HIV Care Continuum Report, 2021

Data as of April 2022

To view the tables used to create the following figures, see the HIV Care Continuum Report • Tables.

Michigan Department of Health & Human Services

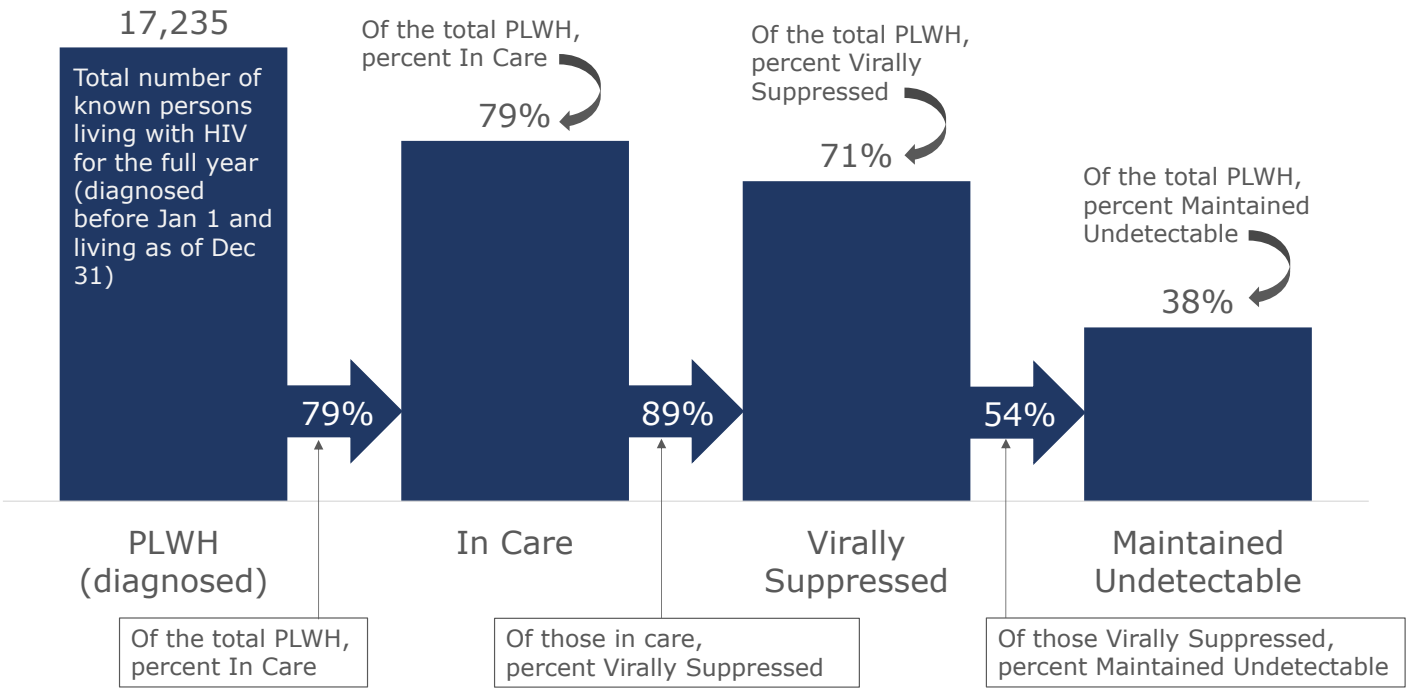
GRETCHEN WHITMER, GOVERNOR | ELIZABETH HERTEL, DIRECTOR

For a .pptx copy of the slide set email
Jennifer Miller: MillerJ93@Michigan.gov

What's new in 2021

- Compared to 2020, care outcomes improved during 2021. However, the proportion of persons living with HIV (PLWH) in care remains lower than 2019, especially for individuals not enrolled in Ryan White *(slide 27)*.
- The largest care disparity is between those enrolled and not enrolled in Ryan White *(slides 11, 26, 27)*. Population level viral suppression will only improve if care among non-Ryan White enrollees improves. Preliminary analyses not included in this slide deck indicate a large portion of non-Ryan White enrollees out of care are eligible for Ryan White. Additional disparity information has been added *(slides 11-12)*.
- Care outcome goals have been updated to reflect the 2030 Ending the Epidemic goals (95-95-95) from 2020 baselines. Graphs display midpoint goals for 2025 *(slides 9, 14)*.
- Telehealth ramped up during 2020. Based on new data from Ryan White, HIV labs (CD4s & viral loads) are still excellent proxies for care, and most patients using telehealth still receive HIV labs *(slide 10)*.
- Age groups with low care rates appear to be changing – away from 15-29 year olds and into the 24-39 age groups as the cohort ages *(slides 23, 24)*.
- The estimated undiagnosed is now Michigan specific *(slides 6, 36)*. Previously the national average was used. Additionally, the Michigan vs. National Care Continuum was updated with 2018 figures *(slide 36)*.

Anatomy of the HIV Care Continuum



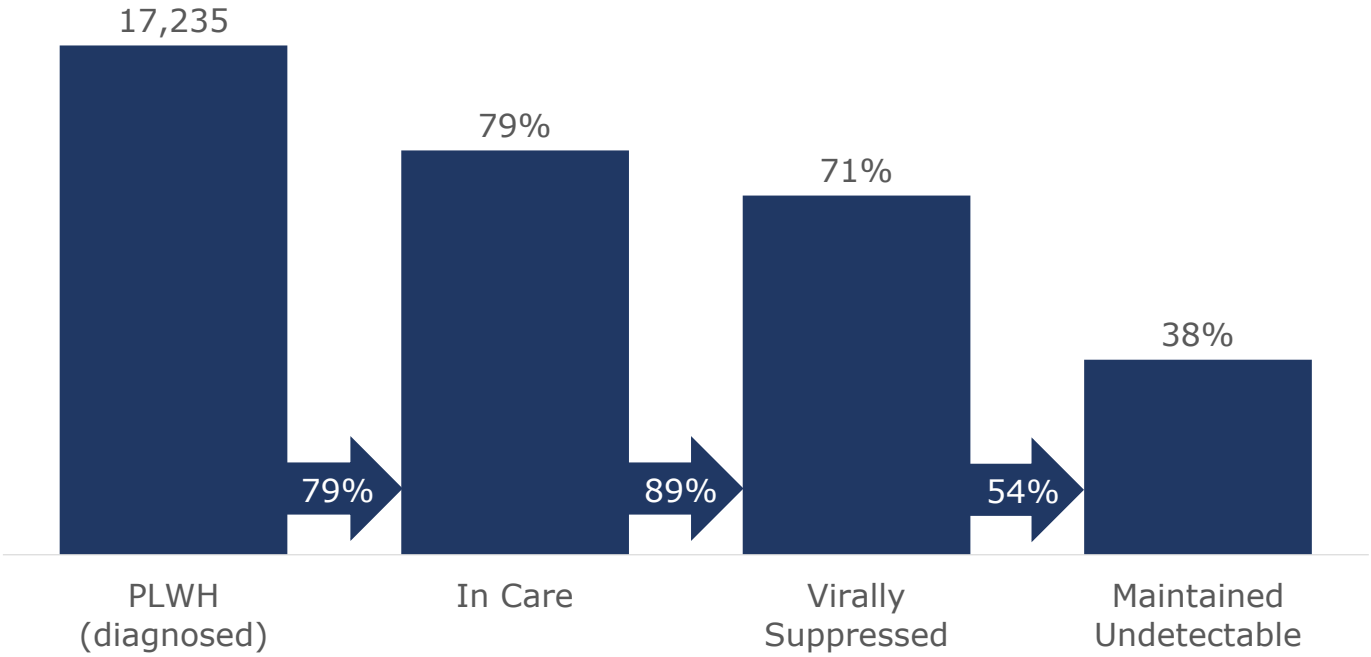
The HIV Care Continuum - also referred to as the Continuum of Care (CoC) or Treatment Cascade - was developed by the CDC to assess gaps in care.

PLWH (diagnosed) is the total number of known persons living with HIV (PLWH) for the full year (diagnosed before January 1 and living as of December 31 of the given year).
In Care includes all diagnosed PLWH who received at least one CD4, viral load, or genotype lab test during the given year.
Virally Suppressed (VS) includes PLWH with less than 200 copies of HIV virus per milliliter of blood (<200c/mL) according to their last viral load lab test during the given year.
Maintained Undetectable (MU) includes virally suppressed individuals who maintained viral load levels <200c/mL for at least 4-8 months.

At each step along the CoC, the transmission rate decreases with 5.3 transmissions per 100 PLWH among those diagnosed but not in care[1], and zero sexual transmissions occurring among those who maintain and monitor a suppressed viral load (the maintained undetectable stage)[2]. Consistent suppression of the virus is an indication of routine access to care and treatment adherence. Those who maintain and monitor a low viral load (MU) have the best long-term prognosis in addition to being unable to transmit the virus sexually.

[1]Skarbinski J, Rosenberg E, Paz-Bailey G, Hall I, Rose C, Viall A, et al. (2015) Human Immunodeficiency Virus Transmission at Each Step of the Care Continuum in the United States. JAMA Intern Med.doi:10.1001/jamainternmed.2014.8180
[2]PreventionAccess.org

Michigan Care Continuum, 2021

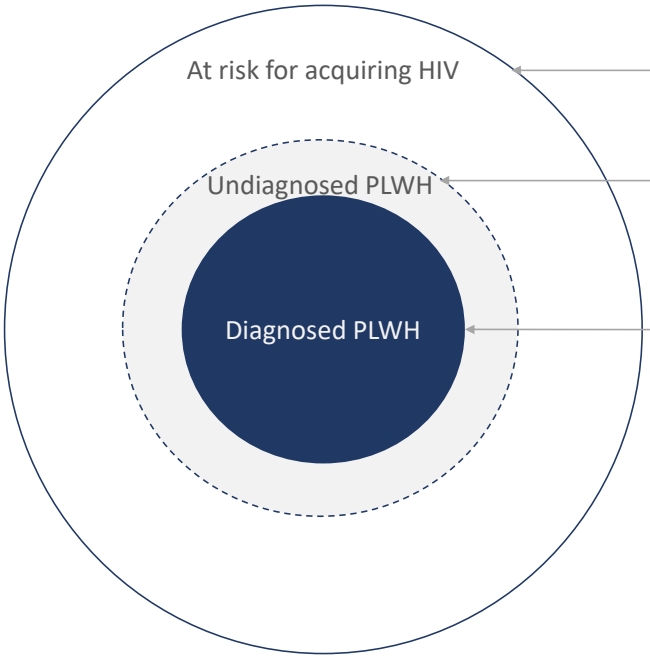


PLWH (diagnosed) - PLWH diagnosed before Jan 1 and alive Dec 31 of the given year.
In Care - PLWH with at least 1 CD4, viral load, or genotype lab test during the given year.
Virally Suppressed - PLWH with less than 200 copies of HIV virus per milliliter of blood (<200c/mL) according to their last viral load lab test during the given year.
Maintained Undetectable - PLWH who maintained viral load levels <200c/mL for at least 4-8 months.

For a .pptx copy of the slide set email
Jennifer Miller: MillerJ93@Michigan.gov

Upstream from the Care Continuum

From persons at risk to those newly diagnosed with HIV, critical prevention and care activities are needed.



Prevention activities aimed at reducing or mitigating the risk of HIV.

Testing activities to reduce the number of PLWH unaware of their status.

Early linkage activities to quickly link newly diagnosed PLWH into medical care and to other needed support resources.

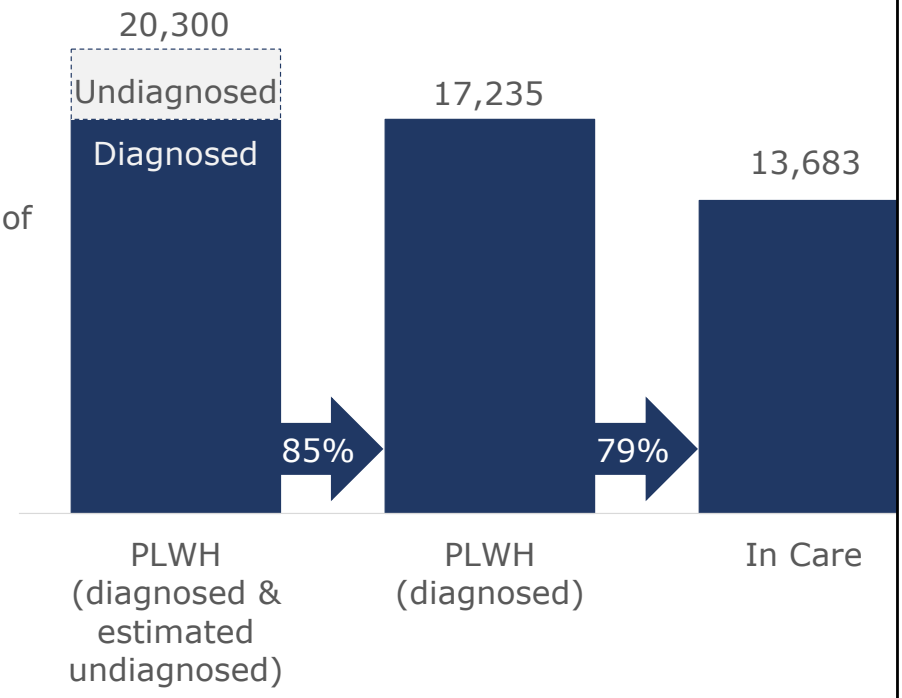
It's important to remember the care continuum is only useful in assessing need gaps among *diagnosed* PLWH. Upstream from the care continuum are three crucial stages:

1) Prevention
2) Early testing
3) Rapid linkage

Upstream from the Care Continuum

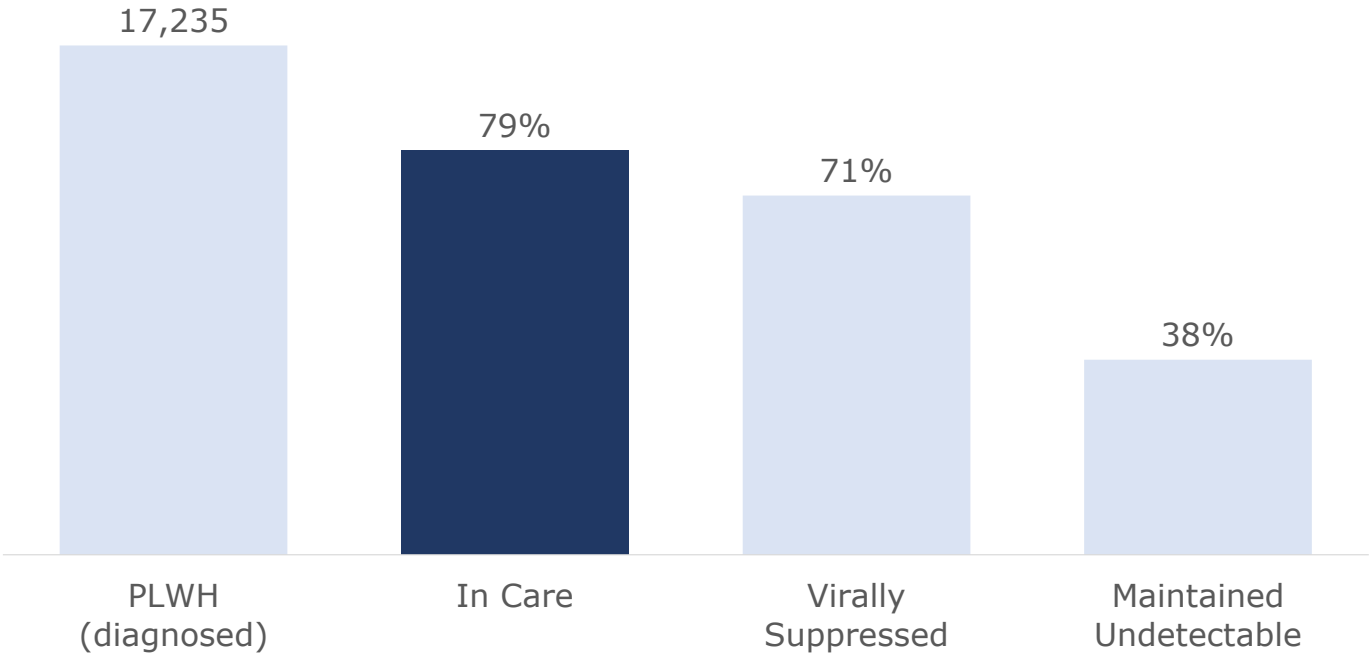
An estimated
15.1%
of PLWH in Michigan are unaware of their status (undiagnosed).

That's
3,000
people



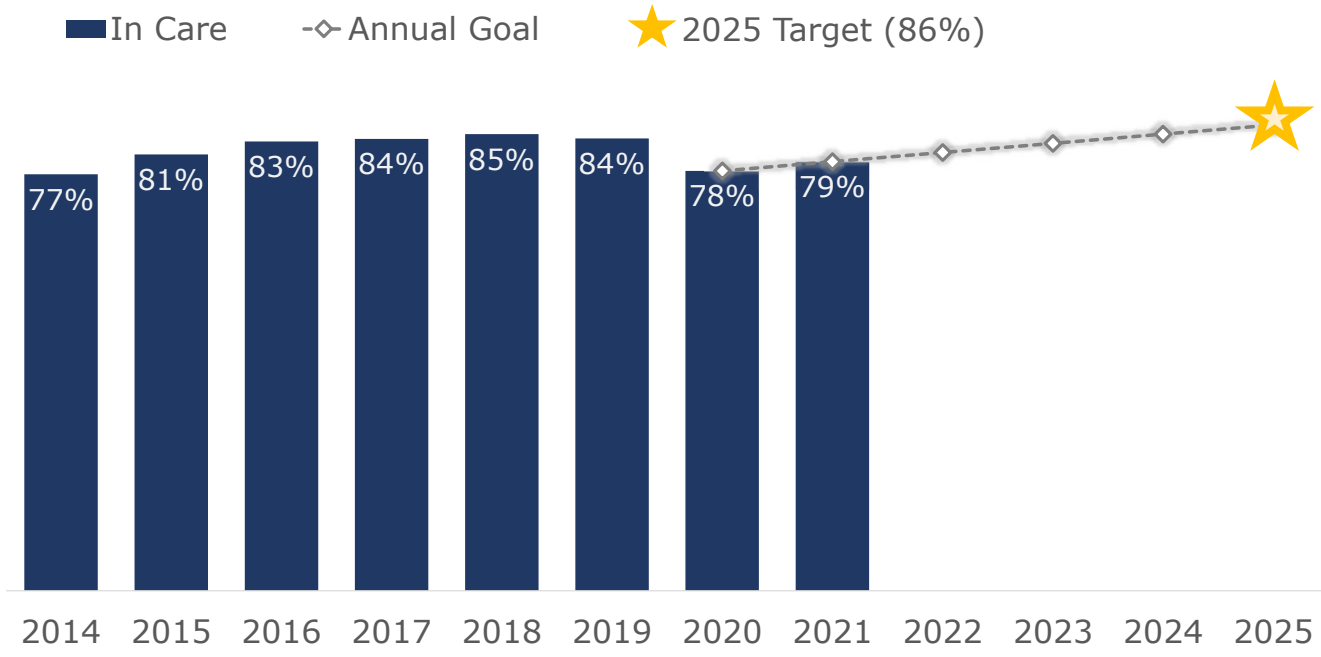
Michigan Care Trends and Disparities

In Care – Michigan, 2021



In Care - PLWH with at least 1 CD4, viral load, or genotype lab test (proxies for medical care visits) during the given year.
The proportion In Care is the number of PLWH in care divided by the total number of *diagnosed* PLWH.

In Care – Michigan



Getting into care is the first step toward achieving viral suppression, improving an individual's prognosis, and reducing transmission risk. In Michigan, the target is to increase the proportion of PLWH In Care (at least one CD4, viral load, or genotype test during the year) from 78% in 2020 to 95% in 2030. Therefore, the midpoint target is 86% by 2025. During 2021, care rates improved enough to meet the annual goal. With 2020 as baseline, the 2025 goal is essentially a 5-year target to recuperate care rates observed pre-COVID. While the COVID-19 pandemic had a major affect on care visits during 2020 and 2021, the stagnation of care rates from 2016-2019 indicate other barriers are preventing Michigan from reaching the 2030 goal.

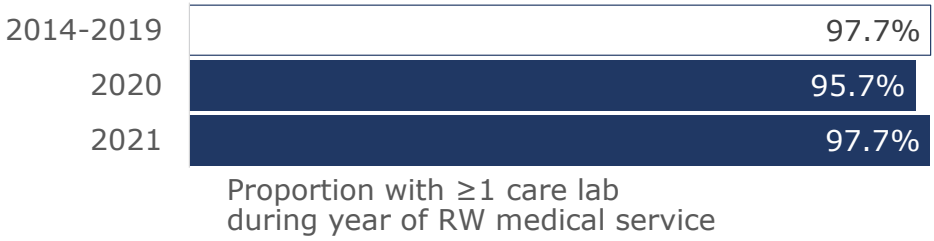
Low or stagnating care rates have a cascading affect – persons not in care cannot achieve viral suppression. This lowers community viral suppression levels, which increases community transmission risk. In order to reduce HIV transmissions at a population level, more PLWH in the state need to be in care. This stage of the Care Continuum (engaging and retaining PLWH in care) should be the primary focus of HIV care programs.

For assistance getting into care, visit the Link Up Michigan website: LinkUpMI.com

Note: The 2025 Target is derived from Ending the Epidemic and UNAIDS Fast-Track 95-95-95 goal: by 2030, 95% of PLWH are aware of their status, 95% of diagnosed PLWH are in care, and 95% of person in care are virally suppressed. This is an update from the 2020 90-90-90 goal. Baseline for Ending the Epidemic strategies in the U.S. is 2017 (not 2020). However, we chose to shift the baseline to 2020 so the annual goals indicate how well we're recovering. Maintaining annual goals from 2017 only tells us what we already know – COVID-19 set us back.

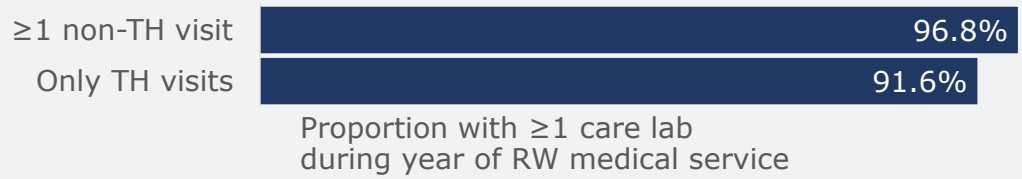
Telehealth and HIV care labs

Labs are still good proxies for care
Of Ryan White (RW) clients receiving medical services, the proportion receiving at least one lab during the same year remained high through 2020 and 2021.



Breaking down 2020-2021

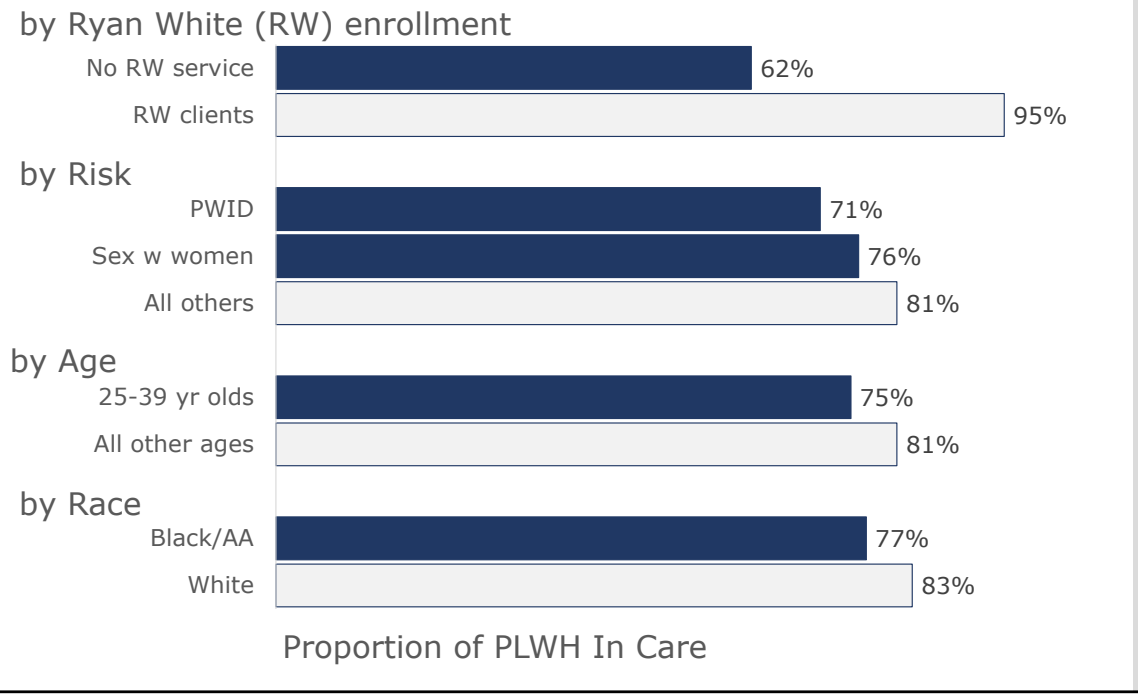
Labs are even good proxies for telehealth (TH) visits (just not as good).
RW clients who *only* received telehealth medical services in a year were less likely to have a lab than those with at least one in person visit.



Ryan White medical services include Medical New Routine, Medical New Complex, Medical Return Routine, Medical Return Complex, Medical Telehealth Return Routine, Medical Telehealth Return Complex, Medical Telehealth New Routine, Medical Telehealth New Complex, EIS Linkage to Medical Care Confirmed, and MCM HIV Specialist Confirmed.

While RW clients who only received telehealth medical services were statistically significantly less likely to receive an HIV care lab (Fisher's exact, p=0.0058), the proportion who did receive a CD4, viral load, or genotype was still very high (91.6%). Only 1.4% of Ryan White clients (n=119) received only telehealth medical services. 98.6% received at least one in-person medical service. Results were similar when EIS Linkage to Medical Care Confirmed, and MCM HIV Specialist Confirmed services were excluded.

