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Homelessness and HIV in Alameda County

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Homelessness is Rising in Alameda County

Social determinants of health are conditions in the environments that affect a wide range of health, functioning, and quality-of-life outcomes.[1] Unsurprisingly, housing has a major influence on health outcomes. Individuals who are housing insecure are more likely to have risk behaviors (e.g., smoking and lack of daily activity) and to delay doctors' visits. Housing insecurity is also associated with poorer physical and mental health outcomes. [2]

The link between housing and health is of heightened concern in the San Francisco Bay Area, including Alameda County, because of a growing housing crisis. There is a currently a shortfall of almost 60,000 affordable homes in the county.[3] Rents are high and low-income residents are increasingly vulnerable to homelessness. A recent Alameda County Point in Time (PIT) count revealed there to be 8,022 people who are either unhoused (6,312) or in shelters (1,710).[4] This represents an increase of 43% since 2017. Similarly, the 5,629 individuals who were experiencing homelessness in 2017 had represented a 39% increase over the numbers in 2015. (Note: the change in counts between 2015 and 2017 may have been due in part to alterations to the counting methodology. However, agencies across the county that worked with homeless individuals also reported increases in demand for services, suggesting that numbers of homeless had risen irrespective of the county methodology changes.) By contrast, counts before 2015 had been fluctuating by less than 10% and were trending downward.

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[1] The Institute of Medicine. Disparities in Health Care: Methods for Studying the Effects of Race, Ethnicity, and SES on Access, Use, and Quality of Health Care, 2002.

[2] Sathre, et al. 2015. Housing Insecurity and the Association with Health Outcomes and Unhealthy Behaviors, Washington State, 2011. Preventing Chronic Disease Public Health Research, Practice, and Policy. Volume 12, E109.

[3] California Housing Partnership Corporation. How Alameda County's Housing Market is Failing to Meet the Needs of Low-income Families. May 2014.

[4] http://everyonehome.org/wp-content/uploads/2019/05/FAQ-2019-EveryOne-Counts-County-Numbers-Release.pdf

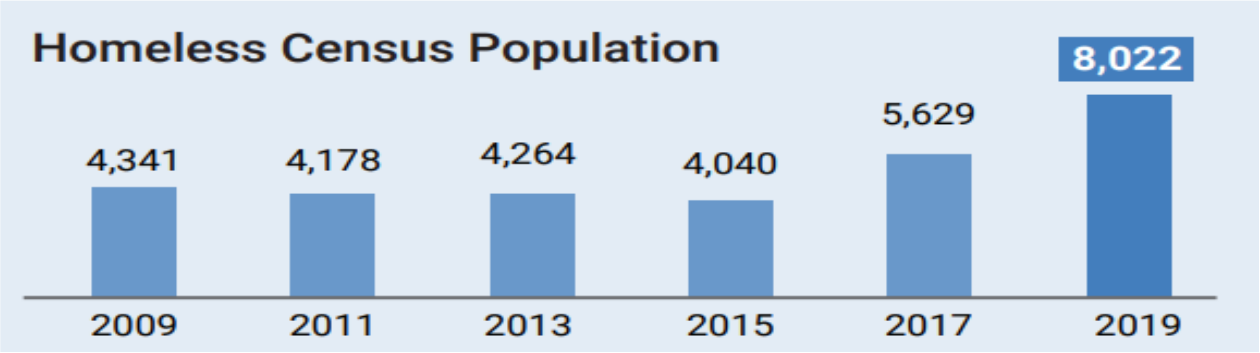

Figure 1. Homeless Census population during the point in time count over time. [4]

Homeless and Unstably Housed Individuals are at Higher Risk of HIV

The 2019 PIT count also helped to highlight important health disparities associated with homelessness. Five percent of the individuals who were identified as homeless reported HIV/AIDS as a current health condition. By contrast, HIV prevalence in Alameda County's overall population is 0.4% (393.3 per 100,000 residents).[5] This stark difference reflects the degree to which people living with HIV (PLWH) are disproportionately overrepresented among the county's homeless population. The rising numbers of people facing housing instability thus points to the potential for significant and growing HIV-related treatment challenges.

