



HIV BEHAVIORAL SURVEILLANCE IN THE BALTIMORE-TOWSON METROPOLITAN AREA

**THIRD ANNUAL HIV BEHAVIORAL SURVEILLANCE
COMMUNITY MEETING
MAY 6, 2013**

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Prevention and Health Promotion Administration**



MISSION AND VISION

MISSION

- The mission of the Prevention and Health Promotion Administration is to protect, promote and improve the health and well-being of all Marylanders and their families through provision of public health leadership and through community-based public health efforts in partnership with local health departments, providers, community based organizations, and public and private sector agencies, giving special attention to at-risk and vulnerable populations.

VISION

- The Prevention and Health Promotion Administration envisions a future in which all Marylanders and their families enjoy optimal health and well-being.



Definition

- Behavioral surveillance, for public health purposes, is the systematic and ongoing collection of data about risk and health-related behaviors with the purpose of correlating trends in behaviors with changes in disease over time.
 - Lansky, *et al.* Public Health Reports, 2007.



National HIV Behavioral Surveillance (NHBS)



- CDC funded project
- Data collection began in 2004
- In up to 25 metropolitan areas (has varied over time)
- Major divisions of metropolitan areas with the greatest numbers of AIDS cases in the U.S.



National HIV Behavioral Surveillance (NHBS)

