We stratified the continuum by underlying cause of death (COD) (HIV-related). CD4 and viral load (VL) tests from surveillance were used to measure CD4 and viral load (VL). Data source: NYC HIV Surveillance Registry.

Among PWH with HIV-related COD (83% vs. 78%), but VS was substantially lower (34% vs. 46%). Half (47%) of all deaths were HIV-related (Figure 1). Retention in care was higher among persons ≥60 years. By risk, men who have sex with men had the lowest retention rate (81%), and persons with a history of injecting drugs had the highest (47%).

A total of 12,010 PWH died during 2007-2013 in New York City; 11,187 PWH were ever linked to care after HIV diagnosis (95% of retained in care, based on 2013 NYC Medical Monitoring Project) and persons ≥60 years. By risk, men who have sex with men had the lowest retention rate (81%), and persons with a history of injecting drugs had the highest (47%).

Table 1. Characteristics of NYC PWH who died during 2007-2013 and were eligible for analysis

<table>
<thead>
<tr>
<th>Sex</th>
<th>Race/Ethnicity</th>
<th>Age</th>
<th>Retained in care during intervenable period</th>
<th>Ever started ART</th>
<th>Presumed ever started ART</th>
<th>Viral suppression in the intervenable period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>White</td>
<td>0-12</td>
<td>20.0%</td>
<td>98.0%</td>
<td>97.5%</td>
<td>95.0%</td>
</tr>
<tr>
<td>Male</td>
<td>Black</td>
<td>0-12</td>
<td>20.0%</td>
<td>98.0%</td>
<td>97.5%</td>
<td>95.0%</td>
</tr>
<tr>
<td>Male</td>
<td>Hispanic</td>
<td>0-12</td>
<td>20.0%</td>
<td>98.0%</td>
<td>97.5%</td>
<td>95.0%</td>
</tr>
<tr>
<td>Male</td>
<td>Other/Unknown</td>
<td>0-12</td>
<td>20.0%</td>
<td>98.0%</td>
<td>97.5%</td>
<td>95.0%</td>
</tr>
</tbody>
</table>

Data as reported to the NYC DOHMH as of September 30, 2014.

Results (Continued)

The stratified HIV-related continuum revealed disparities in VS (Figure 2). Despite comparable retention rates, Whites had higher VS (42%) than Blacks (32%) and Hispanics (33%). Retention and VS increased with increasing age at death: 75% of persons ≥60 years had ever started ART; 47% (N=5,217) were clinically well-managed; and 40% (N=4,518) were virally suppressed (VL≤200 cc/mL).

This analysis did not include persons who died within 15 months of their HIV diagnosis. Misclassification of COD on death certificates is possible. For example, there were persons who were virally suppressed at death or during the intervenable period could be underestimated. Analysis limited to persons living in and/or accessing care in NYC. HIV care activity outside NYC is not reported to NYC HIV surveillance, and thus the prevalence of PWUD is not captured.

Strengths and Limitations

- Analysis limited to persons living in and/or accessing care in NYC. HIV care activity outside NYC is not reported to NYC HIV surveillance, and thus the extent of care patients received during the intervenable period could be underestimated.
- Analysis uses an estimate of 14% of PWH unaware of their HIV diagnosis; this proportion is likely lower in NYC now, and so viral suppression rates might be underestimated.
- Misclassification of COD on death certificates is possible. For example, there were persons who were virally suppressed at death or during the intervenable period, but were classified as having HIV as the underlying cause of death.

Conclusions

- Although retention was high among NYC PWH who died during 2007-2013, VS was low, at nearly half that among all persons living with HIV in NYC (64% in 2013).
- High retention coupled with low VS suggests the need to develop strategies to improve VS and address psychosocial and structural barriers to optimal clinical management.
- The HIV Mortality Reduction Continuum of Care is a novel framework for evaluating pre-dead care outcomes among PWH and identifying opportunities for intervention.

Next Steps

- This analysis did not focus on persons who died within 15 months of their HIV diagnosis (N=832 persons during 2006-2012 in NYC, 6.9% of all deaths). This is an important area for further analysis.