Disparities in the HIV Continuum of Care: A State Level Analysis

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Background

• The HIV Continuum of Care (HCC) is currently utilized as a framework for assessing health outcomes for persons living with HIV (PLWH), with national, state and local initiatives designed to improve linkage, retention and viral suppression among this population.

• One of the goals of the National HIV/AIDS Strategy is to reduce HIV-related health disparities and analyzing the HCC measures by socio-demographic characteristics can measure progress towards this goal over time.

Persons Newly Diagnosed with HIV, 2013: VA and US

Rate (per 100,000 population) of New HIV Diagnoses: 2013[1]
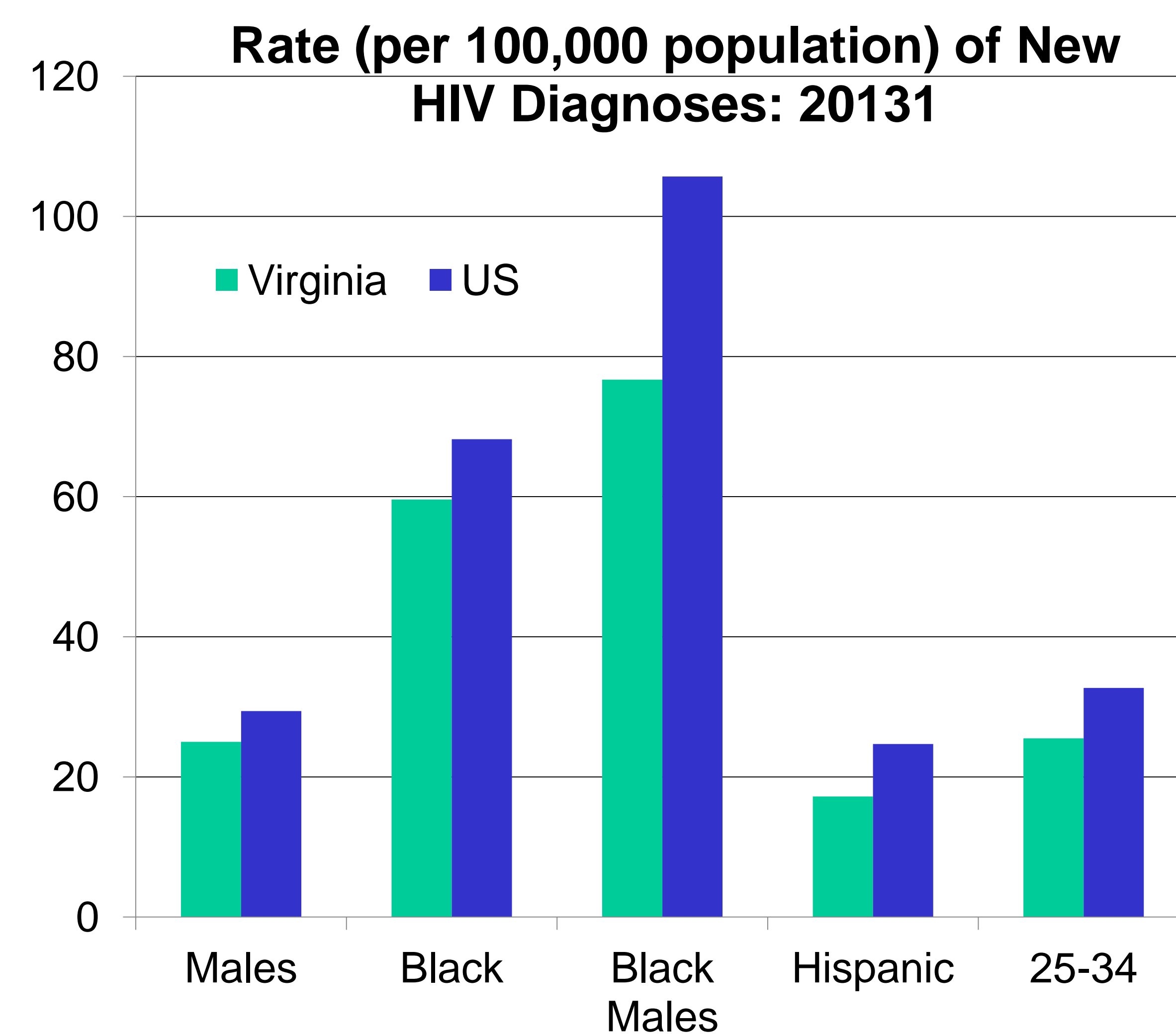
Continuum of Care in Virginia 2013 and 2014
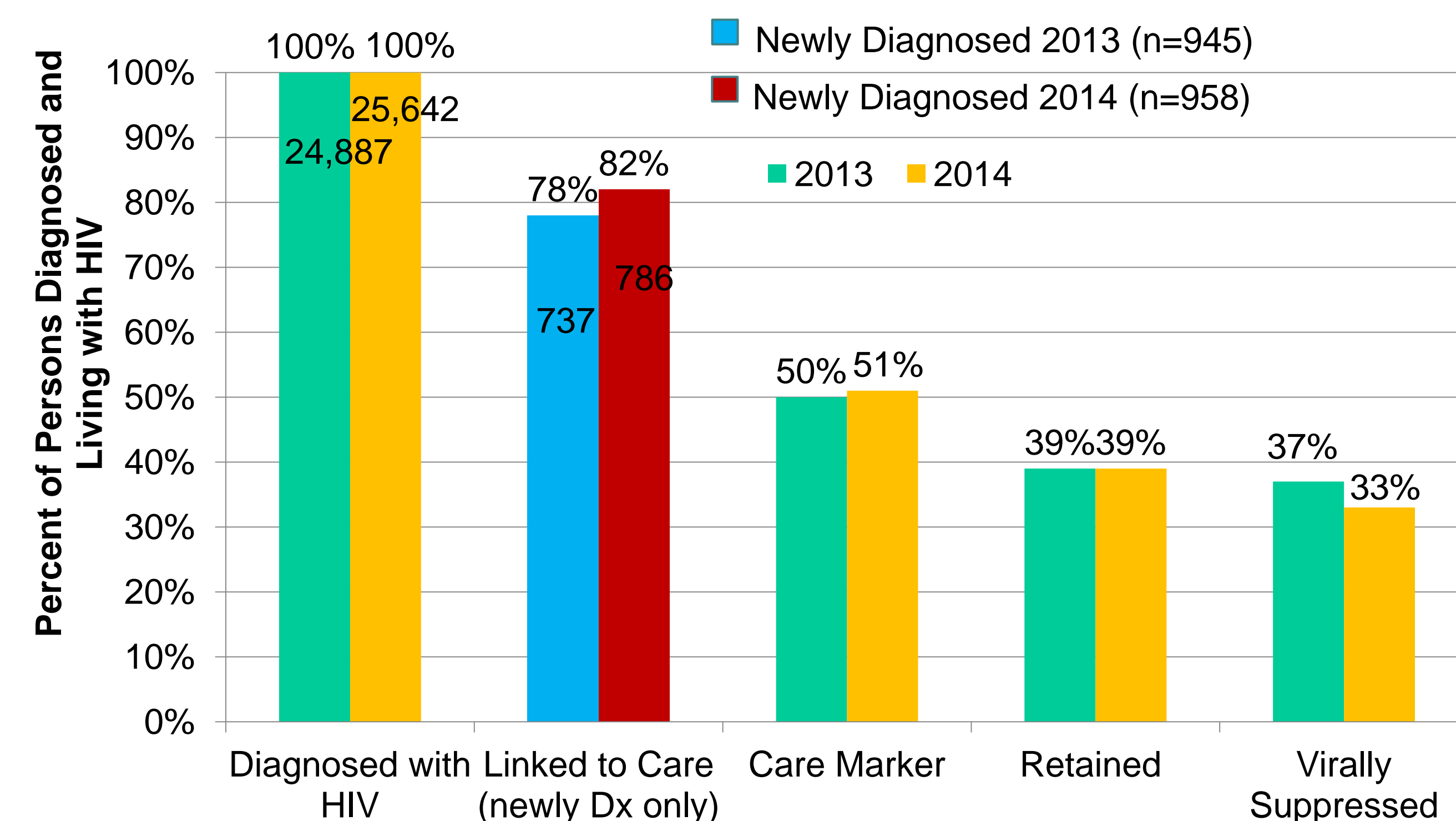
Data and Definitions for Assessing Disparities

