

An assessment of respondent-driven sampling
to recruit illicit drug users, men who have sex
with men, and sex partners of both groups

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Common strategies for sampling hidden or hard-to-reach populations

- Snowball
- Facility-based
- Targeted sampling
- Time and location

Respondent-Driven Sampling (RDS)

- Similar to snowball sampling
- “Seeds” used to start recruiting chains
- Study coupons with serial numbers are provided to participants to give to recruits
- Limit coupons to encourage long chains
 - Reduces bias of respondents with large networks
 - Recruits become independent of seeds: equilibrium
- Collect network size and composition information
 - Compensate for over-sampling of those with large networks
 - Allows for the calculation of prevalence estimates

Sexual Acquisition and Transmission of HIV Cooperative Agreement Program (SATH-CAP)

- Coordinating center
 - RAND Corporation
- Data collection sites
 - University of Illinois at Chicago
 - Research Triangle Institute (Raleigh/Durham)
 - University California at Los Angeles
 - Yale University, Biomedical Center of St. Petersburg, Russia

SATH-CAP Protocol

Eligibility Criteria

In the past 6 months . . .

- “Hard” drug use
 - Powder or crack cocaine, heroin, and/or methamphetamine, regardless of mode of administration
 - Injection of any illicit drug
- Man who had sex with a man (MSM)
 - Drug use not a criterion
- Sex partners of drug users and MSM
- Sex partners of the sex partners

SATH-CAP Protocol

Coupon Distribution

- Drug users and MSM
 - 3 DU/MSM coupons
 - 2 sex partner coupons
 - 1 non-drug using female sex partner coupon (men only)
- Sex partners of drug users or MSM
 - 3 coupons to recruit their sex partners
- Sex partners of sex partners
 - No coupons

SATH-CAP Protocol

Using Coupons

- Color coded for participant identification
- Reimbursement
 - Initial interview
 - Recruit who screens eligible
 - Coupon review
- Participant can call or come back to site with eligibility questions

