Heterosexuals at Risk for HIV Infection in South Florida
National HIV Behavioral Surveillance Preliminary Results

Florida Prevention Planning Group Meeting
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In 2000, CDC and its partners developed an HIV Prevention Strategic Plan with four national goals to reduce new HIV infections:

- Goal 4: By 2005, strengthen the capacity nationwide to monitor the epidemic, develop and implement effective HIV prevention interventions, and evaluate prevention programs.

- National HIV Behavioral Surveillance System developed
NHBS Background (cont.)

- First funded by CDC in 2002
- In metropolitan areas with high AIDS prevalence
- Eligible: states & directly funded cities
## AIDS Prevalence by U.S. MSA/Division, 2004

<table>
<thead>
<tr>
<th>MSA/Division</th>
<th>AIDS Prev</th>
<th>NHBS Rank</th>
<th>MSA/Division</th>
<th>AIDS Prev</th>
<th>NHBS Rank</th>
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<td>New York</td>
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<td>3,009</td>
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<td>N/A</td>
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<td>San Diego</td>
<td>5,643</td>
<td>14</td>
<td>Memphis</td>
<td>2,264</td>
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<td>Tampa</td>
<td>4,673</td>
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<td>West Palm</td>
<td>4,339</td>
<td>N/A</td>
<td>Hartford</td>
<td>2,227</td>
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NHBS Objectives

"Effective HIV prevention programs rely primarily on changing behavior; therefore, behavioral data are needed to inform these programs.” [1]

- NHBS provides data on trends in
  - Risk behaviors
  - HIV testing behaviors
  - Use and impact of prevention services
  - HIV prevalence and incidence

Population

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

- Metropolitan Statistical Area residents
  - Miami-Dade County
  - Broward County
  - Palm Beach County residents are eligible but sampling does not target this area

Sample size: 500 from each county
Overall Strategy

- Conducted in 12-month cycles
  - One group per cycle (MSM, IDU, HET)
  - Different sampling methods per cycle/group
  - Formative research done for each cycle
  - Same populations and MSAs over time

- Core Questionnaire

- Consistent eligibility criteria
  - 18 years of age or older
  - Resident of MSA
Data Collection

- MSM study cycle (NHBS-MSM)
  - Venue-based, time-space sampling
    - Participants in randomly selected venues are systematically recruited and interviewed
- IDU study cycle (NHBS-IDU)
  - Respondent-driven sampling
    - Participants recruit each other from within their networks
- HET study cycle (NHBS-HET)
  - Venue-based sampling
  - Respondent-driven sampling
Data Collection

- Questionnaire
  - Core Questionnaire
    - Behavioral risks for HIV, HIV testing, exposure to/use of prevention services
  - Local Questionnaire
    - Any other local topics
    - Awareness/use of specific prevention programs
Assessing Characteristics of Population X In ON-going surveillance
Interviewing Van
Behavioral Surveillance Among Heterosexuals At Risk for HIV Infection

- NHBS-HET definition of a “heterosexual at-risk for HIV infection”: an adult male or female with (1) a physical or social connection to a “high-risk area” and (2) at least one opposite-sex partner in the past year
Behavioral Surveillance Among Heterosexuals At Risk for HIV Infection (cont.)

- HIV/AIDS and poverty data examined by area
  - 2000 census poverty data by census tract
  - Department of Health address data on newly diagnosed (Jan 2001 – Feb 2006) HIV/AIDS cases
    - Heterosexually exposed males and females ≥13 years of age
    - Females ≥13 years of age with no identified risk factor
- HIV/AIDS and poverty data merged to produce standardized rates by census tract
- Census tracts with high rates determined “high-risk areas”
- Venue-based sampling conducted within selected high-risk areas
NHBS-HET Eligibility Criteria

- 18-50 years of age
- Lives in Miami-Dade, Broward, or Palm Beach county
- Male or female (not transgender)
- Reports vaginal or anal sex with a person of the opposite sex in the past 12 months
- Able to complete interview in English or Spanish
- Not a previous NHBS-HET participant
NHBS-HET Samples
Total Sample Size = 1,224

Broward County:
- Started: Jan 2007
- Ended: Sept 2007
- Eligible participants interviewed: 556
- Eligible participants tested for HIV: 555

Miami-Dade County:
- Started: Mar 2007
- Ended: Oct 2007
- Eligible participants interviewed: 668
- Eligible participants tested for HIV: 667

