

**586. The Aging Epidemic: Virologic Control, Immunologic Recovery, Treatment Regimens, and Clinical Outcomes Among Older Adults Living with HIV in Washington, DC**

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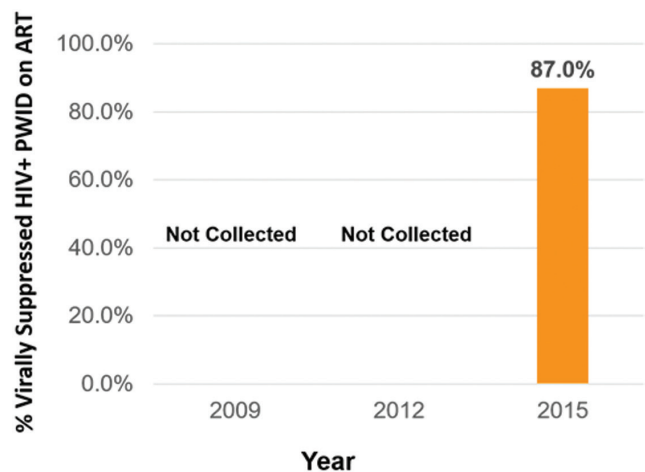
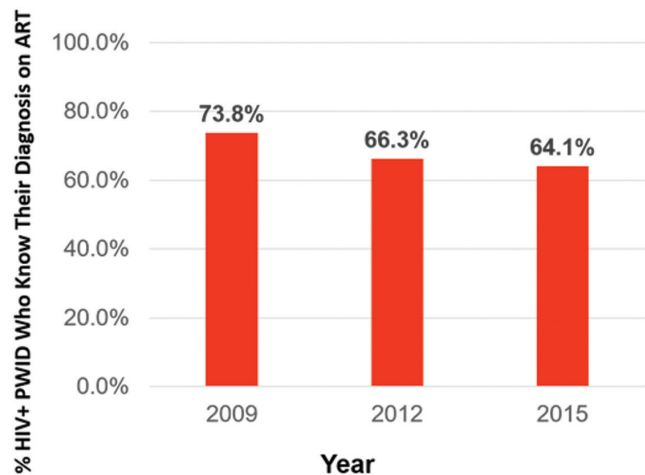
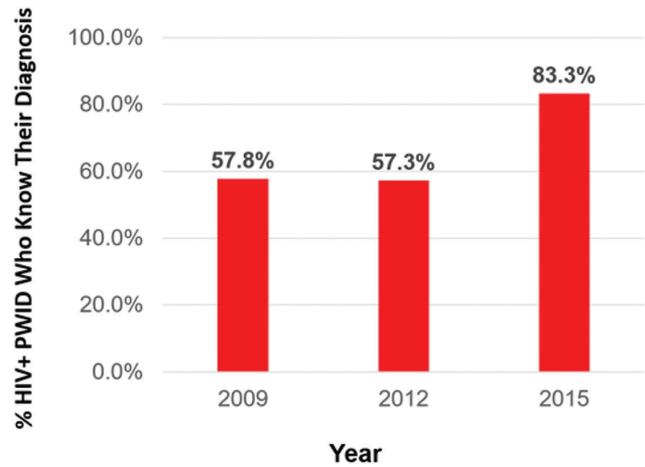
**Background.** As the number of older people living with HIV (PLWH) in the US rises, there is a need to identify factors that lead to poorer clinical outcomes. This study aimed to identify age-based disparities in virologic, immunologic, and clinical disease control.

**Methods.** We analyzed data from the DC cohort, a longitudinal observational cohort of patients receiving HIV care at 15 clinics in 2011–2016 in Washington, DC. We compared 608 patients aged ≥60 years with 832 patients aged 18–35 years. *t*-Test and Wilcoxon rank-sum test were conducted for continuous variables, and chi-square or Fisher's exact tests for categorical variables.

