

HIV Care Continuum Report, 2023

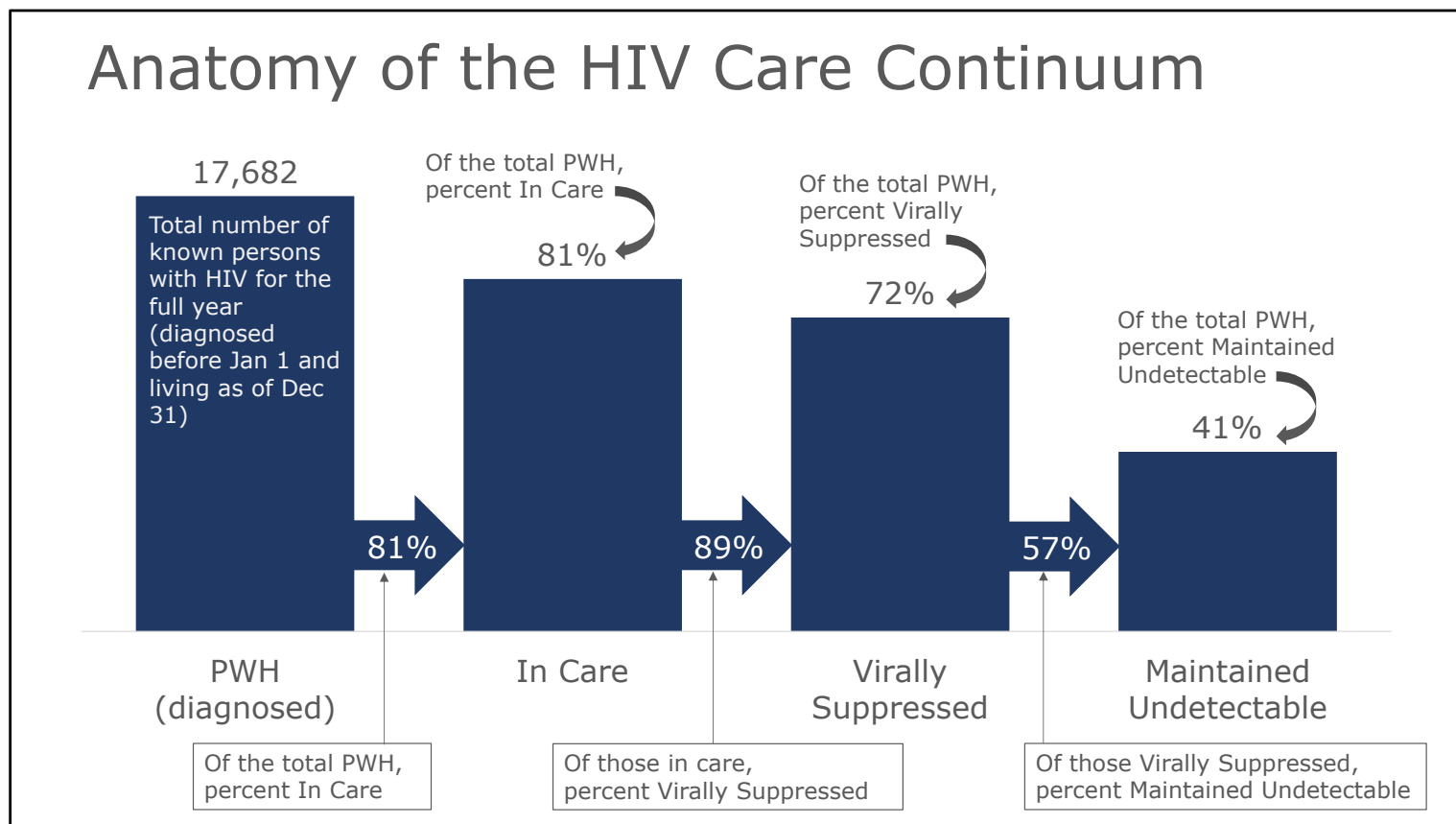
Data as of April 2024



To view the tables used to create the following figures,
see the [HIV Care Continuum Report • Tables](#).



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.

PWH (diagnosed) is the total number of known persons with HIV (PWH) for the full year (diagnosed before January 1 and living as of December 31 of the given year).

In Care includes all diagnosed PWH who received at least one CD4, viral load, or genotype lab test during the given year.

Virally Suppressed (VS) includes PWH 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.