Housing has been shown to have a substantive impact on HIV risk, as well as outcomes along the Care Continuum[6]. Those who are homeless are more likely to have sexual HIV transmission risks and a higher number of sexual partners, as well as more likely to exchange sex for money or drugs. Housing insecurity is also associated with less reliable adherence to antiretroviral therapy (ART) and a reduced likelihood of viral load suppression (VLS). These outcomes in turn put clients at risk of HIV-related complications and potentially lead to a greater number of days in a hospital or long-term care facility, an increased need for home care, and higher costs associated with inpatient care.[7]

According to the *HIV in Alameda County 2016-2018 Epidemiology Report*, 88.4% of 730 individuals newly diagnosed with HIV during the three-year reporting period were linked to care within three months of diagnosis. Among 5,741 people living with HIV who were residents of Alameda County for all of calendar year 2016, 58.4% were retained in care (using HRSA's definition of two medical visits at least 90 days apart) and 70.5% achieved virally suppression,

[5] HIV in Alameda County, 2015-2017. Alameda County Public Health Department HIV and Epidemiology and Surveillance Unit. December 2018.
[6] HUD report on the impact of housing on the HIV Care Continuum. 2017. See also: Aidala et al. 2016. Housing Status, Medical Care, and Health Outcomes Among People Living with HIV/AIDS: A Systematic Review. American Journal of Public Health. 106:95, e1-e23.
[7] Dunn et al. 2018. Risk Factors, Health Care Resource Utilization, and Costs Associated with Nonadherence to Antiretrovirals in Medicaid-Insured Patients with HIV. Journal of Managed Care & Specialty Pharmacy.

defined as ≤200 copies/mL.[8] These timely linkage and retention outcomes are similar to ones observed statewide and nationally, whereas the County's viral suppression outcome is better than the state and national averages.[9]

HIV Care Outcomes in the Ryan White HIV/AIDS Program Differ by Client's Housing Status

Homeless and other vulnerable PLWH are likely to receive HIV-related care and services through the federally funded Ryan White HIV/AIDS Program. Overall, among PLWH who received care in 2018 at a Ryan White-funded provider in the county, 84% were virally suppressed, defined here as ≤200 copies/mL (figure 1).[10] Nationally, Ryan White clients tend to show better care continuum outcomes than those observed for all PLWH.[11]

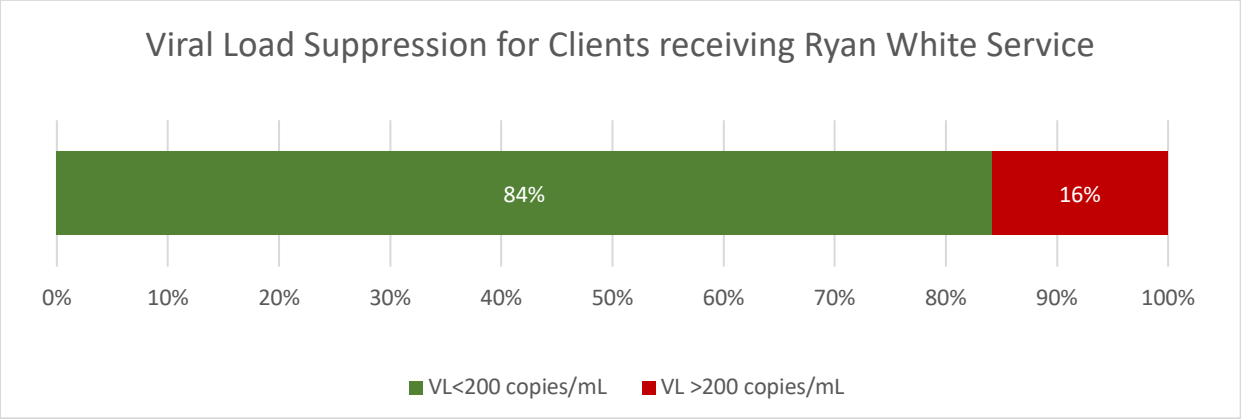

Figure 1. Viral load suppression among clients receiving Ryan White Services in Alameda County

Among county Ryan White clients, there is suggestive evidence of a dose-dependent relationship between VLS and housing status. Figure 2 displays outcomes for 964 such clients for whom housing status data were reported. A smaller proportion of those with unstable housing (76%) achieved VLS than those with temporary (82%) or stable/permanent (85%) housing (X^2 =5.22, p=.074). Although this difference did not meet the traditional cut off for statistical significance, the dose dependent trend remains concerning. Not all Ryan White-