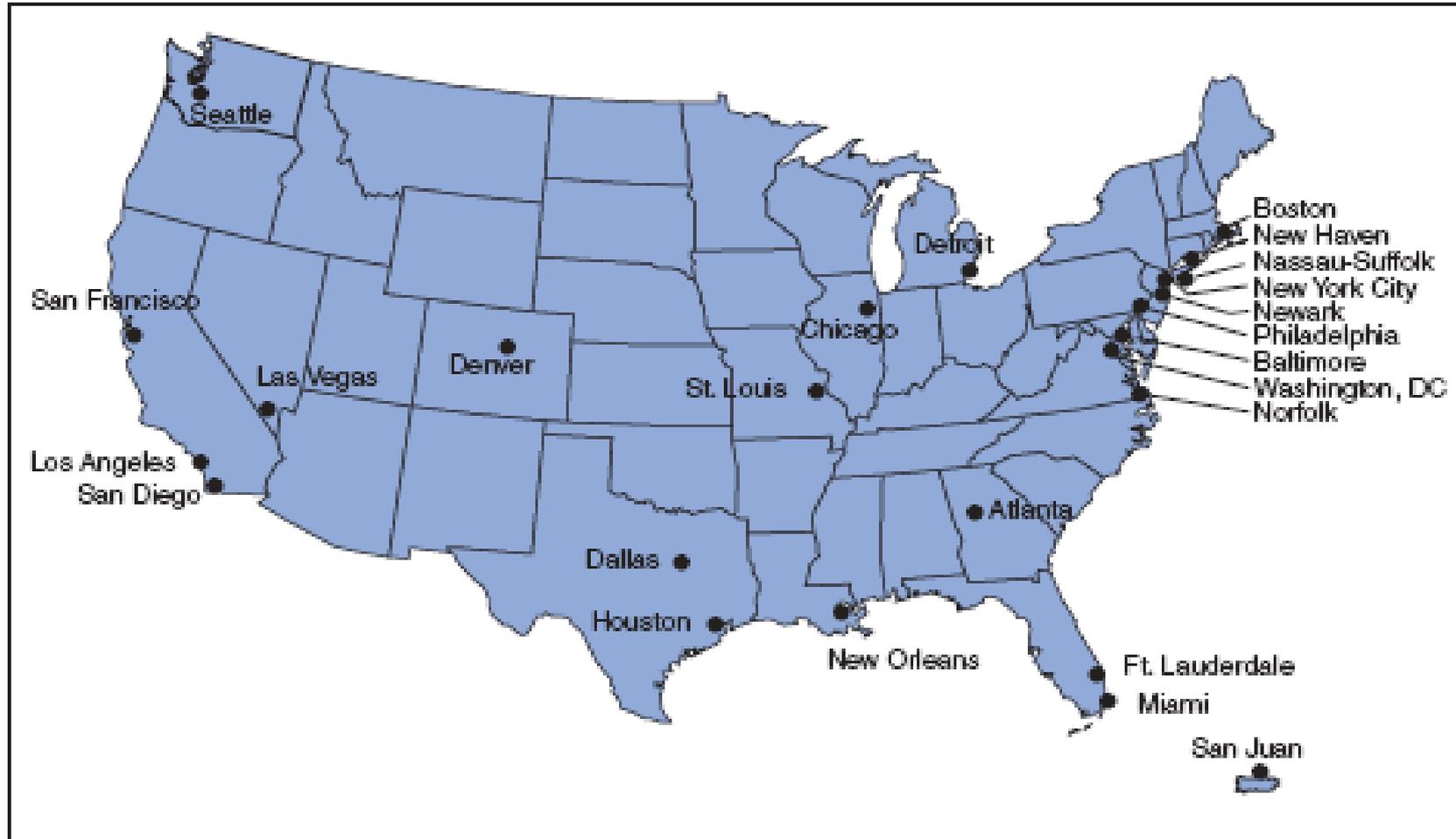


- Based on methods developed in the Young Men's Survey (YMS)
- Funded under a cooperative agreement between the CDC and DHMH
- 2013 – Year 3 of the current 5 year cooperative agreement



NHBS Sites

FIGURE 1. Participating metropolitan statistical areas in the National Human Immunodeficiency Virus Behavioral Surveillance System — United States





NHBS – Baltimore

- DHMH contract with Johns Hopkins Bloomberg School of Public Health for field operations
