Gay Men and HIV

Findings from the Vancouver ManCount Survey

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A Multi-Agency Collaboration

Study Team

- **BC Centre for Disease Control:** Dr. Mark Gilbert (PI), Claudia Rank
- **BC Centre for Excellence in HIV/AIDS:** Dr. Bob Hogg (PI), Eric Druyts, Arn Schilder Dr. David Moore, Steve Kanters, Warren Michelow
- **Community-Based Research Centre:** Dr. Rick Marchand, Dr. Terry Trussler
- **Health Initiative for Men:** Wayne Robert, Phillip Banks, Jim Sheasgreen
- **Vancouver Coastal Health:** Dr. Réka Gustafson (PI), Michael Kwag, Miranda Compton, Meaghan Thumath, Chris Buchner, Stephanie Harvard, Johann Kolstee
- **Public Health Agency of Canada:** Dana Paquette, Rhonda Kropp, Stephen Cule, Susanna Ogunnaike-Cooke, Maureen Perrin, Marissa Maguire, Liz Venditti, Gayatri Jayaraman, Dr. Chris Archibald, Dr. Tom Wong
- **University of British Columbia:** Dr. Paul Gustafson

Survey Interviewers:

- Jody Jollimore, Adam Graham, Dirceu Campos, Lukas Maitland, Olivier Ferlatte, Seamus Sullivan, Ray Sullivan, Blair Petty

HPV (Self-collection) Component

- Dr. Chen Zhou, Dr. Dirk van Niekerk, Dr. Kathy Seballos, Jane Lo, Dr. Gina Ogilvie, Darlene Taylor, Wendy Mei, Dr. Alberto Severini, Dr. Natasha Press

Community Advisory Committee

- Robert Hong (VCH), Paul Harris (BCCFE), Shimpei Chihara (ASIA), Elgin Lim (BCPWA), Richard O'Donnell (VCH), Chris Buchner (Qmunity), Robin Parry (Qmunity), Matthew Taylor (PEERS), Hywel Tuscano (YouthCO), Jesse Brown (YouthCO), Devon MacFarlane (VCH), Jody Jollimore (HIM)

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Community Partners

- Celebrities
- Fountainhead
- Numbers
- Odyssey
- Pumpjack
- Little Sisters
- Rhizome Café
- F212
- Boys ‘R Us
- Club 40/50
- GAB Youth
- Gay Warriors
- Metro Vancouver Kink
- Primetimers
- AIDS Walk
- Davie Days
- Fuck Off and Dance
- Gay Men’s Health Summit
- Koodo
- Oddball
- Out on Screen
- Pride Society
- Red 8
- Vick Vancouver Party
- Spectrum Health
- AIDS Vancouver
- Pender Community Health Centre
- Three Bridges Community Health Centre
- Pine Street Clinic
- BCCDC STI Clinic / Bute Street Clinic

Outline for presentation

- To present the key findings from the Vancouver ManCount survey

- Will cover:
  - Background and Rationale
  - Survey methods
  - Participants
  - Key Findings
  - Limitations
  - Implications

