The National HIV Behavioral Surveillance (NHBS) Detroit Partner Study

Partnership characteristics and female knowledge of male partner risk behavior in heterosexual couples

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Overview of NHBS

- The National HIV Behavioral Surveillance system (NHBS)
  - Multi-site project sponsored by the Centers for Disease Control and Prevention (CDC)
  - Monitors behaviors that place people at risk for HIV infection
  - Questionnaire and optional HIV testing
    - Sexual behaviors
    - Drug use
    - HIV testing behaviors
    - Access to and use of prevention services
Overview of NHBS

- Importance of behavioral surveillance
  - Monitor **behaviors** that lead to HIV infection
  - Unlike other HIV surveillance activities, participants are mostly **uninfected**
  - Used to help control epidemic through the development and evaluation of HIV prevention programs
Overview of NHBS

- NHBS activities rotate each year between three different groups at-risk for HIV
  - MSM (men who have sex with men)
  - IDU (injecting drug users)
  - HET (heterosexuals)
  - HET1 (2006-2007) Partner study
NHBS-HET1 Recruitment

- Detroit used a peer-referral method called *respondent-driven sampling* (RDS)
Overview of NHBS-HET1

- The HET1 cycle defined “high risk areas” to use in the recruitment process
  - High rates of poverty
  - High rates of HIV attributed to heterosexual transmission
- Detroit HET1 participants lived in or were recruited by someone that lived in a “high risk area”
  - Thought to have a higher risk of acquiring HIV infection compared to general heterosexual population
- **Important to remember**: HET1 participants had a connection to an area with high poverty and high rates of HIV
Eligibility

**NHBS-HET1**
- Males and **females**
- 18-50 years of age
- Had an opposite sex partner in the past 12 months
- Resident of a select metropolitan statistical area (major city)
- Was a resident or was recruited through RDS by a resident of a high-risk area (high rates of heterosexually-acquired HIV and high rates of poverty)

**Partner Study**
- Black and Hispanic females who participated in NHBS-HET1
- Had a recent male sex partner (past 3 months)
- Willing to recruit 1 or 2 recent male sex partners at least 18 years of age
NHBS-HET1 → Partner Study Participant Flow

Females

1. Recruited and eligible for NHBS-HET1
2. Completed HET1 interview and HIV testing

Males

1. If eligible for Partner Study, invited to participate
2. Completed Female version of Partner Study questionnaire
3. Recruited male sex partner(s)
4. Completed Male version of Partner Study questionnaire, HET1 survey, and HIV testing
Background

- Black females are disproportionately affected by HIV/AIDS
- 22% of prevalent HIV/AIDS cases in Michigan are women
  - 74% of all female HIV/AIDS cases are black females, with 62% attributed to heterosexual transmission
- In SE Michigan, the rate of new HIV diagnoses among black females is 14.8 times the rate among white females
Overview of Partner Study

- Initiated to give insight into the factors in minority female heterosexual relationships that may be putting minority females at risk of acquiring HIV

- **Topics of Partner Study questionnaire:**
  - Couple (male-female pair) relationship characteristics
  - Couple sexual behavior in the past 3 months
  - Female knowledge of male partner risk behavior
Detroit Partner Study Analysis Sample

- 107 couples analyzed
  - Each considered a unique partnership (unique male-female pair)
- Majority of females (84%) recruited 1 male partner
- 15 females (16%) recruited 2 male partners
- 1 male was recruited by 2 different females
- Analysis of select questions from male and female versions of Partner Study questionnaire and NHBS-HET1 survey
Analysis of data

- **Individual analysis**
  - Demographics (92 females and 106 males)
- **Response-level analysis** (107 female responses and 107 male responses; 214 total responses)
  - Includes male and female duplicates
  - Look at female responses and male responses separately
- **Couple-level analysis** (107 unique couples)
  - Compare female response and male response for each couple
  - Percent agreement and percent disagreement
  - Limitations of agreement/disagreement
Demographics
## Demographics

### Gender

<table>
<thead>
<tr>
<th></th>
<th>Females</th>
<th>Males</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female recruiters</td>
<td>92</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male partners</td>
<td></td>
<td>106</td>
<td>198</td>
</tr>
</tbody>
</table>

Total: 198

### Race/Ethnicity

<table>
<thead>
<tr>
<th></th>
<th>Females</th>
<th>Males</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>91 (99%)</td>
<td>100 (94%)</td>
</tr>
<tr>
<td>White</td>
<td>0</td>
<td>4 (4%)</td>
</tr>
<tr>
<td>Other/multiracial</td>
<td>1 (1%)</td>
<td>2 (2%)</td>
</tr>
</tbody>
</table>

107 unique couples
## Demographics cont.

