Preventing HIV Infections among Men in the United States

NBNA Men’s Health Committee
Prepared by Kendrick Clack, APRN FNP-C, AAHIVS
Sheldon D. Fields, PhD, RN, FNP-BC, AACRN, FAANP, FNAP, FAAN
Learning Objectives

*By the end of this workshop participants will be able to:*

1. Discuss the factors that influence the current trends in HIV infections among the male population?

2. Discuss the evidence based biomedical interventions have been effective in reducing HIV infections?

3. Discuss what PrEP is and how it is used to prevent HIV.

4. Review and discuss the key strategies of the End the HIV Epidemic: A plan for America?
Overview of HIV in America

• General population in 2017
  • 38,739 people received an HIV diagnosis
  • The annual number of HIV diagnoses declined 5% between 2011 and 2015

• Gay and bisexual men (Most Affected)
  • Gay and bisexual men = 67% (26,570), and 83% of diagnoses among males
  • Black/African American men = 10,223, Hispanic/Latino = 7,425,

• Heterosexuals and IDU’s
  • Heterosexual contact accounted for 24% (9,578) of HIV diagnoses
  • Women accounted for 19% (7,529) of HIV diagnoses
    • 87%, or 6,541 (heterosexual), and 12%, or 939 IDU
  • IDU accounted for 9% (3,425) of HIV diagnoses
HIV (Human Immunodeficiency Virus)

- It is a virus that attacks the human immune system.
- There is no cure.
- If not treated it can lead to **Acquired Immunodeficiency Syndrome** or **AIDS**.
HIV and AIDS: What’s the difference?

HIV
- HIV is the virus that causes HIV infection.
- HIV damages the immune system by killing CD4 cells.

CD4 Cells
- CD4 cells are part of the immune system.
- HIV attacks and kills CD4 cells.
- Loss of CD4 cells makes it hard for the body to fight off infections.

AIDS
- AIDS is the last stage of HIV infection.
- As HIV infection advances to AIDS, the amount of HIV in the body increases and the number of CD4 cells decreases.
- HIV medicines can stop HIV infection from advancing to AIDS.
- Without HIV medicines, HIV advances to AIDS in about 10 years.

For more information, visit AIDSinfo

https://aidsinfo.nih.gov/understanding-hiv-aids/infographics/3/hiv-and-aids--what%E2%80%99s-the-difference-
HIV Transmission

**Transmitted By:**
- Sexual contact
- Sharing needles
- Maternal

**Not Transmitted By:**
- Air/Water
- Saliva, sweat, tears, or closed-mouth kissing
- Insects or pets
- Sharing toilets, food or drinks
HIV Transmission

HIV 101

Without treatment, HIV (human immunodeficiency virus) can make a person very sick and even cause death. Learning the basics about HIV can keep you healthy and prevent transmission.

HIV CAN BE TRANSMITTED BY

- Sexual Contact
- Sharing Needles to Inject Drugs
- Mother to Baby During Pregnancy, Birth, or Breastfeeding

HIV IS NOT TRANSMITTED BY

- Air or Water
- Saliva, Sweat, Tears, or Closed-Mouth Kissing
- Insects or Pets
- Sharing Toilets, Food, or Drinks

You can safely share

- a desk
- a toilet
- dishes
- a hug
- a handshake

with someone who has HIV.

For more information, visit AIDSinfo

https://www.cdc.gov/hiv/basics/whatishiv.html

https://aidsinfo.nih.gov/understanding-hiv-aids/infographics/10/you-can-safely-share---with-someone-with-hiv
Protection against HIV

- Testing
- Condoms
- Limit sexual partner and activities
- Avoid injecting drugs, don’t share needles, or injection equipment
- Pre-Exposure Prophylaxis (PrEP)
- Post-Exposure Prophylaxis (PEP)
- STI screening and treatment
Living with HIV

- Engage in HIV care
- Take HIV medicine as prescribed
- Use condoms and talk to partner about PrEP
- STI screening and treatment
HIV Burden in the United States

• Over **1.1 million** people are living with HIV in the United States.

• African-Americans (AA) account for **44%** of new infections.

• Gay and bisexual men or men who have sex with men (MSMs) account for the **majority** of people living with HIV and over **four-fifths** of new HIV infections.

