Women and HIV: The U.S. Perspective

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Women & HIV: Science, Policy, and Practice
Burden of HIV among US Women?

• Women account for one in four people living with HIV in the U.S.

• In 2013, ≈ 9,479 incident HIV infections and 6,424 AIDS diagnoses\(^1\)

\(^1\)Centers for Disease Control and Prevention
Rates of Adult and Adolescent Females Living with Diagnosed HIV Infection, Year-end 2012—United States and 6 Dependent Areas

N = 229,176           Total rate = 169.4

Note. Data include persons with a diagnosis of HIV infection regardless of stage of disease at diagnosis. All displayed data have been statistically adjusted to account for reporting delays, but not for incomplete reporting.
Rates of Diagnoses of HIV Infection among Adult and Adolescent Females, 2013—United States and 6 Dependent Areas

N = 9,479  Total rate = 6.9

Note. Data include persons with a diagnosis of HIV infection regardless of stage of disease at diagnosis. All displayed data have been statistically adjusted to account for reporting delays, but not for incomplete reporting.
Burden of HIV among US Women?

- Women account for one in four people living with HIV in the U.S.
- In 2013, ≈ 9,278 incident HIV infections and 6,424 AIDS diagnoses\(^1\)
- African American women are disproportionately affected

\(^1\)Centers for Disease Control and Prevention
Diagnoses of HIV Infection and Population among Adult and Adolescent Females, by Race/Ethnicity 2013—United States

Diagnoses of HIV Infection
N=9,278

- 17% American Indian/Alaska Native
- 15% Asian
- 63% Black/African American
- 2% Hispanic/Latino
- 1% Native Hawaiian/other Pacific Islander
- <1% Multiple races

Female Population
N = 134,687,181

- 65% White
- 13% Hispanic/Latino
- 15% Black/African American
- 2% Native Hawaiian/other Pacific Islander
- 1% Asian
- <1% Multiple races

Note. Data include persons with a diagnosis of HIV infection regardless of stage of disease at diagnosis. All displayed data have been statistically adjusted to account for reporting delays, but not for incomplete reporting.

a Hispanics/Latinos can be of any race.
Reasons for the Disparity

- 87% of incident infections due to heterosexual contact
  - Especially true among Black women
- Higher prevalence among African American males
- Undisclosed male partner risk factors
- Inconsistent condom use
- SES
- Access to health care
- Education
- Structural and social correlates
Diagnoses of HIV Infection among Adult and Adolescent Females, by Race/Ethnicity and Transmission Category 2013—United States and 6 Dependent Areas

**Black/African American**
N=5,876
- 90% Injection drug use
- 9% Heterosexual contact
- 1% Other

**Hispanic/Latino**
N=1,610
- 86% Injection drug use
- 13% Heterosexual contact
- 1% Other

**White**
N=1,579
- 74% Injection drug use
- 25% Heterosexual contact
- 1% Other

*Note.* Data include persons with a diagnosis of HIV infection regardless of stage of disease at diagnosis. All displayed data have been statistically adjusted to account for reporting delays and missing transmission category, but not for incomplete reporting.

*\(a\) Hispanics/Latinos can be of any race.*

*\(b\) Heterosexual contact with a person known to have, or to be at high risk for, HIV infection.*

*\(c\) Includes blood transfusion, perinatal exposure, and risk factor not reported or not identified.*
Rates of Diagnoses of HIV Infection among Adults and Adolescents, by Sex and Race/Ethnicity, 2013—United States

Note. Data include persons with a diagnosis of HIV infection regardless of stage of disease at diagnosis. All displayed data have been statistically adjusted to account for reporting delays, but not for incomplete reporting.

a Hispanics/Latinos can be of any race.
HIV Continuum of Care

• Once infected, what is the framework for understanding the current epidemiology of HIV?