 - Dept. of Epidemiology: Frank Sifakis, David Celentano
 - Dept. of Health, Behavior and Society: Danielle German, David Holtgrave
- Collaborative project of CDC, DHMH, and JHU



NHBS – Baltimore BESURE



The

BEhavioral

SUrveillance

REsearch

Study



BESURE Logistics



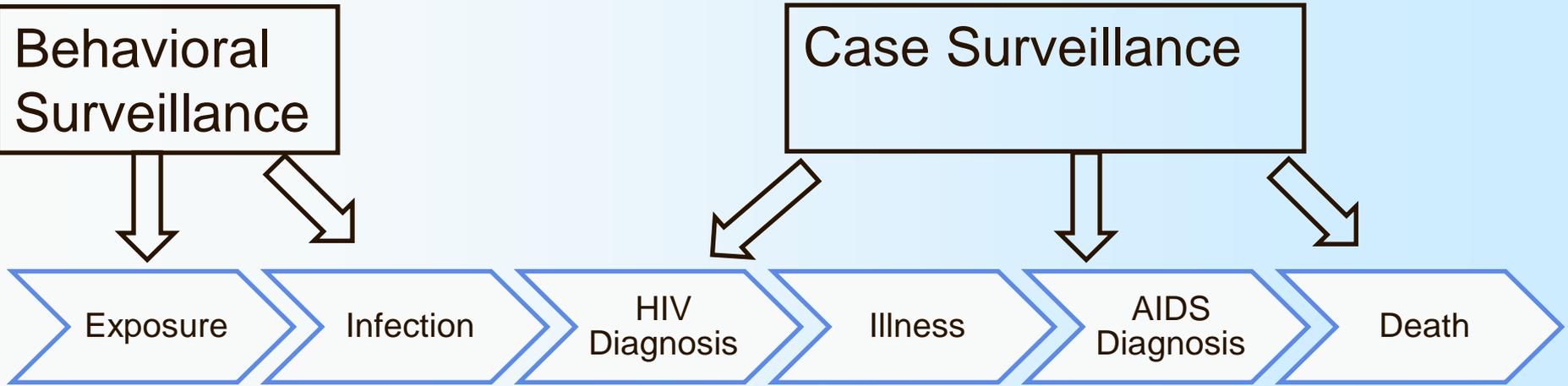


NHBS Objectives

- To assess prevalence of and trends in
 - HIV risk behaviors
 - HIV testing behaviors
 - Exposure to and use of prevention services among persons at high risk for infection
 - HIV prevalence and incidence