<table>
<thead>
<tr>
<th>Age</th>
<th>Females</th>
<th>Males</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-29</td>
<td>33 (36%)</td>
<td>33 (31%)</td>
<td>66 (33%)</td>
</tr>
<tr>
<td>30-39</td>
<td>15 (16%)</td>
<td>22 (21%)</td>
<td>37 (19%)</td>
</tr>
<tr>
<td>40-50</td>
<td>44 (48%)</td>
<td>41 (39%)</td>
<td>85 (43%)</td>
</tr>
<tr>
<td>51+</td>
<td>N/A</td>
<td>10 (9%)</td>
<td>10 (5%)</td>
</tr>
</tbody>
</table>

**Median Age (range)**
- Females: 38 (18-50)
- Males: 38 (18-70)

### Education

- <High school: 55 (28%)
- High school diploma/GED: 92 (46%)
- Some college or technical school: 42 (21%)
- College graduate or beyond: 9 (5%)
## Demographics cont.

### Employment Status

<table>
<thead>
<tr>
<th>Status</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employed</td>
<td>75</td>
<td>38%</td>
</tr>
<tr>
<td>Unemployed</td>
<td>76</td>
<td>38%</td>
</tr>
<tr>
<td>Disabled</td>
<td>20</td>
<td>10%</td>
</tr>
<tr>
<td>Other*</td>
<td>27</td>
<td>14%</td>
</tr>
</tbody>
</table>

### Income

<table>
<thead>
<tr>
<th>Income Range</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;$10,000</td>
<td>108</td>
<td>55%</td>
</tr>
<tr>
<td>$10,000-$19,999</td>
<td>46</td>
<td>23%</td>
</tr>
<tr>
<td>$20,000-$29,999</td>
<td>15</td>
<td>8%</td>
</tr>
<tr>
<td>$30,000+</td>
<td>26</td>
<td>13%</td>
</tr>
</tbody>
</table>

*Other includes homemaker, full-time student, retired, and other*
Combined Household Income for Previous Year (before taxes) (N=198)

- **Females (n=92)**
  - <$10,000: 63%
  - $10,000-19,999: 47%
  - $20,000-29,999: 23%
  - $30,000+: 18%
  - Don't know: 3%

- **Males (n=106)**
  - <$10,000: 47%
  - $10,000-19,999: 24%
  - $20,000-29,999: 7%
  - $30,000+: 8%
  - Don't know: 8%
Demographics *cont.*

### Homelessness*
- Homeless at time of interview: 7 (4%)
- Homeless during 12 months prior to interview: 17 (9%)
- Not homeless: 174 (88%)

### Incarceration (in jail or prison)
- Incarcerated (12 months prior to interview): 28 (14%)
- Not incarcerated (12 months prior to interview): 170 (86%)

*Defined as living on the street, in a shelter, or in a Single Room Occupancy hotel (SRO)*
Marital Status (N=198)

- **Married**: Females (n=92) - 11%, Males (n=106) - 16%
- **Living together as married**: Females (n=92) - 7%, Males (n=106) - 6%
- **Separated**: Females (n=92) - 5%, Males (n=106) - 5%
- **Divorced**: Females (n=92) - 11%, Males (n=106) - 12%
- **Widowed**: Females (n=92) - 3%, Males (n=106) - 2%
- **Never married**: Females (n=92) - 63%, Males (n=106) - 59%
Partnership Characteristics
Type of Partner

- Participants were asked to classify their partner as either a main, casual, or exchange partner.
  
  - **Main partner**: a partner you have sex with and someone you feel committed to above anyone else and someone you would call boyfriend/girlfriend, husband/wife, significant other, or life partner.
  
  - **Casual partner**: a partner you have sex with but do not feel committed to or don’t know very well.
  
