A New Era of Highly-Effective HIV Prevention in Primary Care Part I

Implementing HIV Prevention in Patient Centered Medical Homes and Primary Care

Kevin Ard, MD, MPH and Harvey J Makadon, MD
The Fenway Institute and Harvard Medical School
Boston, MA

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Continuing Medical Education Disclosure

Program Faculty: Kevin Ard, MD, MPH

Current Position: Clinical and Research Fellow, Brigham and Women’s Hospital

Disclosure: No relevant financial relationships. Content of presentation contains no use of unlabeled and/or investigational uses of products.

It is the policy of The National LGBT Health Education Center, Fenway Health that all CME planning committee/faculty/authors/editors/staff disclose relationships with commercial entities upon nomination/invitation of participation. Disclosure documents are reviewed for potential conflicts of interest and, if identified, they are resolved prior to confirmation of participation. Only participants who have no conflict of interest or who agree to an identified resolution process prior to their participation were involved in this CME activity.
Continuing Medical Education Disclosure

Program Faculty: Harvey J. Makadon, MD

Current Position: Director, National LGBT Health Education Center, Fenway Health; Clinical Professor of Medicine, Harvard Medical School

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Learning Objectives

- Describe the epidemiology of HIV transmission in the US and identify those groups at greatest risk.

- Describe five evidence-based approaches to prevention of sexual transmission of HIV.

- Identify barriers to HIV prevention and discuss strategies to overcome them.

- Discuss how to implement integrated HIV-prevention programs based on the principles of population health in Patient-Centered Medical Homes.
HIV Prevention: The Big Picture

- Universal HIV Screening
  - HIV Positive
    - HIV Care / ART/Counseling
  - HIV Negative
    - Safer Sex
      - Address STIs
    - PEP or PrEP

Reduced HIV Incidence
HIV/AIDS in the United States
HIV/AIDS in the United States

- Approximately 1.2 million people are living with HIV.
- Nearly 600,000 people have died of AIDS since the beginning of the epidemic.
- There are ~50,000 new cases of HIV diagnosed every year.

CDC, 2012
HIV Incidence by Transmission Category
United States, 2009

- MSM, 61%
- Heterosexual, 27%
- IDU, 9%
- MSM/IDU, 3%

CDC, 2011
HIV Incidence by Race and Ethnicity
United States, 2009

- Black, 44%
- White, 32%
- Hispanic, 20%
- Asian, 2%
- Other, 2%

CDC, 2011
Audience Polling Question

Which of the following demographic groups do you believe is the only one in which HIV incidence is increasing?

A. Black, heterosexual women
B. Black, heterosexual men
C. Black men who have sex with men
D. White men who have sex with men
E. Injection drug users
HIV Incidence among MSM by Race/Ethnicity and Age
United States, 2009

CDC, 2011
HIV Incidence Among MSM and MSM/IDU
United States, 2006-2009

Incidence among young, black MSM up 48% in this time period

Prejean, 2011
Why is HIV incidence highest among black MSM?

- Differences in HIV rates between white and black MSM are not explained by sexual risk behaviors and substance abuse.
- The most likely causes are:
  - Lower rates of HIV testing
  - Higher HIV prevalence in black MSM networks
  - Higher STI prevalence
  - Barriers to health care access

CDC, 2011
Evidence-Based Approaches to Prevention

- “High-impact” prevention
- “Combination prevention”
- “PrEP Package”
Evidence-Based Approaches to Prevention

1. HIV Counseling and Testing
2. Antiretroviral Therapy
3. Safer Sex
4. STI Screening and Treatment
5. Pre- and Post-Exposure Prophylaxis (PEP and PrEP)
1. HIV Counseling and Testing

- Knowledge of an HIV diagnosis leads to a reduction in high-risk behavior and permits treatment.

- Following HIV counseling and diagnosis, HIV-positive individuals and those in sero-discordant couples increased condom usage (Weinhardt, 1999).
CDC Strategy for HIV Testing

- **Routinely** screen all adults, ages 13-64, for HIV in health-care settings.
- Testing should be **voluntary** and on an **opt-out** basis.
- All **pregnant** women should be screened, as should any newborn whose mother’s HIV status is unknown.
- Repeat screening is recommended **annually** for those at high risk.

Branson, 2006
What’s new in HIV testing?

- Newer testing algorithms which **eliminate the Western blot** have been proposed; in these, the diagnosis of HIV is made by successive immunoassays (Branson 2010).

- “**Fourth generation**” antibody/antigen tests shorten the window period by ~7 days.

- **Home HIV tests** were approved this year.
  - May increase testing
  - Concerns about cost, appropriate use, and follow-up
Testing Statistics

- **45%** of US adults report having been tested for HIV.

- **20%** of those with HIV do not know they are infected; knowledge of HIV status is even lower among some populations.

- Many people with HIV are diagnosed late in their illness; in 2007, **32%** received an AIDS diagnosis **within one year** of HIV diagnosis.