• In 2016, there were **15,807** deaths among people with diagnosed HIV in the United States. These deaths may be due to any cause.
HIV in the United States and Dependent Areas


- 25,748 (66%) WERE AMONG GAY AND BISEXUAL MEN*
- 8,170 (21%) WERE AMONG HETEROSEXUALS
- 2,389 (6%) WERE AMONG PEOPLE WHO INJECT DRUGS (PWID)*
- 1,252 (3%) WERE AMONG GAY AND BISEXUAL MEN WHO INJECT DRUGS

New HIV Diagnoses in the US and Dependent Areas for the Most-Affected Subpopulations, 2017

- Male, M-to-M Sexual Contact: 9,807
- HPW: M-to-M Sexual Contact: 7,436
- Women, M-to-M Sexual Contact: 6,992
- Black Women, Heterosexual Contact: 1,197
- Hispanic/Latino Men, Heterosexual Contact: 1,068
- White Women, Heterosexual Contact: 999

From 2012 to 2016, HIV diagnoses in the US and dependent areas:

- Men: 28%
- Women: 72%

- Men: 17% received care
- Women: 15%

HIV IS A VIRUS THAT ATTACKS THE BODY’S IMMUNE SYSTEM. It usually spreads by and/or vaginal sex or sharing syringes with a person who has HIV. The only way to know you have HIV is to be tested. Everyone aged 13-64 should be tested at least once, and people at high risk should be tested at least once a year. Ask your doctor or visit gettested.cdc.gov to find a testing site. Without treatment, HIV can make a person very sick or may even cause death. If you have HIV, start treatment as soon as possible to stay healthy and help protect your partners.

For More Information
Call 1-800-CDC-INFO (232-4636)
Visit www.cdc.gov/hiv

Reduce Your Risk

- Not having sex
- Using condoms
- Not sharing syringes
- Taking medicine to prevent or treat HIV

People with HIV need to know their HIV status so they can take medicine to treat HIV. Taking HIV medicine as prescribed can make the level of virus in their body very low (called viral suppression) or even undetectable.

A person with HIV who gets and stays virally suppressed or undetectable can stay healthy and has effectively no risk of transmitting HIV to HIV-negative partners through sex.

AT THE END OF 90S, AN ESTIMATED 1,122,900 PEOPLE HAD HIV.

FOR EVERY 100 PEOPLE LIVING WITH HIV IN 2015:

- 63 received some HIV care
- 49 were retained in care
- 51 were virally suppressed

[Image: Map of the United States with HIV prevalence data]

National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention
Division of HIV/AIDS Prevention
January 2019
HIV in the southern United States

- The southern US disproportionately accounts for about 50% of new HIV cases annually.

- HIV infections among African-American men who have sex with men (MSMs) are twice that of Hispanic MSMs and Whites MSM in the South.

- Check out AIDSVUE for local incidence and prevalence by zip codes
  - Prep Article by Dr. Sheldon D. Fields: https://aidsvu.org/fields-2/
HIV in the southern United States

HIV in the southern United States

Subpopulations representing 2% or less of all people who received an HIV diagnosis in 2017 are combined in this chart.

Men Living with HIV

• Among the general population African-American (AA) men have highest lifetime risk of HIV at 1 in 20. Among MSMs, African-Americans have highest lifetime risk of 1 in 2 (50%).

• HIV infections have stabilized among men with a decrease in African-Americans and increase among Hispanics/Latinos and Asians.

• Age groups 25-34 have also had increases in HIV infections

• Ethnic minority men account for almost three-fourths of new HIV infections with African-American men at 39%.
Men Living with HIV

Men With HIV in the 50 States and District of Columbia

AT THE END OF 2016, AN ESTIMATED 882,300 MEN HAD HIV.

6 in 7 KNEW THEY HAD THE VIRUS.

For every 100 men with HIV in 2016:

- 63 received some HIV care
- 49 were retained in care*
- 53 were virally suppressed†

A person with HIV who takes HIV medicine as prescribed and gets and stays virally suppressed or undetectable can stay healthy and has effectively no risk of sexually transmitting HIV to HIV-negative partners.

* Had 2 viral load or CD4 tests at least 3 months apart in a year.
† Based on most recent viral load test.