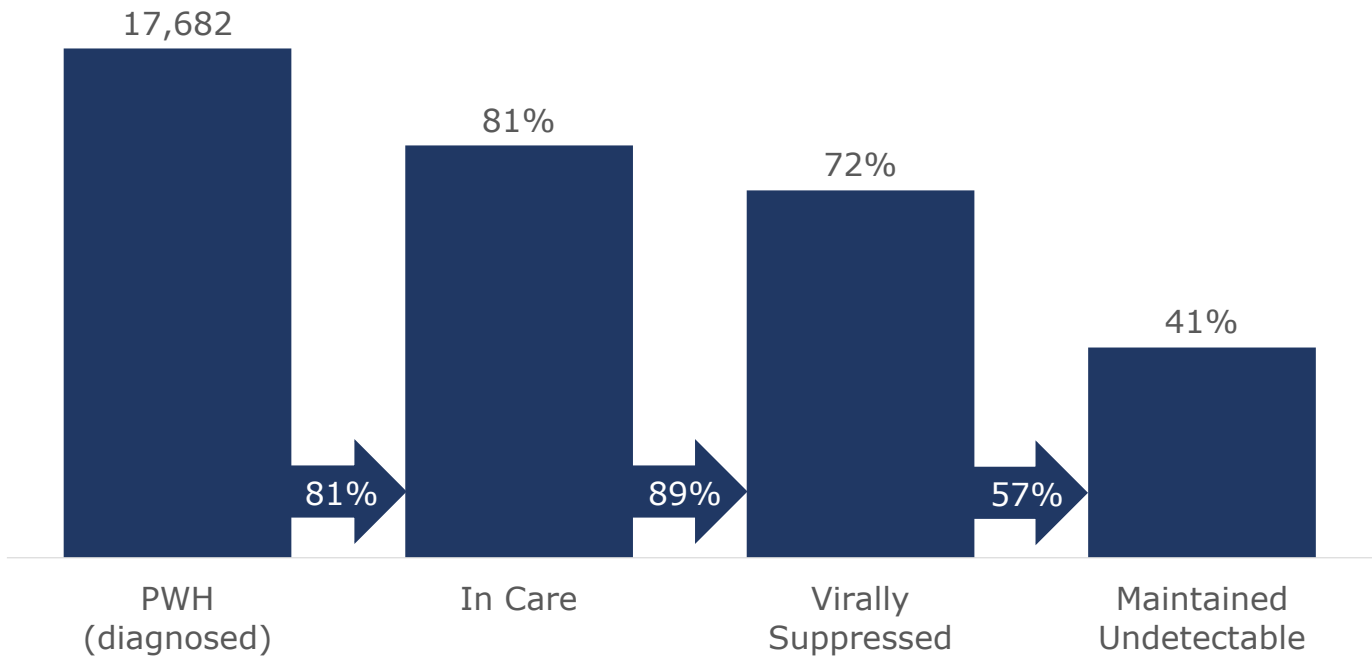
Maintained Undetectable (MU) includes virally suppressed individuals who maintained viral load levels <200c/mL for at least 4-8 months.

At each step along the CoC, the transmission rate decreases with 5.3 transmissions per 100 PWH among those diagnosed but not in care¹, 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.

¹Skarbinski 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

²PreventionAccess.org

Michigan Care Continuum, 2023



PWH (diagnosed) - PWH diagnosed before Jan 1 and alive Dec 31 of the given year.

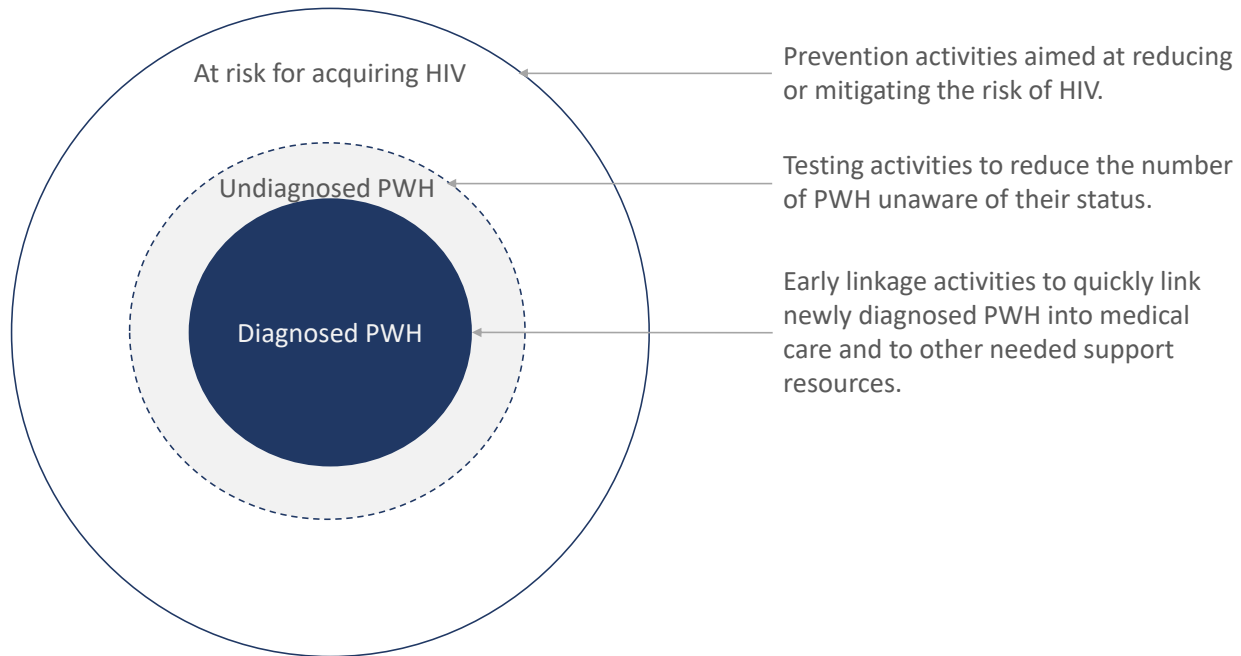
In Care - PWH with at least 1 CD4, viral load, or genotype lab test during the given year.