*Results are preliminary*
Venues Sampled

We conducted 168 sampling events at 117 randomly selected venues (63 in Miami-Dade County, 54 in Broward County)

<table>
<thead>
<tr>
<th>Venue Type</th>
<th>Portion of sample from venue type N (%)</th>
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<tbody>
<tr>
<td>Retail businesses</td>
<td>808 (66%)</td>
</tr>
<tr>
<td>Street locations</td>
<td>142 (12%)</td>
</tr>
<tr>
<td>Cafés &amp; restaurants</td>
<td>87 (7%)</td>
</tr>
<tr>
<td>Social organizations</td>
<td>48 (4%)</td>
</tr>
<tr>
<td>Other</td>
<td>42 (3%)</td>
</tr>
<tr>
<td>Parks</td>
<td>35 (3%)</td>
</tr>
<tr>
<td>Places of worship</td>
<td>26 (2%)</td>
</tr>
<tr>
<td>Sex establishments</td>
<td>26 (2%)</td>
</tr>
<tr>
<td>Bars</td>
<td>1</td>
</tr>
<tr>
<td>Unknown or missing</td>
<td>9</td>
</tr>
</tbody>
</table>
Demographic Characteristics of Sample
N=1,224

- Mean age: 35 years
- 58% male, 42% female
- Majority black

![Pie chart showing demographic breakdown:
- 79% Black
- 16% Hispanic
- 2% White
- 3% Other]
Characteristics of Sample (cont.)

- 91% identify as heterosexual, 9% as bisexual
- Majority (85%) born in U.S.
- 2/3 (63%) without health insurance at time of interview
- Majority (60%) have annual income under $10,000
- Half (50%) unemployed at time of interview
- 42% depressed (according to CES-D 10)
- 1/3 (33%) incarcerated in past 12 months
- 1/4 (28%) used cocaine or crack in past 12 months
- 1/5 (21%) self-reported being hepatitis C+
- 13% homeless in past 12 months
HIV Seroprevalence

- 1 in 12 (8.3%) participants tested HIV positive
  - 9.2% in Broward
  - 7.5% in Miami-Dade
- Of participants reporting heterosexual risk behavior only (N=1076), * 1 in 14 (7.1%) tested HIV positive
  - 8.6% in Broward
  - 5.7% in Miami-Dade

* Analysis excludes persons reporting IDU or MSM risk behavior in their lifetime
HIV Seroprevalence (cont.)

- Variables associated with an HIV-positive test result:
  - Homelessness
  - Bisexual identity
  - Hepatitis C+
  - Crack use in the past 12 months
  - ≥ age 40
  - Participation in alcohol or drug treatment
  - Depression
  - Annual income under $10,000
  - Has health insurance (including Medicaid or Medicare)
  - Disabled
Half (51%) of those testing HIV positive were previously unaware of their infection

- In other words, 1 in 24 (4%) participants had a previously undiagnosed HIV infection

Variables associated with having an undiagnosed infection include:

- Less than a high school education
- Annual income of $10,000 - $14,999
Previous Research Has Identified Numerous Underlying Factors Affecting HIV/AIDS Disparities

- Pre-existing amount of HIV in the community
- Late diagnosis of HIV or AIDS
- Access to and acceptance of care
- HIV/AIDS conspiracy beliefs
- Stigma and discrimination
- Delayed prevention messages to minorities (considered gay, white male disease for a long time)
- Amount of STDs other than HIV in the community
- Complex matrix of factors related to socioeconomic status
- Non-disclosure of MSM risk to female partners
- Prevalence of IDU and other risky behaviors
- Incarceration
HIV Testing

- 4/5 (79%) have tested for HIV in their lifetime
- 40%* tested for HIV in the past 12 months
  - Variables associated with not testing for HIV in the past 12 months:
    - Hispanic
    - Heavy alcohol use
  - Variables associated with testing for HIV in the past 12 months:
    - Female
    - Ages 23-29
    - Participation in alcohol or drug treatment
    - Injection drug use
    - Having health insurance
    - Higher income

* Analysis excludes persons diagnosed with HIV over 12 months ago
Facility Administering Most Recent HIV Test in Past 12 Months, N=443