Care disparities



Also…

Transgender persons

Persons with unstable housing

Persons on Medicaid or lacking health insurance

Persons living below the poverty line

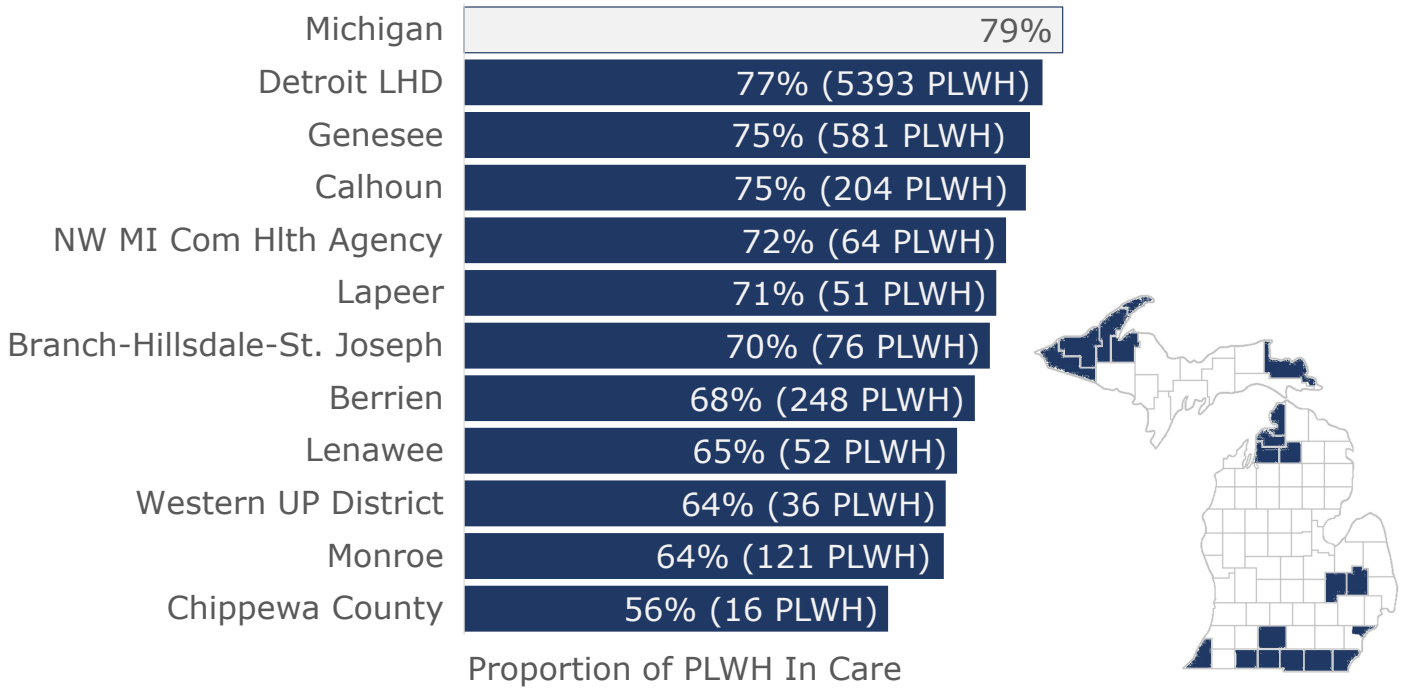
Some populations face significant barriers to receiving HIV care. The populations represented by dark blue bars experience lower care rates compared to the reference groups (light grey bars). Information regarding gender, housing status, health insurance, and income are often only reported among persons in care. Therefore, care rates cannot be reliably calculated for all groups of Michiganders living with HIV. However, based on available information (mainly viral suppression), it is very likely these groups also experience low care rates. See "Care Continuums" beginning on slide 17 for more information.

Disparity effects are compounding. Populations encompassing multiple low-care groups (e.g. 25-29 year olds not enrolled in RW) are usually less likely to be in care than populations falling into only one low-care group.

Notes:

- Previously, 15-29 year olds were the focus population. See slide 24 for more information on this shifting demographic.

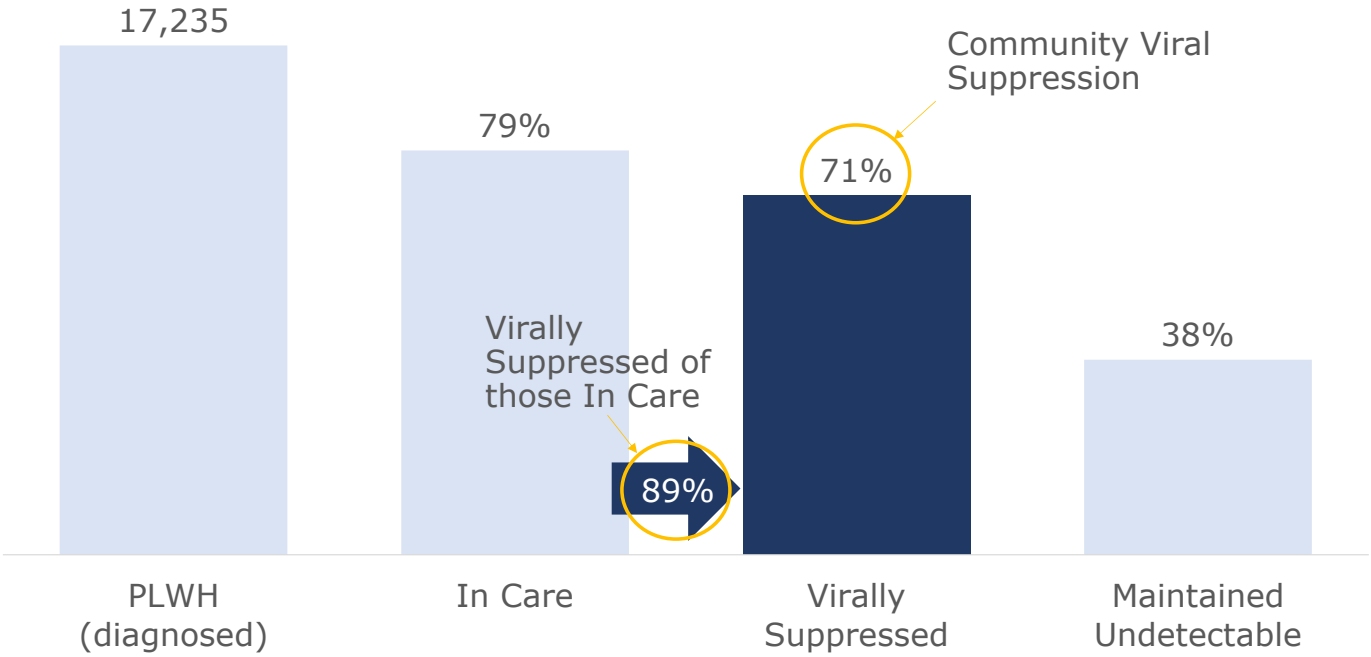
Care disparities by LHD jurisdiction



In general, LHD jurisdiction care rates are driven by care among PLWH in population centers (e.g., Genesee's care rate is primary driven by Flint's care rate). Five additional cities outside the listed LHD jurisdictions above, also had low care rates during 2021:

- Farmington Hills (72%)
- Port Huron (75%)
- Portage (71%)
- Roseville (73%)
- Warren (75%)

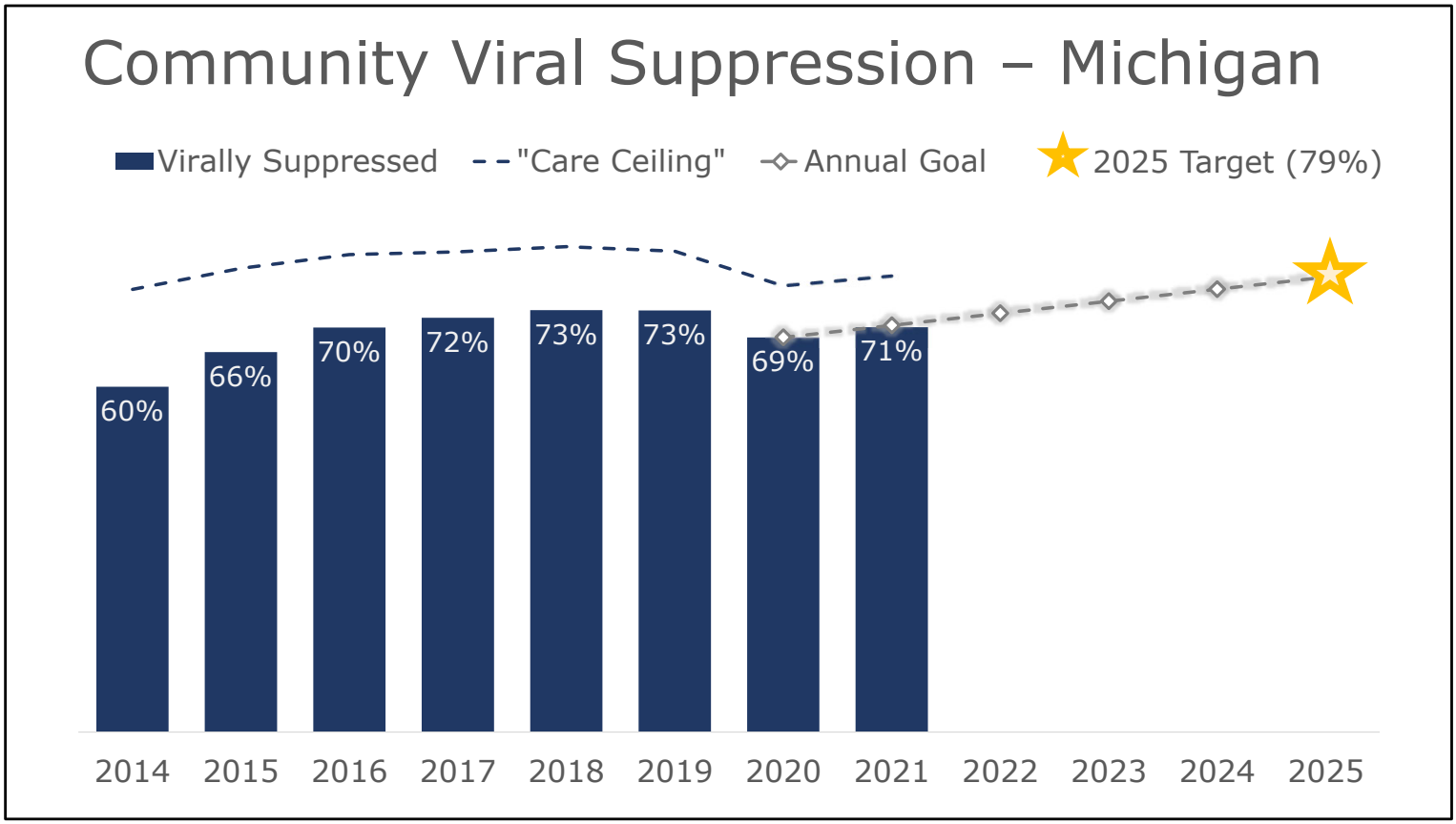
Virally Suppressed – Michigan, 2021



There are two ways to think about viral suppression and each is useful for different purposes. Community viral suppression is the proportion of all diagnosed PLWH who are virally suppressed (**VS divided by diagnosed PLWH**). High community viral suppression indicates high treatment adherence and low transmission risk at the community level. Community viral suppression, however, cannot convey which populations struggle to reach VS even after being established in care. Viral suppression of those in care (**VS divided by those In Care**) does indicate which populations struggle to reach VS after care is established.

Because improved prognosis and transmission reduction at the community level are overarching goals, community viral suppression is the more commonly used indicator. VS of those in care should be used sparingly to determine priority populations for treatment adherence interventions and programs.

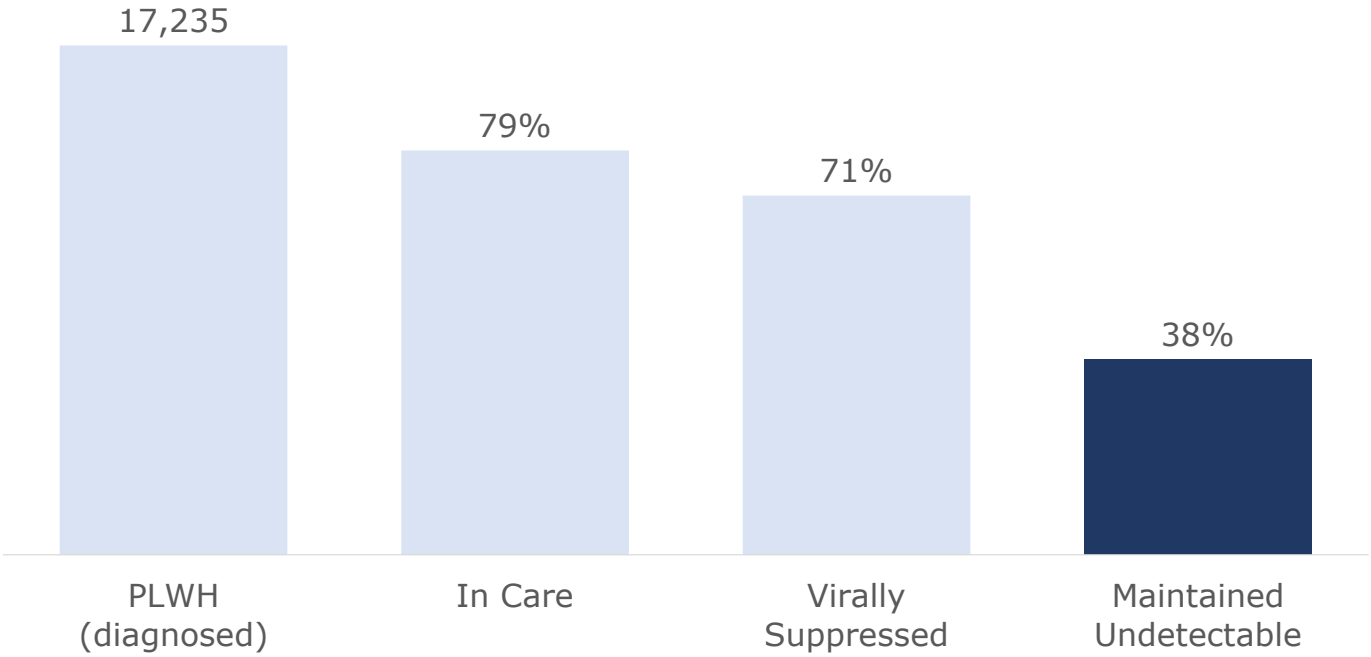
The good news is, in Michigan, once an individual is in care, the majority reach VS. The best way to increase community viral suppression in the state, is to focus on increasing the proportion in care (In Care/PLWH).



A person cannot be virally suppressed if they are not in care, so viral suppression can never exceed the proportion in care (i.e. the "care ceiling"). In Michigan, the target is to increase the proportion of PLWH who are virally suppressed (viral load <200 copies/mL) from 69% in 2020 to 90% in 2030. Therefore, the midpoint target is 79% by 2025. During 2021, Michigan met the annual community viral suppression goal. For this trend to continue, the proportion in care must rise. Engaging and retaining PLWH in care should be the primary focus of HIV care programs. Viral suppression will follow.

