MSM Case Study

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Learning Objectives

• Discuss the impact of stigma on HIV screening and prevention among MSM

• Describe disparities of HIV-associated co-morbidities among MSM living with HIV

• List at least 2 clinical considerations in caring for MSM living with or at-risk of HIV
Case 1: RC

34 y.o. male who presents to for an initial exam. He tells you he is here to “make sure everything is okay.”

- **Past Medical History:**
  - Depression.

- **Medications:**
  - sertraline 100mg daily

- **Allergies:** NKDA

- **Family history:**
  - Type II Diabetes Mellitus and Hypertension

- **Personal/Social History:**
  - former smoker (1 ppd x 10 years quit 5 years ago);
  - works in retail sales
Case 1: Continued

- What additional information would you like to know now?
Sexual History: Do Ask, Do Tell

• Various ways to approach sexual history taking
• The most important thing is to ask

The 5 P’s
• Partners
• Practices
• Prevention of STIs
• Past history of STIs
• Pregnancy
Case 1: Continued

- He informs you that he has sex with men only.
- His last HIV test was about 6 months ago.
- He has a past history of syphilis about 6 months ago.
- He uses condoms “most of the time”
- Denies any dysuria, discharge, sores, LAD, rash

What are your main concerns now?
Globally, gay men and other men who have sex with men are **27 times** more at risk of HIV than the general population.

Source: UNAIDS 2018
Estimated HIV Incidence among Persons Aged ≥13 Years, by Transmission Category 2010–2016—United States

Note. Estimates were derived from a CD4 depletion model using HIV surveillance data. Data have been statistically adjusted to account for missing transmission category. Heterosexual contact is with a person known to have, or to be at high risk for, HIV infection.

* Difference from the 2010 estimate was deemed statistically significant (P < .05).
New HIV diagnoses attributed to sex between men, 2017, EU/EEA

Rate per 100,000 male population
- < 1
- 1 to < 3
- 3 to 5
- > 5
- Not included or not reporting

New HIV diagnoses in the EU/EEA 2017

<table>
<thead>
<tr>
<th>Reporting countries/number of countries*</th>
<th>30/31</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of HIV diagnoses</td>
<td>25 353</td>
</tr>
<tr>
<td>Rate per 100 000 population (adjusted for reporting delay)</td>
<td>6.2</td>
</tr>
<tr>
<td>Male-to-female ratio</td>
<td>3.1</td>
</tr>
<tr>
<td>Percentage of new diagnoses CD4&lt;350 cells/mm$^3$</td>
<td>49%</td>
</tr>
</tbody>
</table>

**Transmission mode (%)**

<table>
<thead>
<tr>
<th>Transmission mode</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex between men</td>
<td>38</td>
</tr>
<tr>
<td>Heterosexual transmission (men)</td>
<td>17</td>
</tr>
<tr>
<td>Heterosexual transmission (women)</td>
<td>16</td>
</tr>
<tr>
<td>Injecting drug use</td>
<td>4</td>
</tr>
<tr>
<td>Vertical transmission</td>
<td>&lt;1</td>
</tr>
<tr>
<td>Unknown</td>
<td>24</td>
</tr>
</tbody>
</table>

* Due to technical issues no 2017 data were received from Germany

Countries showing declines in the rates of new HIV diagnosis reported in MSM, 2008-2017

MSM are disproportionately at risk for and affected by HIV, STI and viral hepatitis

Proportion of new diagnoses attributed to sex between men, EU/EEA, 2016

- Acute HBV: 13%
- Acute HCV: 14%
- HIV: 51%
- Gonorrhea: 52%
- Syphilis: 75%
- LGV: 100%

Legend: MSM, Heterosexual, Other

Why the difference?
Why do MSM experience more health disparities?

- Stigma
- Discrimination
- Violence
- Lack of/No Legal Protection
- Lack of Culturally Competent Providers
- Lack of Safe Spaces
- Invisibility and Erasure

Minority Stress

Homophopia

https://www.avert.org/professionals/hiv-social-issues/key-affected-populations/men-see-men
67 countries criminalise same-sex activity

In at least 8 countries, the death penalty is implemented for same-sex sexual relations

Source: UNAIDS Data 2019
Homophobia impedes addressing HIV/STI

• Prejudice, threats, and violence against MSM
• Criminalization of same sex behavior
• Lack of training for health care workers

• All lead to avoidance of care

(Gonser, J Cult Divers, 2000; Meyer, AJPH, 2001; Mayer, AJPH, 2008; Bettancourt, Cultural Competence in Health Care, 2002)
Intersectionality and health disparities

A gay man has to deal with homophobia. A black man has to deal with racism. But a black gay man will have to deal with homophobia and racism (often at the same time). It is often the case that he will face racism inside the LGBT community and homophobia in the black community.