SATH-CAP Protocol

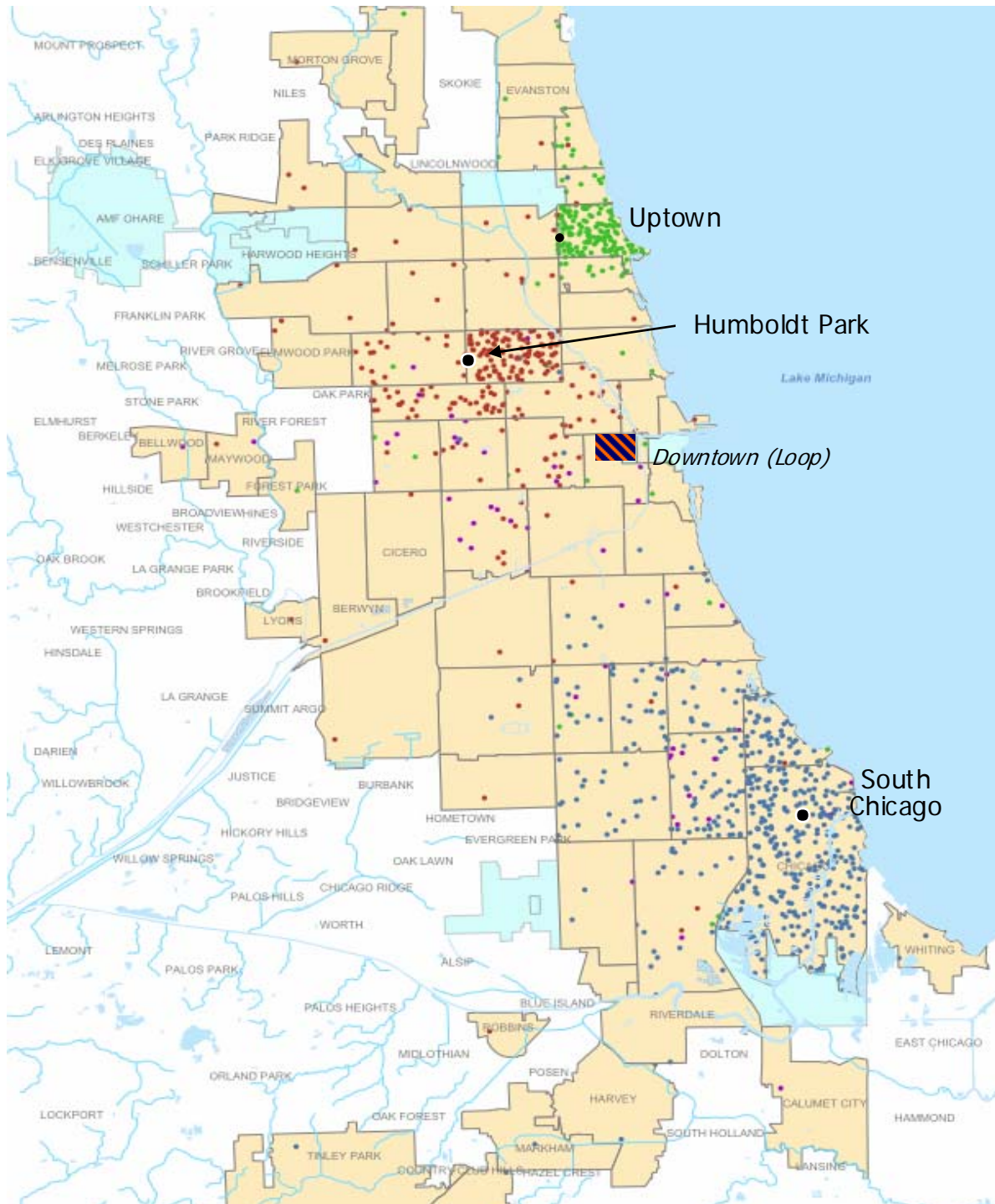
Screening

- Identifying duplicates and false claims
 - Coupon tracking system
 - Serial numbers
- Time-restricted coupons
 - No coupon use before 24 hours
 - Coupon expires after 30 days
- Fraud
 - Eligibility
 - Recruit coaching
 - Not part of recruiter's network