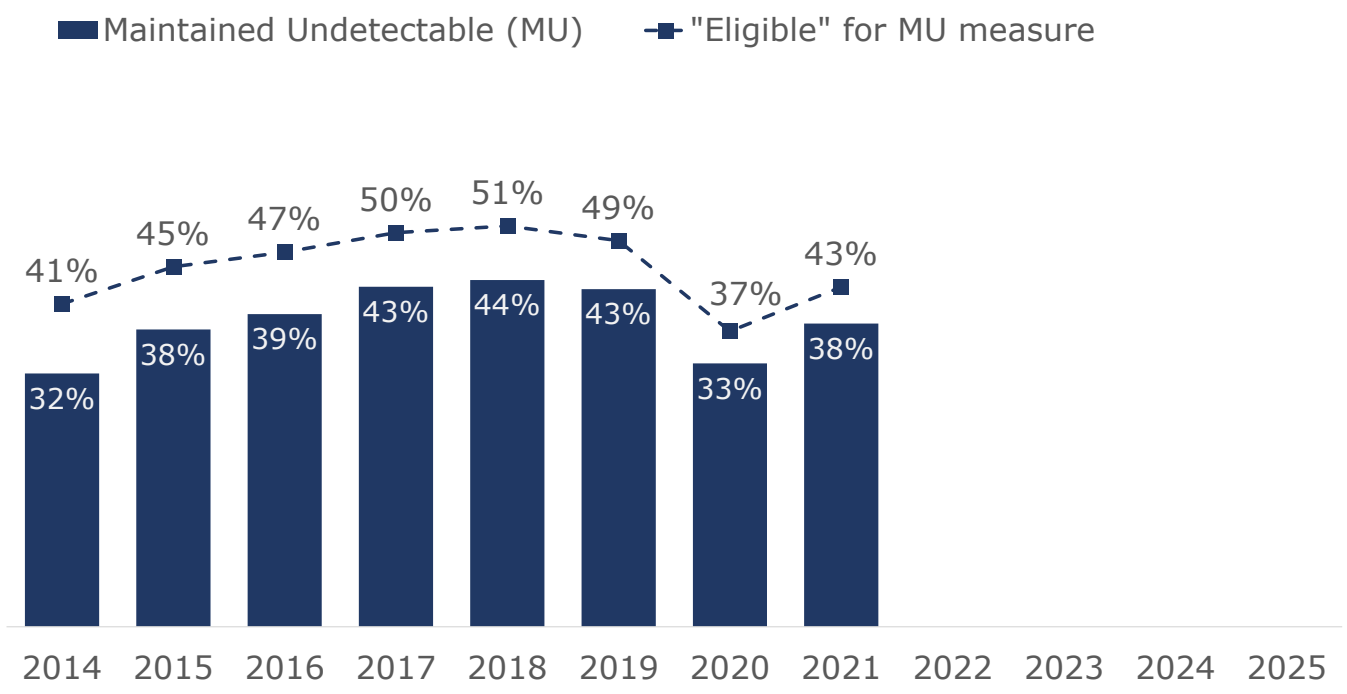
Note: The 2025 Target is derived from Ending the Epidemic and UNAIDS Fast-Track 95-95-95 goal: by 2030, 95% of PLWH are aware of their status, 95% of diagnosed PLWH are in care, and 95% of person in care are virally suppressed. In Michigan during 2021, 89% of persons in care were virally suppressed (on track for the 3rd 95 of the 95-95-95 goal). This is an update from the 2020 90-90-90 goal. Baseline for Ending the Epidemic strategies in the U.S. is 2017 (not 2020). However, we chose to shift the baseline to 2020 so the annual goals indicate how well we're recovering. Maintaining annual goals from 2017 only tells us what we already know – COVID-19 set us back.

Maintained Undetectable – Michigan, 2021



Maintained Undetectable (**MU**) - PLWH who maintained viral load levels <200c/mL for at least 4-8 months. This measure is derived from studies supporting the U=U (undetectable = untransmittable) campaign. This stage was added to Michigan's CoC in 2018 and is not available nationally.

Maintained Undetectable – Michigan



Maintained Undetectable (MU) - PLWH who maintained viral load levels <200c/mL for at least 4-8 months. This measure is derived from studies supporting the U=U (undetectable = untransmittable) campaign.

"Eligible" for MU measure - PLWH who received at least two viral load lab tests 4-8 months apart. This figure helps differentiate between the proportion of PLWH who were not MU due to high viral loads versus the proportion of PLWH who were not MU due to lack of sufficient viral load tests.

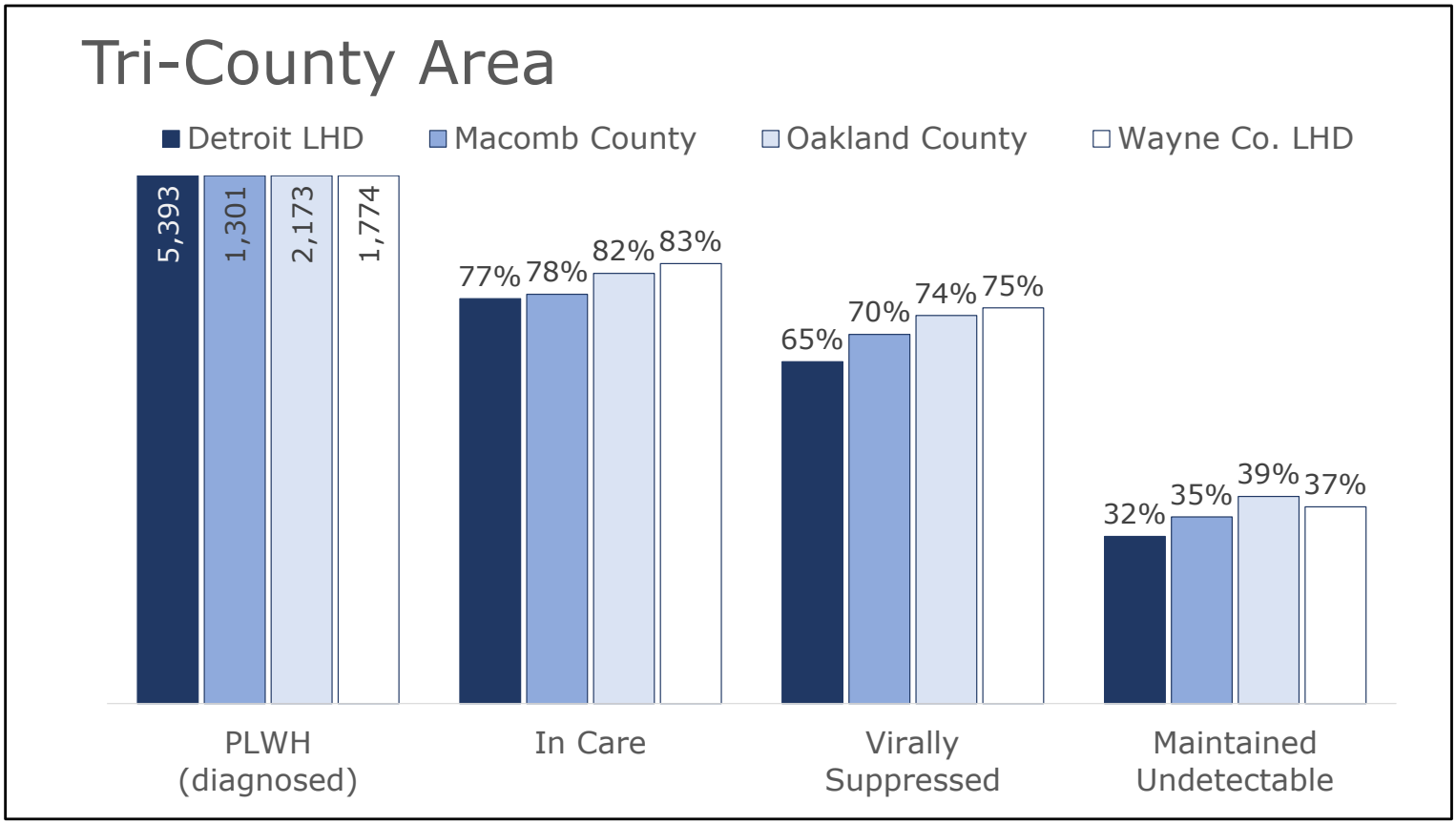
In 2021, only 43% of all PLWH received two viral load lab tests 4-8 months apart ("eligible" for MU measure). Of them, 89% (or 38% of all PLWH) were MU. This is good news – the vast majority of persons receiving consistent viral load monitoring, are maintaining a suppressed viral load. The remaining "ineligible" 57% of PLWH did not receive a sufficient number of viral load tests within the required time frame.

At this time, a goal has not been set for Maintained Undetectable. As more PLWH learn about U=U as a prevention method, it is likely this measure will increase.

2021 Care Continuums

for select populations

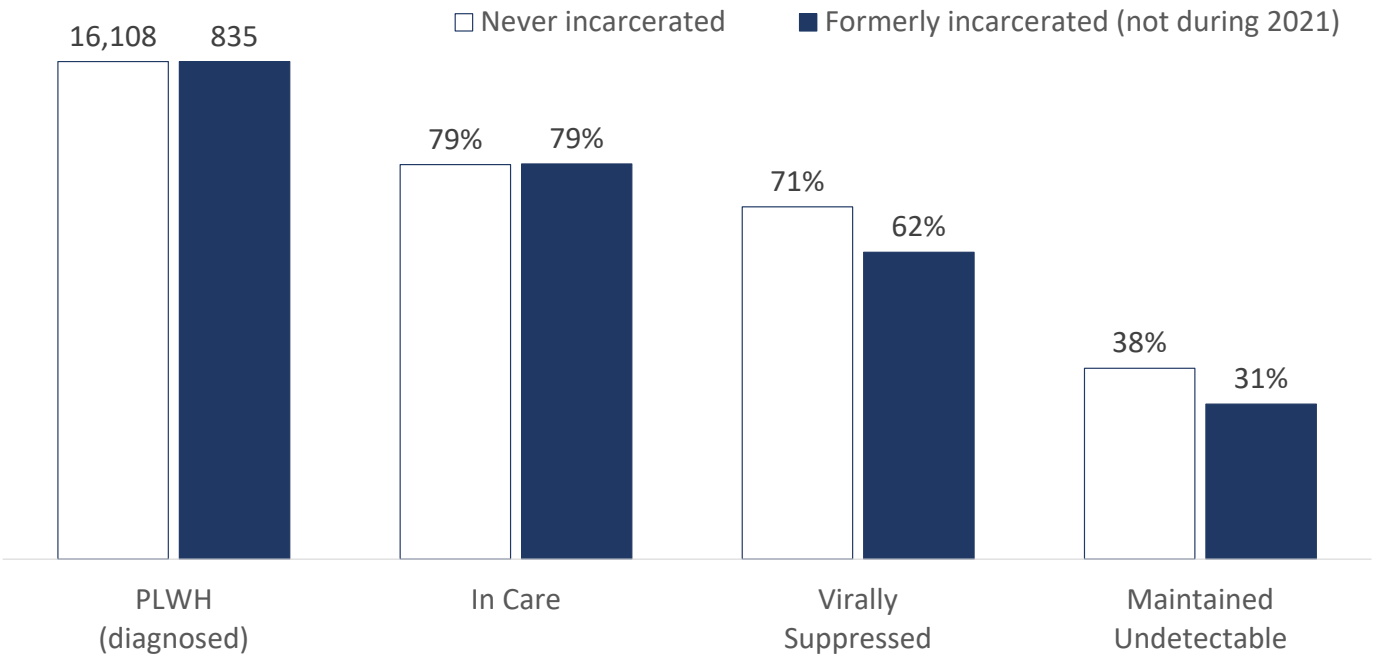
Calculations involving populations with a small number of PLWH (45-99 PLWH) should be interpreted with caution as proportions may fluctuate year to year due to small changes in the numerator.



Detroit LHD jurisdiction includes residents of the cities of Detroit, Highland Park, Hamtramck, Harper Woods, and the Grosse Pointes (Grosse Pointe, Grosse Pointe Farms, Grosse Pointe Park, Grosse Pointe Shores, & Grosse Pointe Woods).

Wayne Co. includes residents of Wayne County except for those residing in the Detroit LHD jurisdiction.