HIV Disease Spectrum and Surveillance





Case vs. Behavioral Surveillance



Case Surveillance

- Infected population
- HIV positives
- Mandated reporting
- Data abstracted from medical records
- All diagnosed cases (N \approx 30,000 in Maryland)
- Dozens of demographic and clinical variables

Behavioral Surveillance

- Population at risk
- HIV negatives and positives
- Research study
- Data from participant interviews and blood tests
- 500 sampled participants per population per year
- Hundreds of behavioral variables



NHBS Target Populations



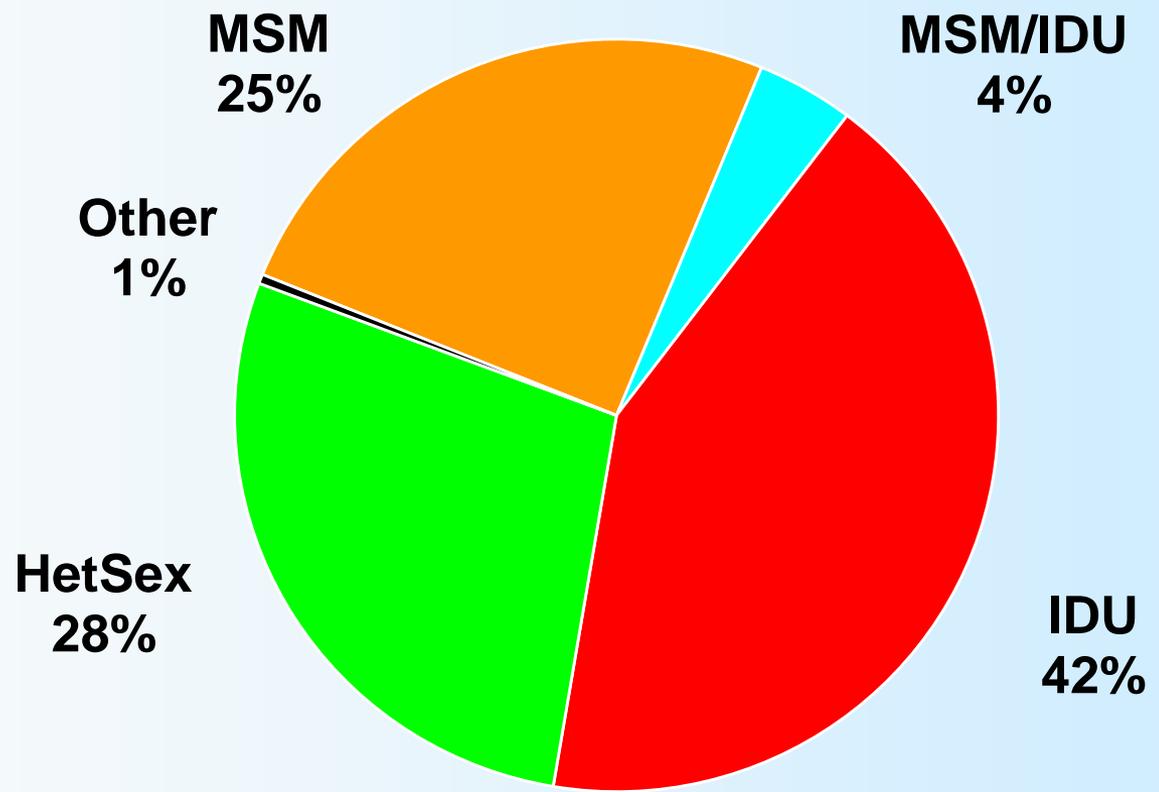
- Men who have sex with men (MSM)
- Injection drug users (IDU)
- Heterosexuals at risk for HIV (HET)



