Learning Objectives

- Describe the epidemiology of HIV transmission in the US and identify those groups at greatest risk.
- Discuss challenges of HIV prevention and care among the homeless
- Designing programs for HIV prevention and care for the homeless
Key Dates in the History of HIV

1981: First AIDS case reported
1984: Human immunodeficiency Virus (HIV) identified
1985: First test for HIV licensed (ELISA)
1987: First Western Blot blood test kit
1989: First study suggesting efficacy of AZT for asymptomatic HIV-positive individuals
1992: First rapid test available
1996: Efficacy of combination ART demonstrated
2005: PEP, non-occupational exposure given for sexual and other non-occupational exposures
2007: WHO/UNAIDS global guidelines recommend routine HIV screening in health-care settings
2010-2011: Advances in PrEP (oral, microbicides)
HIV/AIDS in the US
HIV/AIDS in the US

- 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, 2010

- Male-to-Male Sexual Contact (MSM): 63%
- Heterosexual Contact: 26%
- Injection Drug Use (IDU): 8%
- MSM/IDU: 3%
- Other: <1%

Other: <1%
HIV Incidence by Race/Ethnicity, US, 2010

- White: 31%
- Black/African American: 44%
- Hispanic/Latino: 21%
- Native Hawaiian/Other Pacific Islander: <1%
- American Indian/Alaskan Native: <1%
- Asian: 2%
- Multiple Races: 2%
HIV Incidence among MSM by Race/Ethnicity and Age, US, 2010

- Black/African American
- Hispanic/Latino
- White

1. **13-24**
2. **25-34**
3. **35-44**
4. **45+**
HIV Incidence in the United States, 2006-2010

- ▲ = Incidence among Black MSM 13-24. (Increased 60% from 2006-2010)
- □ = Incidence among MSM and MSM/IDU

Thousands of people

<table>
<thead>
<tr>
<th>Year</th>
<th>Incidence</th>
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<tbody>
<tr>
<td>2006</td>
<td>60%</td>
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<tr>
<td>2007</td>
<td>61%</td>
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<td>2008</td>
<td>59%</td>
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<td>2009</td>
<td>64%</td>
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<td>2010</td>
<td>66%</td>
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Why is HIV incidence highest among black MSM?

- Sexual risk behaviors and substance use do not explain the differences in HIV infection between black and white MSM.

- The most likely causes of disproportionate HIV infection rates are:
  - Low frequency of recent HIV testing
  - High HIV prevalence in black MSM networks
  - High prevalence of other STI’s which facilitate HIV transmission
  - Barriers to access health care
Cornerstones of HIV Prevention

1. HIV Counseling and Testing

2. Antiretroviral Therapy

3. Combination Prevention
   1. Adherence Counseling
   2. Safer Sex
   3. STI Screening and Treatment
   4. Pre- and Post-Exposure Prophylaxis (PEP and PrEP)
1. HIV Counseling and Testing

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

- **Example:**
  Following HIV counseling and diagnosis, HIV-positive individuals and those in serodiscordant couples reduced unprotected intercourse and 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
Testing Statistics

- More than half (54%) of US adults, ages 18–64, report ever having been tested for HIV, including 21% who report being tested in the last year.

- An estimated 20% of those with HIV do not know they are infected (down from 25% in 2003) and knowledge of HIV status is even lower among some populations.

- Many people with HIV are diagnosed late in their illness; in 2008, 33% received an AIDS diagnosis within one year of HIV diagnosis.
Barriers to Routine HIV Testing

- Lack of awareness and application of the recommendations also hinders testing.

- In one recent, national study, only 50% of EDs were aware of the CDC’s recommendations, and only 56% offered HIV testing (Haukoos, 2011).

- In one study of general internists, only 61% offered HIV testing regardless of risk (Korthuis, 2011).
Cost Effectiveness of HIV Testing

- Routine, voluntary HIV testing is a cost-effective intervention.
- Testing itself is relatively inexpensive.
- Diagnosis of HIV infection can lead to life-sustaining interventions (e.g., antiretroviral therapy).
- Routine HIV testing efforts must be accompanied by prompt linkage of HIV-infected persons to medical care and assurance of adequate funding for HIV treatment.
2. Initiating Antiretroviral Therapy

☐ **Rationale:**
Treatment is prevention; antiretroviral therapy of HIV-positive individuals decreases transmission.