  - **Exchange partner**: someone you had sex with in exchange for things like money or drugs.
Type of Partner - *Couple-level analysis*

(Female Response / Male Response)

Couples in agreement - 71%

Couples in disagreement - 29%
Discussion of risk factors

“Next, I’m going to ask about some issues you may have discussed with <initials of partner>. For each one, please answer yes or no if you have discussed it with <initials of partner> in the past 3 months”
## Discussion of Risk Factors

<table>
<thead>
<tr>
<th>Topic</th>
<th>Response-level</th>
<th>Couple-level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Percent of female <code>yes</code></td>
<td>Percent of male <code>yes</code></td>
</tr>
<tr>
<td>Number of his current sex partners</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of his past sex partners</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whether male EVER had sex with a man</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whether male CURRENTLY has sex with men</td>
<td></td>
<td></td>
</tr>
<tr>
<td>His HIV status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>His drug use history</td>
<td></td>
<td></td>
</tr>
<tr>
<td>His STD history</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Using condoms</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Percent of all female or male responses `yes`, includes duplicates

- Agree conversation occurred
- Agree conversation did NOT occur
- Couple in disagreement
## Discussion of Risk Factors

*Past 3 months*

<table>
<thead>
<tr>
<th>Topic</th>
<th>Percent of female ‘yes’</th>
<th>Percent of male ‘yes’</th>
<th>Agree Yes</th>
<th>Agree No</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of his current sex partners</td>
<td>41%</td>
<td>38%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of his past sex partners</td>
<td>42%</td>
<td>32%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whether male EVER had sex with a man</td>
<td>37%</td>
<td>18%</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Whether male CURRENTLY has sex with men</td>
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<td></td>
</tr>
<tr>
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<td>26%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Using condoms</td>
<td>54%</td>
<td>48%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Discussion of Risk Factors

*Past 3 months*

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<tr>
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<td>48%</td>
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</table>
Physical Abuse and Forced Sex (1)

“No matter how well a couple gets along, there are times when they disagree. Please tell me if any of these things has ever happened with <initials of partner>”

Female PS Questionnaire:
- “Has <initials of male partner> ever slapped, punched, shoved, kicked, shaken or otherwise physically hurt you?”
  - 20% of female responses were ‘yes’

Male PS Questionnaire:
- “Have you ever slapped, punched, shoved, kicked, shaken, or otherwise physically hurt <initials of female partner>?”
  - 25% of male responses were ‘yes’
Male Ever Physically Abused Female

(Female Response/Male Response)

Couple-level analysis

Percent of Couples (%)

- Yes/Yes: 9%
- Yes/No: 10%
- No/Yes: 16%
- No/No: 64%
Physical Abuse and Forced Sex (2)

“No matter how well a couple gets along, there are times when they disagree. Please tell me if any of these things has ever happened with <initials of partner>”

Female PS Questionnaire:
- “Has <initials of male partner> ever forced or pressured you to have vaginal, oral or anal sex when you did not want to?”
  - 13% female responses were ‘yes’

Male PS Questionnaire:
- “Have you ever forced or pressured <initials of female partner> to have vaginal, oral, or anal sex when she did not want to?”
  - 6% of males responses were ‘yes’
Male Ever Forced Sex

(Female Response/Male Response)

Couple-level analysis

No couples responded “Yes/Yes”
Summary of findings: Partnership characteristics

- 71% of couples agreed on partner type with half of couples in agreement that their partner was a main partner

- Discussion of male partner’s HIV risk behaviors:
  - More females reported having a conversation with their male partner on many of the HIV-related topics
  - Agreement that conversation took place about male’s HIV-related risk behaviors <25% for all risk behaviors
  - High disagreement on communication of male partner’s HIV risk behaviors and using condoms (34%-47%)

- More males reported physically abusing the female
- More females reported the male forced sex
Couple Sexual Behavior in the Past Three Months
Condom Use for Vaginal Sex During the Past 3 Months

Response level analysis (214 responses)

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Female Responses</th>
<th>Male Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>69%</td>
<td>64%</td>
</tr>
<tr>
<td>Rarely</td>
<td>9%</td>
<td>16%</td>
</tr>
<tr>
<td>About half the time</td>
<td>4%</td>
<td>6%</td>
</tr>
<tr>
<td>Most of the time</td>
<td>8%</td>
<td>5%</td>
</tr>
<tr>
<td>Always</td>
<td>9%</td>
<td>9%</td>
</tr>
</tbody>
</table>
Vaginal Sex and Condom Use