Having an intersectional identity often generates a feeling that someone does not completely belong in one group or another, and can lead to isolation.
Biopsychosocial Drivers of the Syndemic in Gay, Bisexual and Other Men Who Have Sex With Men

Biological Influences
- Prevalence of Infectious Disease
- Infectiousness
- Susceptibility
- Efficacy of Treatment
- Efficacy of Risk Reduction Strategies

Behavioral Influences
- Partner Selection
- Number of Partners
- Sexual Behavior
- Retention in Medical Care
- Treatment Initiation and Adherence
- Choice of Risk Reduction Strategy
- Adherence to Risk Reduction Strategy

Psychosocial and Structural Influences
- Knowledge, Attitudes and Beliefs
- Minority Stress, Homophobia and Racism
- Social Capital and Social Support
- Safe Schools and Legal Protections
- Allocation of Public Resources
- Access to Information and Tools

Syndemic Health Problems
- Mental Health
- Substance Abuse
- Violence and Sexual Abuse
- HIV
- STIs

NOTE: STIs = Sexually Transmitted Infections

Condomless anal intercourse

Figure 5.5 Percentage who had condomless anal intercourse with non-steady partners of unknown HIV status, last 12 months (DDM 3.27) (N=126 493)
Condomless anal sex can lead to mucosal changes that increase HIV risk without STI

- 41 HIV-MSM who reported condomless receptive anal sex (CRAS) with an HIV-partner were compared to 21 who never engaged in CRAS.
- Rectal CD8+ T cells in CRAS+ MSM showed greater proliferation status (i.e. ↑Ki-67, CD38, CCR5, α4β7).
- Rectal CD4+T cells showed ↑IL-17, and CD8+T cells showed ↑pro-inflammatory cytokines.
- Rectal microbiota of CRAS+MSM was enriched for prevotellaceae, associated with mucosal injury and repair.

Kelley, Mucosal Immunol, 2017
Rectal gonorrhea and syphilis are predictive of future HIV infection.

Also Bernstein et al from SF and Pathela et al from NYC.
Extragenital STI Screening is Important

Figure 1 – Anatomical location of extragenital gonorrhoea. Distribution of gonococcal infections by site(s) (n = 87): exclusively extragenital infections accounted for the majority of cases (71), whereas the remainder 16 cases corresponded to mixed extragenital and urogenital infections.

Black and Latino MSM using mobile phones and internet for sex had ↑STI rates
(n=853 Black and Latino MSM)

- 23% reported an STI in the prior year.
  - 29% reported using a mobile phone app for sex.
  - 28% reported using an internet site to meet sex partners
  - 22% used both.

- MSM reporting using both mobile phone and computer-based sites were more likely to report an STI (AOR=2.59, 95% CI 1.75-3.83)

Allen, STD, 2017
Case Study 1: Continued

• Informs you that he has a primary male partner but they are not sexually exclusive.

• He was on PrEP but stopped because he was concerned about side effects and taking it daily.

• He tells you he and his partner started using meth when they have group sex.

What are his options and how would you handle this situation?
Is group sex a higher-risk setting for HIV/STI, compared to dyadic sex, for MSM?

- 35% of 465 MSM participating in Amsterdam cohort studies reported some group sex.
- Condomless sex was more often reported during dyadic than group sex, OR=3.6 (95% CI 2.57-5.16).
- Men who reported group sex were more likely to be diagnosed with gonorrhea compared to those who only reported dyadic sex, OR= 1.71 (95% CI 1.08-2.97) but this did not persist in multivariable model.
- Paradox: more condom use in group sex, but greater STI risk, possibly because of more partners and inconsistent condom use.

van den Boom, STI, 2016
Pre-Exposure Prophylaxis

- Uptake has been slow in the U.S., but continues to increase
- Access
- Provider knowledge
- Stigma
- Cost
Men were asked ‘Have you heard of PrEP?’
63% indicated ‘yes’, 5% were ‘Not sure’
32% had not heard of it
Safety of TDF/FTC


## Event Driven vs Daily PrEP

### Table 2. When ED-PrEP could be considered

<table>
<thead>
<tr>
<th>For whom is ED-PrEP appropriate?</th>
<th>For whom is ED-PrEP NOT appropriate?</th>
</tr>
</thead>
<tbody>
<tr>
<td>- a man who has sex with another man:</td>
<td>- cisgender women or transgender women</td>
</tr>
<tr>
<td>- who would find ED-PrEP more effective and convenient</td>
<td>- transgender men having vaginal/frontal sex</td>
</tr>
<tr>
<td>- who has infrequent sex (for example, sex less than 2 times per week on average)</td>
<td>- men having vaginal or anal sex with women</td>
</tr>
<tr>
<td>- who is able to plan for sex at least 2 hours in advance, or who can delay sex for at least 2 hours</td>
<td>- people with chronic hepatitis B infection.</td>
</tr>
</tbody>
</table>

Stimulant drugs and Sex (Chemsex)

Figure 5.12 Percentage who used stimulant drugs to make sex more intense or last longer (‘chemsex’), last four weeks (DDM 2.50) (N=126 258)

Chemsex associated with higher rates of GC

- MSM who used crystal methamphetamine and GHB/GBL in previous year had 1.92- and 2.23-fold higher odds of GC.

- MSM reporting the use of all three chemsex drugs had the highest increased odds (aOR 3.58; P < 0.0001; n = 15,174).