Virally Suppressed - PWH 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 - PWH who maintained viral load levels <200c/mL for at least 4-8 months.

Upstream from the Care Continuum

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



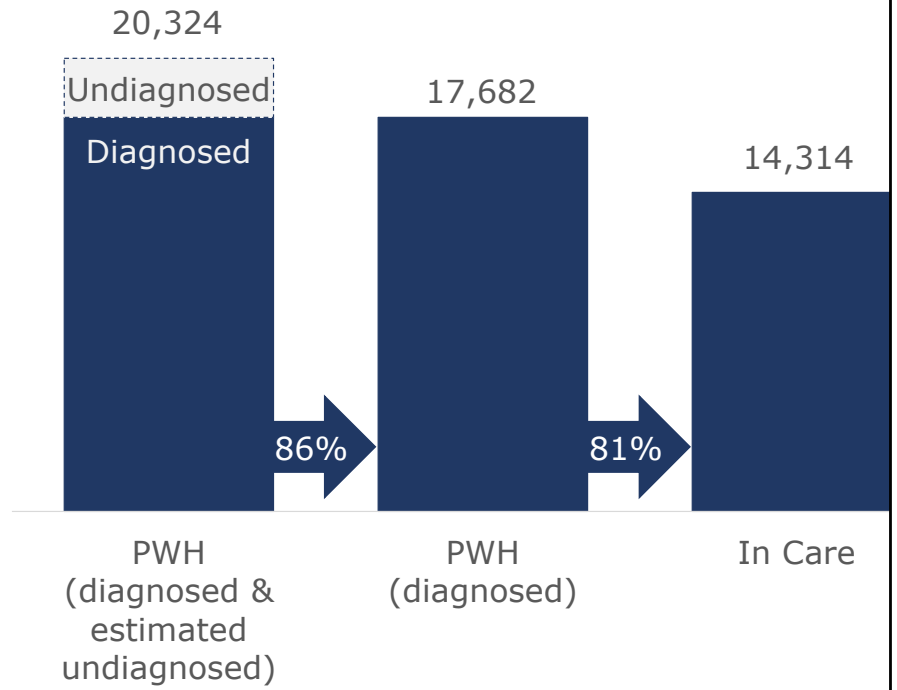
It's important to remember the care continuum is only useful in assessing need gaps among *diagnosed* PWH. Upstream from the care continuum are three crucial stages:

- 1) Prevention
- 2) Early testing
- 3) Rapid linkage

Upstream from the Care Continuum

An estimated **13%** of PWH in the US are unaware of their status (undiagnosed).

