Despite Accelerating We Female - IDU There HIV Deaths We Persons 50-59 Conclusions Information Among 40-49 Persons Among CD4 Male-to-98x38 The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

Analyses were adjusted for missing risk factor information. Prevalence ratios adjusted for other potential covariates. Laboratory tests, including all values of CD4 cell counts and VL recent viral load test result in the 12 months before death. Death if they had ≥1 CD4 or viral load (VL) test results, and in prevention's (CDC) National HIV Surveillance System to death among persons living with HIV. Achieve a suppressed viral load are essential to reduce morbidity and disparities in care, treatment, and viral suppression among some U.S. populations, in particular among persons who never had late stage disease (Table). The percentage with late stage disease in the 12 months before death among persons aged 13 years and older was 16.0% among blacks compared with whites (PR: 0.80; 95% CI: 0.75, 0.86).

There were few (5%) deaths among persons 10-15 years old; viral suppression was significantly lower in this age group compared with those aged 20-39 years or older (Figure 3). Persons with infection attributed to injection-drug use had higher care levels compared with MSM (Table 4). The percentage of persons with a viral load <200 copies/mL was lower among persons with HIV infection attributed to heterosexual contact compared with MSM.

Among the 84% of persons with disease ever classified as stage 3 (AIDS), 42% had a CD4 count <200 cells/µL compared with 30% among persons who never had late stage disease (PR: 0.52; 95% CI: 0.46, 0.59).

HIV Care During the Last Year of Life
H. Irene Hall1, Lorena Espinoza1, Shericka Harris2, Jing Shi2
1Division of HIV/AIDS Prevention, Centers for Disease Control and Prevention, Atlanta, GA; 2ICF International, Atlanta, GA

BACKGROUND

Several substantial decreases in deaths due to HIV since the introduction of ART, death due to HIV remains a leading cause of death among some U.S. populations, in particular among persons aged 20 to 44 years old and Blacks/African-Americans.

Retention in continuous medical care and effective treatment to achieve a suppressed viral load is essential to reduce morbidity and mortality, as well as the potential for the onward transmission of the virus.

Deaths due to HIV may reflect difficulties with accessing medical services, HIV treatment, and treatment adherence, and disparities exist in outcomes along the continuum of care.

Little information is available about care and care outcomes before death among persons living with HIV.

METHODS

We used data from the Centers for Disease Control and Prevention's (CDC) National HIV Surveillance System to determine disease stage, care visits, and viral suppression within 12 months before death among persons infected with HIV who died in 2012.

Persons were considered to be in care within 12 months before death if they had ≥1 CD4 or viral load (VL) test results, and in continuous care if they had ≥2 CD4 or VL test results at least 3 months apart.

Viral suppression (VL <200 copies/mL) was based on the most recent viral load test result in the 12 months before death.

HIV infection is reported in all U.S. jurisdictions; however, not all areas have implemented reporting of HIV-related laboratory tests, including all values of CD4 cell counts and VL tests, which allow assessment of care. Therefore, we used data from 18 jurisdictions with complete reporting of HIV-related tests to CDC (Figure 1).

The analysis included persons who were diagnosed in the selected areas, died in 2012 in the selected areas, and were ≥13 years old at time of death.

We determined statistical differences among groups with prevalence ratios adjusted for other potential covariates. Analyses were adjusted for missing risk factor information.

RESULTS

Among 7,348 persons with HIV who died in 2012, 47% had stage 3 (AIDS), 36% had stage 2, and 17% unknown stage disease (Table). The percentage with late stage disease was highest among younger persons aged 20-39 years, all race/ethnicity groups compared with whites, and those infected perinatally.

Overall, 86% of persons who died had ≥1 CD4 or viral load test, 66% had ≥2 tests at least 3 months apart, and 42% had a suppressed viral load (Figure 2). While the percentages in care were similar or higher among Asians, Hispanics/Latinos, and two or more races compared with whites, the percentage with viral suppression was significantly lower among blacks compared with whites (PR: 0.80; 95% CI: 0.75, 0.86).

Among the 84% of persons with disease ever classified as stage 3 (AIDS), 42% had a CD4 count <200 cells/µL compared with 30% among persons who never had late stage disease (PR: 0.52; 95% CI: 0.46, 0.59).

CONCLUSIONS

The majority of persons infected with HIV who died in 2012 died after a year before death. However, almost half had late stage disease, and there were disparities in late stage disease and viral suppression by race and age.

Notably, the percentage of persons diagnosed with late stage disease is lower among younger persons compared with older persons; the percentage with late stage disease among the young who died was high and viral suppression was low.

Generally, the percentage of blacks diagnosed late is comparable to that of whites; however, at the time of death the percentage with late stage disease was higher and the percentage with viral suppression was lower among blacks.

Persons with late-stage disease or who did not have a suppressed viral load may represent persons who were diagnosed late, did not receive adequate care and treatment, or patients with treatment failure. The majority of persons with late-stage or AIDS at death (5) in any one-year period, yet only 4 to 10 had a suppressed viral load.

Factors that may influence care, treatment, and viral suppression include access to care, prescription patterns, treatment adherence, and other socioeconomic barriers.

Accelerating efforts to improve along the continuum of care for all persons with HIV can help avoid deaths from HIV in the future and reduce HIV-related disparities.

LIMITATIONS

Data were available for 18 U.S. jurisdictions, representing 50% of all persons with HIV aged 13 years who died during 2012, and may not be representative of all persons with HIV who died in the United States that year.

Information was not available on comorbidity, or HIV treatment and adherence.

Conclusions cannot be drawn on the cause of death; however, many persons who died had advanced disease and cause of death information from death certificates may understate deaths due to HIV.

CD4 and viral load testing reflect HIV care but may not adequately capture end-of-life care.

Table 1. Characteristics of persons aged ≥13 years who died in 2012, by selected characteristics—18 U.S. jurisdictions.

<table>
<thead>
<tr>
<th>Category</th>
<th>Total</th>
<th>White</th>
<th>Black</th>
<th>Hispanic/Latino</th>
<th>White</th>
<th>Black</th>
<th>Hispanic/Latino</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age at death</td>
<td>13-19</td>
<td>20-29</td>
<td>30-39</td>
<td>40-49</td>
<td>50-59</td>
<td>60-64</td>
<td>65-74</td>
</tr>
</tbody>
</table>

Figure 1. Percentages with different measures of care among persons aged 20-74 years who died in 2012, by selected characteristics—18 U.S. jurisdictions.

Figure 2. Care and viral suppression within 12 months before death, among persons aged 213 years who died in 2012, by race/ethnicity—18 U.S. jurisdictions.

Figure 3. Care and viral suppression within 12 months before death, among persons aged 213 years who died in 2012, by transmission category—18 U.S. jurisdictions.

Figure 4. Care and viral suppression within 12 months before death, among persons aged 213 years who died in 2012, by sex/transmission category—18 U.S. jurisdictions.