• Women living with HIV in 2011:\(^1\)
  • 45% were engaged in care
  • 32% had achieved viral suppression

\(^1\)Centers for Disease Control and Prevention
HIV Continuum of Care

75% of Diagnosed
59% of infected

24% of Diagnosed
19% of infected

Gardner CID 2011
Women are Less Likely than Men to Discontinue HIV Care

Adapted from Rebeiro et al., 2015

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Discontinuity: Unadjusted HR (95% CI)</th>
<th>Discontinuity: Adjusted* HR (95% CI)</th>
<th>Median Time, Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (per 10 years)</td>
<td>0.57 (0.56, 0.58)</td>
<td>0.61 (0.59, 0.62)</td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>Ref.</td>
<td>Ref.</td>
<td>5.72 (5.40, 5.87)</td>
</tr>
<tr>
<td>Female</td>
<td>1.26 (1.19, 1.33)</td>
<td>0.84 (0.79, 0.89)</td>
<td>6.80 (6.29, 7.01)</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Black</td>
<td>Ref.</td>
<td>Ref.</td>
<td>6.74 (6.27, 7.07)</td>
</tr>
<tr>
<td>Black</td>
<td>1.09 (1.05, 1.14)</td>
<td>1.17 (1.12, 1.23)</td>
<td>5.75 (5.42, 5.94)</td>
</tr>
</tbody>
</table>

*Adjusted model includes all factors described in the table plus HIV risk category, CD4+ cell count, Nadir CD4+ count, and cohort site.
Women’s Interagency HIV Study (WIHS) Sites

San Francisco, CA
Los Angeles, CA
Chicago, IL
Baltimore, MD*
Washington, DC
Bronx, NY
Brooklyn, NY
Baltimore, MD*
Washington, DC
Brooklyn, NY
Chicago, IL
Birmingham, AL/ Jackson, MS
Atlanta, GA
Chapel Hill, NC
Miami, FL

*WIHS Data Center
HIV Among People Aged 50 and Older

Fast Facts

• Americans aged 50 and older have many of the same HIV risk factors as younger Americans.

• Persons aged 55 and older accounted for 26% (313,200) of the estimated 1.2 million people living with HIV infection in the United States in 2011.

• Older Americans are more likely than younger Americans to be diagnosed with HIV infection later in the course of their disease.

A growing number of people aged 50 and older in the United States are living with HIV infection. People aged 55 and older accounted for over one-quarter (26%, 313,200) of the estimated 1.2 million people living with HIV infection in the United States in 2011.
Age Distribution of Active* WIHS Participants

* Active = All participants seen at Visit 39 or 40 (Oct 2013 – Sept 2014)

- **HIV SN**
  - Median Age: 47
  - (IQR): (39, 54)
  - Age > 60: 10%

- **HIV SP**
  - Median Age: 49
  - (IQR): (43, 55)
  - Age > 60: 10%
Race/Ethnicity among HIV+ Women

Diagnoses of HIV Infection, U.S.*

WIHS Active HIV+ Participants

* Data from the Centers for Disease Control and Prevention; includes diagnoses of HIV infection among adult and adolescent females, by race/ethnicity in 2013.
 Median CD4+ T-cell and log10 VL Among WIHS HIV+ by Therapy Use

(as of 9/14)
WIHS Self-Reported AIDS Incidence, Mortality and Use of Therapy
Age-Adjusted 6-Month Mortality Rates (as of 4/15)

2010 age-adjusted mortality rates:
- US population: 0.747/100 PY
- Women: 0.635/100 PY
- Black women: 0.753/100 PY
Incidence of Cervical Squamous Intraepithelial Lesions Associated With HIV Serostatus, CD4 Cell Counts, and Human Papillomavirus Test Results

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Ji Yon Bang, MS
Kathryn Anastos, MD
Howard Minkoff, MD
Charles B. Hall, PhD
Melanie C. Bacon, RN, MPH
Alexandra M. Levine, MD
D. Heather Watts, MD
Michael J. Silverberg, MPH, PhD
Xiaofan Xue, PhD
Sandra L. Melnick, DrPH
Howard D. Strickler, MD, MPH

Context Recent cervical cancer screening guidelines state that the interval between screenings can be safely extended to 3 years in healthy women 30 years or older who have normal cytology results and have negative test results for oncogenic human papillomavirus (HPV) DNA.

Objective To determine the incidence of squamous intraepithelial lesions (SIL) in HIV-seropositive women with normal cytology results, by baseline HIV DNA results.