Simplified frequency of condom use into two categories

- Ever vs. never
- “Ever” category composed of always, most of the time, about half the time, and rarely categories
Ever vs. Never Condom Use for Vaginal Sex
(Female Response/Male Response)
Couple-level analysis
Ever vs. Never Condom Use for Vaginal Sex by Main and Non-Main Partnerships
(Female Response/Male Response)

- **Main partnerships (54 couples):**
  - Ever/Ever: 36%
  - Ever/Never: 7%
  - Never/Ever: 11%
  - Never/Never: 13%

- **Non-main partnerships (28 couples):**
  - Ever/Ever: 65%
  - Ever/Never: 21%
  - Never/Ever: 21%
  - Never/Never: 32%

*Compares couples in agreement that their partner was a main partner (main/main) with couples in agreement that their partner was a non-main partner (casual/casual, casual/exchange, exchange/casual, and exchange/exchange). Excludes couples in disagreement on whether partner was a main or non-main partner (25 dyads).*
Female Level of Comfort Asking Male to Use Condoms

“During the past 3 months, how comfortable were you asking <initials of partner> to use a condom during vaginal or anal sex? Were you:

- Very comfortable
- Somewhat comfortable
- Not comfortable, or
- You never asked him to use a condom”
Female Level of Comfort Asking Male to Use Condoms

107 female responses

- **Never asked male partner to use a condom**: 50%
- **Not comfortable**: 3%
- **Somewhat comfortable**: 7%
- **Very comfortable**: 40%
Female Level of Comfort Asking Male to Use Condoms

107 female responses

Female responses: condom use for vaginal sex during past 3 months (43 responses)

- Never: 40%
- Rarely: 14%
- About half the time: 7%
- Most of the time: 16%
- Always: 23%
Anal Sex and Condom Use

*Couple-level analysis*

- Few couples in agreement (9%, 10 couples) that they had anal sex during the previous 3 months (71% agreed they did not and 20% in disagreement)
- Of the 10 couples in agreement that they had anal sex, 6 couples agreed they never used condoms for anal sex
- Unprotected anal sex more efficient route of HIV/STI transmission compared to unprotected vaginal sex

Summary of findings: Couple sexual behaviors in the past 3 months

- **Low condom use reported for vaginal and anal sex**
  - 21% of couples in agreement that they *EVER used condoms*
  - 54% in agreement that they *NEVER used condoms*
  - 6% of all couples in agreement that they *NEVER used condoms for anal sex*
- 50% of females reported that they *NEVER asked male partner to use a condom*
- 40% of females reported they were “very comfortable” asking their male partner to use a condom- but, 54% of these females reported they “never” or “rarely” used condoms with their partner for vaginal sex
Female Knowledge of Male Partner Risk Behavior
Keep in mind…

- Partner study questionnaire did NOT have questions for males about their knowledge of their female partner’s risk behaviors.
- Study design sought to investigate female knowledge of male risk behavior.
- NHBS-HET1 analysis shows females also have high prevalence of individual HIV risk behaviors (such as multiple sex partners and drug use).
- **Assumption that male told the truth** (if disagreement between members of couple, female assumed to have **incorrect perception**).
Male Risk Factors and Female Perceptions

Concurrency: sexual relationships that overlap in time
Male Partner Concurrency

- Any sexual relationships that overlapped in time with the couple’s sexual relationship
  - Median=4 years
  - Length of couple sexual relationships ranged from <1 year to 20 years
  - Concurrent sexual relationship(s) may have occurred at any time during the course of the couple’s relationship
  - Do not know the duration of concurrent partnerships
Male Partner Concurrency

- 74% of males (n=79) reported concurrent sexual relationships
  - 75% (n=59) reported >1 concurrent sexual relationships
- Median: 3
- Range: 1-39
- Few males reported having sex with men during couple sexual relationship (3% of males)
  - None of the females were aware that their male partner had sex with men during their sexual relationship
Male Partner Concurrency: Female’s perception

Question for females:

“As far as you know, during the time you were having a sexual relationship with [partner’s initials] did he have sex with other people? Would you say he:

- Definitely did not
- Probably did not
- Probably did
- Definitely did
- Refused to answer
- Don’t know”