If that figure is applied to Michigan, that's **2,642** people

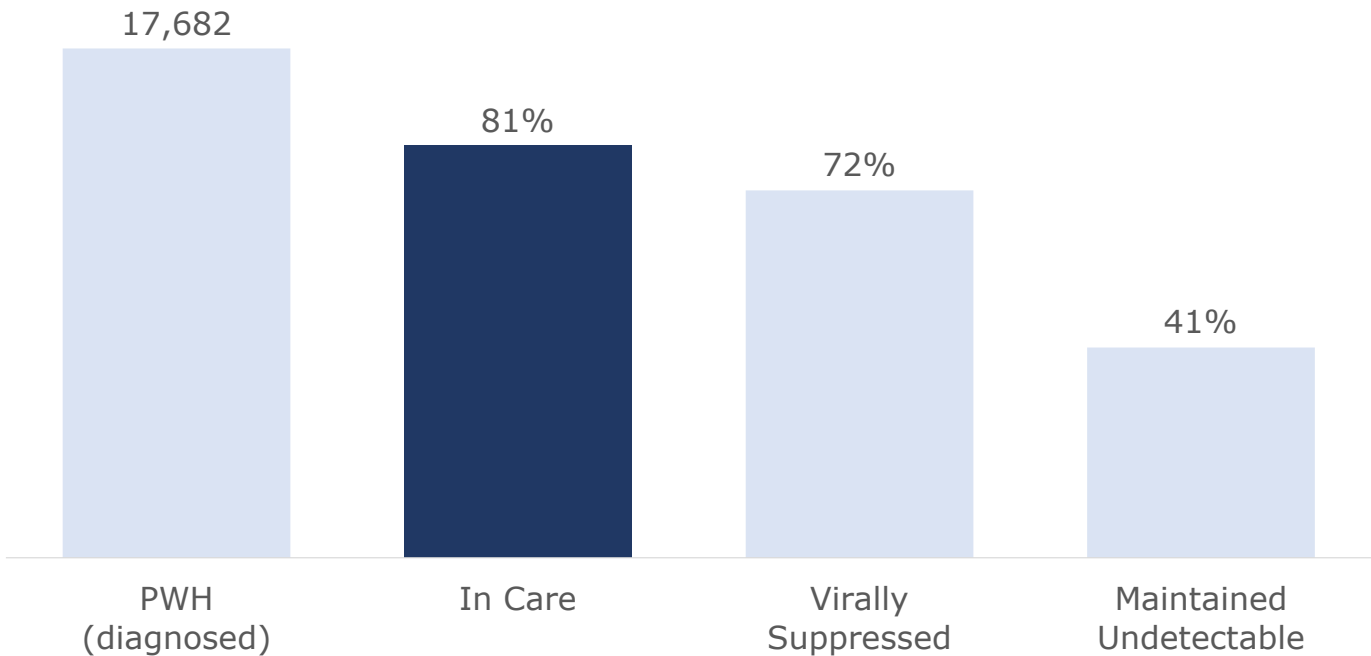


CDC estimates 87% of persons with HIV in the US are diagnosed.
<https://stacks.cdc.gov/view/cdc/156513>

Michigan Care Trends and Disparities

In Care

In Care – Michigan, 2023



In Care - PWH 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 PWH in care divided by the total number of *diagnosed* PWH.

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 PWH 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, however care did not improve further during 2022.

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 PWH in the state need to be in care. This stage of the Care Continuum (engaging and retaining PWH in care) should be the primary focus of HIV care programs.

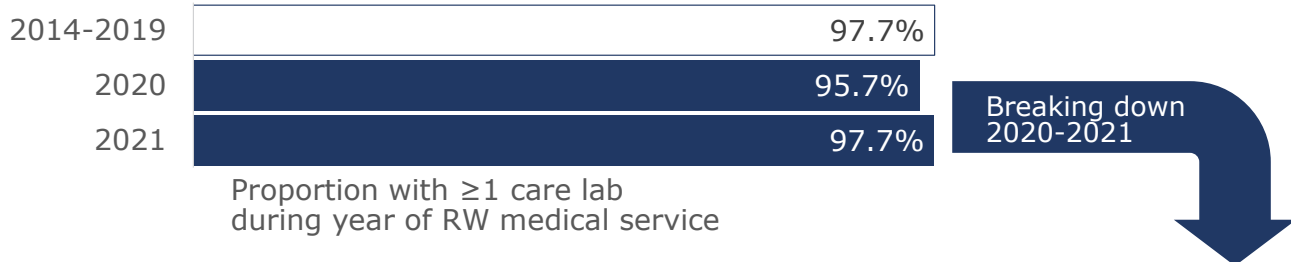
For assistance getting into care, visit [Link-Up Michigan](#).

Note: The 2025 Target is derived from Ending the Epidemic and UNAIDS Fast-Track 95-95-95 goal: by 2030, 95% of PWH are aware of their status, 95% of diagnosed PWH 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.

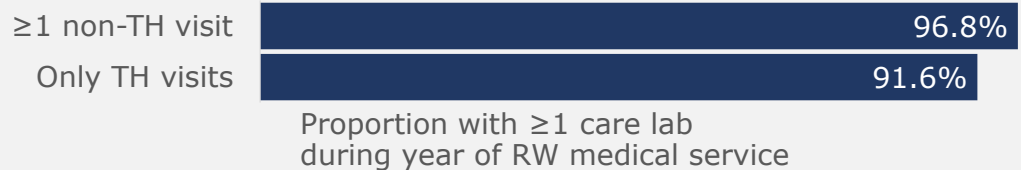
Telehealth and HIV care labs

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.



