The Changing Landscape of HIV Prevention and Treatment:

Looking Back and Looking Forward

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HIV Prevention Services,
Virginia Department of Health
Overview

- Examine the epidemiology of HIV/AIDS in Virginia
- Review the history of HIV in Virginia in the context of national events
- Examine major shifts in the epidemic as well as scientific breakthroughs
- Look at the current state of HIV in the Commonwealth and new opportunities for prevention and treatment
Newly Diagnosed HIV Disease & AIDS in Virginia, 1982-2015

Data reported to the Virginia Department of Health as of March 2017; accessed April 2017.
In December 2016, the VDH HIV Surveillance team completed a series of death matches and address updates to the Enhanced HIV/AIDS Reporting System (eHARS). These updates to the HIV surveillance system resulted in a reduction of 601 cases of persons living with HIV in Virginia as of December 31, 2015 from the 2015 Annual Report to the 2016 Annual Report.

Data reported to the Virginia Department of Health as of March 2017; accessed April 2017.
Summary of Persons Living with HIV Disease in Virginia as of December 31, 1985

Female 7.6%

Male 93.2%

N=590

<table>
<thead>
<tr>
<th>Transmission Risk</th>
<th>Percent of PLWHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male-to-male sexual contact (MSM)</td>
<td>61.4%</td>
</tr>
<tr>
<td>Injection drug use (IDU)</td>
<td>10.5%</td>
</tr>
<tr>
<td>MSM &amp; IDU</td>
<td>8.6%</td>
</tr>
<tr>
<td>Other (pediatric and receipt of blood products)</td>
<td>13.0%</td>
</tr>
<tr>
<td>No risk factor reported or identified</td>
<td>3.2%</td>
</tr>
<tr>
<td>Heterosexual contact</td>
<td>3.2%</td>
</tr>
</tbody>
</table>

Data reported to the Virginia Department of Health as of March 2017; accessed April 2017.
Summary of Persons Living with HIV Disease in Virginia as of December 31, 1995

- Female: 23.7%
- Male: 76.3%

Transmission Risk

<table>
<thead>
<tr>
<th>Transmission Risk</th>
<th>Percent of PLWHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male-to-male sexual contact (MSM)</td>
<td>41.5%</td>
</tr>
<tr>
<td>Injection drug use (IDU)</td>
<td>21.4%</td>
</tr>
<tr>
<td>Heterosexual contact</td>
<td>16.6%</td>
</tr>
<tr>
<td>No risk factor reported or identified</td>
<td>10.1%</td>
</tr>
<tr>
<td>MSM &amp; IDU</td>
<td>7.4%</td>
</tr>
<tr>
<td>Other (pediatric and receipt of blood products)</td>
<td>3.0%</td>
</tr>
</tbody>
</table>

N=1,022

- Black, non-Hispanic: 58.9%
- White, non-Hispanic: 35.0%
- Hispanic (all races): 3.8%
- Asian/Hawaiian/Pacific Islander: 0.6%
- Other: 1.6%

Data reported to the Virginia Department of Health as of March 2017; accessed April 2017.
Summary of Persons Living with HIV Disease in Virginia as of December 31, 2005

Transmission Risk | Percent of PLWHA
--- | ---
Male-to-male sexual contact (MSM) | 41.1%
Heterosexual contact | 21.1%
No risk factor reported or identified | 16.8%
Injection drug use (IDU) | 13.8%
MSM & IDU | 5.1%
Other (pediatric and receipt of blood products) | 2.1%

N=16,928

Data reported to the Virginia Department of Health as of March 2017; accessed April 2017.
Summary of Persons Living with HIV Disease in Virginia as of December 31, 2015

Transmission Risk | Percent of PLWHA
--- | ---
Male-to-male sexual contact (MSM) | 47.1%
Heterosexual contact | 19.5%
No risk factor reported or identified | 19.8%
Injection drug use (IDU) | 8.5%
MSM & IDU | 3.8%
Other (pediatric and receipt of blood products) | 1.6%

N=23,451

Data reported to the Virginia Department of Health as of March 2017; accessed April 2017.
In the Beginning

• AIDS was first reported in the CDC’s Morbidity and Mortality Weekly in 1981

• Cause and transmission were unknown

• GRID, AIDS, ARC, HTLV-III, HIV, HIV Disease

• AIDS victim, AIDS patient, People living with HIV
• The first case of AIDS was reported in Virginia in 1982

• In 1983 AIDS became a reportable disease in Virginia

• HIV was not reportable until 1989
The 1980’s

• 1982
  • All routes of transmission are identified
• 1984
  • First pediatric AIDS case in Virginia
• 1985
  • The US government funds the first efforts for prevention
  • The FDA licenses the first antibody test
  • Virginia establishes an AIDS Hotline and established four anonymous test sites
The 1980’s