Female unaware (if male said ‘yes’)
Female aware (if male said ‘yes’)

43
### Male Concurrent Sexual Relationships

**Female Perception/Male Response**

<table>
<thead>
<tr>
<th>Response</th>
<th>Couples with female unaware male had other partner(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>45%</td>
</tr>
<tr>
<td>No</td>
<td>29%</td>
</tr>
<tr>
<td>Not/Yes</td>
<td>18%</td>
</tr>
<tr>
<td>No/Not</td>
<td>2%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Response</th>
<th>Percent of Couples (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definitely or probably did/Yes</td>
<td>45%</td>
</tr>
<tr>
<td>Definitely or probably did/No</td>
<td>7%</td>
</tr>
<tr>
<td>Definitely or probably did NOT/Yes</td>
<td>29%</td>
</tr>
<tr>
<td>Definitely or probably did NOT/No</td>
<td>18%</td>
</tr>
<tr>
<td>Don't know/No</td>
<td>2%</td>
</tr>
</tbody>
</table>
Male HIV Risk Factors/Behaviors that *Ever* Occurred and Female Partner’s Perceptions
Male Risk Factors and Female Perceptions

Ever diagnosed with an STD
Female Knowledge of Male Partner STD Diagnosis
(Female Response/Male Response)

- 36% of males (n=38) reported ever having an STD diagnosis.
Male Risk Factors and Female Perceptions

Ever inject drugs
Ever use crack cocaine
Male Ever Injected Drugs
(Female Perception/Male Response)

- 10% of males (n=11) ever injected drugs

![Bar chart showing the distribution of couples' perceptions of male drug injection. The chart is divided into six categories: Yes/Yes, Yes/No, No/Yes, No/No, Don't know/Yes, and Don't know/No.]

- Couples with female unaware male had injected drugs: 76%

- Percent of Couples (%)

  - Yes/Yes: 4%
  - Yes/No: 7%
  - No/Yes: 6%
  - No/No: 76%
  - Don’t know/Yes: 1%
  - Don’t know/No: 7%
Male Ever Used Crack Cocaine
(Female Perception/Male Response)

- 25% of males (n=26) ever used crack cocaine

Couples with female unaware male had used crack cocaine

<table>
<thead>
<tr>
<th>Response</th>
<th>Percent of Couples (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes/Yes</td>
<td>15%</td>
</tr>
<tr>
<td>Yes/No</td>
<td>5%</td>
</tr>
<tr>
<td>No/Yes</td>
<td>9%</td>
</tr>
<tr>
<td>No/No</td>
<td>65%</td>
</tr>
<tr>
<td>Don't know/Yes</td>
<td>1%</td>
</tr>
<tr>
<td>Don't know/No</td>
<td>5%</td>
</tr>
</tbody>
</table>
Male Risk Factors and Female Perceptions

Ever been arrested and in jail or prison at least 24 hours
Male Ever Been in Jail or Prison

*Individual analysis, 106 males*

- 72% of males (n=76) had ever been arrested by the police and held for at least 24 hours
  - 25% of males who had ever been arrested (n=19) had been arrested in the 12 months prior to interview
  - Among those *not* arrested during the previous 12 months (n=57):
    - Median length of stay: 23 days
    - Range: 1 day-1825 days (5 years)
Male Ever Been in Jail/Prison - Couple-level
(Female Perception/Male Response)

Couples with female unaware partner had been in jail

Percent of Couples (%)

<table>
<thead>
<tr>
<th>Response</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes/Yes</td>
<td>43%</td>
</tr>
<tr>
<td>Yes/No</td>
<td>13%</td>
</tr>
<tr>
<td>No/Yes</td>
<td>24%</td>
</tr>
<tr>
<td>No/No</td>
<td>14%</td>
</tr>
<tr>
<td>Don’t know/Yes</td>
<td>5%</td>
</tr>
<tr>
<td>Don’t know/No</td>
<td>1%</td>
</tr>
</tbody>
</table>
Male Risk Factors and Female Perceptions

Ever tested for HIV
Ever Tested for HIV

*Individual analysis*

- 64% of males (n=68) who participated in the Partner Study reported they had ever been tested for HIV
- 71% of females (n=65) who participated in the Partner Study had ever been tested for HIV
Male Ever Tested for HIV
(Female Perception/Male Response)