Historic prison status

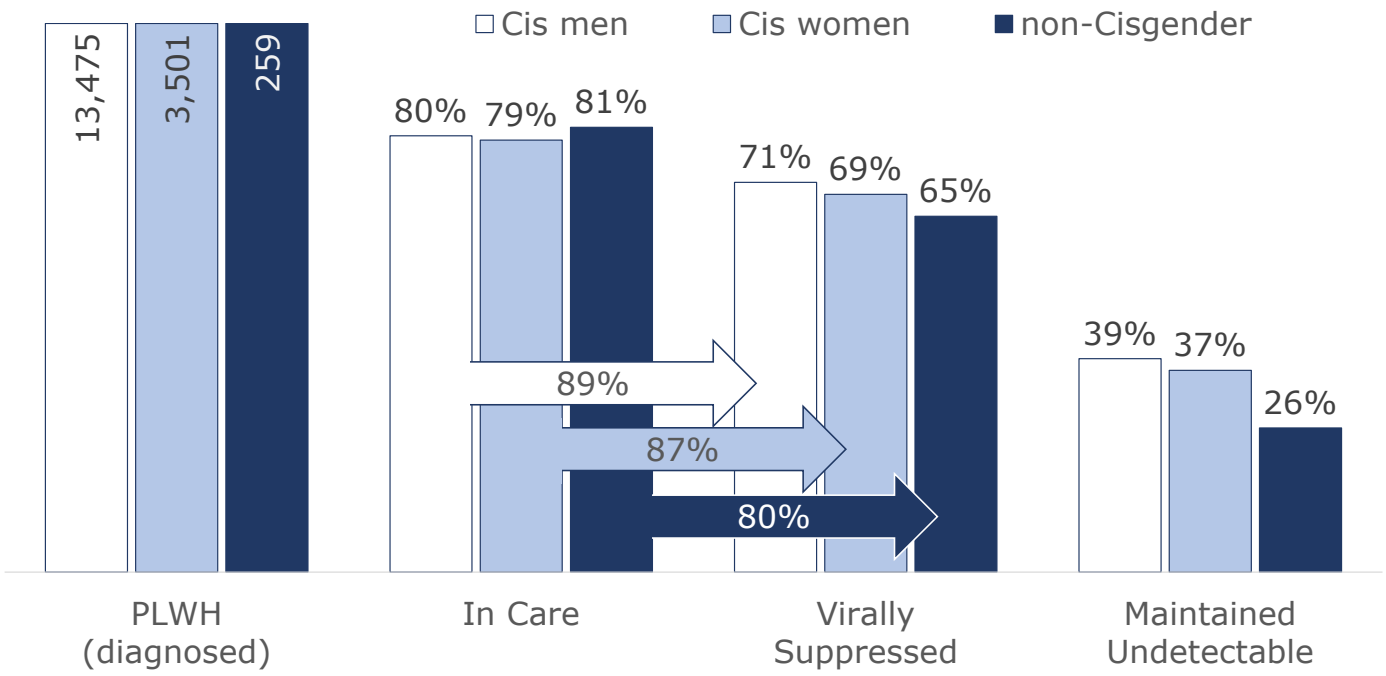


Prison status is based on address data attached to care labs. It is likely care rates among persons currently incarcerated and persons recently released are artificially high as prisons status is only known because of a care lab. Data improvements currently underway should remove this dependance on care labs in the future. For now, it is important to recognize the struggle persons formerly incarcerated face in maintaining a suppressed viral load.

The first group – "Never incarcerated" – are PLWH who have never had a prison address reported since being diagnosed with HIV. Persons with a prison address reported at some point between diagnoses and 2021 but who were not incarcerated during 2021 are included in the "Formerly incarcerated" group. Persons incarcerated during 2021 are excluded.

Note: Prison refers to state and federal prisons, not local jails.

Gender Identity

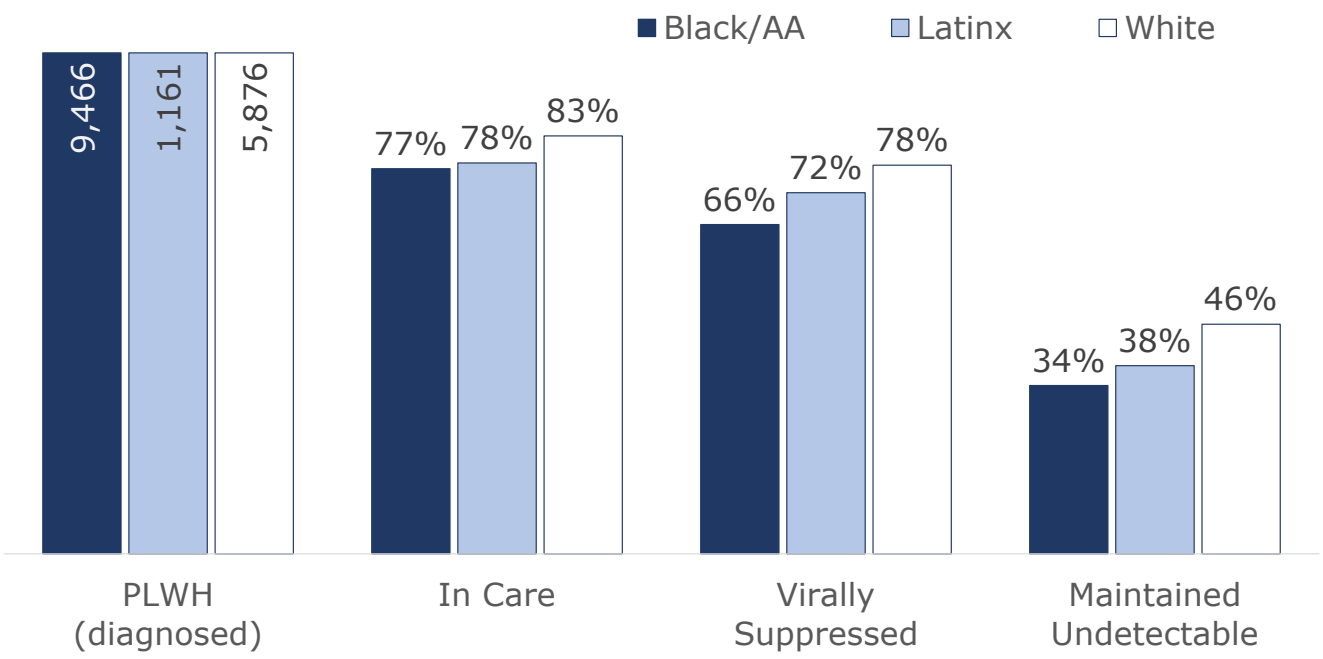


Of the 259 non-Cis persons represented, 253 are trans women, 4 are trans men and 2 identify as "additional gender identity".

The proportion of non-Cis persons who are In Care may be artificially high due to historic limitations within the HIV surveillance system. *Current gender identify* with transgender options was added to the system by the CDC in 2010. In 2021, an *additional gender identity* option was added. Since the inception of these options, Michigan has been able to collect gender identity among the majority of persons newly diagnosed and among persons in care if their provider reported the information. In other words, the surveillance system is more likely to know an individual identifies as non-cis if they are in care. This results in artificially high care rates.

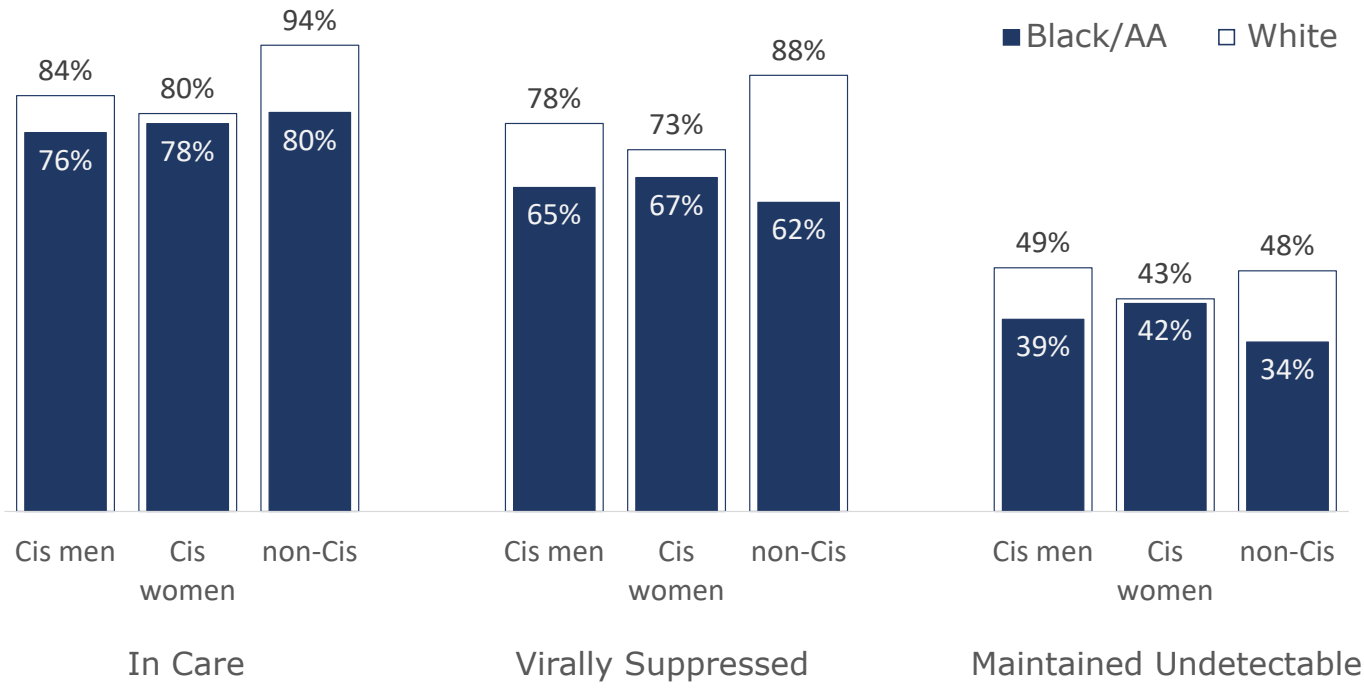
When assessing gaps in care for the non-Cis population, it's better to look at the proportion virally suppressed and maintained undetectable relative to those in care. Of the cis men and cis women in care, 89% and 87% were virally suppressed. However, of the non-Cis individuals in care, only 80% were virally suppressed. This indicates receiving and maintaining care is more challenging for this population.

Race & Ethnicity



Latinx persons may be of any race. Black/AA, Latinx, & White are mutually exclusive categories.

Care disparities - Race & Gender

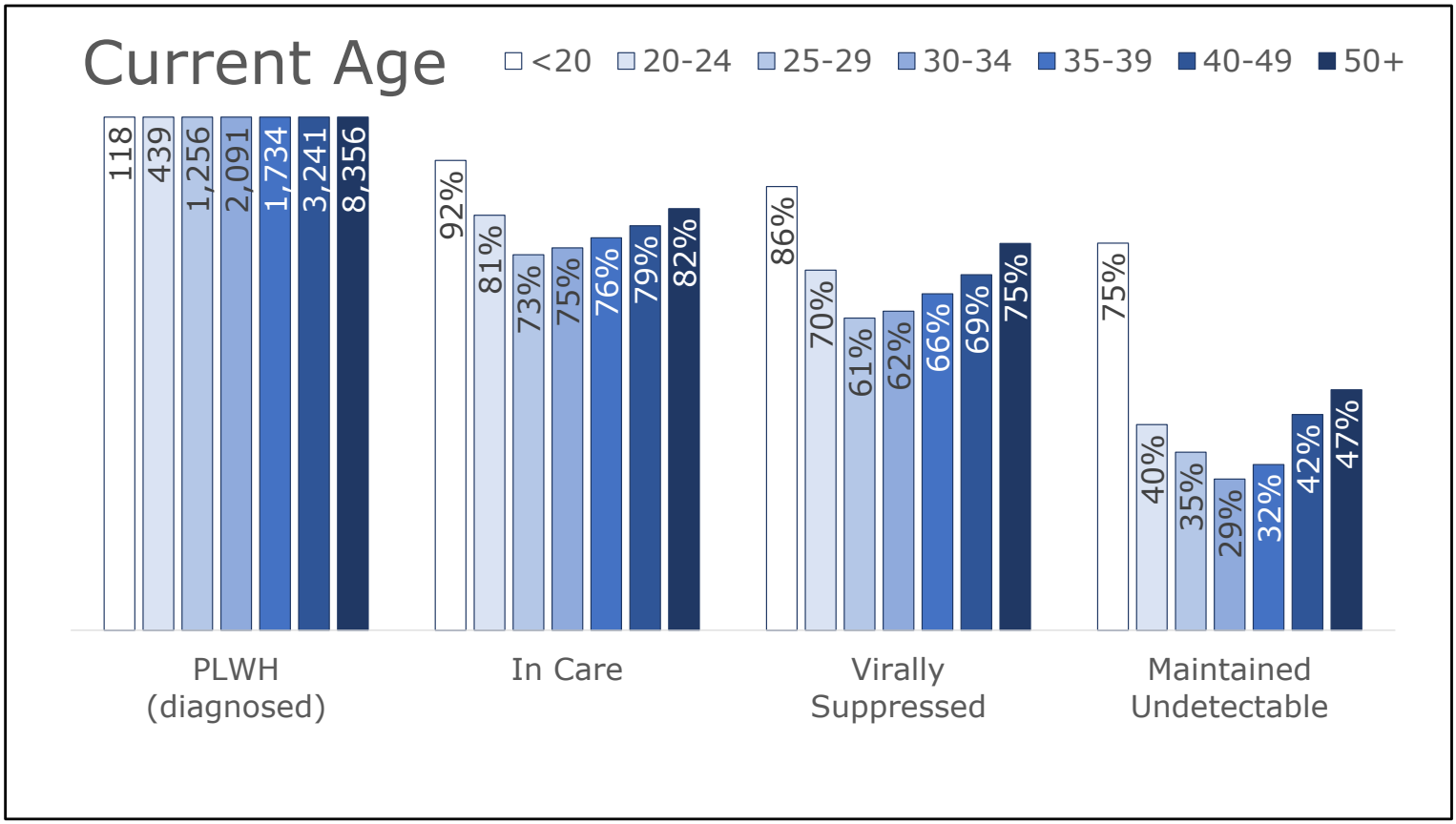


The previous two slides show gender and race alone. Those slides show:

- Black/AA person have poorer care outcomes than white persons.
- very similar care outcomes for cis men and cis women while non-cis individuals experience high care rates but poorer outcomes along the CoC. As discussed, this is due to current gender's dependence on care labs; non-Cisgender's care rate is likely artificially high.

Stratifying by race and gender shows some variation in that overarching picture.