Men Living with HIV

New HIV Diagnoses Among Men in the US and Dependent Areas by Transmission Category, 2017

- Male-to-male sexual contact: 82%
- Injection drug use: 4%
- Other: <1%
- Heterosexual contact: 9%
- Male-to-male sexual contact and injection drug use: 4%

New HIV Diagnoses Among Men in the US and Dependent Areas by Race/Ethnicity, 2017

- Blacks/African Americans: 39%
- Whites: 27%
- Hispanics/Latinos*: 28%
- Asians: 3%
- American Indians/Alaska Natives: 1%
- Native Hawaiians and Other Pacific Islanders: <1%
- Multiple Races: 2%

* Hispanics/Latinos can be of any race.

New HIV Infections in 2017

HIV Trends among men from 2010-2016

HIV Diagnoses Among Men in the 50 States and District of Columbia, 2010-2016

- **Black/African American:** down 7%
- **Hispanic/Latino:** up 11%
- **Asian:** up 45%
- **White:** down 15%
- **Other Races/Ethnicities:** down 31%

**Men by transmission category**
- Male-to-male sexual contact: stable
- Injection drug use: down 37%
- Male-to-male sexual contact and injection drug use: down 23%
- Heterosexual contact: down 21%

**Men by age**
- 13 to 24: stable
- 25 to 34: up 23%
- 35 to 44: down 27%
- 45 to 54: down 28%
- 55 and older: down 5%

HIV Diagnoses in the U.S. and Dependent Areas, 2012–2016

Source: CDC, HIV in the United States and Dependent Areas, Jan. 2019.
Ending the HIV Epidemic: A Plan for America

- HHS plan to eliminate new HIV infections in the United States
- Reduce new HIV infections by 75% in 5 years and at least 90% in 10 years
- Forty-eight counties, Washington DC, San Juan, PR, and seven states with substantial rural burden

Ending the HIV Epidemic: A Plan for America

**Diagnose** all people with HIV as early as possible.

**Treat** people with HIV rapidly and effectively to reach sustained viral suppression.

**Prevent** new HIV transmissions by using proven interventions, including pre-exposure prophylaxis (PrEP) and syringe services programs (SSPs).

**Respond** quickly to potential HIV outbreaks to get needed prevention and treatment services to people who need them.

Men With HIV in the 50 States and District of Columbia

For every 100 men with HIV in 2016:

- 63 received some HIV care
- 49 were retained in care*
- 53 were virally suppressed†

A person with HIV who takes HIV medicine as prescribed and gets and stays virally suppressed or undetectable can stay healthy and has effectively no risk of sexually transmitting HIV to HIV-negative partners.

* Had ≥2 viral load or CD4 tests at least 3 months apart in a year.
† Based on most recent viral load test.

New Advances in HIV Prevention

- **Pre-Exposure Prophylaxis (PrEP)**
  - The use of daily antiretroviral medications to prevent HIV infection.
  - Over **95%** effective with sexual activity.
  - About 75% effective in people who inject drugs.
  - Condoms up to **90%** effective with consistent use
  - Truvada and Descovy FDA approved drugs for adults over 35kg (77lbs).
  - Descovy not proven to be effective with vaginal intercourse.

- [CDC PrEP Video](https://www.cdc.gov/preventing/hiv/pdfs/cdc-pre-exposure-prophylaxis-video.pdf)
- [Dr. Sheldon Fields-PrEP and Black MSM](https://www.hiv.gov/preventing/hiv/pdfs/cdc-pre-exposure-prophylaxis-video.pdf)
New Advances in HIV Prevention

• **Post-Exposure Prophylaxis (PEP)**
  • The use of a 28-day antiretroviral regimen after a single high-risk event to stop HIV seroconversion.
    o Condom breakage
    o Needle sharing or injection equipment
    o Sexual assault
  
• Ideally should be started within **72** hours of exposure.

• For emergency use, if recurrent, discuss PrEP use.

[https://www.cdc.gov/hiv/basics/pep.html](https://www.cdc.gov/hiv/basics/pep.html)
PrEP vs. PEP

PrEP and PEP are methods for preventing HIV infection that involve taking HIV medicines. When you take steps to protect yourself against a disease, like HIV, it’s called prophylaxis. PrEP and PEP are for people who don’t have HIV, but are at risk of getting it.