Living Adult/Adolescent HIV Cases by Risk, Baltimore-Towson MSA, 12/31/10



N (with Risk) = 13,979 (79% of Total)



Using data as reported through 12/31/2011



NHBS Recruitment Methods



- Venue-based sampling (VBS)
- Respondent-driven sampling (RDS)



Venue-Based Sampling (VBS)



- **Formative research** identifies public/private venues and days/times of attendance
- **Venue-Day-Times (VDT)** enumerated for eligibility and viability
- **Sampling frame** consists of VDTs
- Random selection of VDTs to construct sampling **event calendar**
- Individuals systematically recruited at **sampling events**



Venue Identification



- An area, location, or building, within the target geographic area, where men can be approached and recruited to participate in the survey.
- Public or private locations attended by men for any purpose EXCEPT: receiving medical/mental health care, HIV/STD testing/prevention services or social services to HIV+ men



VBS – Challenges



- Implementation
 - Support from target community
 - Ongoing Formative Research
 - Staff fatigue and burn out
 - Duplicates
- Analytical
 - Possibility for unequal probability of selection
 - Weights may be needed for adjustment
 - Clustering of risk factors and outcomes within venues



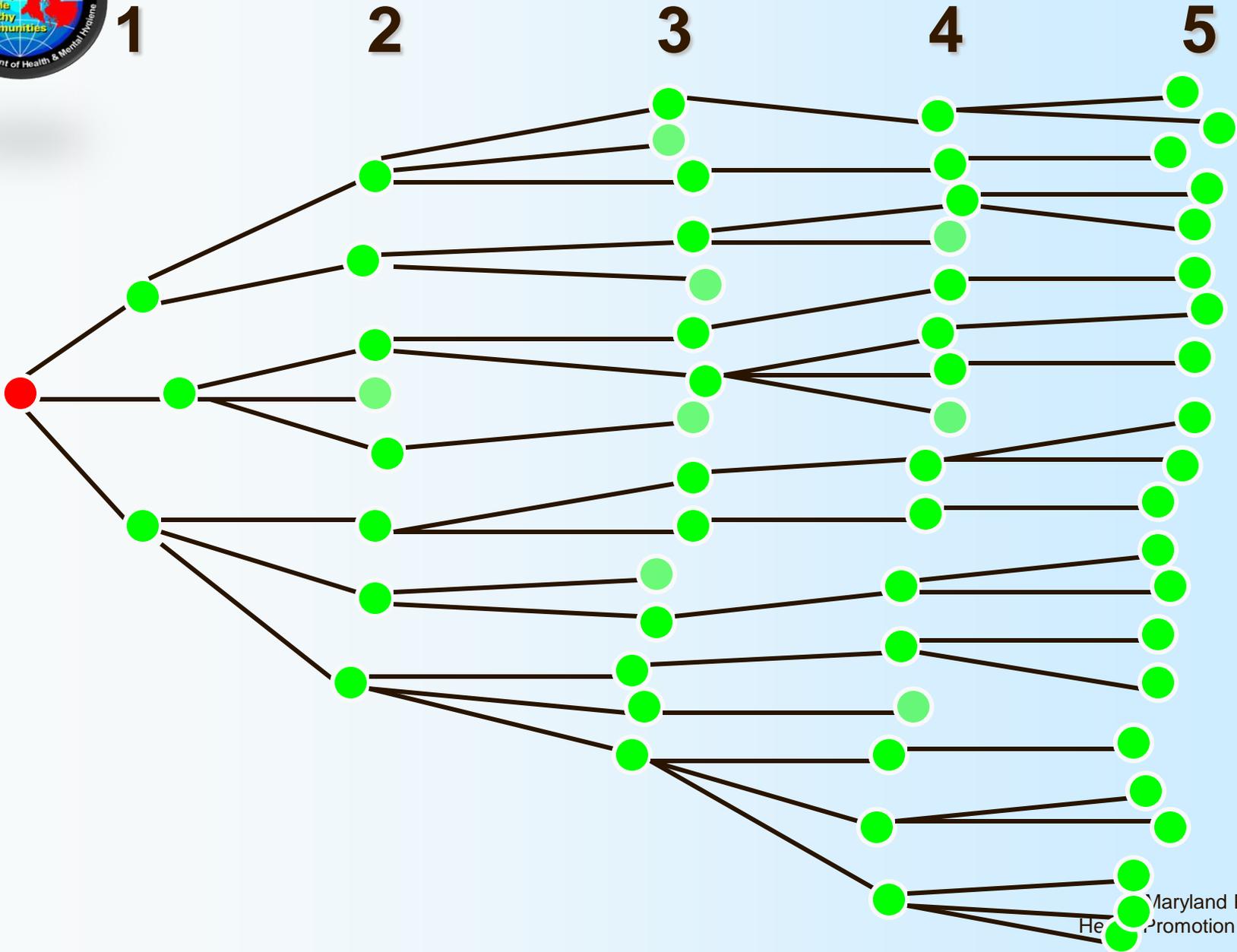
Respondent-Driven Sampling (RDS)