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 Early Intervention Specialist Linkage to Medical Care Confirmed, and Medical Case Management HIV Specialist Confirmed services were excluded.

Care disparities

by Ryan White (RW) enrollment



by Risk



by Age



by Race



Proportion of PWH In Care

Also



Transgender persons



Persons with unstable housing



Persons on Medicaid or lacking health insurance



Persons living below the poverty line

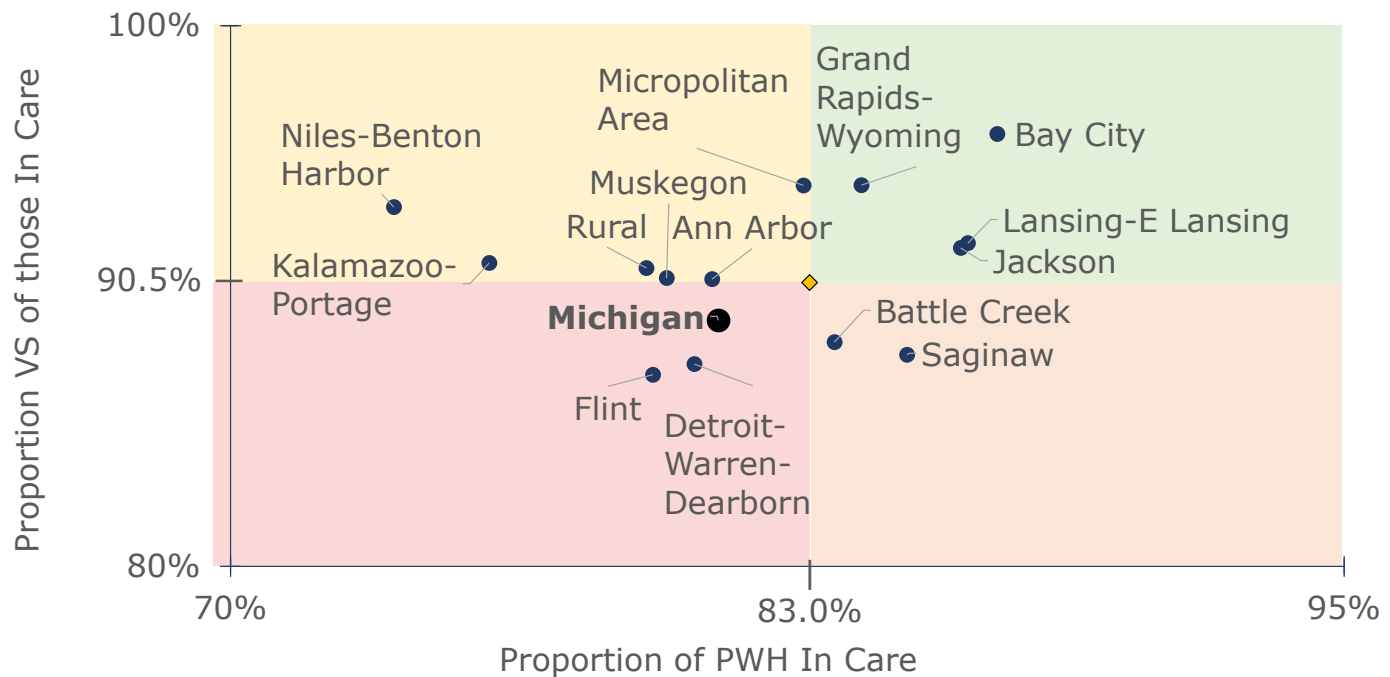
Some populations face significant barriers to receiving HIV care. The populations represented by dark blue bars experience lower care rates compared to the reference groups (light grey bars). Information regarding gender, housing status, health insurance, and income are often only reported among persons 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:

- "PWID only" excludes MSM/PWID
- "All others" under risk excludes persons with no risk reported
- Previously, 15-29 year olds were the focus population. See slide 24 for more information on this shifting demographic.

Most high prevalence Metro Areas (MSAs) did not reach the 2023 care and VS goals



The x-axis is the proportion in care, and the y-axis is the proportion virally suppressed of those in care. To increase community viral suppression (VS of all PWH) and reduce transmission risk, 95% of PWH should be in care, and 95% of those in care should reach VS by 2030. Populations with at least 83.0% in care and 90.5% VS of those in care are on track to reach the 2030 goal.

