

# Health Equity, Housing, and HIV: Analysis of the RWHAP Annual Client-Level Data

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## Introduction

Housing instability, defined as being unable to pay rent, overcrowding, housing cost burden, and frequent residential moves, is strongly linked to poor physical and mental health and reduced access to health care. Ryan White HIV/AIDS Program (RWHAP) data show that clients with temporary or unstable housing have the lowest percentages of viral suppression although the rates of viral suppression for both temporarily housed and unstably housed clients increased markedly between 2010 and 2017. RWHAP data also show that, regardless of race/ethnicity, RWHAP clients with temporary housing and unstable housing had significantly lower rates of retention in care than clients with stable, permanent housing. A recent study showed that the use of patient navigation models to create a network of services for unstably-housed RWHAP clients improved housing stability and HIV-related outcomes such as retention in care, antiretroviral therapy prescription, and viral suppression.

## Findings

### Prevalence of HIV

**Figure 1** shows the prevalence of HIV by United States county, 2012-2015. The highest prevalence (in red) is in the southeastern U.S.

### Housing and HIV correlations

**Table 1** shows the correlation between four housing variables and HIV prevalence.

- Homeownership was inversely associated with HIV prevalence ( $\gamma = -0.34$ ).
- Severe housing cost burden was associated with increased rates of HIV prevalence ( $\gamma = 0.42$ ).
- Non-white/white residential segregation was associated with increased rates of HIV prevalence ( $\gamma = 0.11$ ).

### Viral Suppression

Viral suppression keeps the immune system working, prevents illness, and prevents the transmission of HIV to others when maintained at undetectable levels. In 2017, 86 percent of the Ryan White HIV/AIDS Program clients were virally suppressed, up from 70 percent in 2010, and exceeding the national average of 57 percent. **Figure 2** shows viral suppression rates for clients served by the Ryan White HIV/AIDS Program, by housing status and race/ethnicity in the United States and Territories of Guam, Puerto Rico, and the U.S. Virgin Islands in 2017.

- RWHAP clients with stable housing (blue bar) have the highest rate of viral suppression (87.2 percent) regardless of race/ethnicity.
- RWHAP clients with unstable housing (yellow bar) have the lowest rates of viral suppression (71.4 percent) regardless of race/ethnicity.
- RWHAP clients with temporary housing (orange bar) have a viral suppression rate of 79.2 percent regardless of race/ethnicity.

Viral suppression rates are significantly lower among Blacks, American Indians/Alaska Natives, and Native Hawaiians/Pacific Islanders compared with non-Hispanic Whites, although all racial/ethnic groups experienced improvement in viral suppression between 2010 and 2017.

### Retention in Care

People who stay in lifetime treatment can live longer, prevent complications from HIV, and prevent transmission through sex. **Figure 3** shows retention in care among male clients served by the Ryan White HIV/AIDS Program by housing status and race/ethnicity in the U.S. and Territories of Guam, Puerto Rico, and U.S. Virgin Islands, 2017.