Background & Rationale

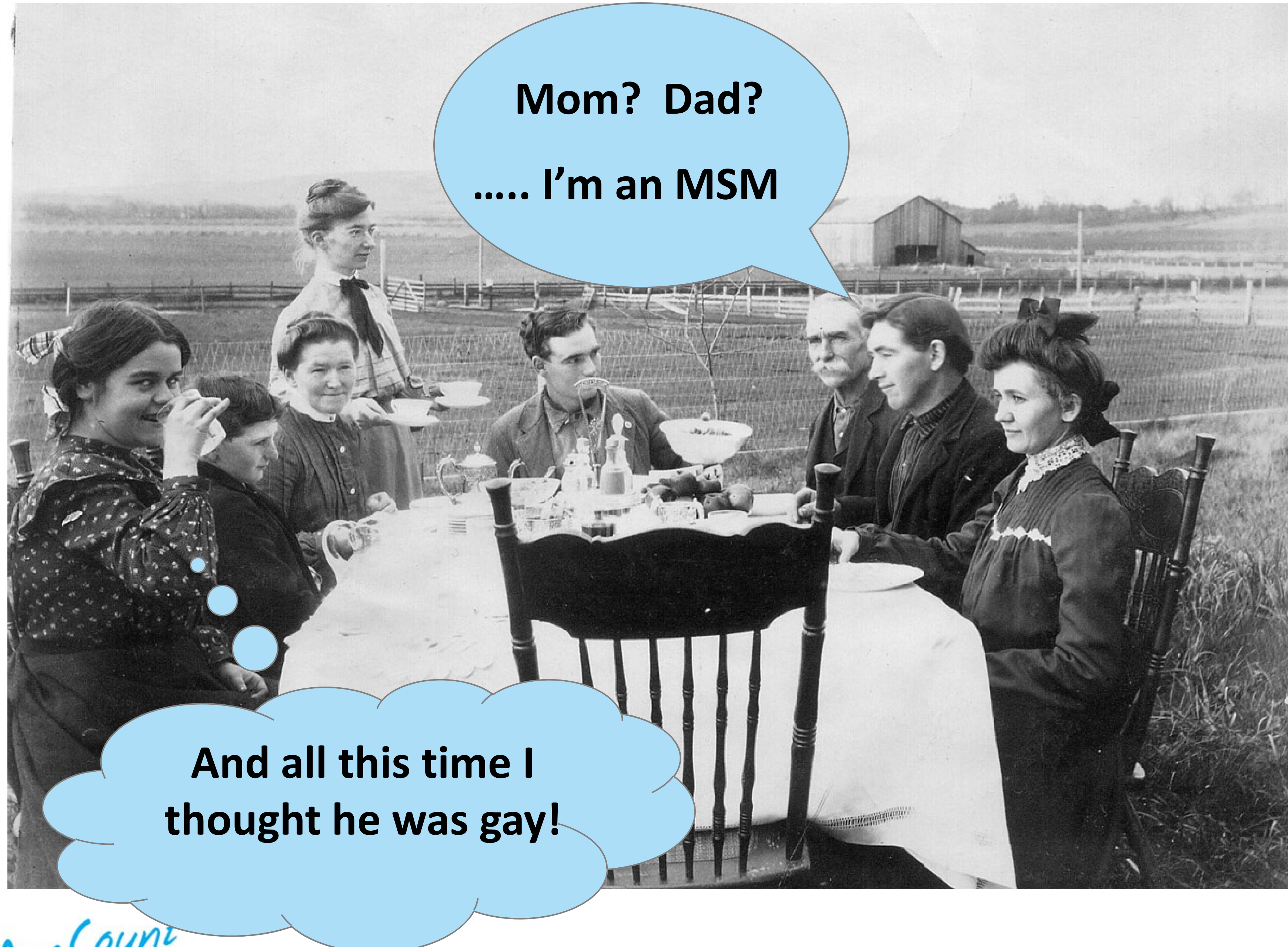

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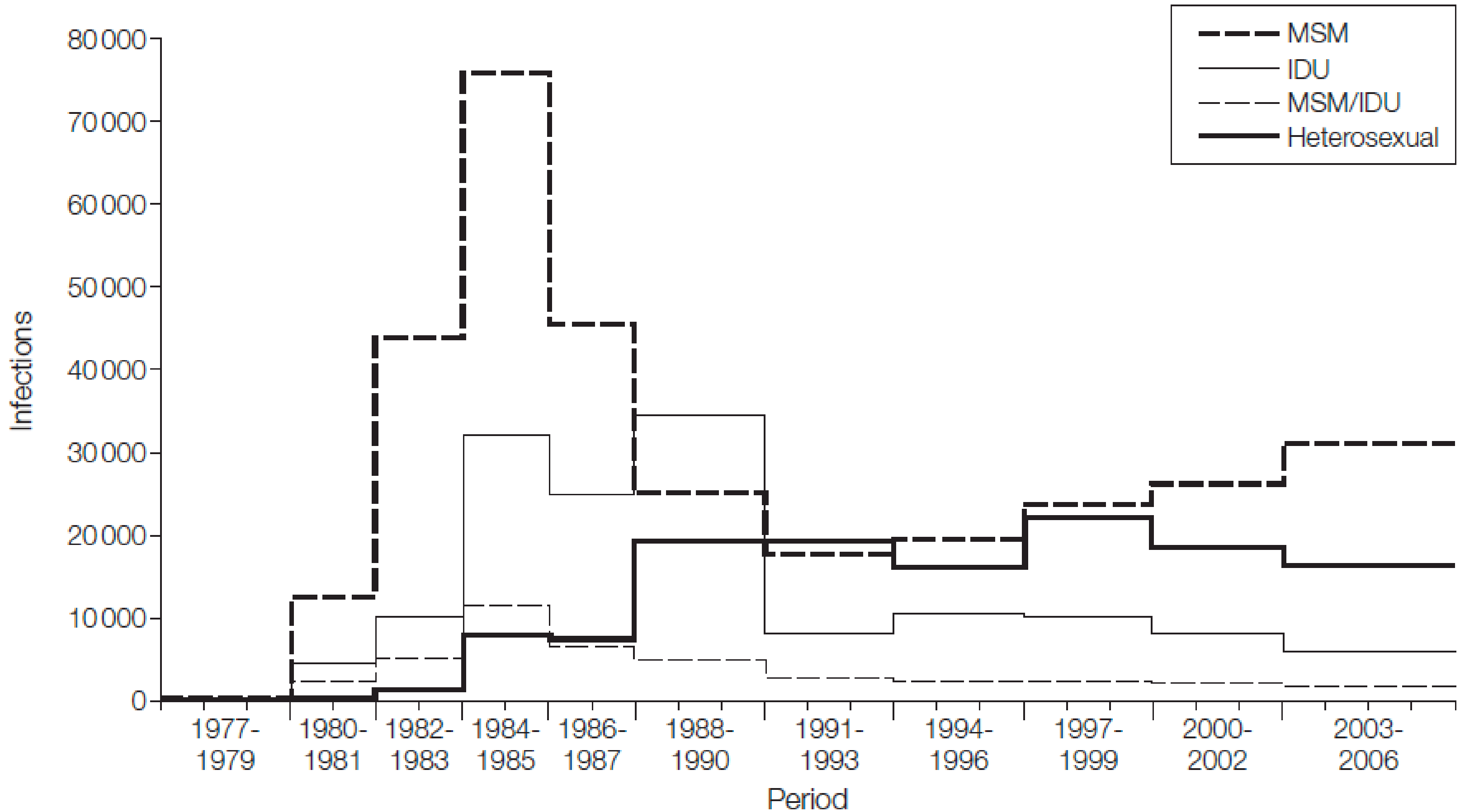
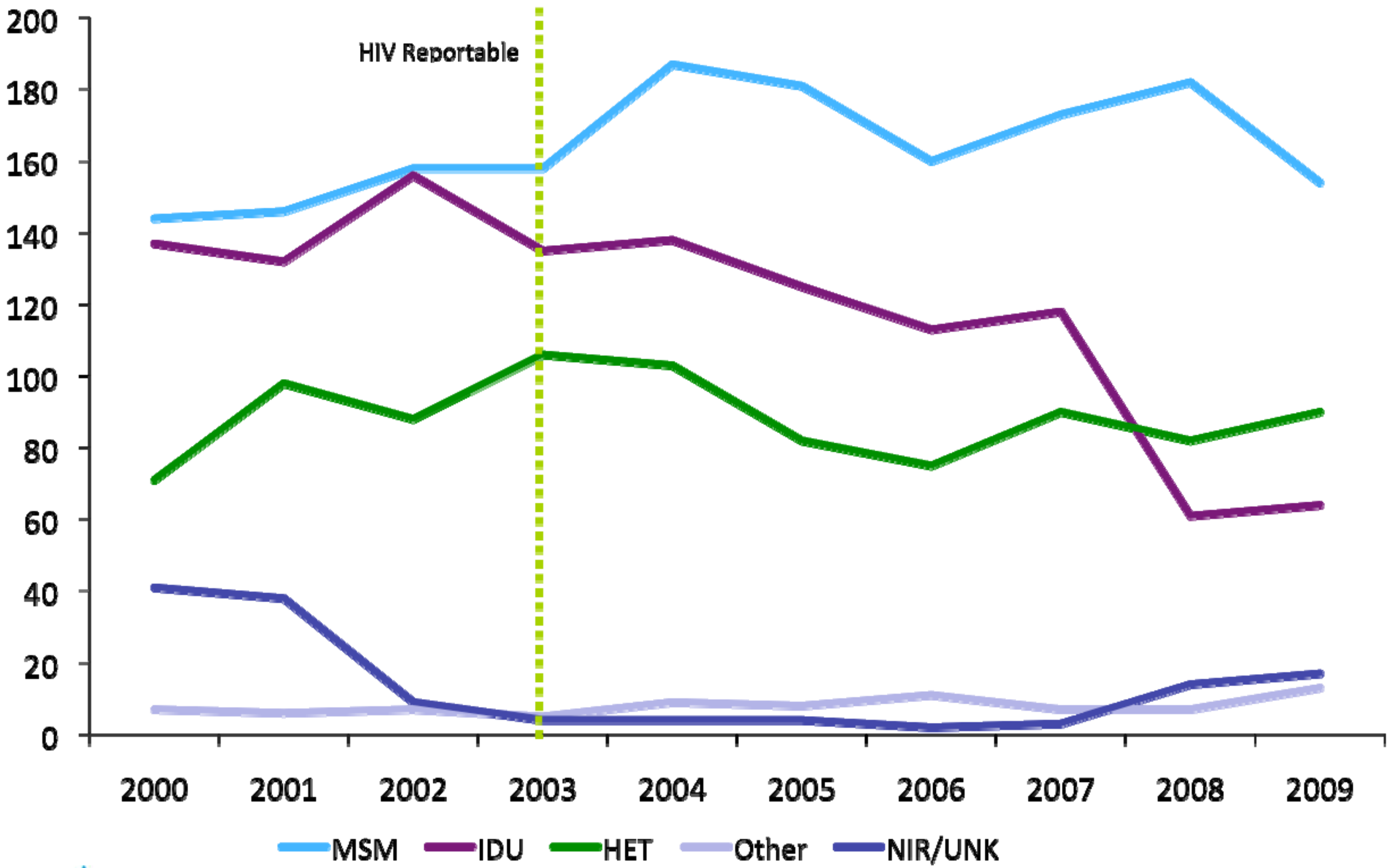
Figure 2. Estimated New Human Immunodeficiency Virus (HIV) Infections by Transmission Category, Extended Back-Calculation Model, 50 US States and the District of Columbia, 1977-2006



Hall et al, JAMA 2008; 300(5):520-529

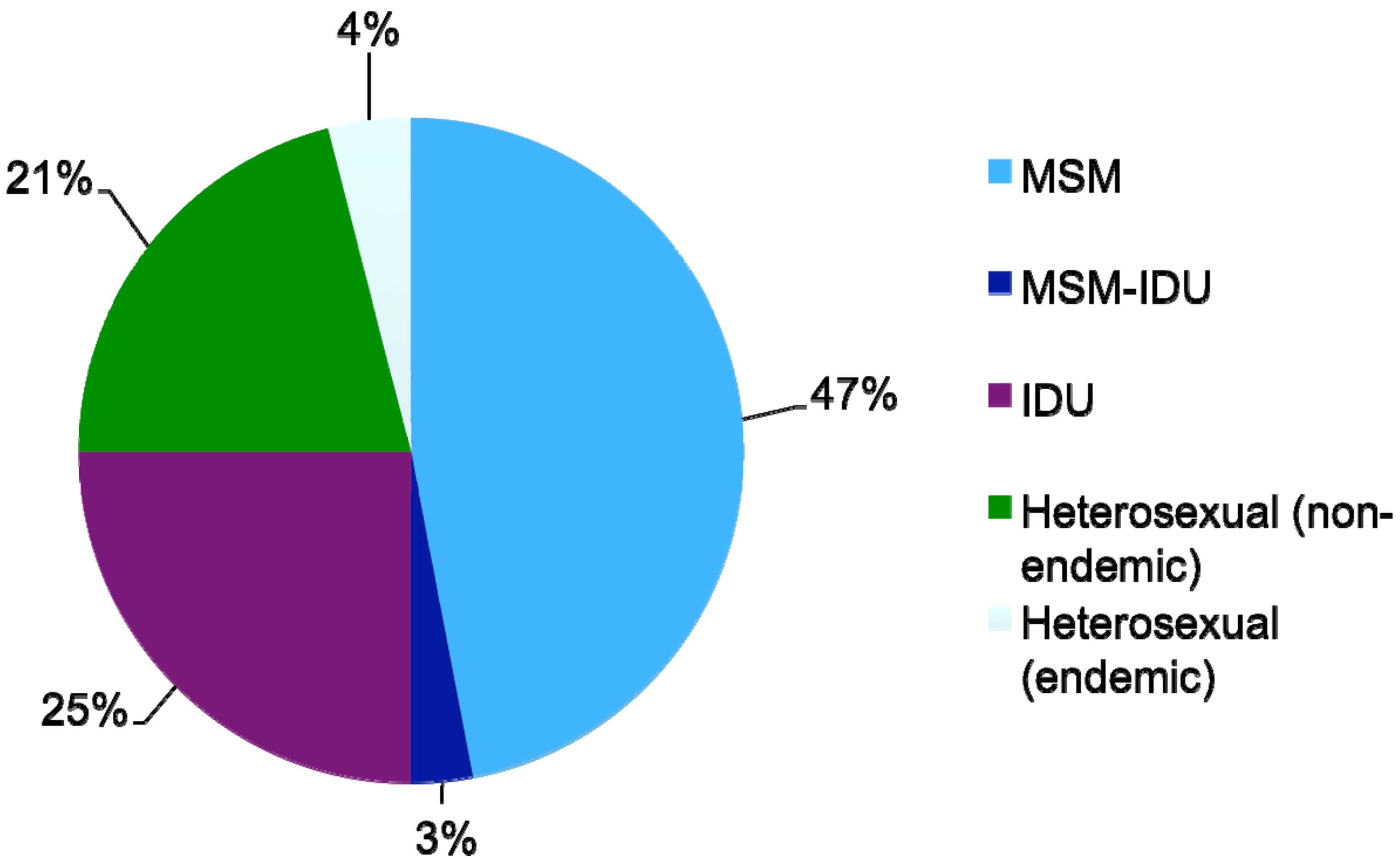
New Positive HIV tests, BC



BCCDC. HIV/STI Annual Surveillance Report, 2009.