[8] HIV in Alameda County, 2015-2017. Alameda County Public Health Department HIV and Epidemiology and Surveillance Unit. December 2018.
[9] Ibid.
[10] The county's Ryan White HIV/AIDS Program data are reported into the AIDS Regional Information and Evaluation System (ARIES). A client's services and outcomes are included in the report if the client has been diagnosed with HIV and obtains services at a provider who receives any Ryan White funding, regardless of whether the client's specific services were in fact funded by the program.
[11] Health Resources and Services Administration. Ryan White HIV/AIDS Program. Annual Client-Level Data Report. Ryan White HIV/AIDS Program Services Report. 2017. Retrieved from: https://hab.hrsa.gov/sites/default/files/hab/data/datareports/RWHAP-annual-client-level-data-report-2017.pdf. Access date: April 23, 2019.

funded agencies reliably include client housing status in their data reports, and the agencies that struggle most with up-to-date reporting are also ones that tend to serve more vulnerable clients and have somewhat lower VLS outcomes. These dynamics suggest that the true difference in VLS between unstably and stably housed patients in the county's Ryan White funded settings may in fact be greater than the proportions displayed in Figure 2.

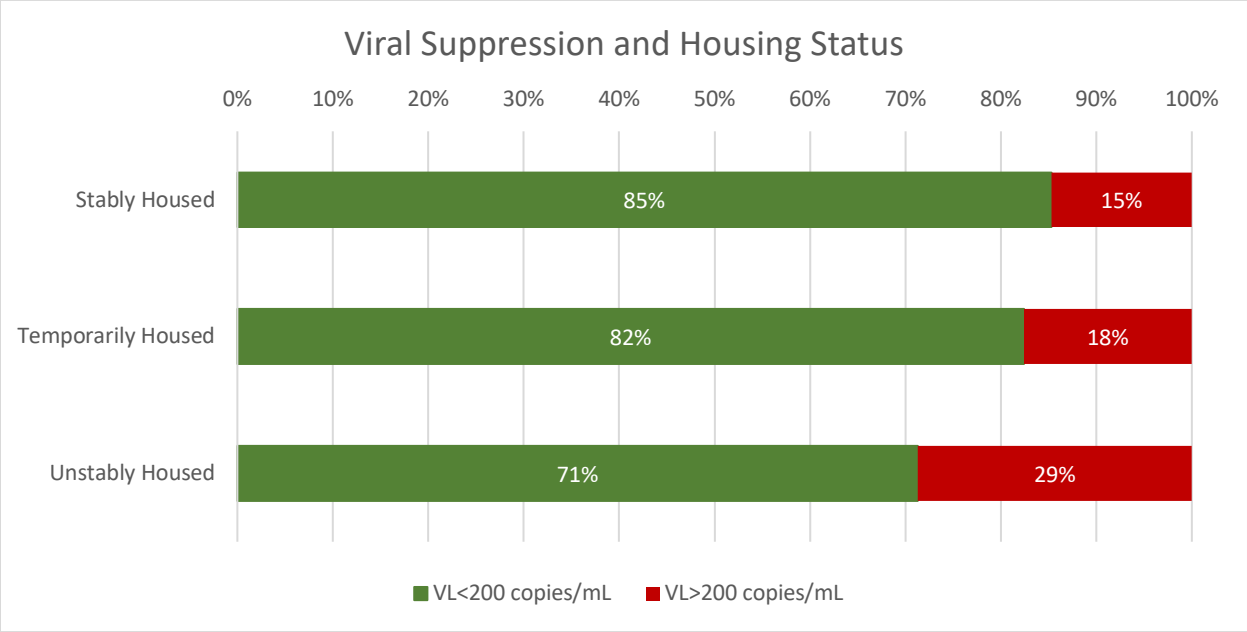

Figure 2. Viral load suppression and housing among individuals receiving Ryan White funded Services

To explore further the disparate outcomes among homeless clients in Ryan White Program settings, we also looked at outcomes by type of service received in 2018, specifically Outpatient Ambulatory Health Services (OAHS) and Medical Case Management (MCM) .[12] As reflected by Figure 3, the proportion of clients achieving VLS was relatively comparable across these two service categories. By contrast, clients who received MCM were more likely than OAHS clients to be unstably housed (Figure 4). This difference may be due to how the programs are directed. OAHS consists of primary HIV medical care and, thus, is a service recommended for all PLWH (who are not otherwise covered by Medi-Cal, private insurance, or another healthcare payor source). MCM is directed specifically to clients who are vulnerable to falling out of HIV care. It helps connect clients with medical care, food, housing, transportation, legal services, emergency financial assistance, and many other services to support their well-being and engagement in care. Given the greater focus on vulnerable clients, it is unsurprising to observe a relatively higher proportion of unstably housed individuals among the people served by MCM.