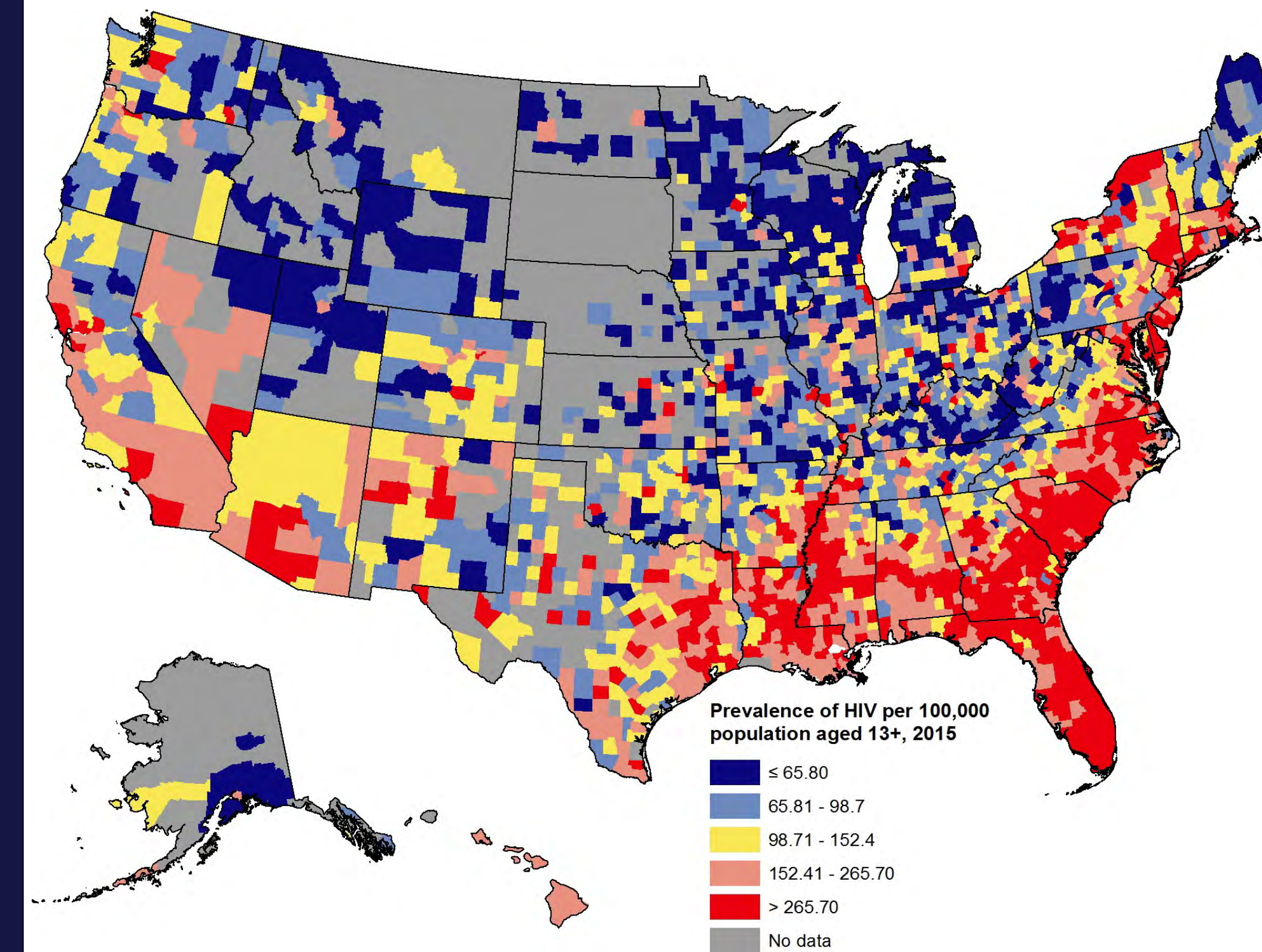
- Male RWHAP clients with stable housing (blue bar) have the highest retention care (81.3 percent), regardless of race/ethnicity.
- Male RWHAP clients with unstable housing (green bar) have the lowest retention (72.6 percent), with the exception of American Indian/Alaska Natives. In that group, men with temporary housing have the lowest retention in care.
- Male RWHAP clients with temporary housing (light blue bar) have a retention in care rate of 75.6 percent overall.

The impact of housing stability on retention in care is stronger for men than for women.

## References

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2. Health Resources and Services Administration. *Ryan White HIV/AIDS Program Annual Client-Level Data Report 2017*. Rockville, Maryland: U.S. Department of Health and Human Services; 2018. <https://hab.hrsa.gov/sites/default/files/hab/data/datareports/RWHAP-annual-client-level-data-report-2017.pdf>. Accessed June 18, 2020.
3. Rajabium S, Tryon J, Feaster M, et al. The influence of housing status on the HIV continuum of care: results from a multisite study of patient navigation models to build a medical home for people living with HIV experiencing homelessness. *American Journal of Public Health*. 2018; 108(S7):S539-S545.