MSA: Metropolitan Statistical Area

Compared to the annual goal:

- MSAs in the upper right quadrant (green), have care and VS rates higher than the annual goal.
- MSAs in the upper left (yellow), have lower care rates and higher VS rates than the annual goal. These regions need assistance with retaining PWH in care.
- MSAs in the lower right (orange), have higher care rates and lower VS rates than the annual goal. These regions need assistance with treatment adherence.
- MSAs in the lower left (red), have lower care and VS rates than the annual goal. These regions need assistance with retaining PWH in care & treatment adherence.

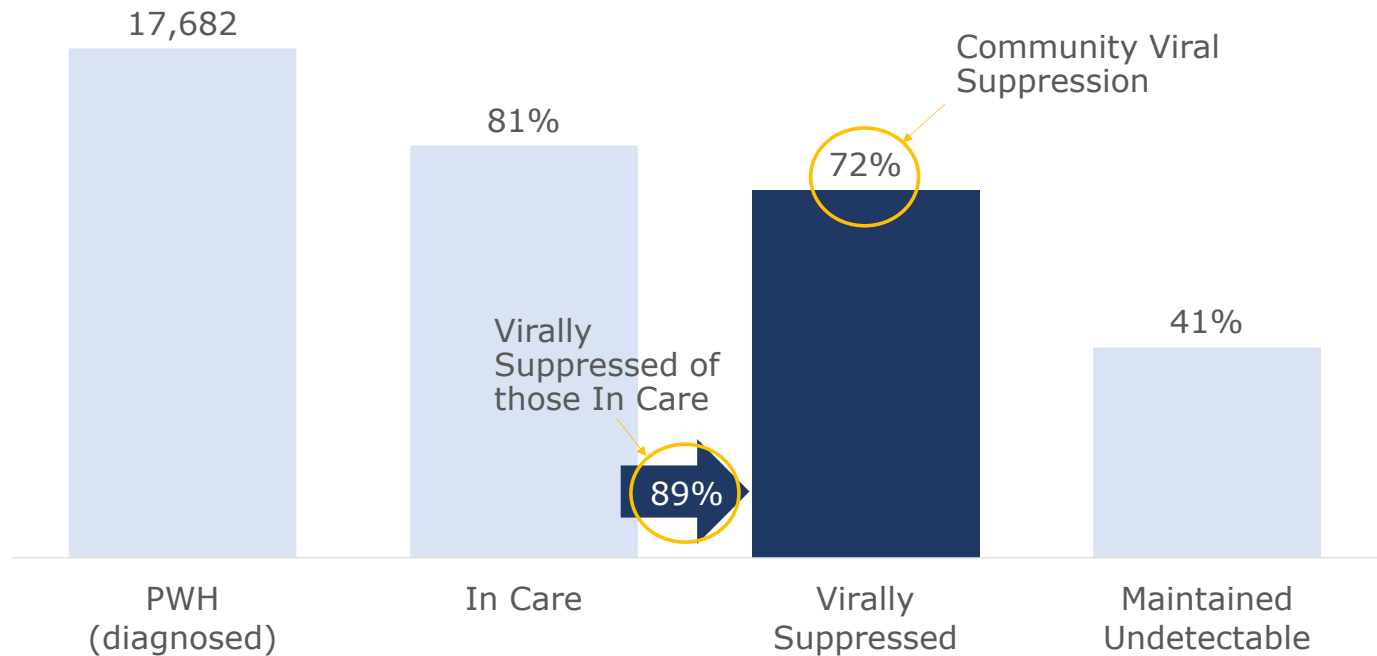
This same comparison is available for LHD jurisdictions in the Care Continuum Tables (link on title slide).

An explanation of the MSAs can be found on the census bureau website, but the wiki page is more straightforward and easier to see which counties belong in which MSAs:

https://en.wikipedia.org/wiki/Michigan_statistical_areas

Viral Suppression

Virally Suppressed – Michigan, 2022



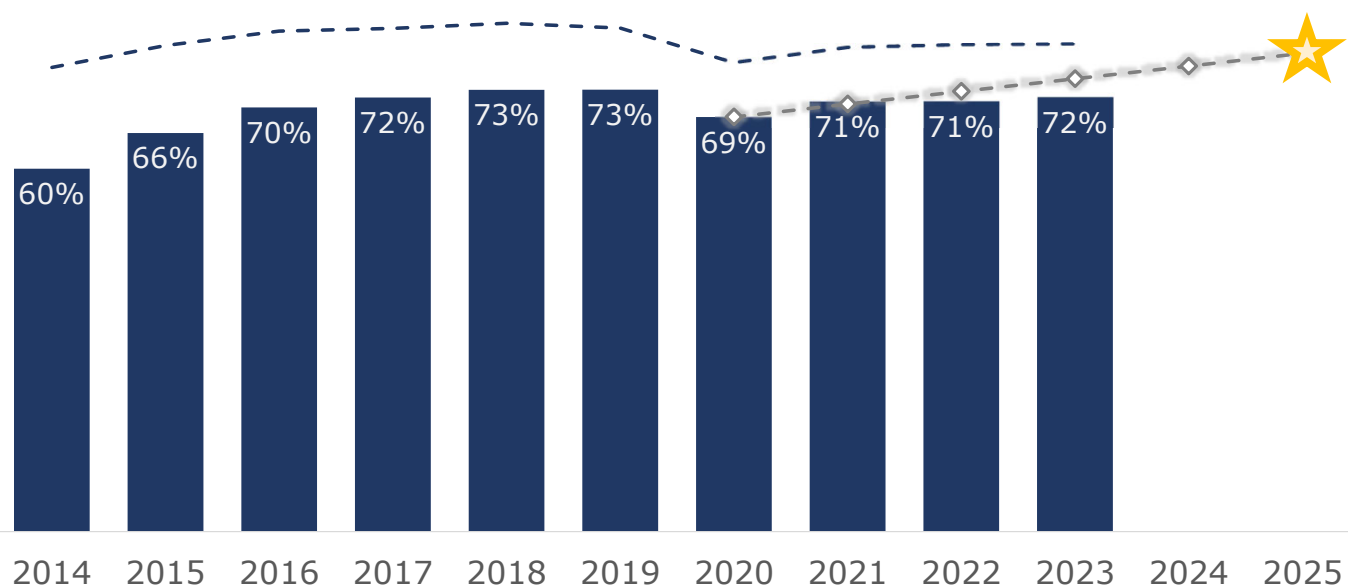
There are two ways to think about viral suppression and each is useful for different purposes. Community viral suppression is the proportion of all diagnosed PWH who are virally suppressed (**VS divided by diagnosed PWH**). High community viral suppression indicates high treatment adherence and low transmission 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/PWH).

Community Viral Suppression – Michigan

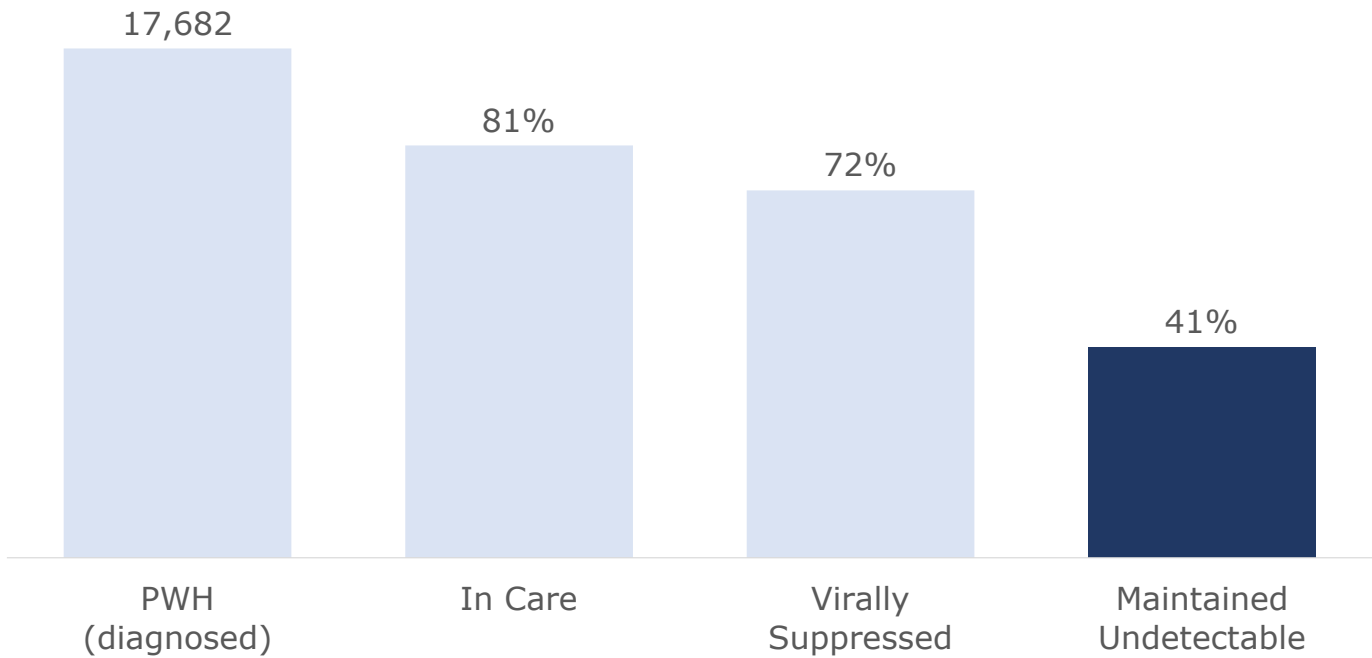
■ Virally Suppressed - - "Care Ceiling" ◇ Annual Goal ★ 2025 Target (79%)