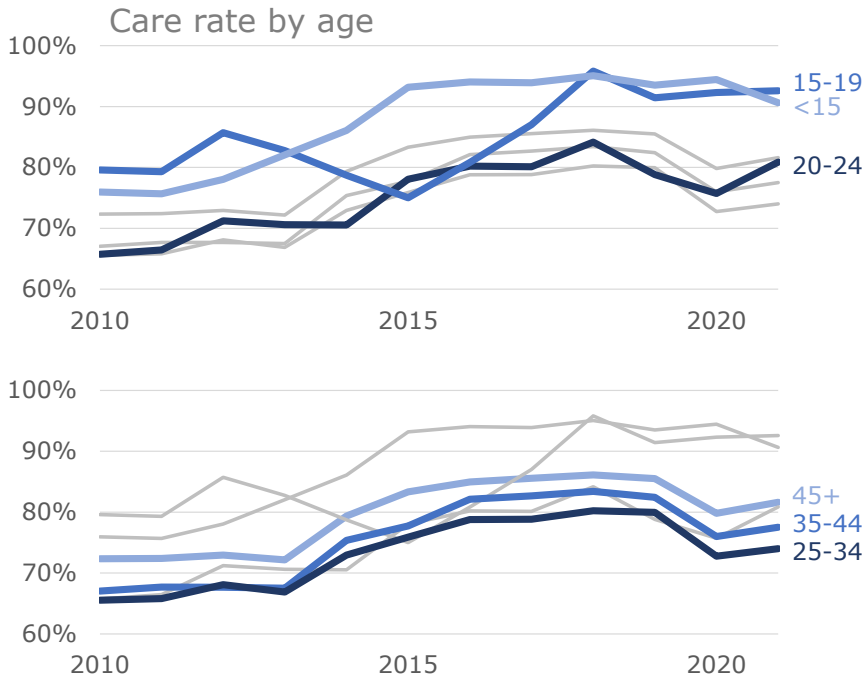
- Care outcomes among Black/AA persons are lower than white persons for all genders, but care outcomes among cis women are *very* close for both races. The disparity between Black/AA and white persons is primarily driven by cis men and non-cis persons.
- While Black/AA cis men and women have very similar care outcomes overall with cis women slightly higher, white cis women have lower outcomes than white cis men.
- There is a very small number of white non-cis persons (33), so care outcomes should be interpreted with caution, but the disparity between Black/AA and white non-cis persons is large.



During 2021, persons 25-39 years old experienced the lowest care outcomes. The age groups of concern with regards to care may be shifting away from the 15-29 group as the cohort ages. Persons 15-29 remain the focus population for new diagnoses.

See the next slide for more detail on the shifting age groups.

Ages of concern may be changing

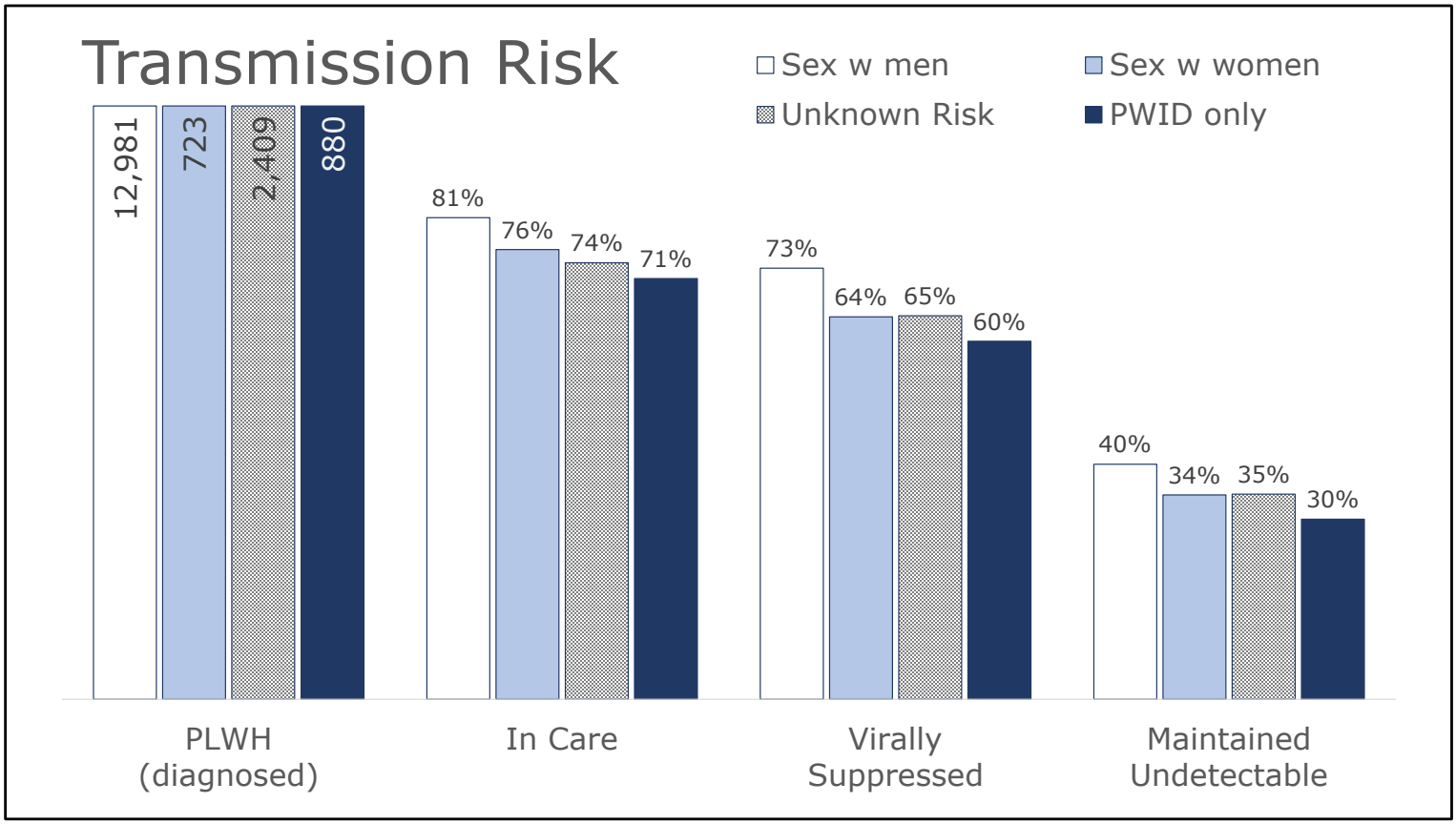


The duplicated graphs demonstrate the changes in care over time for those under 25 (top) and those 25 and older (bottom).

Groups with similar current and historic care rates (e.g. 25-29 and 30-34) have been combined for ease of viewing. Both graphs are identical with different age groups highlighted.

First figure:
Persons 15-19 years old. Between 2014 and 2017, care rates among persons 15-19 dropped significantly below those under 15 but returned to similar rates in 2018.
Persons 20-24 years old. Care appeared high in 2018 and 2021. As care rates in this age group fluctuate often, this age cohort should remain a focus population for now.
General note: As new diagnoses decline among persons under 20 and PLWH age out of these cohorts, prevalence declines.

Second figure:
Persons 25-44 years old. These age groups have not deviated from the general trend, but with other age groups improving, these age groups now experience the lowest care rates.
General note: These age groups are growing as younger PLWH age into them.



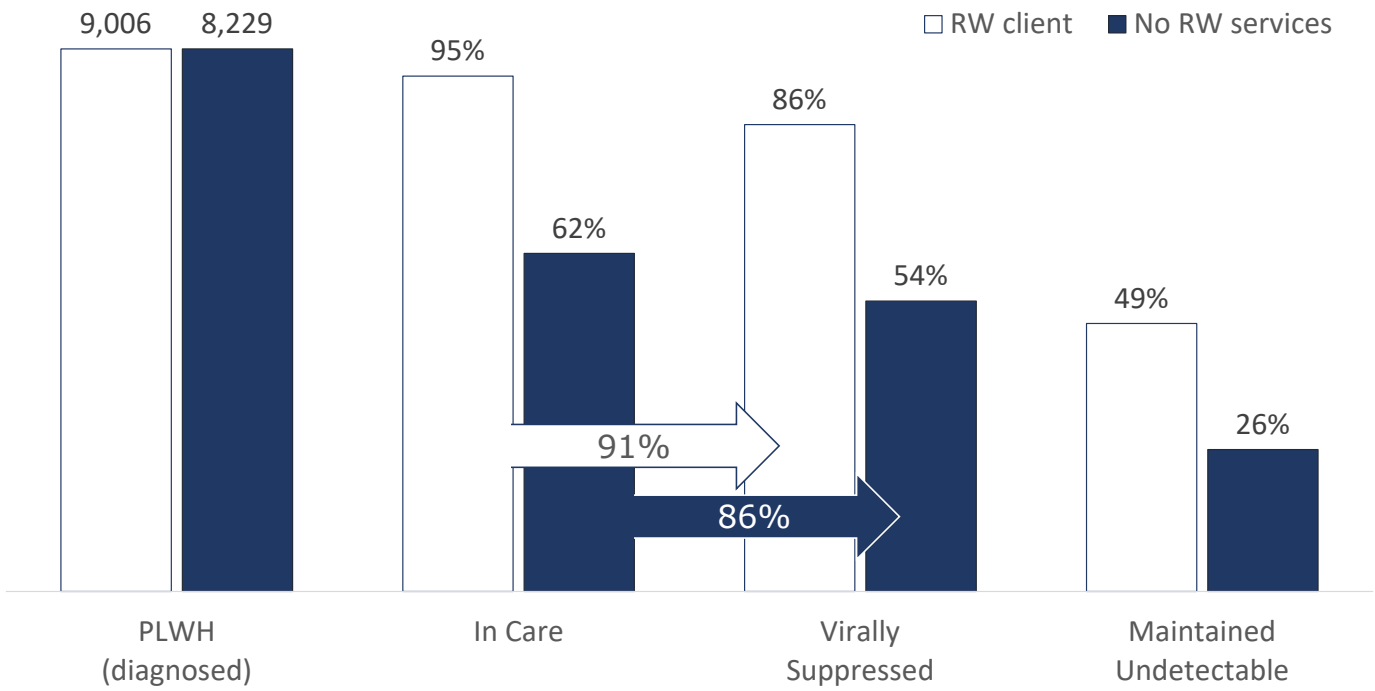
Sex w men includes all persons who reported sex with men (gay/bisexual cis men, non-Cis persons who reported sex with men, and heterosexual women who do not inject drugs). This risk accounts for the majority of PLWH.

Sex w women includes heterosexual men who only reported sex with a woman living with HIV or sex with a woman at high risk for HIV. Men who only reported sex with a woman, but the woman's HIV risk could not be confirmed are included in "unknown risk".

Unknown Risk - A large proportion of PLWH have no reported risk (14%). Such a large portion without a known risk hinders effective direction of HIV prevention and care programs. Another large portion of this group is cis men who only reported sex with women. Unknown risk reflects individuals who could not be found or did not want to disclose risk to Partner Services.

PWID only (persons who inject drugs) includes heterosexual persons who reported injection drug use. Gay and bisexual men who reported PWID are included in "sex w men" as these individuals have similar care outcomes.

Ryan White (RW) Clients



RW clients are individuals who received at least one RW funded service during the given year.

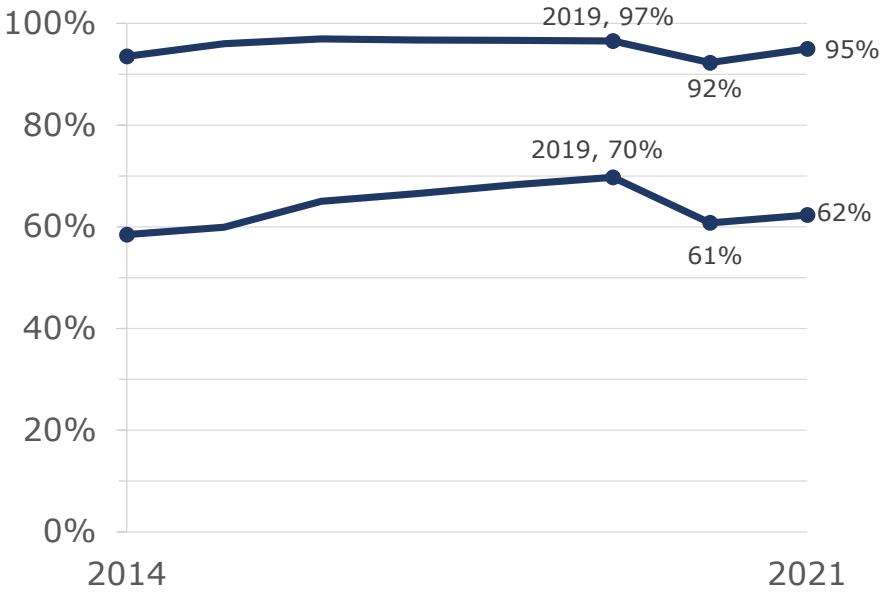
The largest care disparity is between those enrolled and not enrolled in Ryan White (RW). **Care programs should focus on engaging and retaining all eligible PLWH in RW.** Of Medical Monitoring Project (MMP) participants 2015-2019, 89-97% were eligible for RW, but only 72% received a service during the year of their MMP interview. Of all PLWH, only 50% receive services each year, but an additional 15-25% are likely eligible based on previous enrollment status. Of the previously enrolled out of care PLWH, 84% were in care when they were enrolled in RW.

The second 95 of the Ending the Epidemic and UNAIDS Fast-Track 95-95-95 goal (95% of diagnosed PLWH are in care) has been achieved among Ryan White (RW) clients. RW programs need to focus on retaining persons in RW care and improving viral suppression among their clients.

Viral suppression (VS) and maintained undetectable (MU) disparities are mainly due to this care disparity (anyone not in care is considered not VS and not MU). However, additional disparities exist. The viral suppression rate of those in care has been diverging since 2019. In 2021, 91% of RW clients were VS compared to 86% of non-RW clients. Additionally, RW clients are much more likely to receive two viral loads 4-8 months apart resulting in more MU among RW clients compared to non-RW.