[12] Comparisons by service category only reflect those clients who received a service directly funded by the Ryan White HIV/AIDS Program and for whom housing status information was available. There were 510 such clients receiving MCM and 163 receiving OAHS. The numbers for OAHS are likely lower because many clients now have their primary HIV-related medical care funded through Medi-Cal or an insurance plan as a result of Affordable Care Act reforms.

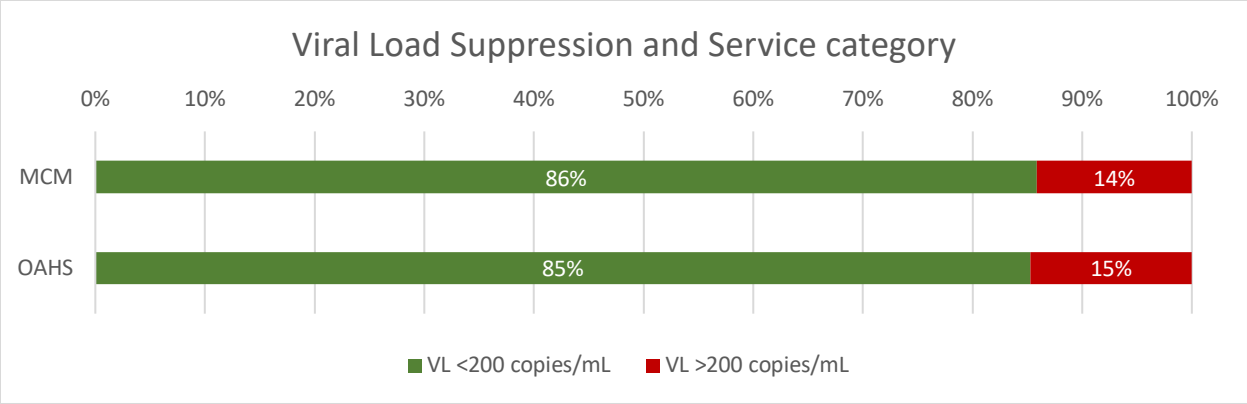

Figure 3. Viral load suppression among clients receiving highly utilized service categories.

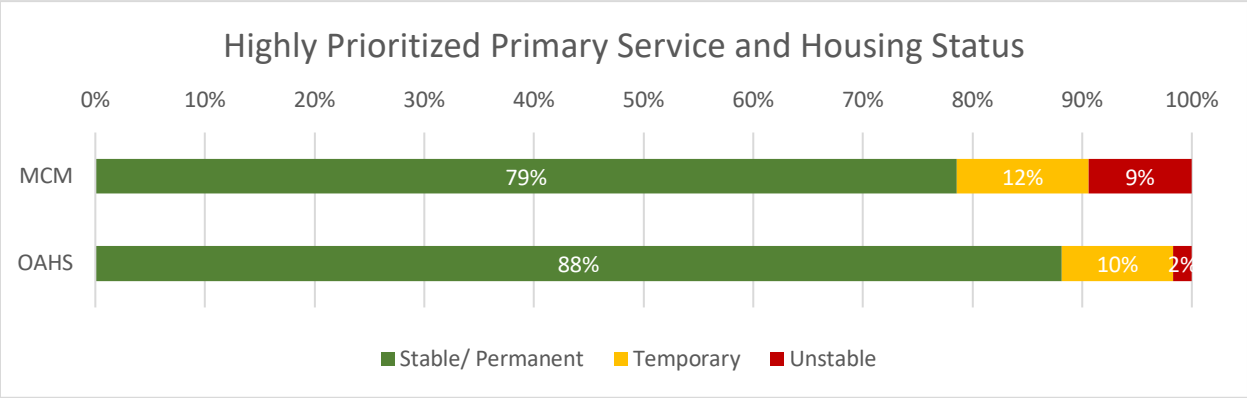

Figure 4. Housing status among clients receiving highly utilized service categories.