MMWR, 2010
Cost Effectiveness of HIV Testing

- Routine HIV testing is a cost-effective intervention (Walensky, 2007).
- Diagnosis of HIV infection can lead to life-sustaining interventions (e.g., antiretroviral therapy) and reduce HIV transmission.
- Cost-effectiveness improves with better linkage of HIV-infected individuals to care.
2. Antiretroviral Therapy

- Treatment is prevention; antiretroviral therapy of HIV-positive individuals decreases transmission.

- Antiretroviral treatment of the HIV-positive partners in sero-discordant couples reduced HIV transmission by 96% in a recent, international, randomized, controlled trial (Cohen, 2011).
“Test and Treatment” Cascade

Cohen, 2011
3. Safer Sex

- Education and outreach surrounding safer sex reduce high-risk behaviors associated with HIV transmission.
- Statewide availability of free condoms in Louisiana led to increased condom usage, especially in high-risk groups (Cohen, 1999).
- Individual, small-group, and community level prevention programs for MSM (including non-gay identified) have been associated with a reduction in unprotected anal sex (Johnson, 2008).
Safer Sex Counseling

Approaches include:

- Monogamy with an uninfected partner
- Reduction in the number of sexual partners
- Engaging in lower-risk sexual practices
- Consistent and correct use of barrier methods
- Avoiding excessive substance use
4. STI Screening and Treatment

- Treatment of some sexually-transmitted infections (STIs) can reduce transmission of HIV.
- Sexually active MSM should be tested for STIs annually.
- Testing should be performed every 3-6 months for those who
  - Have multiple or anonymous sexual partners.
  - Use illicit drugs (especially methamphetamine) in conjunction with sex.
  - Have sex partners who engage in any of the above.
Annual STI Screening in MSM

1. HIV serology

2. Syphilis serology

3. Chlamydia NAAT* of the urethra and rectum

4. Gonorrhea culture or NAAT of the urethra, rectum, and pharynx

*Nucleic acid amplification test
5. Pre- and Post-Exposure Prophylaxis

- **nPep** = post-exposure prophylaxis
- **PrEp** = pre-exposure prophylaxis
Post-Exposure Prophylaxis

Antiretroviral Postexposure Prophylaxis After Sexual, Injection-Drug Use, or Other Nonoccupational Exposure to HIV in the United States

Recommendations from the U.S. Department of Health and Human Services
FIGURE 1. Algorithm for evaluation and treatment of possible nonoccupational HIV exposures

Substantial exposure risk

- \(<72\) Hours since exposure
  - Source patient known to be HIV positive
    - nPEP recommended
  - Source patient of unknown HIV status
    - Case-by-case determination

Negligible exposure risk

- \(>72\) Hours since exposure
  - nPEP not recommended

Substantial Risk for HIV Exposure

- Exposure of vagina, rectum, eye, mouth, or other mucous membrane, nonintact skin, or percutaneous contact
  - With blood, semen, vaginal secretions, rectal secretions, breast milk, or any body fluid that is visibly contaminated with blood
  - When the source is known to be HIV-infected

Negligible Risk for HIV Exposure

- Exposure of vagina, rectum, eye, mouth, or other mucous membrane, intact or nonintact skin, or percutaneous contact
  - With urine, nasal secretions, saliva, sweat, or tears if not visibly contaminated with blood
  - Regardless of the known or suspected HIV status of the source
Post-Exposure Prophylaxis

- Antiretrovirals initiated within 72 hours (and best if < 36 hours) after exposure
- Indicated for exposures of “substantial risk”
- Consists of 28 days of antiretroviral therapy
- Perform HIV antibody testing at 1, 3, and 6 months post-exposure.
# Trials of Pre-Exposure Prophylaxis

<table>
<thead>
<tr>
<th>Trial</th>
<th>Agent</th>
<th>Population</th>
<th>Risk Reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAPRISA</td>
<td>TDF* 1% vaginal gel</td>
<td>Women</td>
<td>39%</td>
</tr>
<tr>
<td>iPrEx</td>
<td>TDF-FTC† tablets</td>
<td>MSM, transgender women</td>
<td>44%</td>
</tr>
<tr>
<td>FEM-PrEP</td>
<td>TDF-FTC tablets</td>
<td>Women</td>
<td>Stopped due to futility</td>
</tr>
<tr>
<td>TDF2-CDC</td>
<td>TDF tablets</td>
<td>Heterosexual men and women</td>
<td>62.2%</td>
</tr>
<tr>
<td>Partners PrEP</td>
<td>TDF tablets, TDF-FTC tablets</td>
<td>Heterosexual couples</td>
<td>75% TDF-FTC, 67% TDF</td>
</tr>
<tr>
<td>VOICE</td>
<td>TDF-FTC</td>
<td>Women</td>
<td>Stopped due to futility</td>
</tr>
</tbody>
</table>

(*TDF=tenofovir, †FTC=emtricitabine)