☐ **Example:**
Antiretroviral treatment of the HIV-positive partners in serodiscordant couples reduced HIV transmission by 96% in a recent, international, randomized, controlled trial (Cohen, 2011).
Initial Approach to HIV/AIDS

Counseling and Testing

Care and Treatment

NATIONAL LGBT HEALTH EDUCATION CENTER
A PROGRAM OF THE FENWAY INSTITUTE

BOSTON HEALTH CARE for
the HOMELESS PROGRAM
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.
3. Safer Sex

- **Rationale:**
  Education and outreach surrounding safer sex reduce high-risk behaviors associated with HIV transmission.

- **Examples:**
  - 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

- Behavioral risk / harm reduction 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

- Discuss developing a pro-active plan to protect oneself and one’s partners
4. STI Screening and Treatment

- **Rationale:**
  Treatment of some other STIs can reduce transmission of HIV.

- **Example:**
  Suppressive valacyclovir for men with HIV/HSV co-infection led to lower HIV levels in rectal tissue and blood (Zuckerman, 2007).
STI Screening in MSM

- 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

CDC, 2010
Annual STI Screening in MSM

- HIV serology
- Syphilis serology
- Urethral gonorrhea (culture or NAAT*) and Chlamydia (NAAT) if insertive intercourse in the past year
- Rectal gonorrhea (culture) and Chlamydia (NAAT) testing if receptive anal intercourse in the past year
- Pharyngeal gonorrhea (culture) if receptive oral intercourse in the past year
- Anal cytology (not recommended by the CDC but endorsed by some experts)

*Nucleic acid amplification test
Additional Considerations

- Vaccination against hepatitis A and B (unless there is evidence of prior infection or immunity)

- HPV vaccination for men ages 11 to 26 years to prevent genital warts and anal cancer
5. Pre- and Post-Exposure Prophylaxis

- **Rationale:**
  Pharmacologic agents, given either before or after HIV exposure, can prevent HIV transmission.

- **Examples:**
  - Non-occupational post-exposure prophylaxis (nPEP)
  - Pre-exposure prophylaxis (PrEP)
**Post-Exposure Prophylaxis**

- Antiretrovirals initiated within 72 hours (and best if < 36 hours) after exposure

- Indicated for exposures of “substantial risk”

- Prophylaxis consists of 28 days of antiretroviral therapy

- Perform HIV antibody testing at 1, 3, and 6 months post-exposure.
PrEP

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

THE FENWAY INSTITUTE

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

THE FENWAY INSTITUTE
Substance Use/Mental Health Treatment, Housing, and Food Security are Prevention

Courtesy Moupali Das Douglas of SFDPH
Putting it all together

Universal HIV Screening

HIV Positive
- HIV care / antiretroviral therapy

HIV Negative
- Safer sex
- Address STIs
- PEP or PrEP

Reduce HIV Incidence
Building a Program to Optimize HIV and STD Prevention and Care

- Outreach/Counseling and Testing
- Access
  - Integrated Prevention
  - Knowledge, Attitudes and Skills
- Retention
  - Peer Navigation/Case Management
- Regular Follow Up
  - Counseling
  - Behavior Change
Questions?
Homeless Populations and HIV

James O’Connell, MD
President, Boston Health Care for the Homeless
Where We Are Now, and How Did We Get Here?

Carole Hohl
Boston Health Care for the Homeless
Our first HIV Clinic

- Early innovative HIV Clinic
- Multidisciplinary approach
- Included PCP’s from CHC’s
Off On Our Own

- We needed more space and more providers to see patients as our numbers grew
- Ryan White Grant allowed us to do this
- Importance of open access
Building our Team

- Internists and mid level providers
- Nurse case managers
- Counselor/testers
- Non medical case managers
- Behavioral Health
- Substance Abuse Treatment
Easy Access and Relationship Building
Team meetings

- Weekly
- Behavioral health and medical providers
- Case managers
- Nurses
Importance of EMR

- Communicating with shelter clinics
- Communicating within the team
- Looking for lost patients
- Reporting
Partnerships

- Services for recently incarcerated
- Housing
Partnerships

- Substance abuse treatment
- ID doc in clinic
Prevention

- Prevention and screening groups at over 20 sites
- Expansion to chlamydia, gonorrhea, syphilis, Hepatitis C
- Secondary prevention part of care
Can primary care providers really take care of patients with HIV?

- Yes
- Primary care providers can incorporate HIV care into overall care
- Training (CME) must be offered
- ID Consultation is important
In conclusion

- Important to have support of clinic/program administration as well as line staff - medical/nursing/case management/BH
- Training for staff
- Look for grant support
- Easy access and ongoing support can keep even the most marginalized people in care.
- Team approach
- Community Partners