Chicago SATH-CAP Wave 1

3 recruitment sites

- South Chicago
- Uptown
- Humboldt Park



Southeast Side Fieldstation



Humboldt Park Fieldstation



Uptown Fieldstation



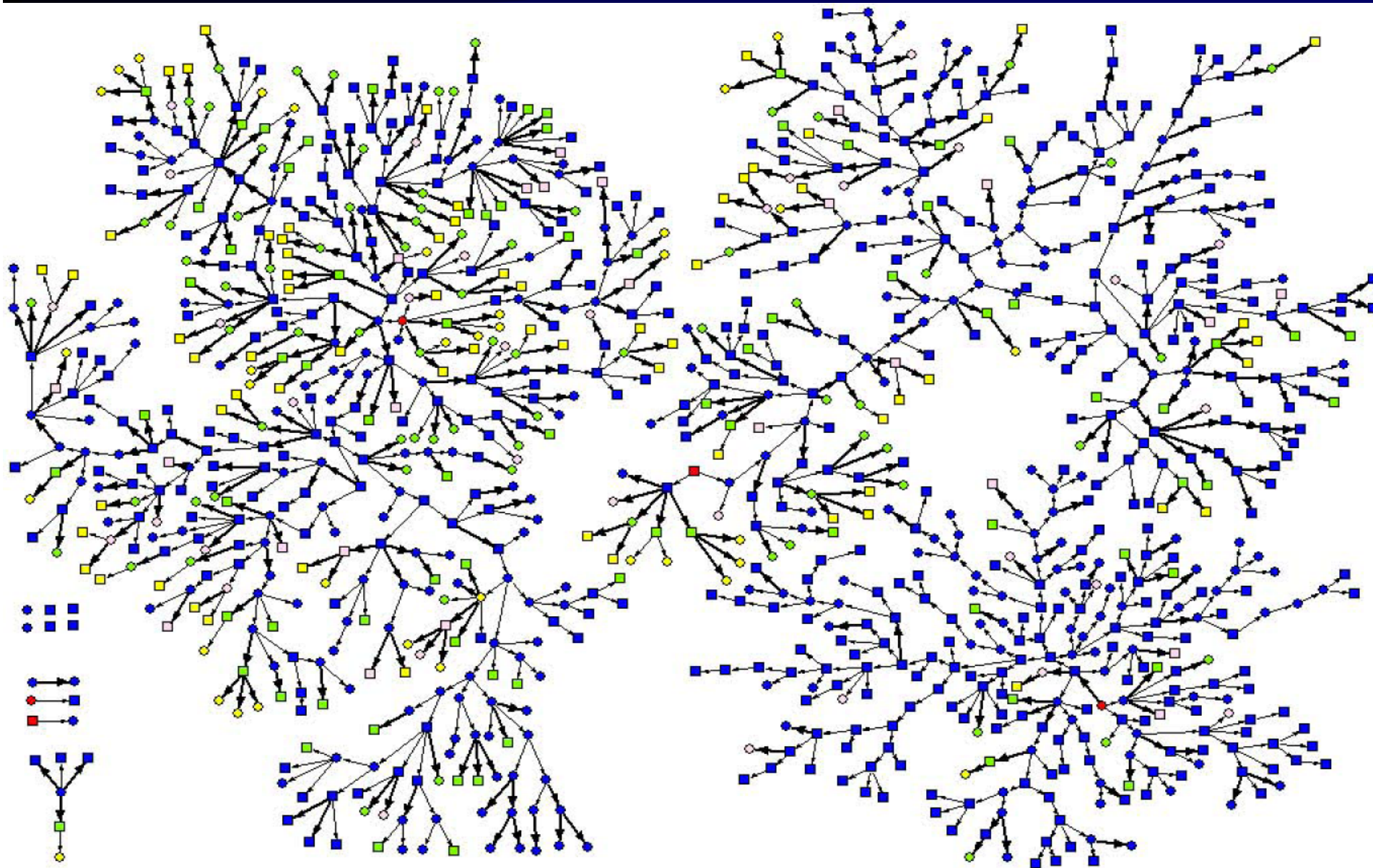
Sample: Chicago SATH-CAP

6 “seed” recruiters



1062 recruits

SATH-CAP Recruitment Tree



Chicago Sample Demographics

| Total N=1068 | N | % of Total Sample |
|--|-----------------|--------------------------|
| Male | 652 | 61% |
| African American | 765 | 72% |
| White | 64 | 6% |
| Hispanic | 218 | 20% |
| Hard Drug Use* (previous 30 days) | 907 | 85% |
| Injection Drug Use (previous 30 days) | 299 | 28% |
| MSM (previous 6 months) | 149 | 14% |
| Earned <\$1000 in previous month | 963 | 90% |
| Mean Age | 44 years | |

*Powder and/or crack cocaine, heroine, and methamphetamine

^74% percent of MSM also had sex with women in previous six months

Men's Sex Partners by Sexual Self-Identification

(n=538)

Sex partners
(6 months)

Sexual Identity

| | <u>Homosexual</u> | <u>Bi/Other</u> | <u>Hetero</u> |
|---|-------------------|-----------------|---------------|
| Male & Female 20% (n=109) | 5% (5) | 79% (86) | 17% (18) |
| Female only 73% (n=393) | 0.5% (2) | 22% (85) | 78% (306) |
| Male only 7% (n=36) | 50% (18) | 44% (16) | 6% (2) |

Cross-Gender Sample Recruitment

| Gender of Recruiter | Gender of Recruit | |
|------------------------|-------------------|--------|
| | Male | Female |
| Male | 62% | 38% |
| Female | 60% | 40% |
| Homophily | -0.015 | 0.040 |
| Adj. Mean Network Size | 7.7 | 8.2 |

*Due to missing data, this table is based on 1055 respondents

Cross-Race Sample Recruitment

| Race of Recruiter | Race of Recruit | | |
|------------------------|-----------------|--------------|--------------|
| | White | Black | Hispanic |
| White | 29% | 38% | 30% |
| Black | 3% | 91% | 4% |
| Hispanic | 7% | 22% | 69% |
| Homophily | 0.250 | 0.619 | 0.630 |
| Adj. Mean Network Size | 8.3 | 7.9 | 7.7 |