Adapted from van der Straten, 2012
Maximizing PrEP

- Does not replace condoms, safer sex counseling, and STI treatment.
- Adherence is vital.
- Making PrEP available to highest-risk individuals is key.
  - Offered where these individuals access health care.
  - Affordable.
- Future strategies include rectal microbicides, vaginal rings, or injections and incorporation of PrEP with contraception.
"The PrEP Package"

INTRODUCING THE “PrEP PACKAGE” FOR ENHANCED HIV PREVENTION:
A Practical Guide for Clinicians
October, 2012

PROTECTING YOURSELF FROM HIV THROUGH PRE-EXPOSURE PROPHYLAXIS (PrEP): What You Need to Know
October, 2012
Audience Polling Question

What concerns do you have, if any, about prescribing PrEP to high-risk patients?

A. Medication Adherence
B. Behavior Adherence
   (e.g. continuing to use condoms)
C. Effectiveness
D. Cost
E. Something else
F. I don’t have concerns
Overcoming Barriers to HIV Prevention
Barriers to Routine HIV Testing

- 50% of EDs are aware of CDC’s guidelines, and only 56% offer HIV testing (Haukoos, 2011).

- Only 61% of general internists offer HIV testing regardless of risk (Korthuis, 2011).
Barriers to Linkage to Care

Counseling and Testing  Care and Treatment
Accessing Antiretroviral Therapy

- Newly diagnosed patients should be linked to HIV care as soon as possible.

- HIV counseling and testing should be integrated with HIV care.

- Socio-economic and cultural factors impeding HIV care must be addressed.
HIV Prevention among Young, Black MSM

- May not identify as gay
- Addressing psychosocial and structural issues may be key for HIV prevention in this group:
  - Mental health (depression, trauma history)
  - Poverty, homelessness, and unstable housing
  - Stigma and homophobia

Peterson, 2009; Ayala, 2012
Resources for Prevention

- Federal funding for HIV prevention is unchanged since 1991, adjusting for inflation (Mermin 2012).

- MSM account for 61% of new infections but receive only
  - 27% of education and risk-reduction funding/
  - 10% of counseling, testing, and referral funding (CDC, 2011).
Affordable Care Act: New Opportunities and Challenges for Health Centers

Health Center

Patient-Centered Medical Home
PCMH 2011 Core Standards

• PCMH 1: Enhance Access and Continuity
• PCMH 2: Identify and Manage Patient Populations
• PCMH 3: Plan and Manage Care
• PCMH 4: Provide Self-Care and Community Support
• PCMH 5: Track and Coordinate Care
• PCMH 6: Measure and Improve Performance
Population Health in PCMHs
Population Health

“The health outcomes of a group of individuals, including the distribution of such outcomes within the group.”

One major step in achieving this aim is to reduce health inequities among population groups.

Population health seeks to step beyond the individual-level focus of mainstream medicine and public health by addressing the social determinants of health and improve the capacity of people to adapt to, respond to, or control life's challenges and changes.
Population Health: Ending LGBT Invisibility in Health Care

- How many of you have ever been asked to discuss your sexual history during a primary care visit?
- Has a clinician ever asked you about your sexual orientation?
- Has a clinician ever asked about your gender identity?
Shift in Leadership and Roles Within Continuum of Care with Reform

Traditional focus of hospitals within the “care continuum”

- Prevention
- Urgent Care
- Primary Care & Coordination
- Specialist Visit
- Treatment Inpatient Care
- Diagnostic Ancillaries e.g., imaging
- Emergency Care
- Rehab Care
- Housing
- Shelter
- Case Management
- Outreach

 PATIENT CARE CONTINUUM
Creating an Inclusive Community: Programs that meet patients’ needs

SHADES OF BLACK:
A THERAPY GROUP FOR GAY/BI BLACK MEN

Do you experience the black and LGBT communities as two separate worlds? How do you find or create a community where all of your identities are accepted? Let’s talk about it together!

Contact Tfawa Haynes, LICSW at 617.927.6223 or thaynes@fenwayhealth.org
Building a Program for Effective HIV Prevention

- Stigma and Homophobia
  - Understanding Diversity
  - Education for Providers
- Social Determinants of Health
- Outreach/Counseling and Testing
- Access
  - Integrated Prevention
  - Knowledge, Attitudes and Skills
- Retention
  - Peer Navigation/Case Management
- Regular Follow Up
  - Counseling
  - Behavior Change
Our Challenge:
Quality Care for All, Including LGBT People

- Research
- Clinical Education
- Consumer Education
- Patient Centered Medical Homes
The National LGBT Health Education Center at The Fenway Institute:

We are here to help you!

Harvey Makadon, Hilary Goldhammer,
Jeffrey Walter
T 617.927.6354

Email us: lgbthealtheducation@fenwayhealth.org
Visit us online: www.lgbthealtheducation.org

lgbthealtheducation@fenwayhealth.org
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Questions?
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