

# ADAM: Statistical Issues Related to Prevalence Estimates and Trends

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Thursday, May 27, 2010

# Summary of Presentation

- Define ADAM as a survey:
  - Instrumentation: What is asked?
  - Sampling
  - Weighting
  - Estimation
  - Who is represented by ADAM?
- Looking to the future
  - Weaknesses of ADAM
  - Strengths of ADAM
  - Recommendations to BJS/NIJ
- Addendum: Some current uses of ADAM data

# ADAM: The Survey

ADAM is

- (A) a probability-based survey of
- (B) individuals shortly after they were arrested and booked
- (C) during repeated but purposively selected two-week periods
- (D) within purposively selected counties throughout the United States.

# Instrumentation: What is Asked?

ADAM asks about:

- Self-Reports of:
  - Short- and long-term drug use
  - Recent drug market activity
  - Salient events in the user's history (calendar)
- A bioassay (urine test) for identifying recent illegal drug use

# The Sample

- Counties are selected purposively
- Two-week periods are selected purposively
- Booking facilities are selected randomly
  - Single booking facility
  - Stratification of booking facilities
  - Stratified cluster sample of booking facilities
- Arrestees are sampled systematically
  - From a stock of individuals who remain in custody
  - From a flow of individuals being booked
- Almost every ADAM site poses some special problems.

# The Weighting Process

ADAM uses poststratification

- Analysts match interviews with a census of booking records.
- Analysts estimate propensity scores from the matched records.
- The inverse of the propensity scores are used as weights.

# What is Estimated?

- Prevalence
- Annualized trends (2000-2003 and 2007-)
  - Annualized trends control for yearly cycles of drug use.
  - Annualized trends control for:
    - Exogenous changes in arrest practices
    - Exogenous changes in detection practices

# What Population is Represented?

- ADAM represents individuals booked in the **county** during the **two-week periods**.
- By convention ADAM is treated as representing individuals booked during the year.
- As a policy tool, ADAM is treated as representing trends by individuals involved with the CJS.
  - By logical extension, ADAM is treated as representing local trends in drug use.
  - Through modeling, ADAM represents all chronic drug users in a county.

# Weaknesses of Design

- To derive national estimates, the sample of counties must be expanded and selected randomly, but:
  - Probably only practical for urban counties
  - Some urban counties pose logistical problems
  - Some sheriffs will refuse
- Booking facilities are chaotic places to interview often precluding (for security reasons) the use of computer assisted interviewing.

# Strengths of the Design

- Samples nearest the population of policy interest.
- Confirmatory test for recent drug use.
- Respondents were recently on the street:
  - Their responses are timely for evaluation.
  - Recall periods are limited to days/last month/last year.
- Survey users could add policy-relevant questions.
  - Public health questions
  - Criminal justice questions

# Looking Forward: Recommendations

- First decide the research questions.
- Second decide the survey and estimation methodologies for answering those questions.

# Current Use of ADAM Data

- Estimate the number of chronic drug users in the US.
- Estimate the amount that they spend on illegal drugs.
- Estimate the tonnage of illegal drugs that they use.
- Confirm prevalence estimates of intelligence-based production potential for cocaine, heroin, methamphetamine and marijuana.
- Evaluate the effectiveness of enforcement initiatives on drug markets.
- Understand more about drug-use careers.