• 1986
  • Virginia became the first state in the nation to offer testing in its sexually transmitted disease clinics
  • VDH begins funding HIV prevention
• 1987
  • AZT, the first treatment for HIV, receives fast track approval through the FDA
  • Virginia initiates the AIDS Drug Assistance Program, the Minority AIDS Projects and expands testing to maternity and TB Clinics
The 1980’s

• 1988
  • The Surgeon General mails information to every household in America

• 1989
  • First 100,000 cases are reported in the U.S.
  • Virginia reports more than 1,000 cases in a single year
  • Education for health care providers is launched in Virginia and anonymous testing is expanded
Stigma

The Four H’s
• Homosexuals
• Heroin Users
• Hemophiliacs
• Haitians
AIDS Hysteria
The 1990’s

• 1990
  • Congress passes the Ryan White C.A.R.E. Act and the Americans with Disabilities Act

• 1991
  • Magic Johnson announces he has HIV
  • Virginia begins funding care and support services for people with HIV

• 1992
  • Richmond native Arthur Ashe announces he has AIDS
The 1990’s

• 1994
  • AIDS becomes the leading cause of death for all Americans aged 25-44
  • Clinical trials show that perinatal transmission can be reduced with AZT
  • Surgeon General Jocelyn Elders fired for her controversial comments
The 1990s

• 1995
  • Rapper Eazy-E dies
  • AIDS cases in the U.S. reach 500,000
  • National Academy of Sciences concludes that syringe exchange programs reduce infectious diseases
  • Virginia law requires all pregnant women to be counseled about HIV and offered testing
  • Highly Active Anti-Retroviral Treatment
• 1997
  • U.S. sees first declines in HIV deaths
The 1990’s

• 1998
  • Congressional Black Caucus approves additional funding for HIV

• 1999
  • Perinatal cases drop to a new low
Death Events Among Persons with HIV Disease in Virginia, 1983-2015

Data reported to the Virginia Department of Health as of March 2017; accessed April 2017.
Newly Diagnosed Pediatric Cases, 1982-2015

Pediatric includes: mother-to-child transmission, child received clotting factor or transplant, or other/unknown pediatric risk.

Data reported to the Virginia Department of Health as of March 2017; accessed April 2017.
The 21st Century

2000-2005

- New cases around 50,000 a year in the U.S.
- 25% don’t know they are infected
- New test technologies emerge

2006

- June 25, 2006 marks 25th anniversary of AIDS
- CDC recommends that everyone age 13-64 get an HIV test
- Virginia is serving over 3,500 clients through the Ryan White program
Abstinence Versus Comprehensive Sex Education and Condoms
The 21st Century

• 2009
  • Washington, DC reports HIV rates higher than in West Africa

• 2010
  • U.S. releases the first National HIV/AIDS Strategy
  • Study shows that a daily pill can prevent HIV

• 2012
  • Truvada approved by the FDA as PrEP*
  • Treatment as Prevention*
Growing Disparities in the South

- CDC funding formulas for HIV prevention remain unchanged for more than a decade.

- Southern states represent more than 50% of the HIV epidemic but receive only 37% of the HIV funding.

- Southern states have greater poverty, lower rates of insured persons and higher rates of negative attitudes regarding HIV, sexual orientation etc.

- Young Black gay men are particularly hard hit.
Virginia

• From December 2010 to August 2012, Virginia has a waiting list for the AIDS Drug Assistance Program

• Based on HIV incidence, Virginia was being underfunded by almost $1,000,000 per year for HIV prevention

• CDC began redistributing funds in 2012. Virginia is now receiving a proportional share of prevention funding.
Newly Diagnosed HIV Disease & AIDS in Virginia, 1982-2015

Data reported to the Virginia Department of Health as of March 2017; accessed April 2017.
Newly Diagnosed HIV Disease Among Young Black, non-Hispanic MSMs in Virginia, 2006-2015

Young Black, non-Hispanic MSMs represent approximately 12% of the newly diagnosed cases in a given year.

Data reported to the Virginia Department of Health as of March 2017; accessed April 2017.
Newly Diagnosed HIV Disease Among Injection Drug Users (IDU) in Virginia, 2006-2015

2006: 4.5% of newly diagnosed cases attributed to IDU
2015: 2.0% of newly diagnosed cases attributed to IDU

Data reported to the Virginia Department of Health as of March 2017; accessed April 2017. These numbers are for IDU only and do not include the risk group MSM & IDU.
Newly Diagnosed HIV Disease Among Women in Virginia by Race/Ethnicity, 2006-2015

Data reported to the Virginia Department of Health as of March 2017; accessed April 2017.
Treatment as Prevention and the HIV Care Continuum
Treatment as Prevention

• New HIV cases have been stable for about 15 years and domestic funding for HIV prevention has been flat

• HIV prevention receives only 3% of the federal expenditures for HIV

• Behavioral interventions to reduce risk are effective but cannot be scaled up sufficiently with existing funding to further change the course of the epidemic
Treatment As Prevention

• Viral Suppression is the Key
  • PLWHA who take their medications and have an undetectable viral load have almost a zero chance of passing on the virus