Care rates among RW clients have nearly recovered to pre-COVID levels

Proportion of PLWH In Care by RW enrollment



Ryan White client
- Only 2% lower than 2019 rate

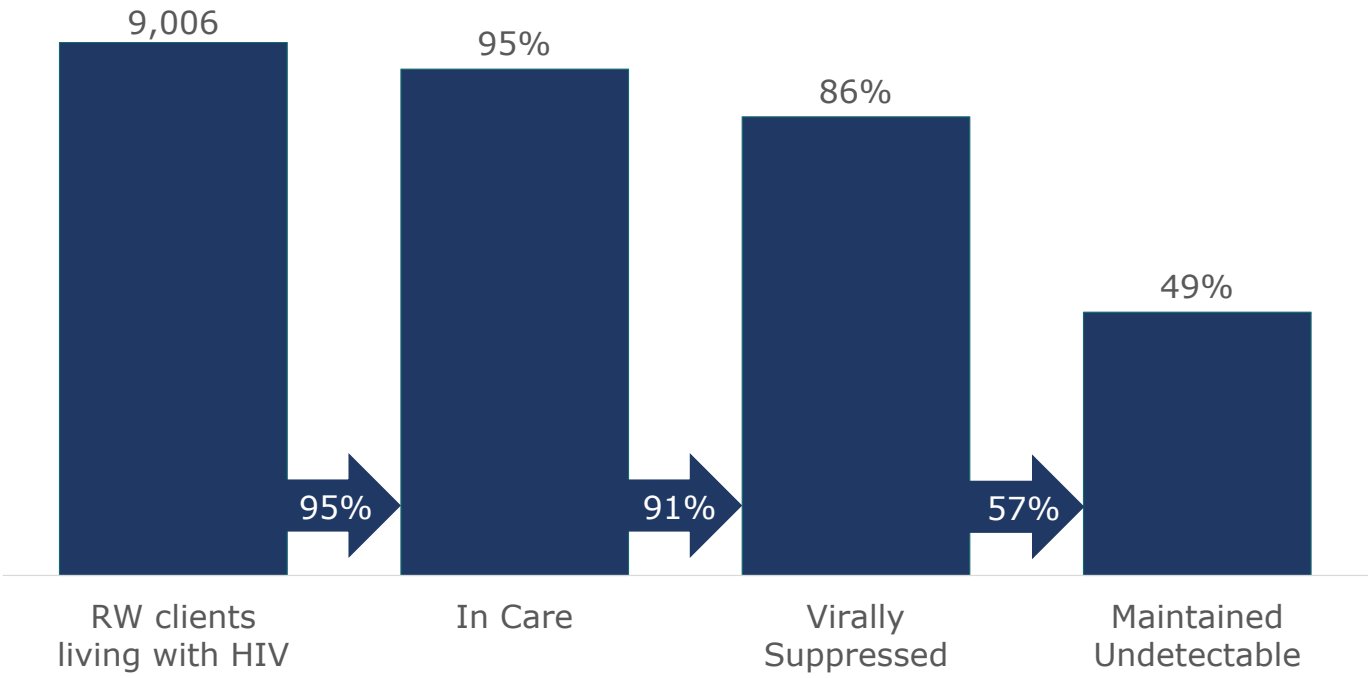
No Ryan White services
- Has not recovered from 2020
- Still 8% lower than 2019 rate

2021 Ryan White Care Continuums

Includes persons who received at least one Ryan White (RW) service during 2021.

Do not compare to Care Continuums containing all PLWH

Michigan's Ryan White Care Continuum, 2021

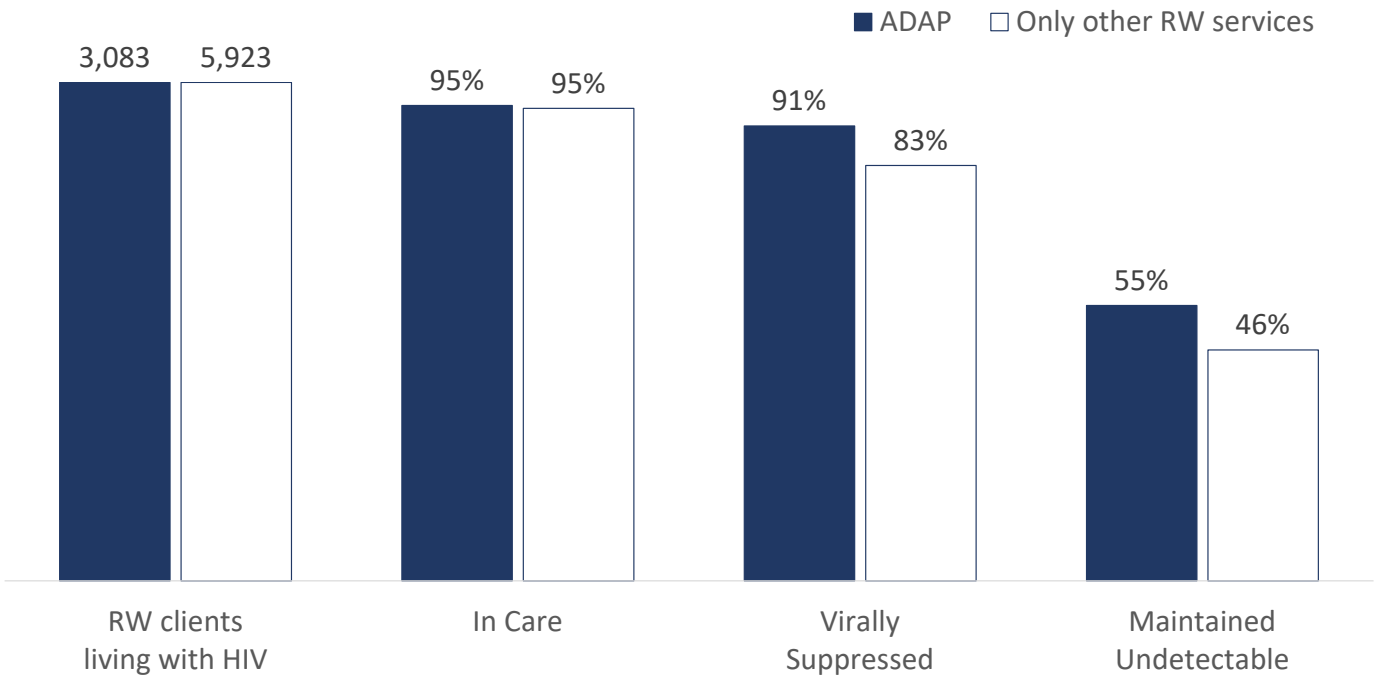


DO NOT COMPARE WITH NON RW CARE CONTINUUMS

RW clients living with HIV- PLWH diagnosed before Jan 1 and alive Dec 31 of the given year and received at least one Ryan White service during the given year.
In Care – RW clients living with HIV with at least 1 CD4, viral load, or genotype lab test during the given year.
Virally Suppressed - RW clients living with HIV with less than 200 copies of HIV virus per milliliter of blood (<200c/mL) according to their last viral load lab test during the given year.
Maintained Undetectable - RW clients living with HIV who maintained viral load levels <200c/mL for at least 4-8 months.

Note: The second 95 of the Ending the Epidemic and UNAIDS Fast-Track 95-95-95 goal (95% of diagnosed PLWH are in care) has been achieved among Ryan White (RW) clients. RW programs need to focus on retaining persons in RW care and improving viral suppression among their clients.

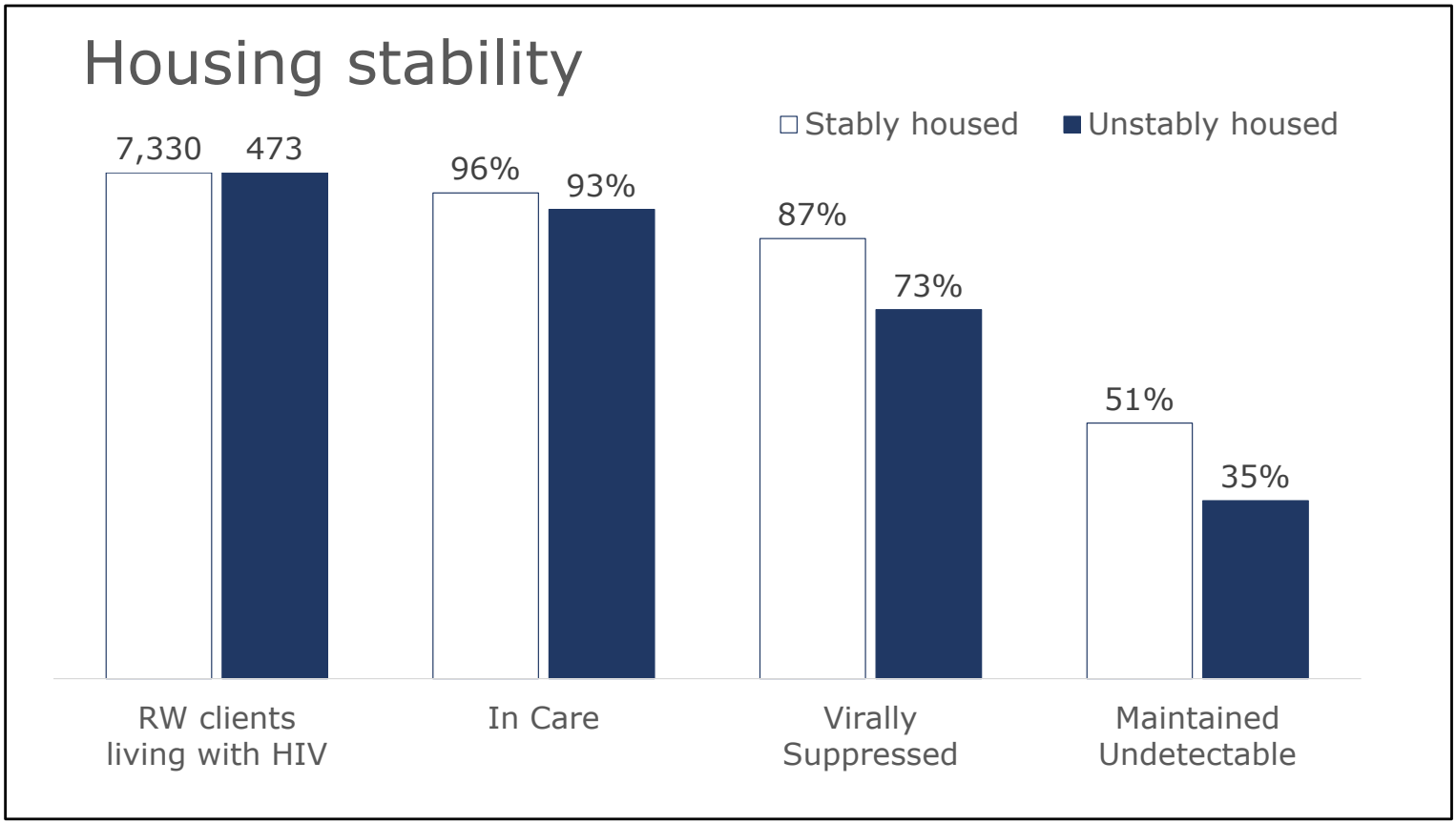
AIDS Drug Assistance Program (ADAP)



DO NOT COMPARE WITH NON RW CARE CONTINUUMS

ADAP includes all RW clients who received at least one ADAP funded service during the year. They may also have received services funded by Parts A, B, C or D.
Only other RW services includes RW clients who did not receive any ADAP funded services during the year.

Michigan ADAP clients have higher viral suppression and maintained undetectable rates compared to RW clients who did not receive ADAP services.

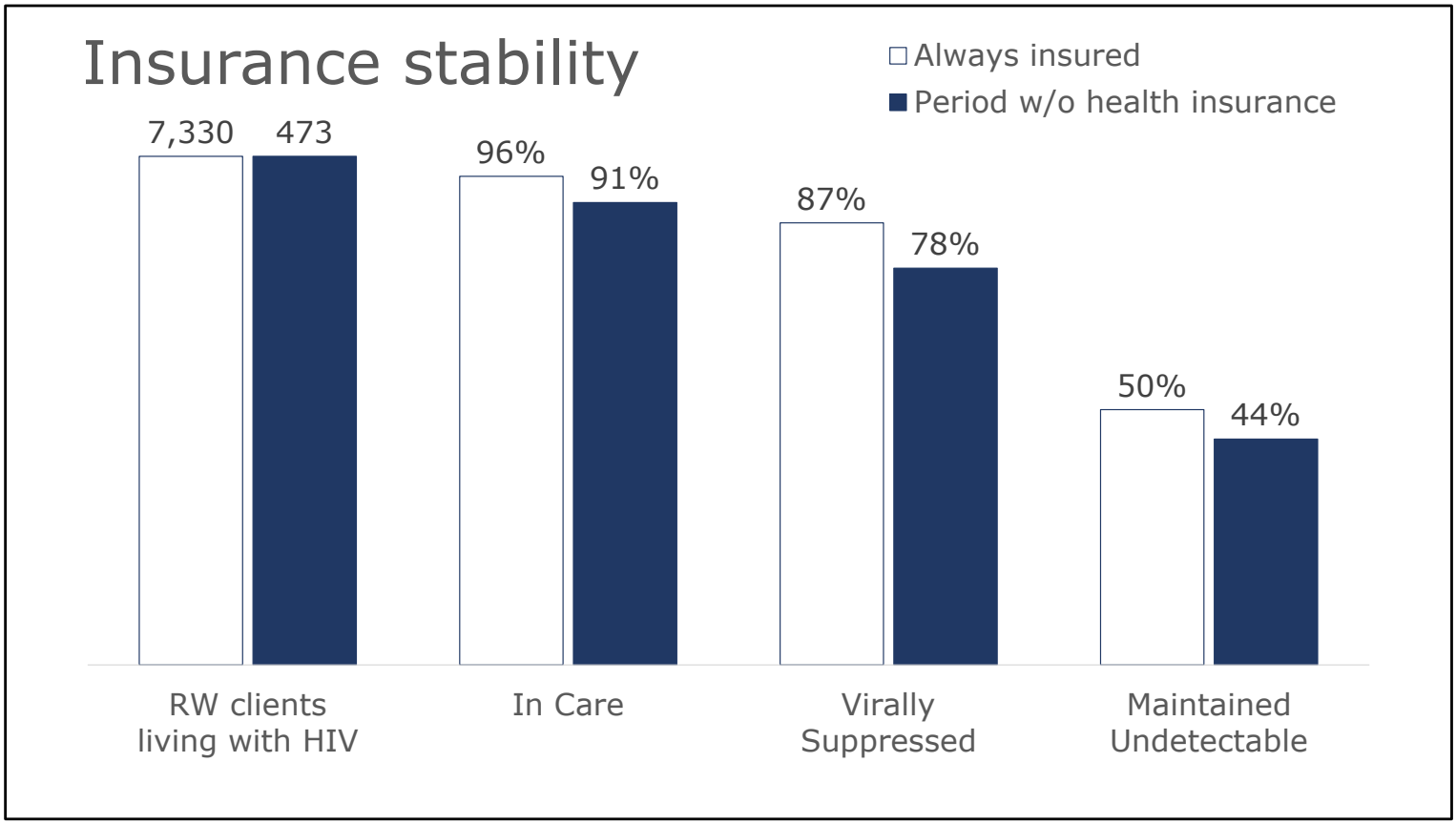


DO NOT COMPARE WITH NON RW CARE CONTINUUMS

Persons **stably housed** includes RW clients who only reported stable housing all year.
Persons **unstably housed** includes RW clients who reported *any* period of unstable or temporary housing during the year.