- Community health center or public health clinic: 26%
- Correctional facility: 21%
- Private doctor’s office: 16%
- HIV/AIDS street outreach program: 10%
- Hospital (inpatient): 7%
- Blood bank or plasma center: 5%
- Prenatal or obstetrics clinic: 3%

Other facilities reported by less than 3%
Reasons for Not Seeking an HIV Test in the Past 12 Months, N=685

- Low risk for HIV infection: 32%
- Afraid of finding out HIV+: 31%
- Didn’t have time: 29%
- Don’t like needles: 15%
- Afraid of losing family or friends: 13%
- Worried someone would find out result: 10%

Other reasons reported by less than 10%
Healthcare Experiences

- Half (49%) of the sample visited a healthcare provider in the past 12 months
  - Of those who saw a healthcare provider*, half (52%) were offered an HIV test
  - Of the participants who self-reported being HIV+, 4/5 (78%) reported ever taking HIV medication

* Analysis excludes persons diagnosed with HIV over 12 months ago
Sexual Risk Behaviors in Past 12 Months – **Males, N=709**

- Nearly 2/3 (64%) reported unprotected vaginal or anal sex with a main partner*
- Over 2/3 (70%) reported more than 1 sex partner
  - Median number of partners: 3

* Someone you have sex with and who you feel committed to above anyone else (e.g., girlfriend/boyfriend, wife/husband, significant other, life partner)
Sexual Risk Behaviors in Past 12 Months – Males, N=709 (cont.)

- A majority (61%) reported at least 1 casual partner*
- 6% reported at least 1 exchange partner**

* Someone you have sex with but do not feel committed to or don't know very well
** Someone you have sex with in exchange for things like money or drugs
Sexual Risk Behaviors in Past 12 Months – Males, N=709 (cont.)

- Over 1/3 (39%) reported unprotected vaginal or anal sex with a casual or exchange partner
- Variables associated with unprotected sex with a casual or exchange partner:
  - Bisexual identity
  - Ages 40-49
  - Hispanic
  - Non-U.S. born
  - Tested for HIV but never obtained results
  - Unemployment
  - Income < $10,000
  - Homelessness
  - Depression
  - Hepatitis C+
  - Crack use
  - Cocaine use
  - Heavy alcohol drinking
  - Participation in alcohol or drug treatment
Sexual Risk Behaviors in Past 12 Months – Males, N=709 (cont.)

- 5% reported sex with males and females
  - 3% among black men
  - 12% among Hispanic men
  - Variables associated with sex with males and females: bisexual identity, homelessness, unemployment, lower income (<$5,000), crack use, cocaine use, heavy drinking, ages 40-49
- Of the men reporting sex with males and females (N=36), half (56%) reported *unprotected* sex with both males and females
Sexual Risk Behaviors in Past 12 Months – Females, N=513

- 3/4 (75%) reported unprotected vaginal or anal sex with a main partner
- Half (53%) reported more than 1 sex partner
  - Median number of partners: 2
40% reported at least 1 casual partner

7% reported at least 1 exchange partner
Sexual Risk Behaviors in Past 12 Months – Females, N=513 (cont.)

- 1/4 (26%) reported unprotected vaginal or anal sex with a casual or exchange partner

- Variables associated with unprotected sex with a casual or exchange partner:
  - Bisexual identity
  - Homelessness
  - Income < $10,000
  - Incarceration in past 12 months
  - White
  - Cocaine use
  - Crack use
  - Marijuana use
  - Heavy drinking
  - Participation in alcohol or drug treatment
  - Tested for HIV but never obtained results
Sexual Risk Behaviors in Past 12 Months - Self-reported HIV+ Participants

- Persons who self-reported as HIV+ reported lower rates of unprotected sex with main partners
  - 42% of HIV+ males vs. 64% of all other* males
  - 40% of HIV+ females vs. 77% of all other* females

* HIV-, never tested, never obtained results, indeterminate
Alcohol and Drug Use

- Over half (54%) reported illicit drug use in the past 12 months
  - Over 1/4 (28%) reported cocaine or crack use
- Less than 2% injected drugs in the past 12 months
- 7% reported ever injecting drugs
- Over 1/4 (27%) reported heavy alcohol use* in the past 30 days
  - 1/3 (33%) of males
  - 1/5 (20%) of females

*5 or more drinks in one sitting for males; 4 or more drinks in one sitting for females
Alcohol and Drug Use At Last Sex Act with an Opposite-Sex Partner