• The strategy is to identify PLWHA, get them into treatment and keep them virally suppressed

• Improved individual and public health outcomes
HIV Continuum of Care in Virginia, 2012-2015

- Persons living with HIV as of 12/31/2012 (N=22,514)
- Persons newly diagnosed in 2012 (N=938)
- Persons living with HIV as of 12/31/2013 (N=23,224)
- Persons newly diagnosed in 2013 (N=972)
- Persons living with HIV as of 12/31/2014 (N=23,961)
- Persons newly diagnosed in 2014 (N=924)
- Persons living with HIV as of 12/31/2015 (N=24,853)
- Persons newly diagnosed in 2015 (N=929)

<table>
<thead>
<tr>
<th>Year</th>
<th>Persons diagnosed and living with HIV</th>
<th>Newly diagnosed and linked to HIV care within 90 days</th>
<th>Evidence of HIV care</th>
<th>Retained in HIV care</th>
<th>Virally suppressed</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>22,514</td>
<td>938</td>
<td>74%</td>
<td>49%</td>
<td>37%</td>
</tr>
<tr>
<td>2013</td>
<td>23,224</td>
<td>972</td>
<td>78%</td>
<td>53%</td>
<td>39%</td>
</tr>
<tr>
<td>2014</td>
<td>23,961</td>
<td>924</td>
<td>82%</td>
<td>57%</td>
<td>41%</td>
</tr>
<tr>
<td>2015</td>
<td>24,853</td>
<td>929</td>
<td>81%</td>
<td>56%</td>
<td>42%</td>
</tr>
</tbody>
</table>
HIV Continuum of Care in Virginia, 2015

- Persons living with HIV as of 12/31/2015 (N=23,425)
- Persons newly diagnosed in 2015 (N=967)
- Retention and viral suppression outcomes for persons with evidence of HIV care in 2015
- Linkage to HIV care within 30 days

Persons diagnosed and living with HIV as of 12/31/2015: 23,425
Newly diagnosed and linked to HIV care within 30/90 days: 809
Evidence of HIV care in 2015: 14,232
Retained in HIV care in 2015: 11,105
Virally suppressed in 2015: 10,671

Data reported to the Virginia Department of Health as of December 2016; Accessed February 2017.
Pre-Exposure Prophylaxis

• A daily dose of the HIV drug, Truvada, has been shown to reduce the chances of getting HIV by 94%.
Advances in Prevention and Care

• New Testing Opportunities
  • Expansion of pharmacy-based testing
  • 4th generation testing to identify acute infection

• Early treatment leads to long term health benefits

• ACA

• About 6,000 being served through ADAP

• Only 13% of PLWHA don’t know their status
Could We See the End of AIDS?

- Life expectancy is near normal
- Getting to Zero
  - Zero New Infections
  - Zero Discrimination
  - Zero AIDS-Related Deaths
- What will get in our way?
Goals

• 90% of people living with HIV are diagnosed

• 90% linked to care within 30 days

• 90% virally suppressed

• PrEP
  • 1 in 4 MSM
  • 1 in 200 Heterosexuals
“HIV, you won't stand between me and a long healthy life.”

Eddie – Miami, FL
Living with HIV since 1987.

Encouraged by the love of my HIV-negative partner, I started HIV treatment 27 years ago. I've seen first hand the dramatic advancement of HIV care. When I first started treatment, I had to take 30 pills a day. Now, I just take 3 pills a day with few side effects. Initially, I started treatment to protect my partner from getting HIV. Now, I know that being healthy, taking my medication, exercising, and eating well are the reasons I have a full and productive life today.

“You know what, HIV? There are many things I still want to accomplish and you are not going to stop me.”

L’Orangelis - San Juan, PR
Living with HIV since 1988.

I was born with HIV so I don’t know what a life without HIV is like. There was a period of time where I did not take medicine, but I decided to get back on treatment and seek medical care. I am motivated now to stay healthy because there are so many things I still want to accomplish. I have a whole life to look forward to and an opportunity to be a role model for other young people.

"HIV, taking my meds makes you undetectable. And that makes me unstoppable."

Aaron - St Louis, MO
Living with HIV since 2011.

HIV TREATMENT WORKS

This is my disease. It’s in my body and I need to know everything I can to fight it. I stay informed. I talk to my doctor, I talk to my pharmacist. And I share my story through my own YouTube channel called My HIV Journey. Three years ago, when I met my partner Phil, I told him I was HIV-positive in our first conversation. He said, ‘That’s OK. There are lots of ways to protect ourselves.’ Phil takes PREP and I take my meds every day. In this relationship, HIV ends with me.

cdc.gov/HIVTreatmentWorks

CDC Department of Health
Protecting You and Your Environment
THANK YOU

• Lauren Yerkes, Care Continuum Data and Project Manager, Virginia Department of Health

• Amanda Saia, HIV Surveillance Epidemiologist, Virginia Department of Health