Kohli, Manik, Hickson, Ford; Free, Caroline; Reid, David; Weatherburn, Peter; (2019) Cross-sectional analysis of chemsex drug use and gonorrhoea diagnosis among men who have sex with men in the UK. Sexual Health. DOI: https://doi.org/10.1071/SH18159
Substance Use

Figure 5.9: Recency of consuming cannabis, cocaine, ecstasy pill, amphetamine, ecstasy powder and GHB/GBL among the whole sample.

When was the last time you consumed...?

- Cannabis
- Cocaine
- Ecstasy pill
- Amphetamine
- Ecstasy powder
- GHB/GBL
Alcohol Dependency

Figure 4.3 Percentage with potential alcohol dependency (CAGE4) (N=126 146)

- 9 – 18%
- 19 – 26%
- 27 – 34%

Tobacco Use
Anxiety or Depression

Mental Health Issues

• 40% of MSM become depressed, 2X the lifetime rate of heterosexuals

• Predictors of major depression are:
  • not having a partner,
  • experiencing anti-gay threats or violence,
  • non-identification as gay

• Panic disorder, social phobia, generalized anxiety disorder are more common among MSM (20% lifetime incidence)

• Culturally-tailored treatment may involve groups that enhance community identification

(Sandfort, Arch Gen Psych, 2001; Gilman, AJPH, 2001; Lewis, Health Place, 2010; Safren, Health Psychology, 2012)
Social Support

Figure 6.3 Percentage lacking social support (scoring <10 in either sub-scale SPS) (N=57,853)

Other Prevention Needs

- Vaccination for Hepatitis A and Hepatitis B
- Vaccination against HPV

41% of the respondents did not know that vaccination against hepatitis A and B is recommended for MSM.
Guidelines for implementing comprehensive HIV and STI programs with MSM

- Human Rights
- Access to quality health care
- Access to justice
- Acceptability of services is a key aspect of effectiveness
- Health literacy
- Integrated service provision
- Community empowerment
- Community participation and leadership

Case #2: KZ

- KZ is a 62 year old male living with HIV (dx in 2000)
- Presents with a complaint of rectal bleeding
- **Past Medical History:**
  - syphilis, GC proctitis, asthma, hypertension, hyperlipidemia, depression
- **Medications:**
  - Tenofovir alafenamide/Emtricitabine/Bictegravir
  - Albuterol
  - Valsartan
  - Citalopram
  - Atorvostatin
Case #2: KZ

- On physical exam
Anal Cancer

• HIV negative MSMs are **20 times** more likely to be diagnosed with anal cancer. Their rate is about 40 cases per 100,000.

• HIV-positive MSMs are up to **40-80 times** more likely to diagnosed with the disease, resulting in a rate of 80 anal cancer cases per 100,000 people.
HPV Type in HIV+ MSM

HPV screening algorithm

- Anal Pap
  - ASCUS
  - ASC-H
  - LSIL
  - HSIL
  - Referral for HRA and biopsies to evaluate for AIN
- Normal cytology
  - Consider annual screening: DRE and Pap
### Digital Anal Rectal Exam

<table>
<thead>
<tr>
<th>Group</th>
<th>Minimum(^a) proposed DARE frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Those with symptoms suggesting anal cancer such as: bleeding, anal/perianal mass, tenesmus, pain, altered bowel habit (read, Read et al., 2013)(^{38})</td>
<td>Immediately, with referral for anoscopy, HRA, or to a colorectal specialist if the initial DARE is negative</td>
</tr>
<tr>
<td>HIV-positive MSM</td>
<td>At least annually in men ≥35 y</td>
</tr>
<tr>
<td>Those with demonstrated cytologic or histologic anal HSIL</td>
<td>At least annually</td>
</tr>
<tr>
<td>Those with a history of treated anal squamous cell carcinoma</td>
<td>Every 4 mo after completion of radiation for first 2 y, then every 6 mo for the next 3 y, then at least annually (Wright et al., 2010)(^{39})</td>
</tr>
<tr>
<td>Other immunosuppressed populations, such as other groups with HIV infection and recipients of solid organ transplants</td>
<td>At least annually in those ≥50 y</td>
</tr>
<tr>
<td>HIV-negative MSM</td>
<td>Every 2 to 5 y in those ≥50 y</td>
</tr>
<tr>
<td>Women with a history of cervical, vulvar or vaginal neoplasia or cancer</td>
<td>Every 2 to 5 y, depending on further risk assessment (Moscicki et al.,(^{15}) 2015)</td>
</tr>
</tbody>
</table>

Colonoscopy may miss anal canal lesions and performing a DARE potentially provides an opportunity to assess the anal canal while the patient is sedated.

\(^{a}\)Frequency may increase, depending on risk assessment, such as anal history, degree of immunosuppression, age, and smoking status.
Conclusions

• MSM are at **greater risk for health disparities** including HIV, other STIs, substance use, violence, and mental health issues.

• **MSM living with HIV** are also at **greater** risk for certain co-morbidities including HPV-associated **anal cancer**.

• **Nurses** play a critical role in recognizing, addressing disparities in care through the **provision of social, physical, and behavioral interventions that are re-affirming** and meet the **cultural needs of MSM**