Estimated incident HIV infections, BC, 2008

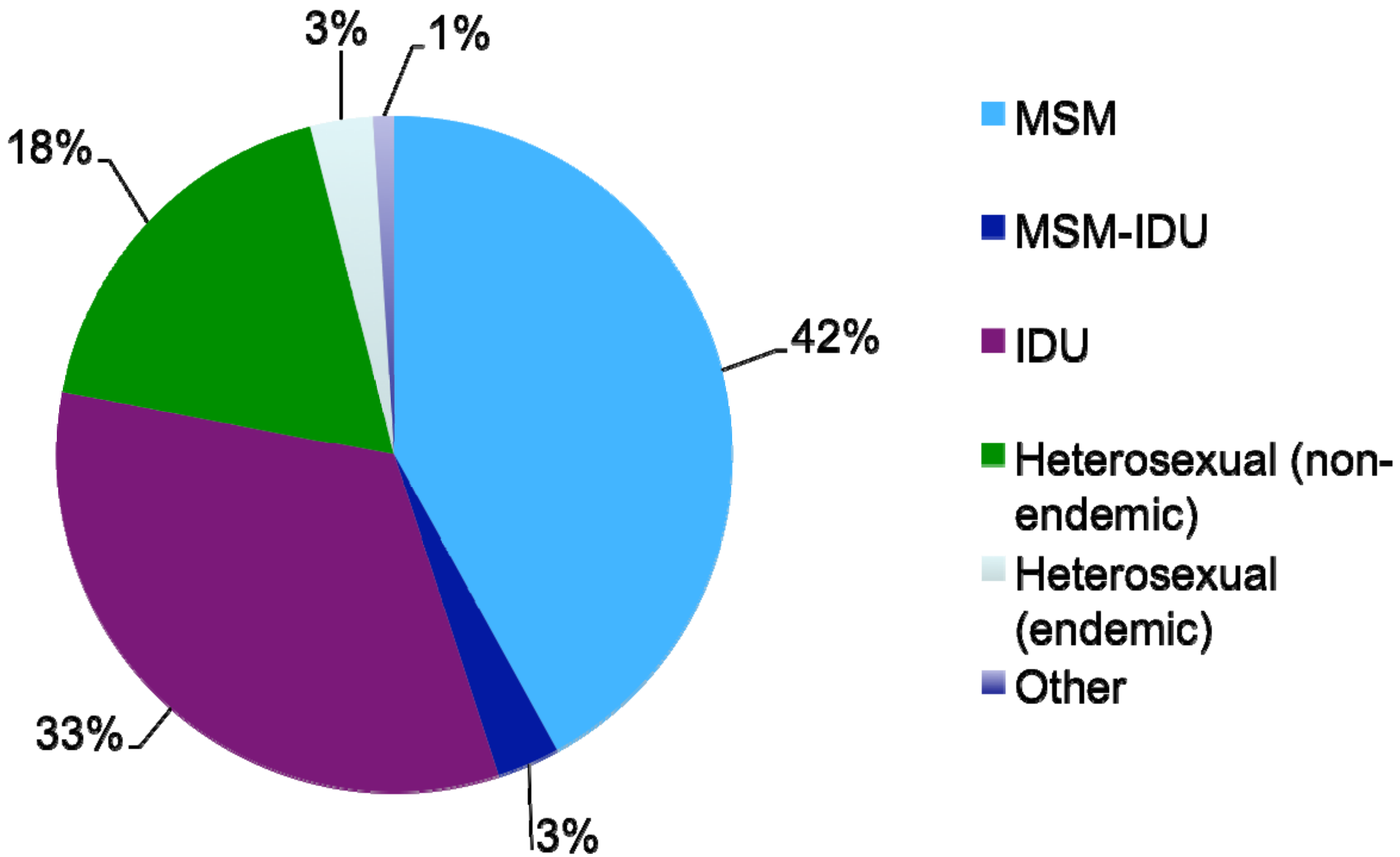
Total N = 280 to 540



BCCDC. HIV/STI Annual Surveillance Report, 2009.

Estimated prevalent HIV infections, BC, 2008

Total N = 11,400 (Range 9,300 – 13,500)



BCCDC. HIV/STI Annual Surveillance Report, 2009.

Unaware of HIV infection, Canada, 2008

- Overall estimate: 26%
- By exposure category:
  - MSM 19%
  - IDU 25%
  - Heterosexual (endemic & non-endemic) 35%

Summary: Estimates of HIV Prevalence and Incidence in Canada, 2008. PHAC, 2009.

Other BC data

- Vanguard study:
  - Sustained increase in HIV incidence since 2000
    - 1997-2001: 0.64 [0-1.12] infections per P-Y
    - 2002-2003: 1.88 [0-3.33] infections per P-Y
- Sex Now Survey (Vancouver, 2008):
  - Self-reported HIV prevalence: 16%
- M-Track Victoria (2007):
  - Measured HIV prevalence: 14%

Lampinen JAIDS 2005; Trussler CBRC 2008; VIHA 2008.

M-Track Survey

- M-Track is a second generation HIV surveillance system, coordinated by PHAC
  - Monitors trends in HIV, viral hepatitis, other STI
  - Monitors trends in sexual and testing behaviours
  - Direct population sampling
  - Cross-sectional surveys at regular intervals

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- A sexual health survey for gay, bisexual and other men who have sex with men in Vancouver

- <u>Vision</u>: To collect relevant data to inform collective action to prevent the transmission of HIV and improve sexual health

- <u>Objectives</u>:
  - To measure the prevalence of HIV, Hepatitis C, syphilis
  - To track trends in testing and sexual behaviours
  - *To use self-collected rectal swabs to measure prevalence of HPV, Chlamydia, gonorrhea, & abnormal anal cytology (sub-study)*

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Determinants of HIV epidemics

Underlying Determinants

Socioeconomic, demographic, geography, cultural, political, health system

Proximate Determinants

Knowledge, Behaviour, Networks, Substance Use, Care seeking

HIV

Immediate Determinants

$R^{o} = \beta \times c \times D$

Probability of transmission if exposed
Rate of contact between pos/neg
Duration of infectiousness

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(Aral STI 2002)

Survey Methods

Sampling method

- "Hard-to-Measure" population
  - External validity of results an important issue
- Probability sampling: preferred, but feasible?
- Non-probability sampling methods
  - Snowball
  - Facility-based
  - Targeted
  - **Time-Space**
  - Respondent-Driven

(Magnani 2005; Semaan 2002)

Time-Space Sampling

- Ethnographic mapping of community venues
  - In consultation with community partners
  - Bars, bathhouses, festivals, events, organizations, businesses
- Reviewed for feasibility
- All identified venues approached to participate
- Two-stage sampling approach:
  - Construction of sampling frame, updated monthly
  - Stratified randomized selection of one-time, monthly, or regular sampling events (~ 20 sampling events per month)

Recruitment & Data Collection

- Strategies for approaching men in venues varied
- Eligible to participate if:
  - 19 yrs +
  - self-identified as man who has ever had sex with a man
  - Able to complete english language questionnaire
- Informed Consent
- Self-completed questionnaire
  - Core questions (demographics, sexual, testing behaviours)
  - Site-specific questions (pilot-tested)
  - 20-40 minutes to complete
- Fingerstick blood specimen for Dried Blood Spot (DBS)
- Honorarium provided ($10)

Laboratory Testing of DBS specimens

- Dried Blood Spot tested for antibodies to:
  - **HIV**: Screening EIA (Bio-Rad), confirmation by Western Blot
  - **Hepatitis C**:* Screening EIA (Ortho), no confirmatory testing. Does not discriminate acute, chronic, resolved infections
  - **Syphilis**:* Screening TP-PA assay (Serodia), no confirmatory testing. Does not discriminate current from past infection.

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* Positive result indicates past or present infection. Validation of commercially available laboratory tests on DBS specimens for Hepatitis C and syphilis is ongoing.

Photo courtesy of John Kim, PHAC.

Who Participated?

Recruitment – survey, DBS

- August 2008 to February 2009

2805 men approached

1636 (58.3%) declined

1169 (41.7%) consented & completed questionnaire

1139 (97.4%) provided DBS

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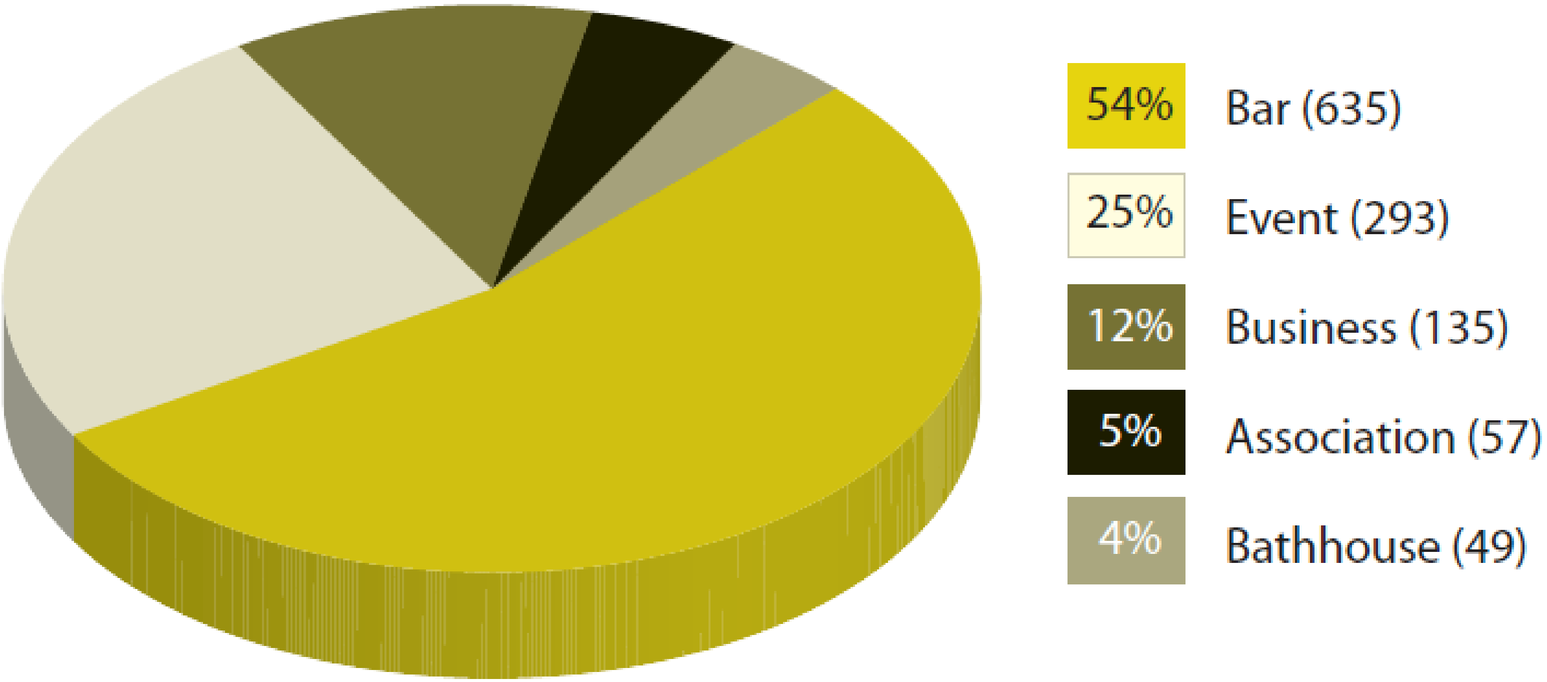
Participation by Venue