- Type of chain referral sampling to reach hidden populations
- Begin with a set of non-randomly selected seeds
- Seeds recruit peers, who recruit peers, etc.
- Each seed is given a set number of recruitment coupons
- Recruits are linked by coupons with unique identifying numbers
- Incentives provided for participation and for each successful recruit

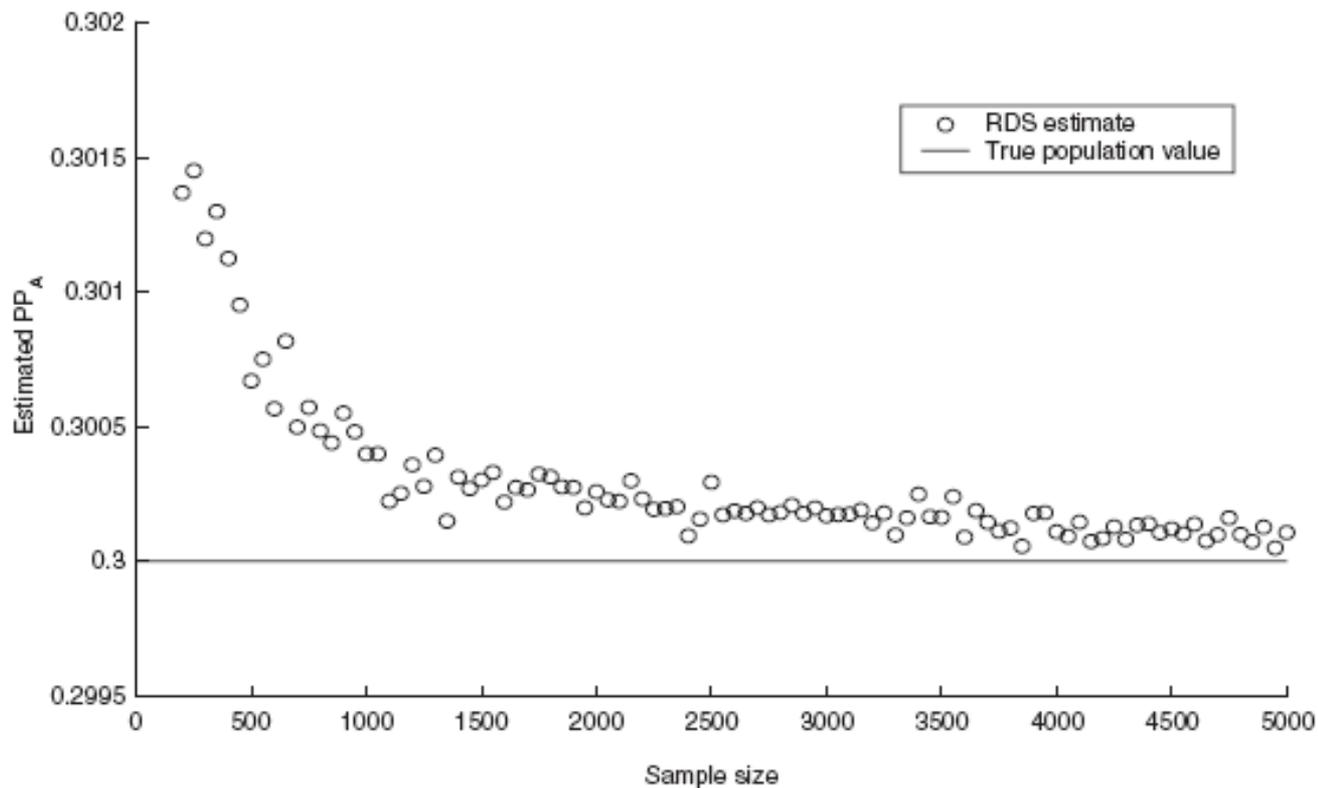


Recruitment Waves





RDS Premise



As the recruitment process continues from wave to wave, an equilibrium mix of recruits will eventually be attained that is independent of the characteristics of the subject or set of subjects from which recruitment began.



RDS – Challenges



- Implementation
 - Dependent on geographic/social barriers
 - Adequate time needed; referral chains may be interrupted
 - Coupons are commodities; may be sold
 - Appropriately trained staff; complex operations
 - Ethical concerns; coercion to participate
 - Only participants who are part of networks are sampled



RDS – Challenges



- Analytical
 - Possibility for unequal selection probability of participants
 - Weights may be needed for adjustment
 - Cross-sectional; inability to make causal inferences
 - Only participants who are part of networks are sampled



NHBS Cycles

	MSM	IDU	HET
Wave 1	VBS 2004-2005	RDS 2006	VBS and RDS 2007
Wave 2	VBS 2008	RDS 2009	RDS 2010
Wave 3	VBS 2011	RDS 2012	RDS 2013

VBS = venue-based sampling

RDS = respondent-driven sampling



NHBS Data Collection



- Formative Research
- Interview Instrument
 - Demographics
 - Health care utilization
 - Sexual orientation
 - Sex behaviors
 - Drug use
 - HIV testing
 - Health conditions
 - HIV prevention awareness/use



NHBS Data Collection



- Recruitment Data (venue characteristics or referral networks)
- HIV Testing
- Supplemental Testing
- Local Questions



NHBS Data Reports



- MMWR articles
- Journal articles
- Conference presentations
- Planning group presentations
- MSM Response Team presentations
- DHMH website
- Later this morning – data presentations on each target population



Recent MMWR Articles



- 2012 HIV infection and HIV-associated behaviors among IDU
- 2013 HIV infection among heterosexuals at increased risk



Recent Journal Articles



- 2012 Maulsby et al. The Open AIDS Journal
 - Differences and similarities in HIV testing among men who have sex with men and women (MSMW) and men who have sex with men only (MSMO)
- 2013 Maulsby et al. Journal of Homosexuality
 - HIV risk among men who have sex with men only (MSMO) and men who have sex with men and women (MSMW) in Baltimore



Forthcoming Journal Articles



- German et al. *AIDS and Behavior* (in press)
 - Using Baltimore HIV behavioral surveillance data for local HIV prevention planning



Questions?



Maryland Prevention and Health Promotion Administration

[http://phpa.dhmh.maryland.gov/
OIDEOR/CHSE/SitePages/
behavioral-surveillance.aspx](http://phpa.dhmh.maryland.gov/OIDEOR/CHSE/SitePages/behavioral-surveillance.aspx)