*Due to missing data, this table is based on 1026 respondents

Cross-Behavior Sample Recruitment

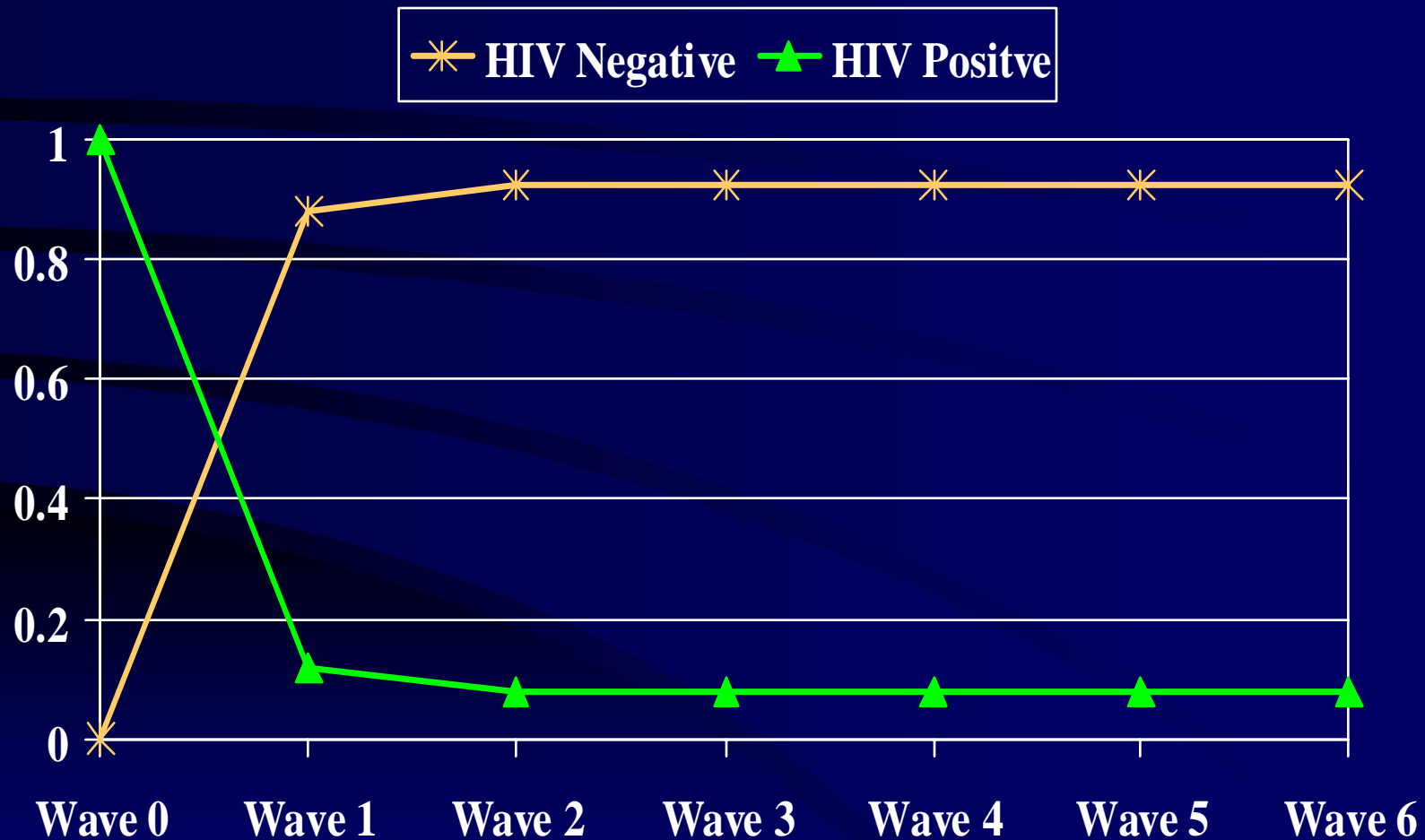
| Sexual Behavior of Recruiter | Sexual Behavior of Recruit | | | |
|------------------------------|----------------------------|--------------|------------------------|--------------|
| | Non-MSM | MSM* | Sexually Inactive Men* | Women |
| Non-MSM | 36% | 10% | 12% | 42% |
| MSM* | 15% | 50% | 8% | 28% |
| Sexually Inactive Men* | 39% | 14% | 10% | 38% |
| Women | 48% | 6% | 6% | 40% |
| Homophily | -0.031 | 0.407 | -0.077 | 0.046 |
| Adj. Mean Network Size | 7.9 | 7.8 | 6.5 | 8.2 |

*Sexual behavior in previous six months

Cross-HIV Status Sample Recruitment

| HIV Status of Recruiter | HIV Status of Recruit | |
|-------------------------|-----------------------|---------------|
| | Sero-negative | Sero-positive |
| Sero-negative | 93% | 7% |
| Sero-positive | 88% | 12% |
| Homophily | 0.187 | 0.031 |
| Adj. Mean Network Size | 8.0 | 6.7 |

Sample Composition by Recruitment Wave, Starting with Only HIV+ Seeds



Difficulties

- Cross-income recruitment
 - Limited movement beyond low-income respondents
 - Reflects study protocol
 - Eligibility criteria
 - Site locations
 - One standard of compensation
- Recruitment can move into concentrated, homogenous networks
 - Shelters, etc.
 - Requires a larger sample size

Discussion

- RDS efficient in recruiting our target populations
 - IDUs
 - Non-injection drugs users
 - MSM/W
 - Sex partners (general)
- Equilibrium was achieved quickly for major demographic variables
- Less efficient in recruiting non-drug using sex partners and higher income respondents
 - Common problem in other forms of recruitment for drug-related studies

Discussion

- Study participants and staff are strangers to each other
- Importance of knowledgeable field staff
 - Neighborhood
 - Local population
 - Essential during screening
 - Can increase community participation

Thank you

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