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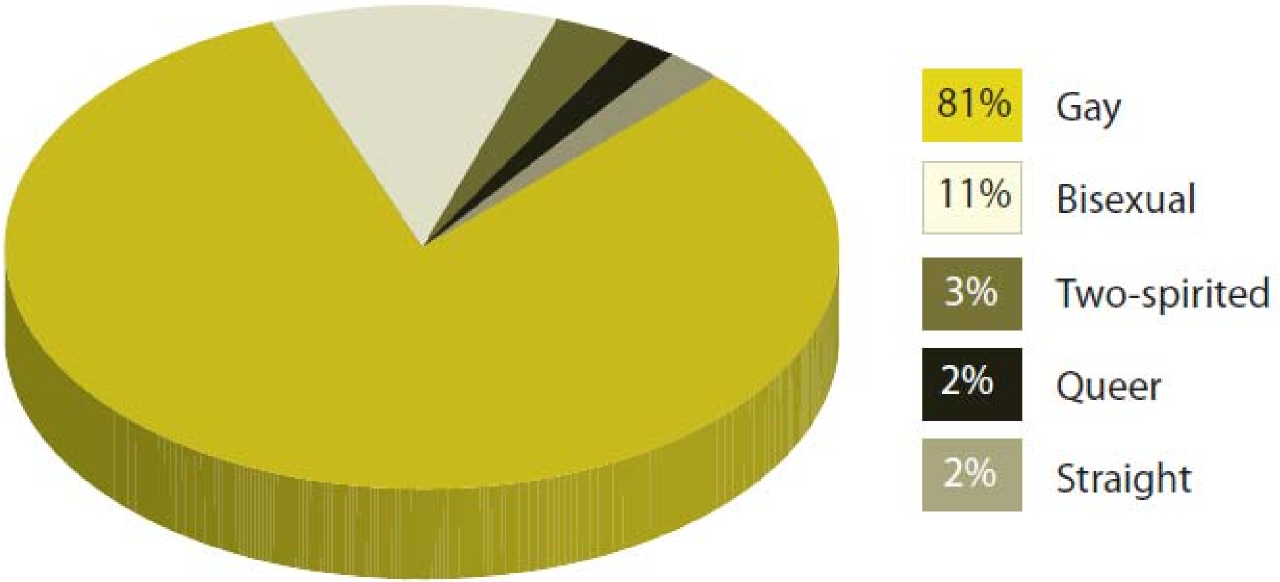
Participation by Orientation



Gender Identity:

Man	95%
Two-spirited	4%
Transgendered	2%
Other	1%

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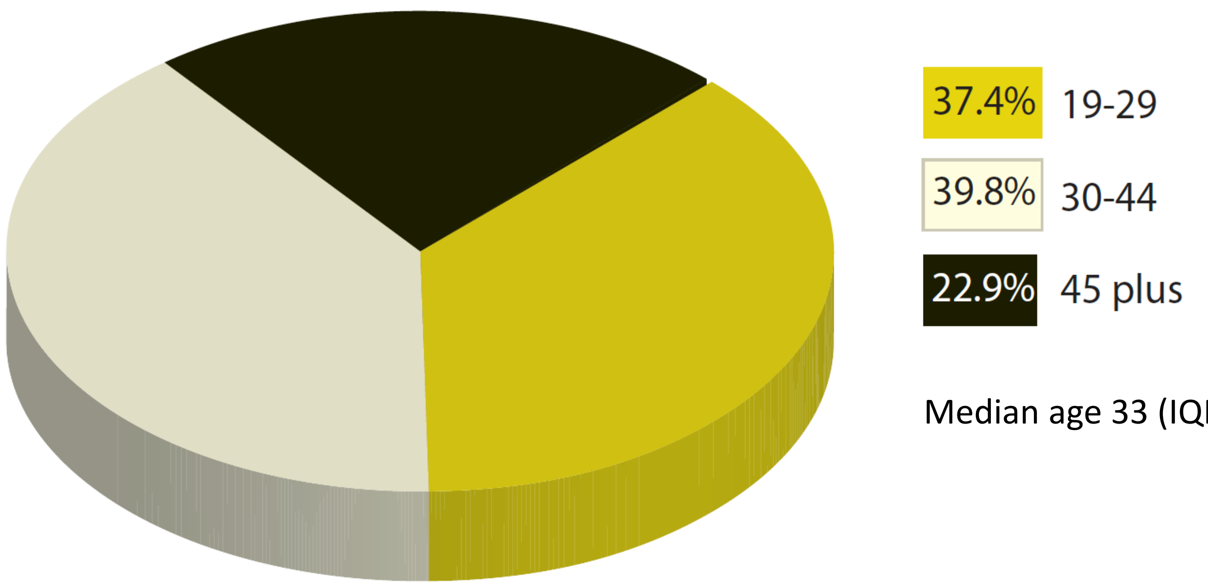
Participation by Age



Median age 33 (IQR 26-44)

Income:	$30-39 K per year (median)
Education:	
Some High School or less	7%
Completed High School	13%
College or University	57%
Graduate education	23%

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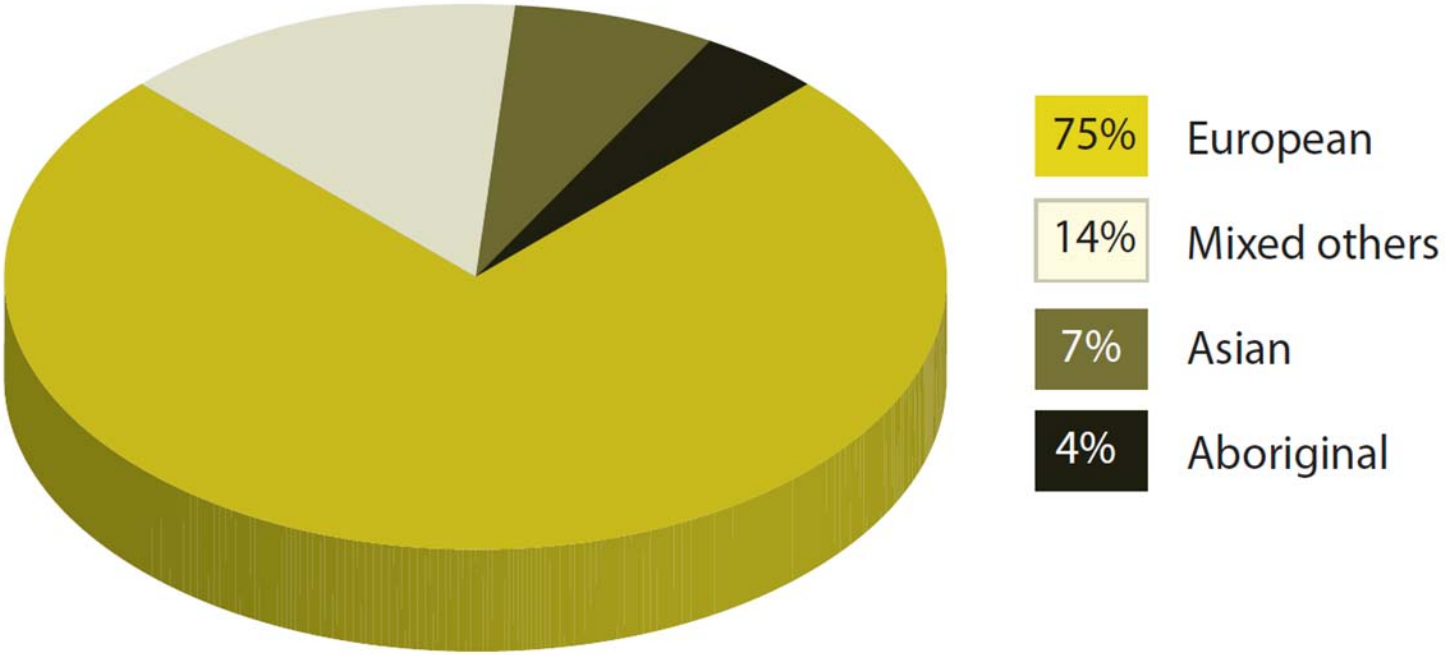
Participation by Ethnicity



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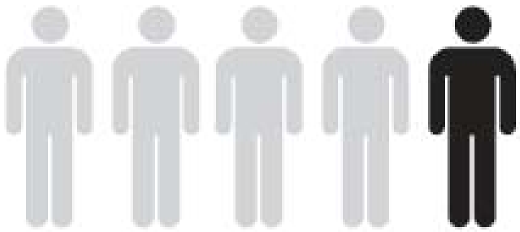
87% lived in metro Vancouver

Key Findings

Section 1:

HIV and other infections

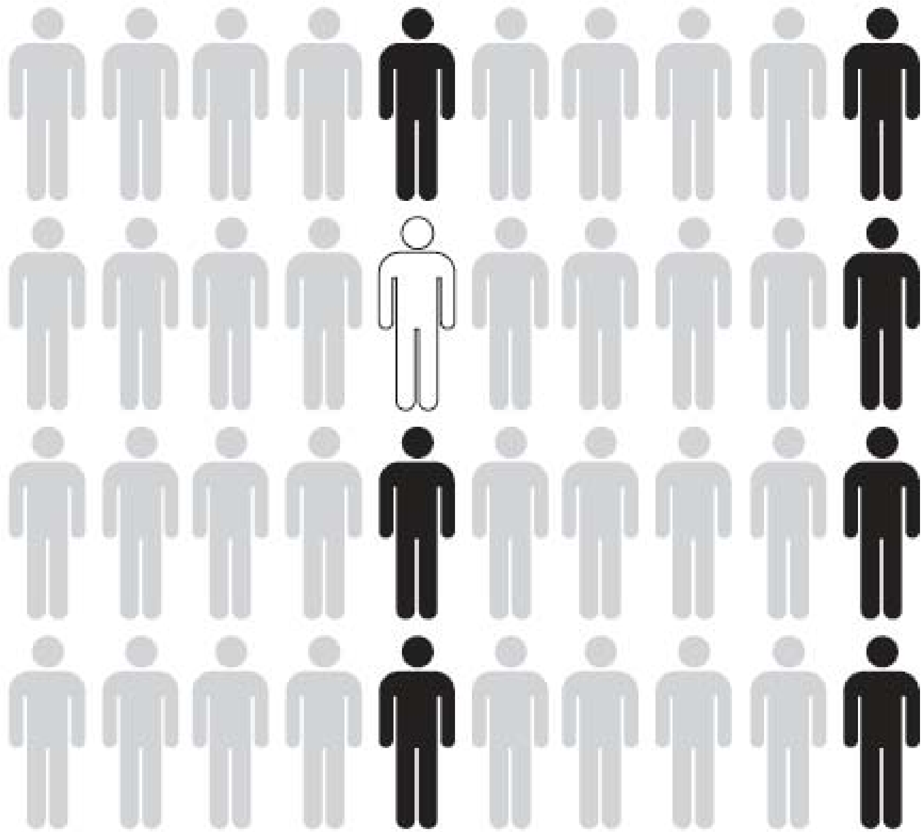
HIV Prevalence



18.1 %

1 in 5 were positive by blood sample

206 / 1139 DBS specimens.



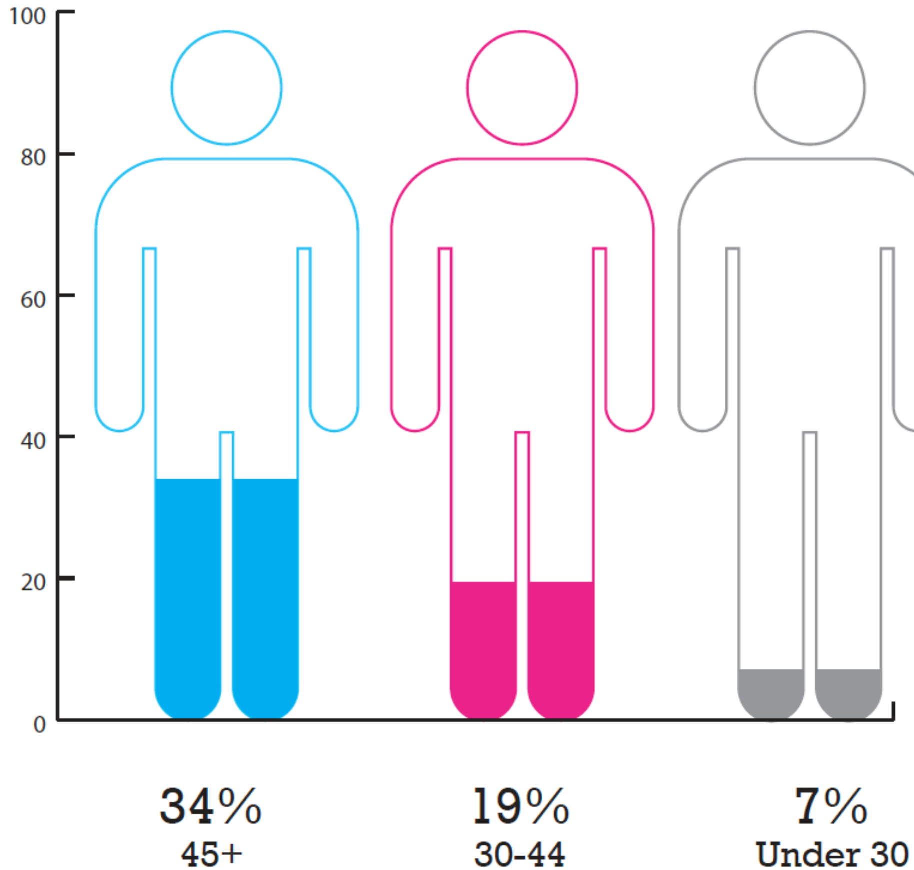
2.5 %

1 in 40 were unaware they were HIV+

28 / 1139 DBS specimens.

Equivalent to 14% of all men with a HIV positive DBS specimen.

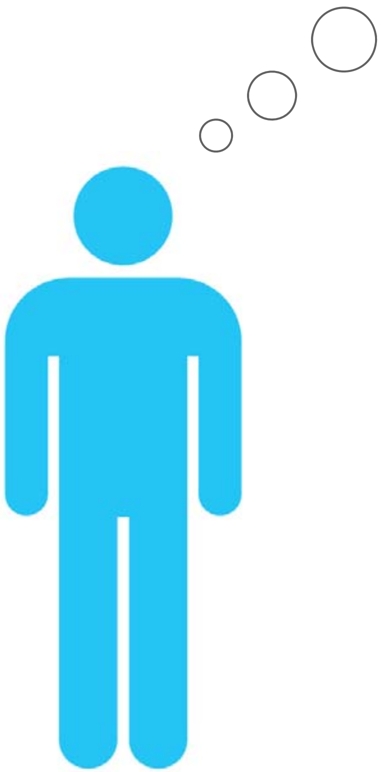
HIV Prevalence by Age Group



	45+	30-44	Under 30
Unaware	5/88 (5.7%)	11/87 (12.6%)	12/28 (40.0%)

HIV treatment

- Year of HIV diagnosis: median 1997 (IQR 1989-2003)
- In the past 6 months, 71% of HIV positive men had taken anti-HIV medication
- Additional 9% reported use of medications in the past



13.6% of HIV negative men believed that they were somewhat to very likely to become HIV positive in their lifetime

Other blood test results

- Indicate current or past infection
- More uncertainty with these findings

- Hepatitis C antibodies

  4.9% positive → 23% appear unaware

  36/52 (52%) were HIV positive

  47/48 (81%) had history of injection drug use

- Syphilis antibodies

  4.4% positive → 31% appear unaware

Diagnosed (self-reported)

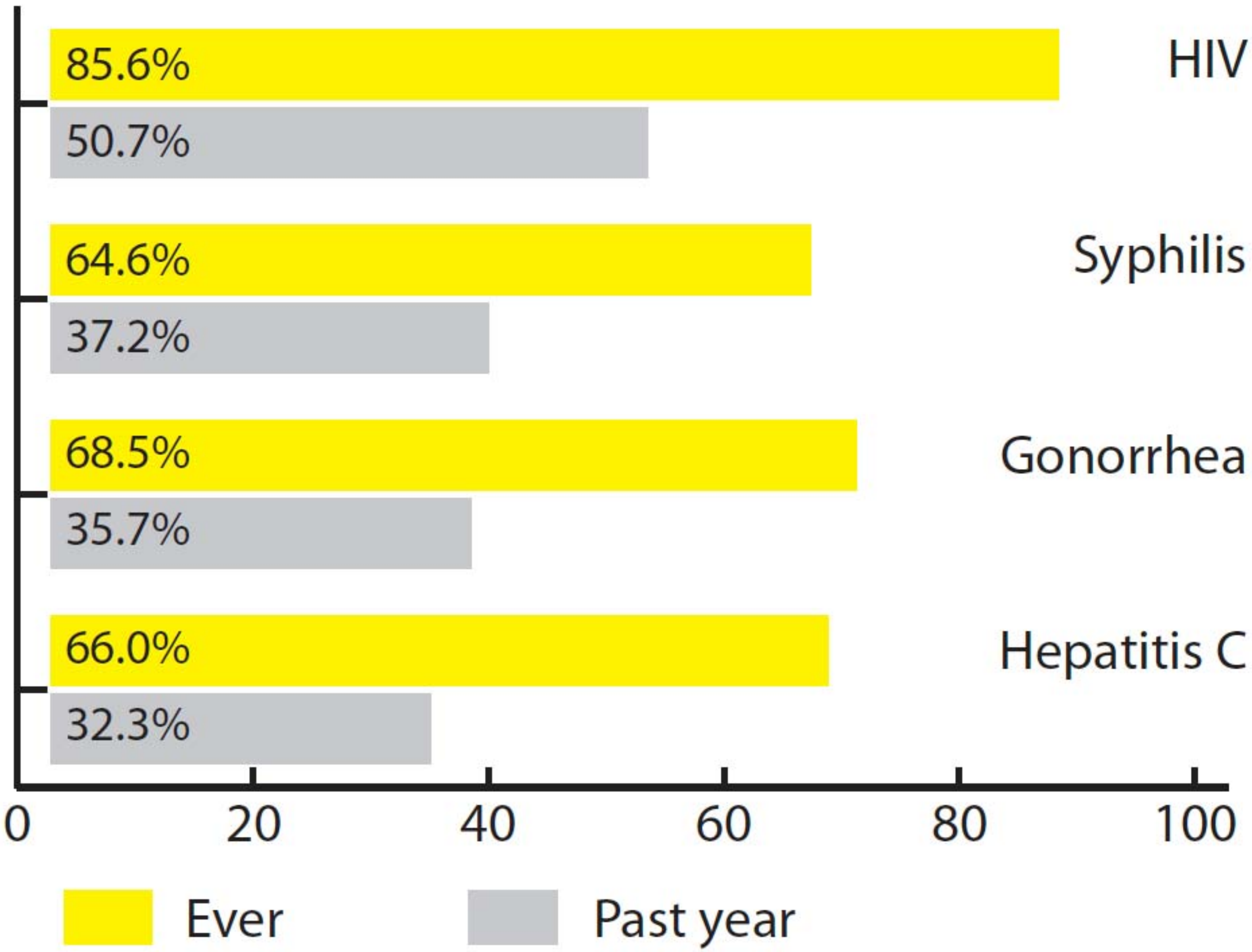
	Ever	Past Year
Gonorrhea	22.5%	4.9%
Chlamydia	13.7%	3.4%
Genital warts	17.9%	4.1%
Syphilis	7.8%	2.2%
Genital herpes	7.3%	2.6%
Hepatitis A	5.6%	0.9%
Hepatitis B	7.6%	1.8%
Hepatitis C	4.9%	2.0%
Any STBBI	37.8%	11.2%

Any STIBBI: one of Gonorrhea, Chlamydia, Genital warts, syphilis, or genital herpes.