Table 1 provides a breakdown of MCM and OAHS clients by VLS and housing status. In line with earlier observed differences (see Figure 2), only 73% of unstably housed clients in MCM achieved VLS, compared to 86% of stably housed clients, a statistically significant difference (X^2=6.215, p=.045). We were not able to test for statistical difference among clients receiving OAHS, as there were too few observations for those with unstable housing. However, it is worth noting that neither of the two unstably housed clients in OAHS had achieved VLS whereas 86% of stably housed clients had done so.[13]

MCM	**VL <200**	**VL >200**
Stable	346	55
Temp	53	8
Unstable	35	13
Total	434	76

X^2= 6.215, p=0.045

OAHS	**VL <200**	**VL >200**
Stable	125	19
Temp	14	3
Unstable	0	2
Total	139	24

X^2= not reliable due to small n

Table 1: Association between viral load suppression and housing status for clients receiving MCM and OAHS.

[13] Other Ryan White funded services are not discussed here as there were too few observations (i.e., clients who received the service and for whom housing status data were available) to permit meaningful comparisons.

Implications and Recommendations

These data highlight the challenges of successfully delivering HIV care to homeless and unstably housed clients. PLWH who receive care in Ryan White funded settings in Alameda County tend to be less likely to achieve viral suppression if they are not stably housed. The difference achieves statistical significance when comparing VLS outcomes specifically among housed vs. homeless PLWH who are receiving MCM. Such a finding is concerning because MCM is designed specifically for those who are known to be facing engagement in care challenges. Its standards of care include developing medical care plans with clients, coordinating care, monitoring client needs and progress on care plans, needs assessments, treatment and adherence counseling, advocacy and review, orientation and health education, and providing client referrals to other support services. Despite the service's comprehensiveness, disparate outcomes in VLS remain for homeless and unstably housed clients.

Concerns are further amplified when one considers the larger backdrop in which our findings were obtained. The total numbers of homeless and unstably housed clients in the Ryan White Program data are well below what would be expected given the program's focus on vulnerable populations and the total number of homeless individuals known to be living in the county. The low numbers in the Ryan White data are likely due in part to underreporting of housing status information by providers. But they also appear to be due to reduced accessing of services by homeless individuals. Unfortunately, this pattern of results suggests very unfavorable outcomes for homeless clients who are not currently benefitting from Ryan White services. Again, when we consider that the overall VLS rate is 70.5% for all PLWH across the county but the VLS rate for unhoused and unstably housed clients in Alameda County is over 70%, there is a benefit to clients to receiving services through the Ryan White network of providers. Clients who are unstably housed and accessing Ryan White services do as well as the aggregated population of people living with HIV in Alameda County.

Given the significant association between housing status and VLS, even among clients accessing existing MCM services, we recommend adding homeless street outreach to medical case management standards of care, as well as adding a non-brick and mortar approach to providing medical services. Services should focus outreach to homeless encampments and shelters where homeless individuals seek services. Care should be provided in a way that meets the client where they are. Many of the clinics and community-based organizations that provide Ryan White services already take a client centered approach. By incorporating homeless outreach and services, this client centered approach can be expanded to better serve a highly vulnerable population. A client centered model for homeless individuals could include:

- Intentional collaboration between departments within Alameda County Health Care Services Agency.
- Cross-agency teams for conducting street-based outreach and provision of services.

- Co-locating HIV medical services with food or legal services already being accessed by homeless individuals.
- Directing more resources for Early Intervention services (EIS) to reach unstably housed clients and bridging EIS with Mental Health services. This would help improve access to mental health services for unstably housed PLWH.
- Expanding clinic hours and developing pop-up clinics for HIV screening and rapid linkage/ re-linkage to care.
- Clearer collaboration between housing case management and HIV case management to ensure clients have access to multiple levels of support
- Well defined linkage protocols from emergency departments to HIV care providers

Each of these steps would potentially increase access to medical care, improve retention in care, and ultimately improve VLS among homeless and unstably housed PLWH, thereby helping to achieve objectives delineated in Alameda County's Getting to Zero plan.

Acknowledgements

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