**What’s it called?**
- **PrEP** stands for pre-exposure prophylaxis.
- **PEP** stands for post-exposure prophylaxis.

**Before HIV exposure.**
PrEP is taken every day, before possible exposure.

**When is it taken?**
- **Before HIV exposure.** In emergency situations, PEP is taken within 72 hours (3 days) after possible exposure.

**PrEP** is for people who don’t have HIV and:
- have a sex partner with HIV
- have sex with people whose HIV status is unknown
- share injection drug equipment

**Who’s it for?**
- **PrEP** is for people who don’t have HIV but may have been exposed:
  - during sex
  - at work through a needlestick or other injury
  - by sharing injection drug equipment
  - during a sexual assault

**How effective is it?**
Consistent use of PrEP can reduce the risk of getting HIV from sex by about 99% and from injection drug use by at least 74%.

**How do you get it?**
- Ask your health care provider about a prescription for PrEP, or use PEPlocator.org to find a health care provider in your area who can prescribe PrEP.
- To get a prescription for PEP, contact your health care provider or go to an urgent care facility or emergency room within 72 hours of the potential exposure.

For more information, visit AIDSinfo.
New Advances in HIV Prevention

• **Undetectable=Untransmittable (U=U)**
  - people with HIV who achieve and maintain an undetectable viral load—the amount of HIV in the blood—by taking antiretroviral therapy (ART) daily as prescribed cannot sexually transmit the virus to others.

• **Evidence**
  - HPTN052 (Cohen, 2016),
  - PARTNER (Rodger, 2016),
  - Opposites Attract (Bavinton, 2018), and
  - PARTNER2 (Rodger, 2018)

https://www.cdc.gov/hiv/risk/estimates/preventionstrategies.html
https://www.niaid.nih.gov/diseases-conditions/treatment-prevention
https://www.preventionaccess.org/
# HIV TRANSMISSIONS IN 2016

<table>
<thead>
<tr>
<th>% OF PEOPLE WITH HIV</th>
<th>STATUS OF CARE</th>
<th>ACCOUNTED FOR X% OF NEW TRANSMISSIONS*</th>
</tr>
</thead>
<tbody>
<tr>
<td>15%</td>
<td>didn’t know they had HIV</td>
<td>38%</td>
</tr>
<tr>
<td>23%</td>
<td>knew they had HIV but weren’t in care</td>
<td>43%</td>
</tr>
<tr>
<td>11%</td>
<td>in care but not virally suppressed</td>
<td>20%</td>
</tr>
<tr>
<td>51%</td>
<td>taking HIV medicine and virally suppressed</td>
<td>0%</td>
</tr>
</tbody>
</table>

*Values do not equal 100% because of rounding

SOURCE: Vital Signs, 2019

[https://www.cdc.gov/vitalsigns/end-hiv/index.html](https://www.cdc.gov/vitalsigns/end-hiv/index.html)
Challenges with Ending the HIV Epidemic

- Unknown Status
- Social Stigma and Discrimination
- High HIV Prevalence
- Substance Use
- Low and disparate PrEP Uptake
  - Overall increase in MSM but remains low in black and Hispanic MSM
  - 70% of PrEP uses are disproportionately White
  - Low provider and patient awareness
    - NP’s and PA’s prescribe PrEP in higher numbers
  - Limited access and Cost
  - Evolving long term health concerns

https://www.cdc.gov/mmwr/volumes/68/wr/mm6827a1.htm#T2_down
Discussion

1. What are the factors that influence the current trends in HIV infections among the male population?

2. What evidence based biomedical interventions have been effective in reducing HIV infections?
   2a. What is PrEP?

3. What are the key strategies of the End the HIV Epidemic: A plan for America?
Contact Content Experts

Kendrick T. Clack, MS, APRN, FNP-C, AAHVIS
Fort Bend County Black Nurses Association, Inc.
Email: kclack1982@gmail.com
Phone: 832-545-2161

Sheldon D. Fields, PhD, RN, FNP-BC, AACRN, FAANP, FNAP, FAAN
President: Greater New York City - Black Nurses Association, Inc
Email: Sheldon.Fields40@gmail.com
Phone: 585-315-8725
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- Prevention Access Campaign https://www.preventionaccess.org/
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