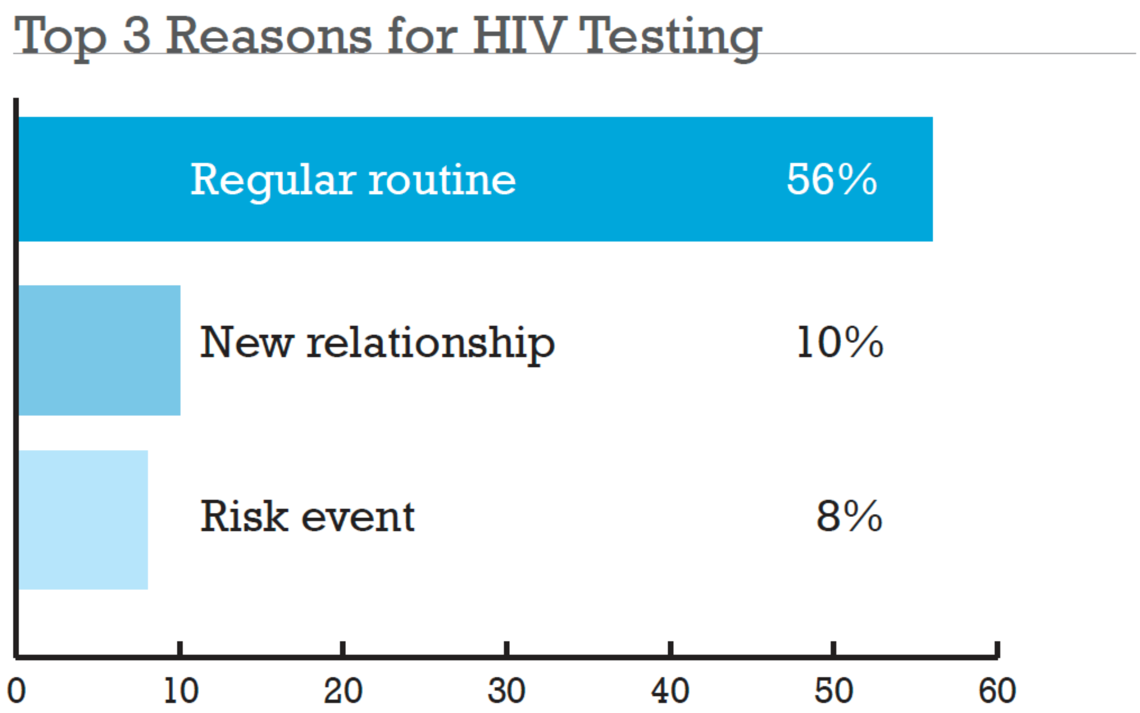
Section 2:

Testing Practices

Tested



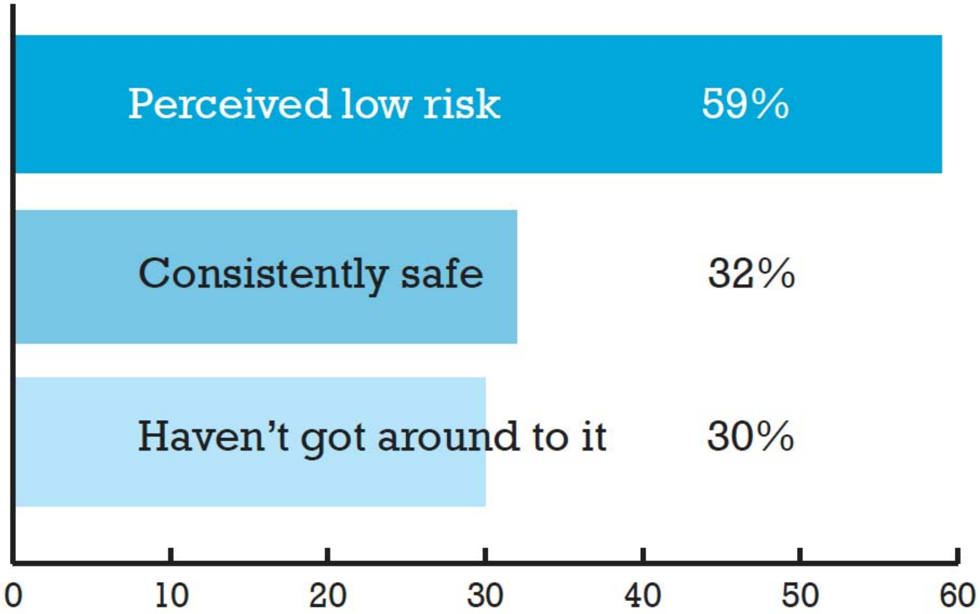
85.6%
50.7%
HIV
64.6%
37.2%
Syphilis
68.5%
35.7%
Gonorrhea
66.0%
32.3%
Hepatitis C
0
20
40
60
80
100
Ever
Past year



Testing because of ‘system’: 7%

Being tested for STD, HCW recommended test, saw ad/poster/article about HIV

Top 3 Reasons for Not Testing



Negative consequences: 16%

Do not want to know, could not deal with it, affect relationships/career, discrimination, nothing could be done, reporting, impact on sex life

Because of 'system': 14%

Don't have a doctor, couldn't get appointment, don't know where to go for testing

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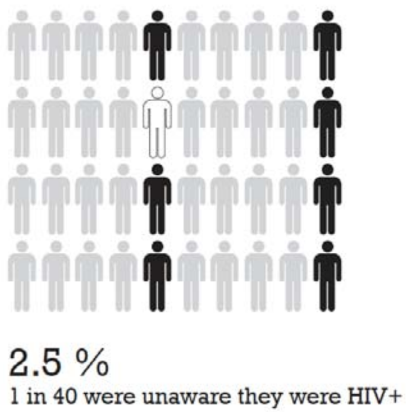
Testing among unaware



20/28 (71%) previously tested

Median 2 tests past 2 yr

(IQR 0-4 tests)

May be between screenings

16/28 not tested past 2 yr

Reasons:

Not want to know

Unable to cope with result

Already HIV positive

Concern about impact on relationships

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Section 3:

Sexual Health and Behaviour

In the past 6 months

- Number of sexual partners:

None	8.5%
One	23.5%
2 to 5	34.6%
6 to 9	12.0%
10 to 19	10.2%
20 plus	11.7%

- Concurrency with regular partner: 52.2%
- Female partner (one or more): 11.1%
- Condom use last time had anal sex: 58.9%

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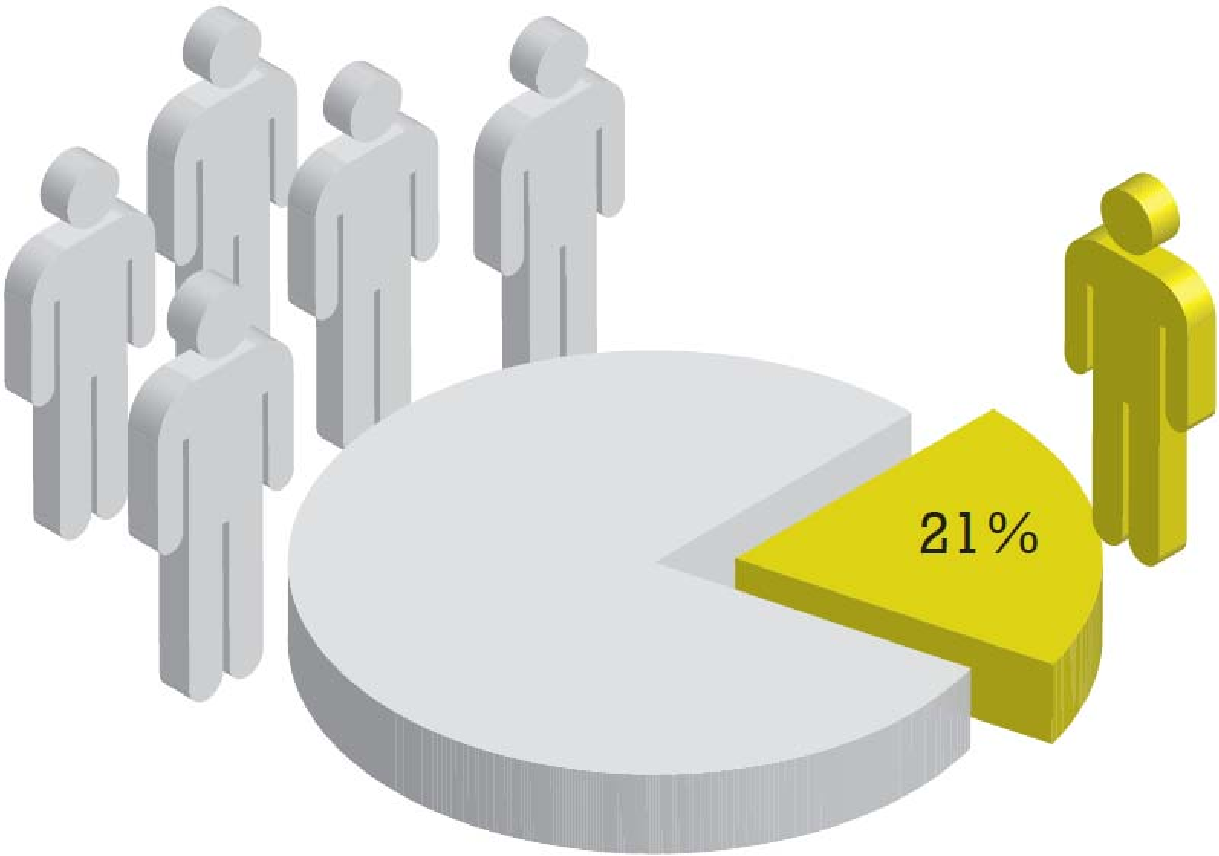