- Nearly half (48%) of the sample used alcohol and/or drugs at last sex act
  - Alcohol use (alone):
    - 24% of males
    - 17% of females
  - Drug use (alone):
    - 9% of males
    - 7% of females
  - Alcohol and drug use:
    - 15% of males
    - 13% of females
Types of Non-Injection Drugs Used in Past 12 Months, N=1,224

Use of amphetamine, pain killers, hallucinogens, club drugs, and poppers reported by less than 3%
Frequency of Drug Use – Cocaine or Crack Users

- Of the cocaine users (N=231), nearly 2/3 (64%) reported using cocaine at least once a week
- Of the crack users (N=197), 4/5 (80%) reported using crack at least once a week
  - 43% reported using crack more than once a day
Drug Treatment History - Cocaine or Crack Users

Participated in Drug Treatment During Past 12 Months, Cocaine or Crack Users, N=344

- Yes: 89%
- No: 11%

Ever Participated in Drug Treatment, Cocaine or Crack Users, N=344

- Yes: 51%
- No: 49%
Beliefs on How HIV Can Be Spread, N=1,221

- Sharing needles to inject drugs: 100%
- Vaginal Sex: 98%
- Anal sex: 97%
- Oral sex: 91%
- Receiving a blood transfusion: 85%
- Donating blood: 68%
- Mosquitoes: 35%
- Using public toilets: 9%
- Food: 5%
- Drinking fountains: 4%
Beliefs on How HIV Can Be Prevented, N=1,221

- A man using a condom: 94%
- Not having sex: 92%
- Having sex with one partner only: 47%
- Having sex with main partners only: 45%
- A man not ejaculating inside his partner: 17%
Beliefs on How HIV Can Be Prevented (cont.), N=1,221

- Urinating after sex: 7%
- A woman douching after sex: 6%
- A woman douching before sex: 5%
- Washing genitals with soap after sex: 6%
- Washing genitals with bleach after sex: 5%
- Washing genitals with alcohol after sex: 5%
- Having sex with healthy-looking people only: 4%
- Taking antibiotics: 4%
- A woman taking birth control pills: 1%
Receipt of Prevention Services in Past 12 Months

- 1/5 (21%) received free condoms
- Only 4% participated in an individual- or group-level intervention
  - individual-level intervention* (4%)
  - group-level intervention** (1%)

*a one-on-one conversation with an outreach worker, counselor, or prevention program worker about preventing HIV (excluding HIV pre- and post-test counseling sessions)

**an organized session involving a small group of people to discuss ways to prevent HIV
Areas of Concern

- Alarming HIV seroprevalence (8%)
- Large portion (4%) with undiagnosed HIV infection
- Significant rates of unprotected sex with main, casual, and exchange partners
- HIV transmission and prevention myths common
- Low receipt of HIV prevention interventions
Areas of Concern (cont.)

- Substance abuse, particularly cocaine and crack
- Low use of drug treatment among cocaine and crack users
- High level of depression
- High levels of unemployment and homelessness
- Majority without health insurance
- High level of incarceration
Some Good News

- Research studies have shown that there are evidence-based interventions that can decrease HIV risk behaviors

  - New HIV prevention interventions and testing strategies are coming to Florida soon!

- We have seen significant declines in heterosexually-acquired HIV cases among blacks in Florida since 1999 (59% among males, 46% among females)

- African American Testing Initiative (awarded funding in 2007)
Recommendations

- Increase HIV testing efforts in areas with high rates of poverty and HIV
  - Utilize Social Networks Strategy
- Increase HIV prevention intervention delivery to both HIV- and + persons living in areas with high rates of poverty and HIV
- Enhance partnerships to address intersecting HIV and substance abuse epidemics
  - Focus attention on crack and cocaine problem
- Ensure strong linkage systems to psychosocial and healthcare services
Limitations

- Data are preliminary
- Data are predominantly self-reported and subject to recall bias
- Data are cross sectional and time order cannot be established
- Findings can only be generalized to the population meeting eligibility criteria who attended venues on the sampling frame
NHBS Website

- Visit www.FloridaAIDS.org
  - Scroll down to “Behavioral Surveillance” link
- NHBS site has links to publications, presentations, and fact sheets
  - Local and national findings
  - Categorized by population (MSM, IDU, HET)
Questions and Discussion
Contact Information

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