<table>
<thead>
<tr>
<th>Response M/F</th>
<th>Percent of Couples (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes/Yes</td>
<td>32%</td>
</tr>
<tr>
<td>Yes/No</td>
<td>14%</td>
</tr>
<tr>
<td>Yes/Don’t know</td>
<td>2%</td>
</tr>
<tr>
<td>No/Yes</td>
<td>15%</td>
</tr>
<tr>
<td>No/No</td>
<td>9%</td>
</tr>
<tr>
<td>Don’t know/Yes</td>
<td>18%</td>
</tr>
<tr>
<td>Don’t know/No</td>
<td>10%</td>
</tr>
</tbody>
</table>
**Female Awareness of Male HIV-related Behaviors (107 couples)**

<table>
<thead>
<tr>
<th>Behavior</th>
<th>Percent of male ‘yes’ responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Had other partners during relationship (concurrent partners)</td>
<td>74%</td>
</tr>
<tr>
<td>Ever diagnosed with an STD</td>
<td>36%</td>
</tr>
<tr>
<td>Ever injected drugs</td>
<td>10%</td>
</tr>
<tr>
<td>Ever used crack cocaine</td>
<td>25%</td>
</tr>
<tr>
<td>Ever been in jail or prison</td>
<td>72%</td>
</tr>
<tr>
<td>Ever tested for HIV</td>
<td>64%</td>
</tr>
</tbody>
</table>
### Female Awareness of Male HIV-related Behaviors

<table>
<thead>
<tr>
<th>Behavior</th>
<th>Percent of male ‘yes’ responses</th>
<th>Female partner aware</th>
</tr>
</thead>
<tbody>
<tr>
<td>Had other partners during relationship (concurrent partners)</td>
<td>74%</td>
<td>61%*</td>
</tr>
<tr>
<td>Ever diagnosed with an STD</td>
<td>36%</td>
<td>26%</td>
</tr>
<tr>
<td>Ever injected drugs</td>
<td>10%</td>
<td>36%**</td>
</tr>
<tr>
<td>Ever used crack cocaine</td>
<td>25%</td>
<td>59%</td>
</tr>
<tr>
<td>Ever been in jail or prison</td>
<td>72%</td>
<td>60%</td>
</tr>
<tr>
<td>Ever tested for HIV</td>
<td>64%</td>
<td>49%</td>
</tr>
</tbody>
</table>

*Female reported “definitely did” or “probably did”

**Only 11 couples had males report they had ever injected drugs and 4/11 couples the female was aware

Diagram notes:
- **BoxeditinBlue=less than 2/3 aware**
- **BoxeditinRed=less than ½ aware**
Discussion
Discussion

From the literature...

- Studies suggest there are likely many interrelating factors contributing to black females higher risk of HIV infection
  - Contextual factors (social and economic)
  - Sexual networks (prevalence of HIV in partner pool, pattern of connections)
  - Individual risk behaviors (concurrency)
  - Discussion of sexual/behavioral history with partner
Discussion

*From the literature...*

- Studies suggest there are likely many **interrelating factors** contributing to black females higher risk of HIV infection
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  - Individual risk behaviors (**concurrency**)
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Discussion

From the literature...

- **Contextual factors**
  - Income, education (low)
  - Incarceration rates (high)
  - Male: female sex ratio (low)
  - Marriage rates (low)

- **Influence prevalence of partnership concurrency and other HIV risk behaviors**


Discussion

*From the literature- concurrency*

- Black heterosexuals report more sex partners and higher concurrency
- Sexual relationships that overlap in time
- Enhance the transmission of HIV and other STIs in mathematical modeling studies

*Adimora AA et al., 2002; Adimora AA et al., 2007; Morris M & Kretzschmar M, 1997; Watts CH & May RM, 1992.*
Context-Network Relationships

From the literature- attributed to Ada Adimora

Inmates: sex with others in population with high HIV prevalence

Disrupts partnerships

New long term links with antisocial networks

Reduces employment prospects- ↑ poverty, destabilizes partnerships

↑ Unemployment in community

Prevalence of men

Context-Network Pathways

*From the literature - attributed to Ada Adimora*

Male:Female Sex Ratio by Race/Ethnicity, Detroit 2007

- White, Non-Hispanic: 1.1
- Black, Non-Hispanic: 0.86
- Hispanic or Latino: 1.1
- Asian: 1.3