21% had unprotected sex with unknown or different status partners in the previous 6 months

Risk Reduction

	HIV- men	HIV+ men
Condoms always	68%	not asked
Ask status	63%	63%
Omit anal sex	not asked	58%
Control ejaculation	44%	46%
Same status partner	35%	50%
Strategic positioning	34%	37%
Low viral load	7%	23%

Any HIV prevention measure	92%	86%

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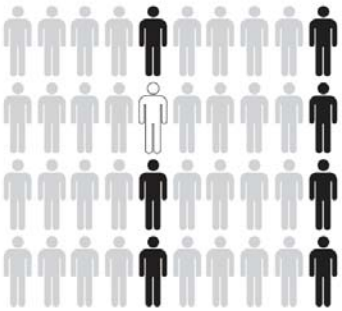
Based on self-reported HIV status.

Risk among unaware



2.5 %

1 in 40 were unaware they were HIV+

85% report any HIV prevention strategy

39% report sero-sorting

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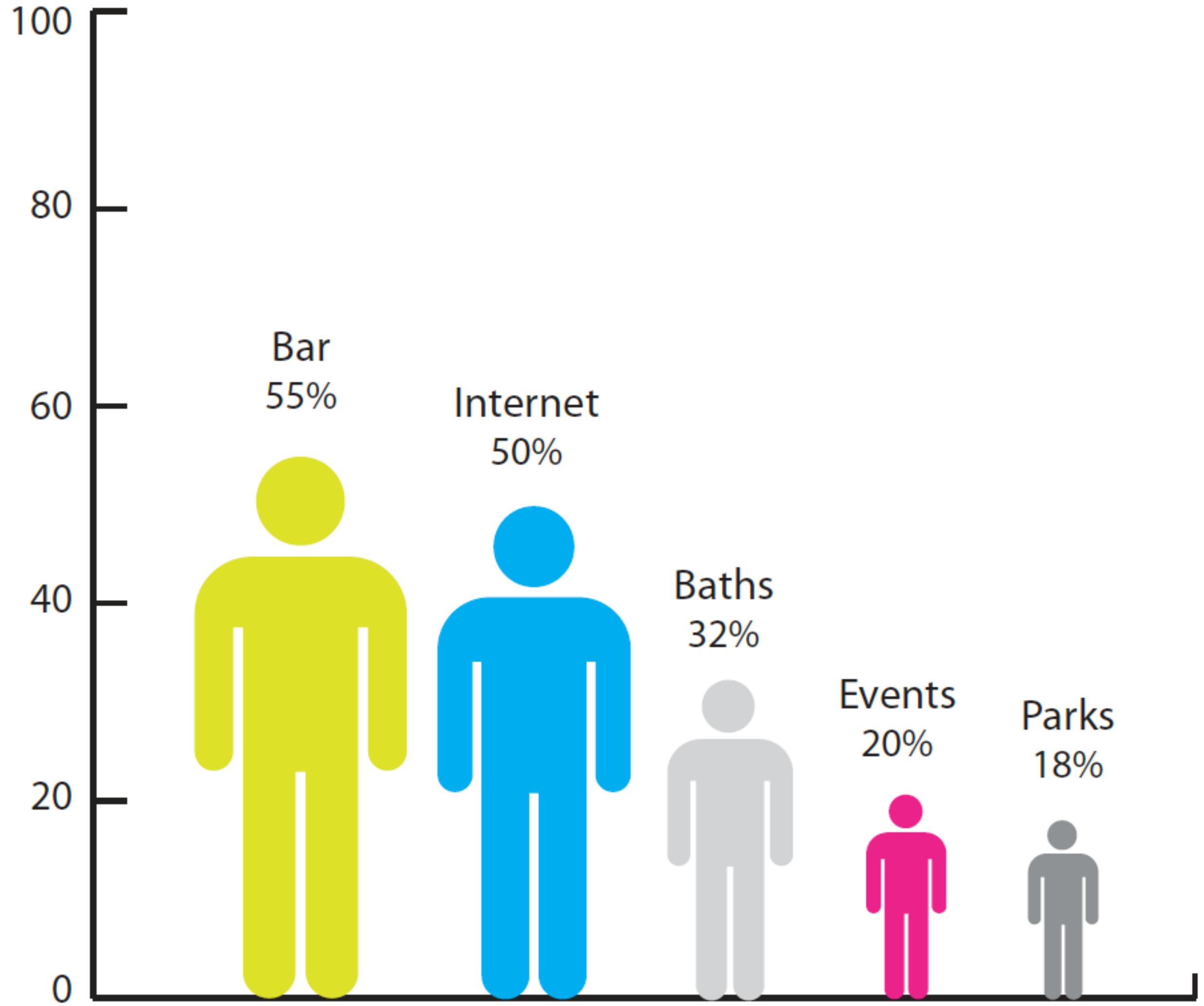
Top Sex Seeking Settings