Design, Setting, and Patients Participants were HIV-seropositive (n = 85; mean age, 36 years) and HIV-seronegative (n = 343; mean age, 34 years) US women with normal baseline cervical cytology who were enrolled in the Women’s Intercourse History Study (WIHS), a large, multi-institutional prospective cohort study. Since their recruitment during 1994–1996, WIHS participants have been followed up semi-annually with repeated Pap smears for a median of 7 years.

Main Outcome Measure The cumulative incidence of any SIL and high-grade SIL (HSIL+) was estimated according to baseline HIV DNA results, stratified by HIV serostatus and CD4 T-cell count.

Results Development of any SIL in women with negative HIV results (both oncogenic and nononcogenic) at 2 years was as follows: in HIV-seropositive women with CD4 counts less than 200/µL and 500/µL, 9% (95% CI, 1.1%-18%) and 4% (95% CI, 0.4%-13%), respectively, and with CD4 counts greater than 500/µL, 4% (95% CI, 1.1%-7%), indicating no large absolute differences in the cumulative incidence of any SIL between HIV-seronegative and HIV-seropositive women. Furthermore, no HIV-seropositive participants in any group developed HSIL+ lesions within 3 years. Multivariate Cox models showed that, on a relative scale, the incidence of any SIL among HIV-seronegative women with CD4 counts greater than 500/µL (hazard ratio [HR], 1.2; 95% CI, 0.5-3.0), but not those with CD4 counts less than or equal to 200/µL (HR, 2.9; 95% CI, 1.2-7.1), was similar to that in HIV-seronegative women.

Conclusion The similar low cumulative incidence of any SIL among HIV-seronegative and HIV-seropositive women with CD4 counts greater than 500/µL and with normal cervical cytology and HIV-negative test results suggests that similar cervical cancer screening practices may be applicable to both groups, although this strategy warrants evaluation in an appropriate clinical trial.

JAMA. 2006;295:1471–1477

Cervical cancer screening recommendations in the United States have been recently updated and now advise using an interval of 3 years between screenings in healthy women 30 years or older who have normal cytology results and who test negative for oncogenic (cancer-associated) human papillomavirus (HPV) DNA.

The recommended interval is 6 to 12 months for women with normal cytology results and detectable oncogenic HPV. If no HPV test is conducted, 3 consecutive normal annual Pap smears (Pap) smear results are required before the Pap smear frequency is changed to once every 2 or 3 years. Support for these recommendations comes from several large observational studies.

However, guidelines for human immunodeficiency virus (HIV)-seropositive women have not been revised since 1999. Because of the increased risk of cervical cancer in HIV-infected women, guidelines for these women should include recommendations for cervical cancer screening.
Focus Group: May 13, 2015

10 WIHS participants:

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV status</td>
<td></td>
</tr>
<tr>
<td>HIV+</td>
<td>9</td>
</tr>
<tr>
<td>HIV-</td>
<td>1</td>
</tr>
<tr>
<td>Race/ethnicity</td>
<td></td>
</tr>
<tr>
<td>African-American</td>
<td>7</td>
</tr>
<tr>
<td>Latina</td>
<td>3</td>
</tr>
<tr>
<td>Age range</td>
<td></td>
</tr>
<tr>
<td>40-49</td>
<td>5</td>
</tr>
<tr>
<td>50-59</td>
<td>4</td>
</tr>
<tr>
<td>60-69</td>
<td>1</td>
</tr>
<tr>
<td>Year infected</td>
<td></td>
</tr>
<tr>
<td>1980s</td>
<td>3 (1981/83/86)</td>
</tr>
<tr>
<td>1990s</td>
<td>3 (1991/92/98)</td>
</tr>
<tr>
<td>2000s</td>
<td>3 (2008/10/11)</td>
</tr>
</tbody>
</table>
Concerns


(2) **The future** – “I just want to grow old gracefully and not be hurting every day”

(3) **Family** - “When I get older, I don’t want to be a burden on my kids”
   “I had the box sent to me”

(4) **Stigma** – “We women don’t take care of ourselves. When society is telling us we’ve done something wrong, that just gets worse.”

(5) **Disclosure** - “I don’t want [my HIV status] to be something that someone can hang over my head”
Legacy

“We haven’t forgotten the women who came before us and have passed – but how can we honor them and still maintain confidentiality?”

“I hope our names will go on until they find a cure. Don’t forget us. That way our names can live on and our children can benefit from all we have done.

Don’t forget us”