**Results.** Older patients reported less MSM-related (25% vs. 60%, *P* < 0.0001) and more IDU-related (18% vs. 0.5%, *P* < 0.0001) HIV acquisition than younger patients. The proportion of older patients with CD4 >500 cells/uL was higher at enrollment (56% vs. 53%, *P* = 0.0067), but lower at CD4 nadir (18% vs. 21%, *P* < 0.0001) and at most recent recording (60% vs. 69%, *P* = 0.0003). Younger patients were more likely to have HIV VL >200 copies/mL at enrollment (35% vs. 11%, *P* < 0.0001), recently (18% vs. 6%, *P* < 0.0001), and peak VL >100,000 copies/mL during the study period (15% vs. 4%, *P* < 0.0001). Viral re-emergence after initial suppression was less common in older PLWH overall (27% vs. 39%, *P* < 0.0001), but more common in older patients infected for ≥10 years (29% vs. 22%, *P* = 0.0607). There was a shift toward novel ART regimens (TAF and INSTI) during the study period, with more older patients on an INSTI by its end (59% vs. 50%, *P* = 0.0007). Among older patients, 23% had chronic kidney disease (CKD), and 24% had a serum creatinine rise of ≥150% during the study period. Of patients with CKD, 16% remained on TDF. The incidence of malignancies during the study period was 3.5% among younger and 14.3% among older patients). These were mainly (92.2%) non-AIDS-defining cancers.

**Conclusion.** Older PLWH in DC have a high burden of complications related to renal dysfunction, lower CD4 counts, and non-AIDS-defining malignancies; those with longer duration of infection also had more viral re-emergence. Opportunities to improve care include closer monitoring for resistant virus and new cancers, and consideration of ART regimens with high efficacy and better renal safety profiles.

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**587. HIV Care Outcomes Among PWID in San Francisco, 2009–2015**

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**Background.** Around 16% of HIV infections in the United States are among persons who inject drugs (PWID). PWID have a higher mortality than other persons living with HIV due to delayed diagnosis, lower use of antiretroviral therapy (ART), and other factors. Understanding the specific barriers to virologic suppression, however, is challenging as PWID are less likely to engage in care. Here we present trends in HIV care indicators for PWID in San Francisco from 2009 to 2015, using a novel system of behavioral health surveys. These data will inform international and local initiatives for population-level HIV control, such as San Francisco's "Getting to Zero" initiative and UNAIDS's "90-90-90" targets.

**Methods.** We used data from serial cross-sectional surveys of PWID conducted in 2009, 2012, and 2015 as part of the CDC-led National HIV Behavioral Surveillance system. PWID were recruited using respondent-driven sampling, in which PWID refer their peers to the surveys. We tracked the number of PWID who were: (i) living with HIV, (ii) knew their HIV status, (iii) were on ART, and (iv) for 2015 only, were virally suppressed (self-reported).

**Results.** HIV prevalence among PWID was 11.4% in 2009, 12.0% in 2012, and 16.8% in 2015. The percentage of PWID living with HIV who knew their HIV+ diagnosis remained stable (57.8% in 2009; 57.3% in 2012) before increasing to 83.3% in 2015. Among PWID who knew their HIV status, the proportion reporting they were currently taking ART declined from 73.8% in 2009 to 66.3% in 2012 to 64.1% in 2015. In 2015, the only year the question was asked, 87.2% of HIV+ PWID reported that their most recent viral load was suppressed.

**Conclusion.** We successfully tracked trends in engagement in HIV care among PWID from 2009 to 2015. Our data are notable for an apparent improvement in HIV diagnosis over time, a persistent gap in treatment with ART, and—in 2015—a relatively high rate of self-reported viral suppression when on ART. All three measures fall short of the UNAIDS 90-90-90 goals. The decline in getting PWID on ART from 2009 to 2015 is particularly concerning and warrants additional linkage to care and retention efforts. This is especially important given the high rates of viral suppression PWID can achieve once on ART, as seen in our study and other reports from published literature.

**588. Retrospective Analysis of Clinical Characteristics and Treatment Patterns Among HIV Patients with Commercial and Medicare Advantage Health Insurance in the United States**

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**Background.** With modern antiretroviral (ARV) regimens, HIV infection has evolved into a manageable chronic condition. The ultimate goal of treatment is to maximize the virologic suppression of HIV virus while minimizing intolerance,