no changes in drug price and purity were reported in Tijuana, San Diego IDUs reported increases in price, decreases in purity, and more colored methamphetamine injection. Injecting colored methamphetamine was associated with recent abscesses. Some Tijuana IDUs reported powder heroin use, which was associated with mortality. A considerable proportion of both Tijuana and San Diego IDUs reported cross-border travel, but San Diego IDUs were more likely to report recent travel. Deportation emerged as an important factor influencing mobility and health outcomes among Tijuana IDUs, with a fourfold increase in the likelihood of being HIV positive.

**ASSESSING THE DEVELOPMENT OF DRUG MARKETS USING BAYESIAN SPACE–TIME MODELS**

Paul Gruenewald

Population rates of hospital discharges with diagnoses of amphetamine abuse or dependence in California increased by a factor of 15 from 1983 to 2007. During this time, discharges for opioid and cocaine abuse and dependence increased by factors of 3 and 6 respectively. The rapid rise in amphetamine abuse in California has been attributed to increases in the use of methamphetamine, the wide availability of chemical precursors for the production of this drug, and the activities of illegal domestic and international drug markets. Although laws limiting the availability of chemical precursors for methamphetamine did restrain abuse, growth rates remained between 13 and 20 percent per year. Bayesian space-time disease models of hospital discharge data from 1995–2007 across ZIP codes in California show that rates were greatest among White and Hispanic low income populations living in suburban and urban periphery areas of the state. There was substantial contagion between populations over time, in part related to areas linked by major highway systems. Prior drug market activities in an area, indicated by greater rates of arrest related to production, transportation or sales, were negatively although somewhat weakly related to subsequent rates of abuse. Prior rates of abuse were strongly related to subsequent rates of violence across areas of the state, suggesting that methamphetamine market activity placed substantial upward pressure on violence in the state.