**Figure 1: HIV Prevalence Rate, United States, 2012-2015 (3,144 Counties)**

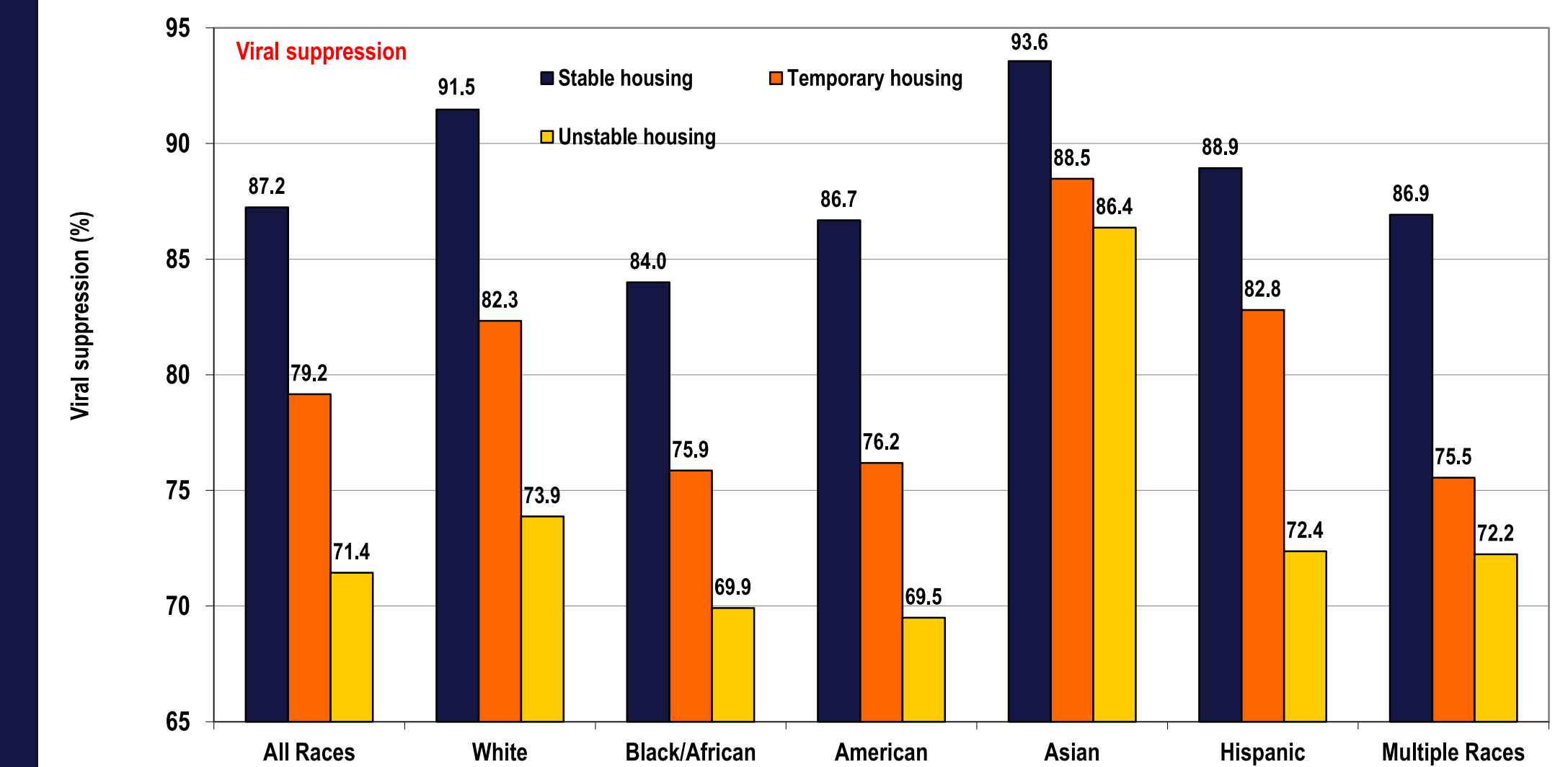


**Table 1: Correlation Between Housing Variables and HIV prevalence rate, United States, 2015**

Housing Variables	HIV prevalence rate, 2015	p-value
Home ownership rate (%) 2013-2017 N = 3,142 counties	-0.33768	<.0001
Severe housing problem (%) 2010-2014 N = 3,141 counties	0.27805	<.0001
Severe housing cost burden (%) 2013-2017 N = 3,127 counties	0.41957	<.0001
Non-White/White residential segregation 2012-2016 N = 2,786 counties	0.11383	<.0001

Source: Data derived from the 2018-2019 County Health Rankings and Roadmaps.

**Figure 2: Viral Suppression (%) among Ryan White HIV/AIDS Program Clients, by Housing Status and Race/Ethnicity, United States and Territories of Guam, Puerto Rico, and the U.S. Virgin Islands, 2017**



**Figure 3: Retention in Care (%) among Male Clients of the Ryan White HIV/AIDS Program, by Housing Status and Race/Ethnicity, United States and Territories of Guam, Puerto Rico, and the U.S. Virgin Islands, 2017**