M:F sex ratio under one= more females then males

Source: 2007 American Community Survey 1-year estimates, City of Detroit
Contextual factors and concurrency

Partner study data
Discussion

Demographics of Partner study sample

- 55% reported an income <$10,000
- 28% reported less than a high school education
- 38% unemployed
- The majority of males (63%) and females (59%) reported that they were never married
Discussion

Partner study sample - Incarceration

- High incarceration
  - 72% of males ever arrested
    - 40% of female partners unaware
  - 25% of males had been arrested during the 12 months prior to interview

- Incarceration is associated with high risk partnerships, including multiple and concurrent partnerships

Khan MR et al., 2009; Pouget ER et al., 2010.
Discussion

*Partner study sample - concurrency*

- 74% of males reported concurrent sexual relationships, 75% of them reporting >1 concurrent relationship
  - Many females were unaware (39%)
  - High concurrency may not be surprising based on:
    - Low income
    - High unemployment
    - High incarceration
    - Majority never married
    - Low black male:female sex ratio in Detroit at time of partner study
Discussion of HIV risk factors
Discussion

From the literature-discussed HIV risk factors

- HIV-positive black women **less likely** to **discuss** a variety of HIV risk behaviors with their male partners (*prior to HIV diagnosis*) compared to HIV-negative black women
- Number of past sex partners
- Number of current sex partners
- HIV status
- STD history
- Drug use history
- Incarceration history

Discussion

*Partner study sample- discussed HIV risk factors*

- Agreement that communication of male risk behaviors **did occur** during the past 3 months
  - Discuss number of his current sex partners: 21%
  - Discuss number of his past sex partners: 13%
  - Discuss whether male had ever had sex with a man: 7%
  - Discuss whether male currently has sex with men: 5%
  - Discuss his HIV status: 18%
  - Discuss his drug use history: 22%
  - Discuss his STD history: 10%
  - Discuss using condoms: 34%
Limitations of Partner Study

- Self-reported data
- Recall accuracy
- Possible reporting bias
- Differences in interpretation of questions and responses
- Participation of males dependent on female’s recruitment choices
- Not a representative sample of heterosexual black and Hispanic women and their sex partners
- Did not have questions about male’s perceptions of female partner’s risk behaviors
HIV Testing Results- Partner Study

- All final HIV test results for males were negative
- One positive HIV final test result for a female (1%)
  - Female reported never being tested for HIV
  - One male partner during past 12 months; no unprotected sex
  - Never injected drugs
  - Unknown date of infection
HIV Testing Results- Detroit HET1

- Detroit HET1 sample (n=786), HIV prevalence <1%
  - 6 positive HIV final test results
  - 3 male and 3 female
- NHBS-HET1 nationwide sample (n=14,837) had an HIV prevalence of 2%
  - All sites targeted high poverty areas with high rates of HIV
  - 10-20 times greater estimated prevalence of HIV in non-IDU heterosexuals in U.S.

Implications for prevention

- Investigating the extent of couple agreement is important for understanding how partner level dynamics influence HIV risk behavior
  - Partner level HIV prevention strategies
    - Improve communication of HIV risk factors in couples
    - Identifying barriers to condom use
Implications for prevention

- **Multi-dimensional approach** to HIV prevention needed for black females
  - Social and economic environment
  - Community-level changes
- Individual HIV prevention for black females
  - Know your sex partner’s HIV status
  - Consistent condom use
For more information

- Partner Study Data Summary and NHBS-HET1 Summary online
- Please visit MDCH HIV Statistics online- www.michigan.gov/hivstd
  - Select “HIV/AIDS”
  - Select “Surveillance: Case Reporting and Projects”
  - National HIV Behavioral Surveillance link
Thank you!

- Renee McCoy
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- Emily Higgins
- Vivian Griffin
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- Interviewers
  - Derrick Willis
  - Jamilah Drakeford
  - Korin Makuannen
  - Meosia Lee-Turner
  - Marquetta Jones
- Testing Organizations- provided space and HIV testing
  - DDHWP Counseling and Testing
  - DCHC
- Kathy Hageman
- Belinda Chandler and Leanne Savola