Persons with stable housing experience better care outcomes.

Note: persons lacking a housing status report were excluded.

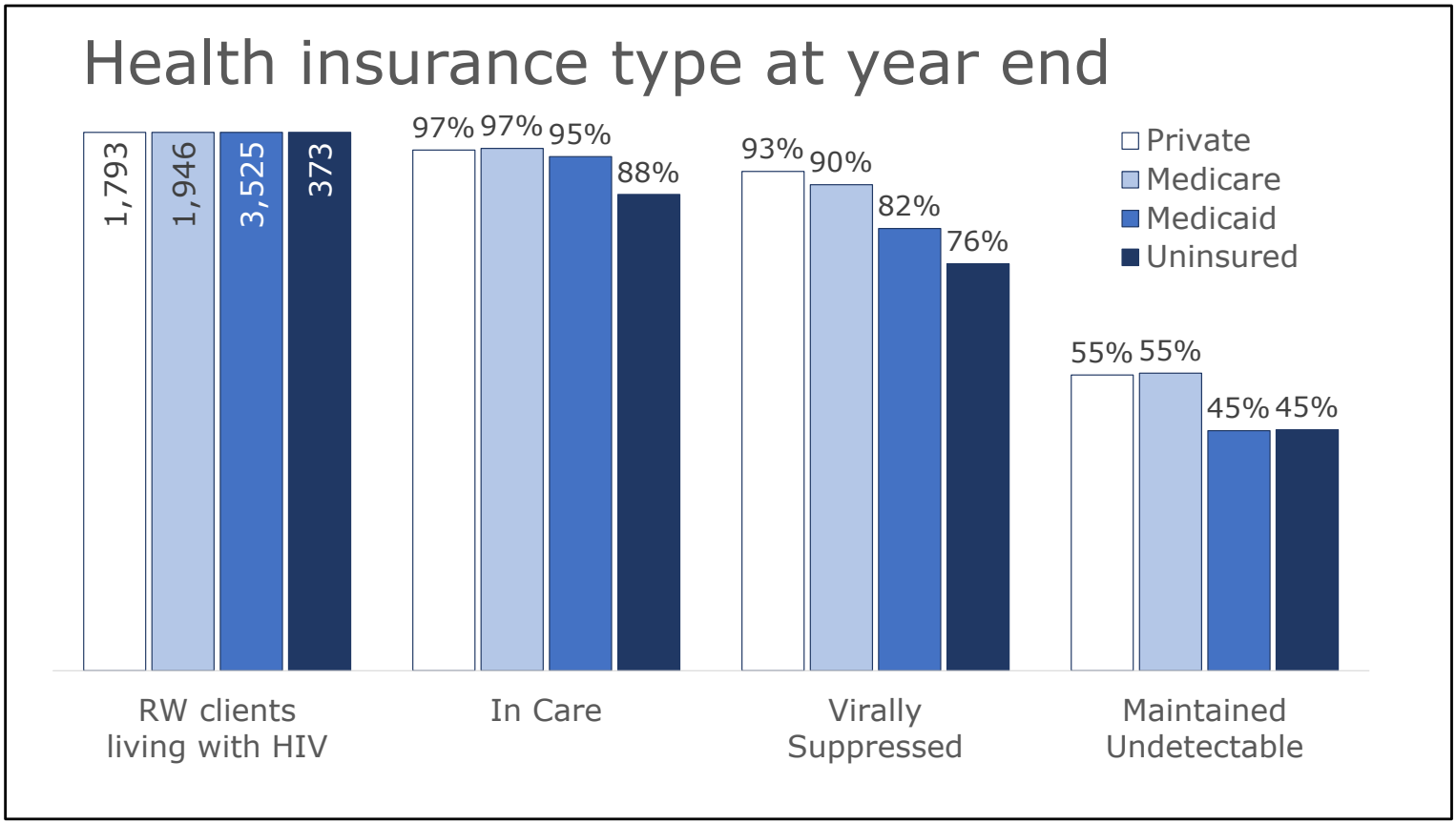


DO NOT COMPARE WITH NON RW CARE CONTINUUMS

Persons **always insured** includes RW clients who always reported having some type of health insurance during the year.
Persons included in **period w/o health insurance** reported being uninsured at least once during the year.

Consistently insured RW clients experience higher care outcomes than those with gaps in insurance, but the difference is smaller than expected. Type of coverage is a better indicator of care (next slide).

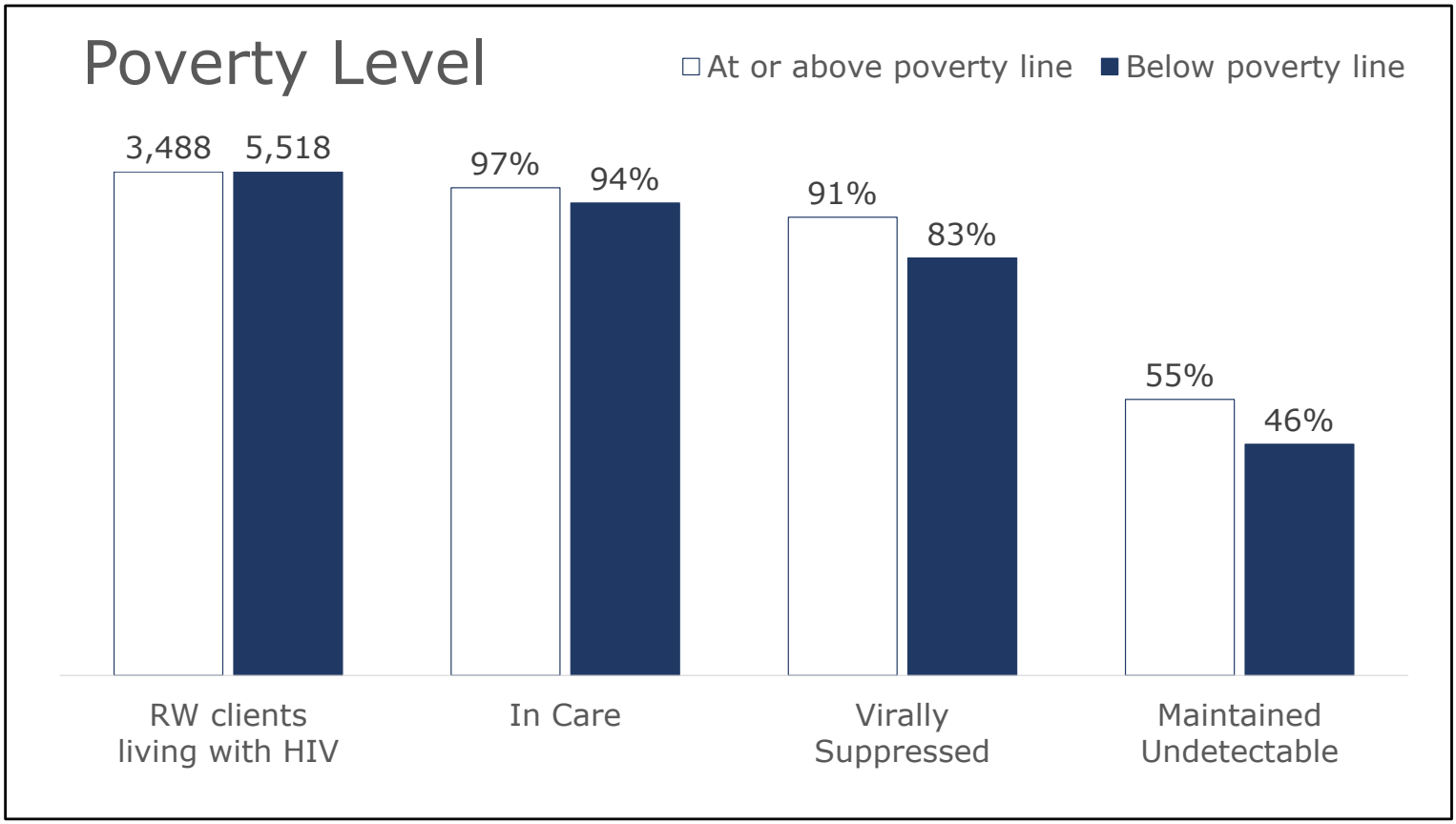
Note: persons lacking an insurance report were excluded.



DO NOT COMPARE WITH NON RW CARE CONTINUUMS

Persons uninsured or insured by Medicaid have poorer health outcomes than those with private insurance or Medicare. The positive care outcomes among persons receiving Medicare is likely due to Medicare's age requirements – care outcomes are better among the older population (see earlier age slide) – and the way Medicare interacts with Michigan's AIDS Drug Assistance Program (MIDAP) compared to Medicaid. Medicare recipients are more likely to be eligible for MIDAP than those with Medicaid, and MIDAP is positively associated with care outcomes (see earlier ADAP slide), therefore Medicare recipients also have improved care outcomes.

Note: persons lacking an insurance report and persons who receive other insurance (VA, HIS) were excluded due to small numbers.



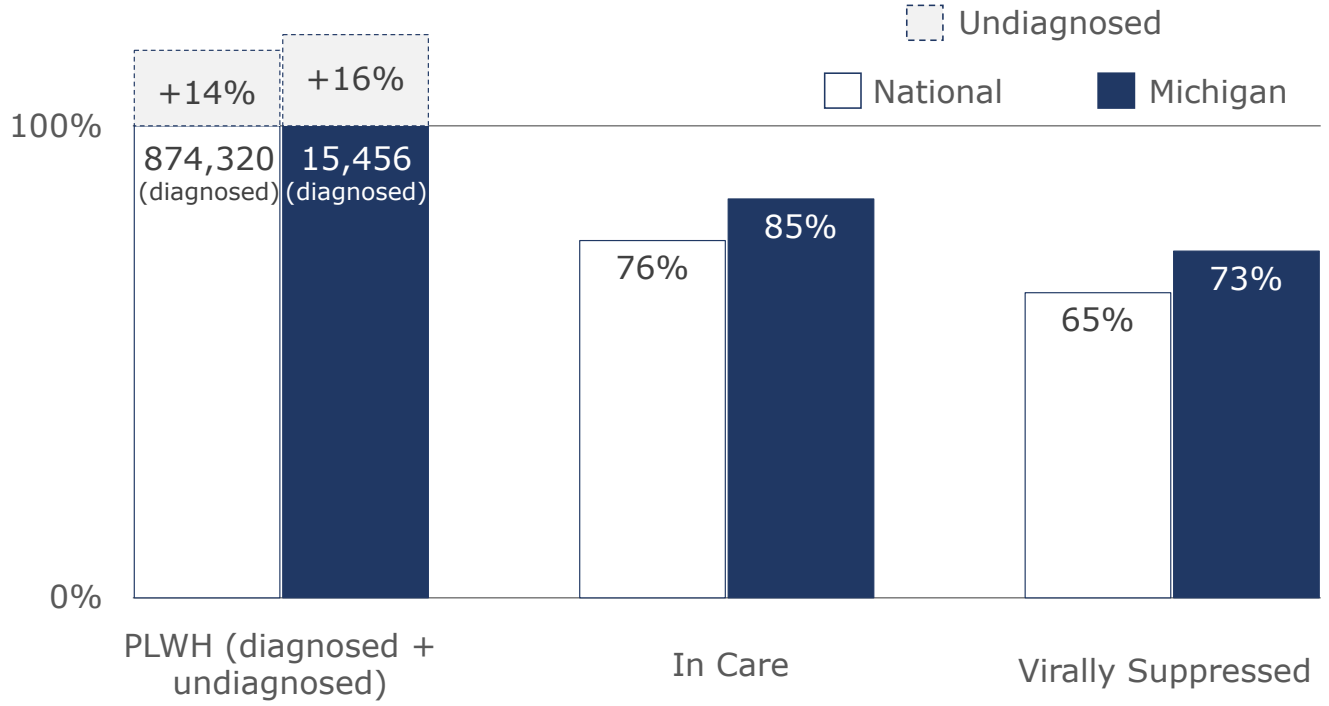
DO NOT COMPARE WITH NON RW CARE CONTINUUMS

Ryan White clients with higher incomes experience better care outcomes.

National comparison

2018

2018 National & Michigan Care Continuum



Compared to PLWH nationally, Michigan residents experience better care outcomes. However, the estimated number of undiagnosed PLWH (16%) remains higher than the national average (14%). In Michigan, an estimated 3,000 PLWH are undiagnosed. Nationally, approximately 140,000 PLWH are undiagnosed. Michigan accounts for 1.8% of all diagnosed PLWH in the country, and 2.1% of all undiagnosed.

SHOARS
STI/HIV Operations and Resource System

For STI or HIV Data Requests or Technical Assistance, visit
www.Michigan.gov/SHOARS