• **Care Markers Database:** Contains information on care markers for PLWH from several sources, including HIV Surveillance, Ryan White, AIDS Drug Assistance Program, Medicaid, and others

• **Care Markers:** Defined as evidence of a viral load, CD4 count, HIV-related medical visit or antiretroviral therapy (ART)

• **Linkage:** Care Marker within 90 days of initial HIV diagnosis

• **Retention:** 2 Care Markers in a 12-month period at least 90 days apart

• **Viral Suppression:** Last viral load in 12 month period at < 200 copies/mL

• **Demographics:** Sex at birth, race/ethnicity, transmission risk (Men who have sex with Men (MSM)), age

• **Care Access:** Participation in Ryan White program

Methods for Disparities Analysis

• Multiple logistic regression models were run to examine the association between demographics and linkage, retention and suppression.

• Final models were adjusted utilizing Ryan White program participation variable, as this provided a proxy for access to medications and medical care.

• Adjusted Odds Ratios (aORs) were reported.

• N for Linkage =928, N for Retention, Suppression=25,440

Results: All PLWH 2014

Table 1: Adjusted Odds Ratios for HCC Outcomes, 2014 aORs (95% Confidence Interval)*

Variable	Linkage	Retention	Suppression
Male	2.1 (1.7,2.6)	.26 (.25,.27)	.30 (.29,.32)
Black	1.5 (1.2,1.9)	.33 (.31,.34)	.31 (.29,.32)
MSM risk	2.3 (1.8,3.0)	.36 (.34,.37)	.38 (.37,.40)
Black Male	1.4 (1.1,1.9)	.36 (.34, .38)	.36 (.34,.38)
Age 25-34	1.6 (1.2, 2.2)	.51 (.47,.55)	.50 (.46,.54)
Ryan White	11.6 (8.4,16.1)	1.9 (1.8, 2.0)	1.2 (1.2, 1.2)

* Odds Ratios Adjusted for Participation in Ryan White Program

Analysis: Ryan White Clients Only

• Further analysis done to determine if disparities existed within the Ryan White population on the HCC measures

• N for Linkage = 491, N for Retention, Suppression = 11,965

Results: Ryan White Clients Only

Table 2: Adjusted Odds Ratios for RW HCC Outcomes, 2014 ORs (95% Confidence Interval)*

Variable	Linkage	Retention	Suppression
Male	10.5 (7.4,15.0)	1.9 (1.8, 2.0)	1.2 (1.1,1.3)
Black	9.1 (6.3,13.2)	1.9 (1.8,2.0)	1.1 (1.0,1.2)
MSM risk	11.1 (7.3,16.8)	2.0 (1.9,2.1)	1.2 (1.2,1.3)
Black Male	7.9 (5.2,11.8)	1.9 (1.8,2.0)	1.1 (1.0, 1.1)
Age 25-34	12.9 (7.2,23.4)	1.8 (1.7, 2.0)	1.0 (.9,1.1)*

* Result not significant at p < .05

Summary of Disparities

ALL PLWH
• Males were more likely than females to be initially linked to care but less likely to be retained in care and virally suppressed.

• Those identifying as black race were more likely to be linked, but less likely to be retained and virally suppressed than persons in other racial/ethnic groups, as were black males.

• MSM were more likely to be linked but less likely to be retained and virally suppressed than those in other risk transmission groups (such as heterosexual).

• Those between 25 and 34 were more likely to be linked to care but less likely to be retained and virally suppressed than other age groups.

• Ryan White participation was associated with better linkage, retention and suppression.

RYAN WHITE ONLY
• Males more likely than females to be linked, retained, and virally suppressed than females.

• Those identifying as black race more likely to be linked, retained, and virally suppressed than those of other racial/ethnic groups, as were black males.

• MSM were more likely to be linked, retained and virally suppressed than those in other transmission groups.

• Those age 25-34 more likely to be linked and retained but not suppressed than those in other age groups.

Care Continuum Framework for Disparity Analysis

• Receipt of Ryan White services associated with increased outcomes across the HCC.

• For all PLWH, initial linkage to care appears to be associated with those groups with higher rates of HIV infection (males, black, younger age) but this association is not seen in retention and suppression rates.

• The associations change for those accessing Ryan White services where increased associations are seen in retention and suppression for those with higher rates of HIV in the population.

• Ryan White traditionally serves underinsured or uninsured persons, with close to 2/3 of clients in Virginia at or below the Federal Poverty Level (FPL), compared to the overall Virginia population where only 10% of the population is below the FPL.[2]

Next Steps

• Examine interactions of race/ethnicity, sex at birth, transmission risk, age, and other potential disparity indicators, including insurance status, income, and health region.

• Explore differences by clinic to determine if Ryan White providers have better HCC outcomes, even for non-Ryan White clients.

• Continue Data to Care efforts to identify those not retained in care to determine dispositions, including gaps in both data and care systems.

• Improve data systems for tracking outcomes across the HCC and produce continuums at least twice a year by demographic groups, including by sex at birth, gender, race/ethnicity, transmission risk, age, and health region to track changes over time.

References

[1] CDC Atlas, accessed at http://gis.cdc.gov/GRASP/NCHHSTPAtlas/main.html

[2] HRSA Ryan White State Profiles, 2012. Accessed at http://hab.hrsa.gov/stateprofiles/Client-Characteristics.aspx#chart6.

Acknowledgments