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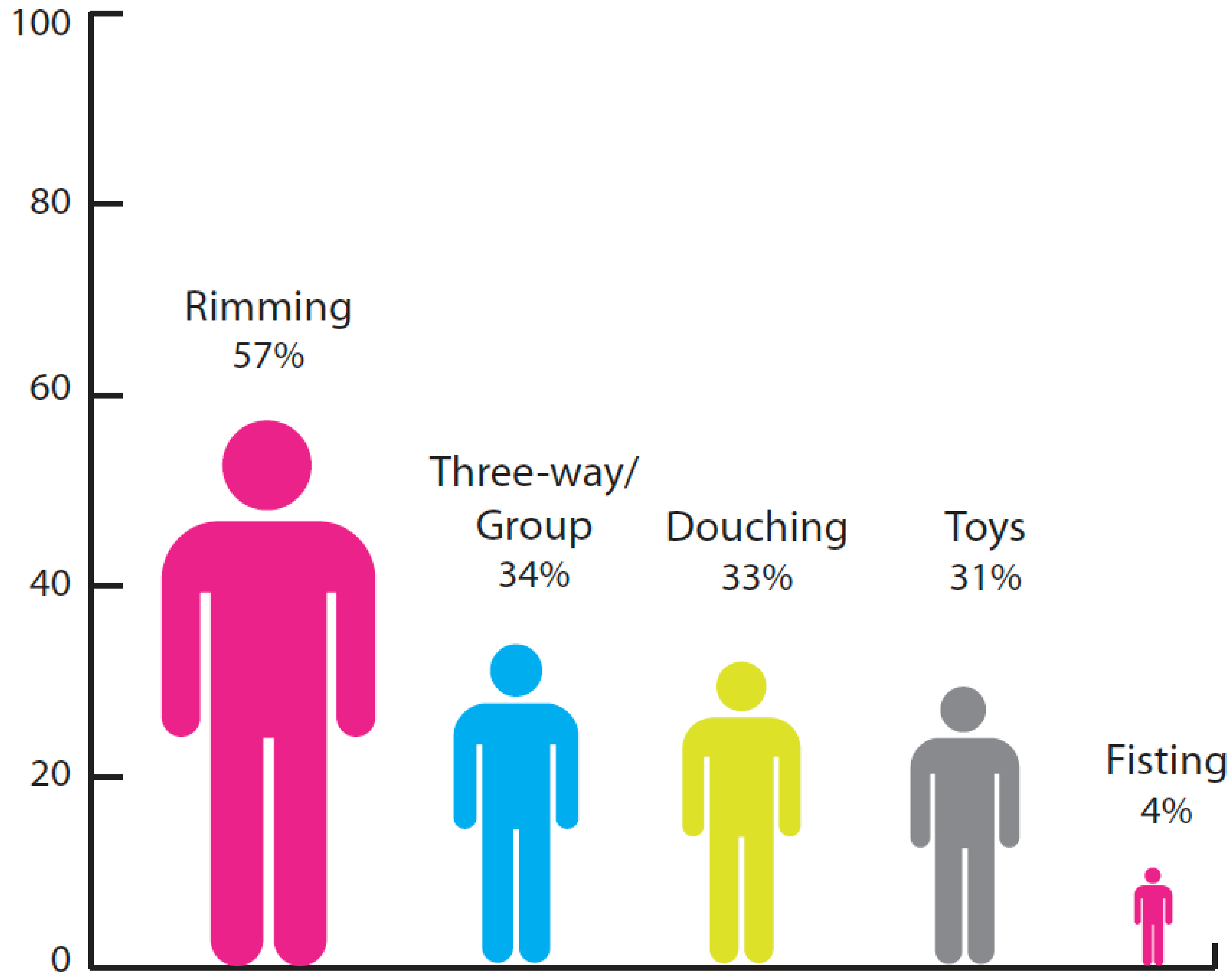
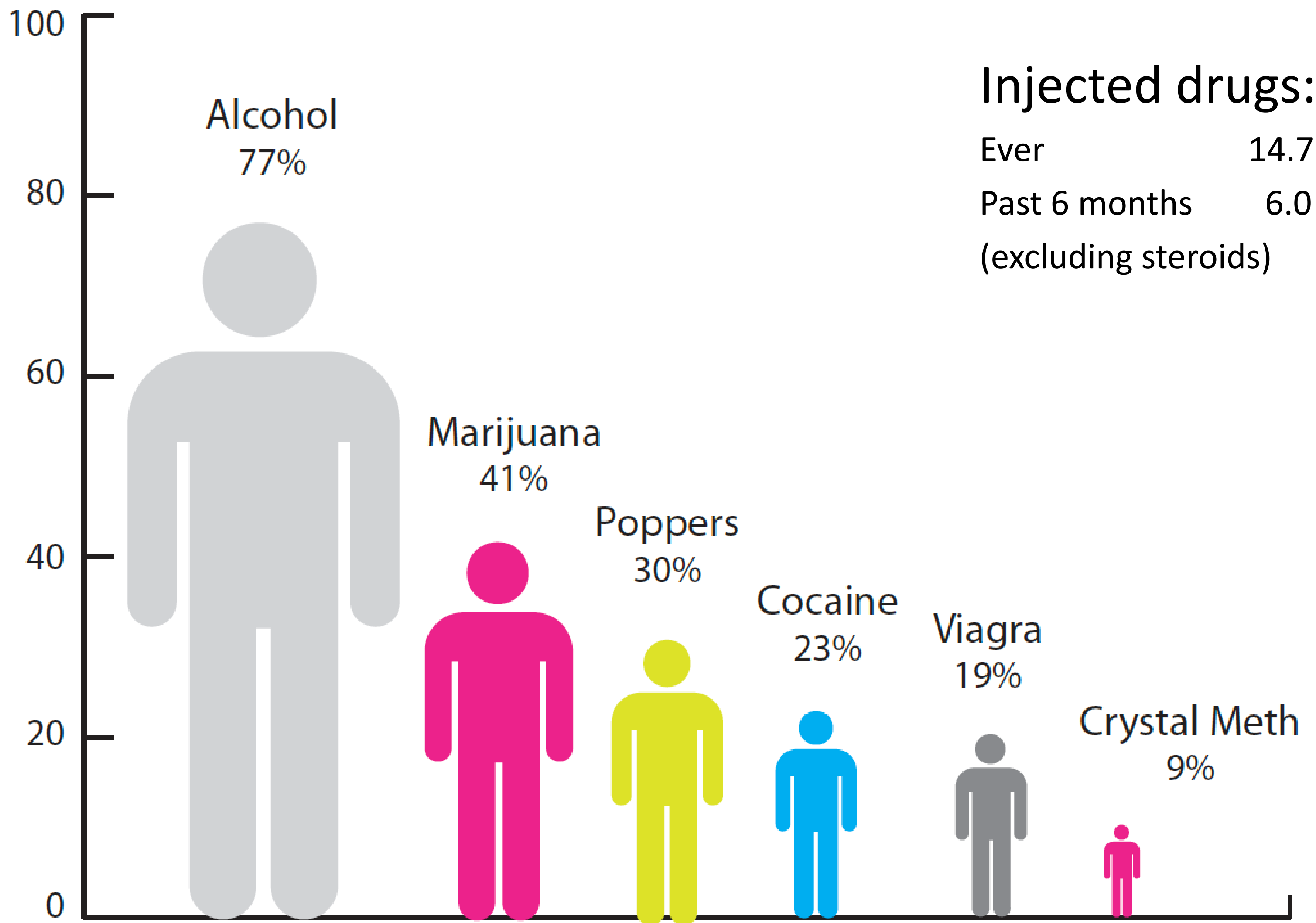
Other Sex Practices



Drugs Prior to Sex



Injected drugs:

Ever	14.7 %
Past 6 months	6.0 %

(excluding steroids)

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Appropriate access to health care?

- Told a physician or nurse had male sex partners: 79%
  - Of these men, disclosure occurred a median of 4 years (IQR 1-8 years) after they first had sex with a man

Limitations

- Findings are representative of men who attend venues sampled in the survey
  - Adjustment based on frequency of venue attendance (underway)
  - Urban sample (not generalizable to other areas of BC)
- Community-based data collection
  - Not a controlled, clinical environment!
  - Likely impact on data quality
- For description and monitoring, not explanation

"…to provide reliable – though arguably imperfect – indicators on the road to a community response."

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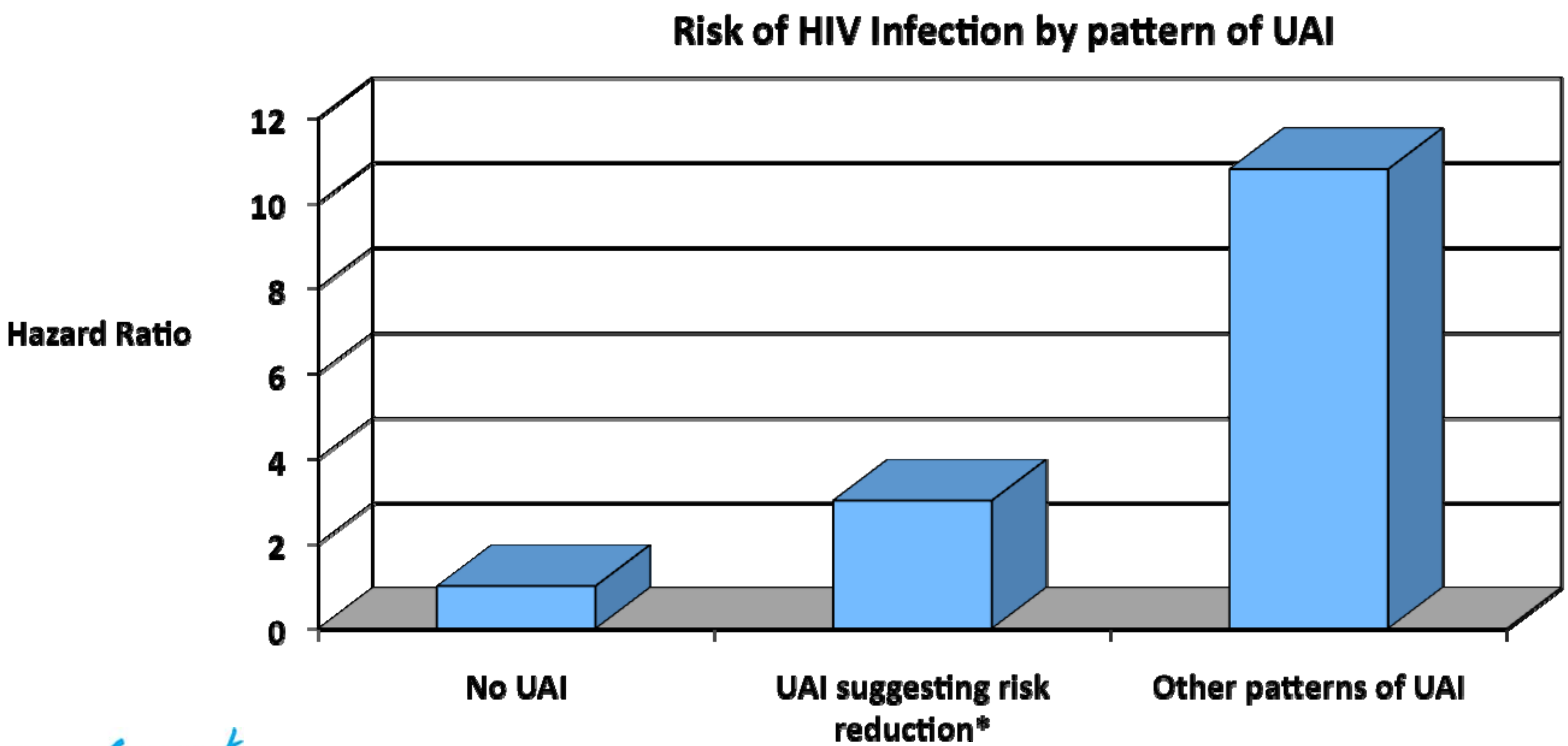
Implications

Gay men and HIV

- Situation is critical, chronic, and not unique
  - Greatest proportion of prevalent and incident infections in BC
  - Stable trends in diagnoses (? increasing incidence)
  - Findings similar to other surveys in large urban centres

HIV Prevention is important to gay men

- Strategies have limitations (e.g., sero-sorting among HIV negative men)



* Serosorting, strategic positioning, withdrawal. Adapted from: Jin et all, IAC 2008, Mexico City.

Gay men get tested

- Testing is high but there are gaps
  - Increasing frequency of testing an important strategy
  - Testing for HCV, other STIs
  - Strategies for younger men

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Multiple determinants of HIV epidemic

Underlying Determinants → Access to Health Care

Proximate Determinants → Substance Use
Risk reduction strategies
Testing patterns

HIV

Immediate Determinants

R^o = ß x c x D

→ HIV prevalence
Awareness of status
STIs
Condom use
Number of sex partners
Concurrent relationships
HAART

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What next?

- Need to strengthen our response to HIV prevention in gay men
- Multiple, multi-level strategies are required
- Partner agencies are beginning to plan collaboratively
- Informed by further analyses of survey data

- All study findings available at www.mancount.ca
- Contact info: mark.gilbert@bccdc.ca