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 PWH 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 2022, Michigan fell behind the annual community viral suppression goal. To reach this goal, the proportion in care must rise. Engaging and retaining PWH in care should be the primary focus of HIV care programs. Viral suppression will follow.

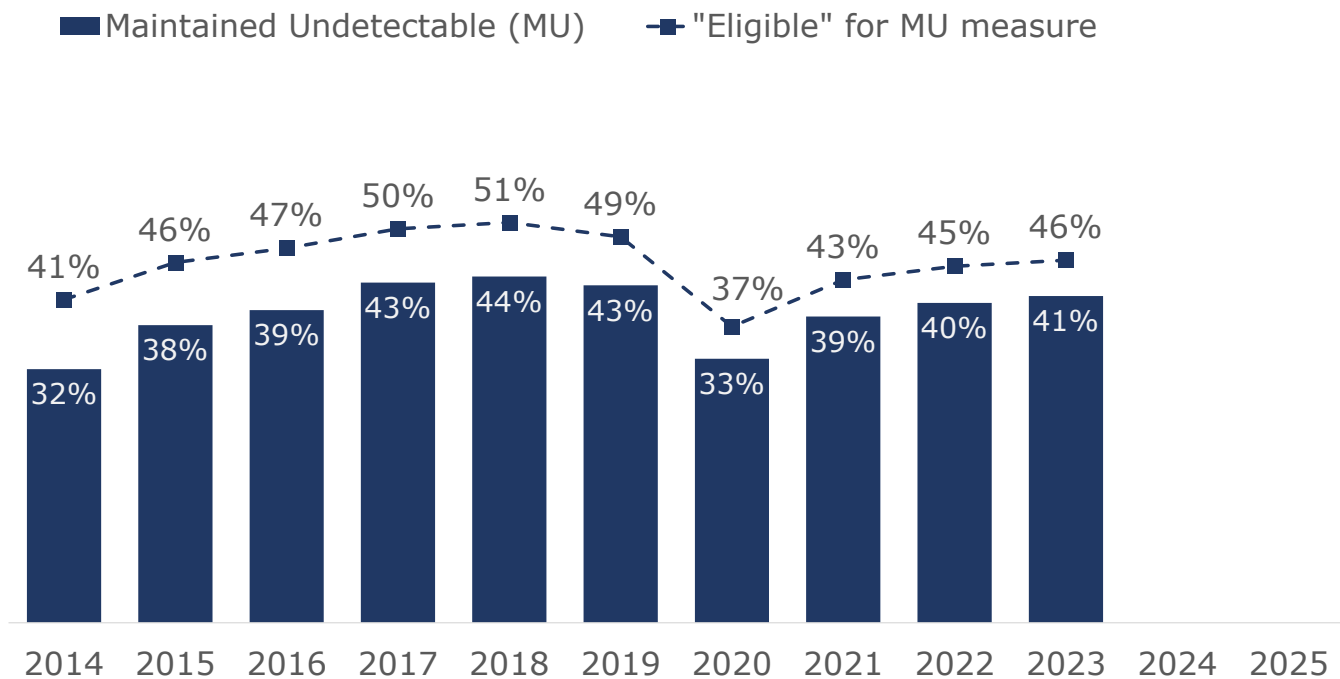
Note: The 2025 Target is derived from Ending the Epidemic and UNAIDS Fast-Track 95-95-95 goal: by 2030, 95% of PWH are aware of their status, 95% of diagnosed PWH are in care, and 95% of person in care are virally suppressed. In Michigan during 2021, 89% of persons in care were virally suppressed (on 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, 2022



Maintained Undetectable (**MU**) - PWH who maintained viral load levels $<200\text{c/mL}$ 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) - PWH 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 - PWH who received at least two viral load lab tests 4-8 months apart. This figure helps differentiate between the proportion of PWH who were not MU due to high viral loads versus the proportion of PWH who were not MU due to lack of sufficient viral load tests.

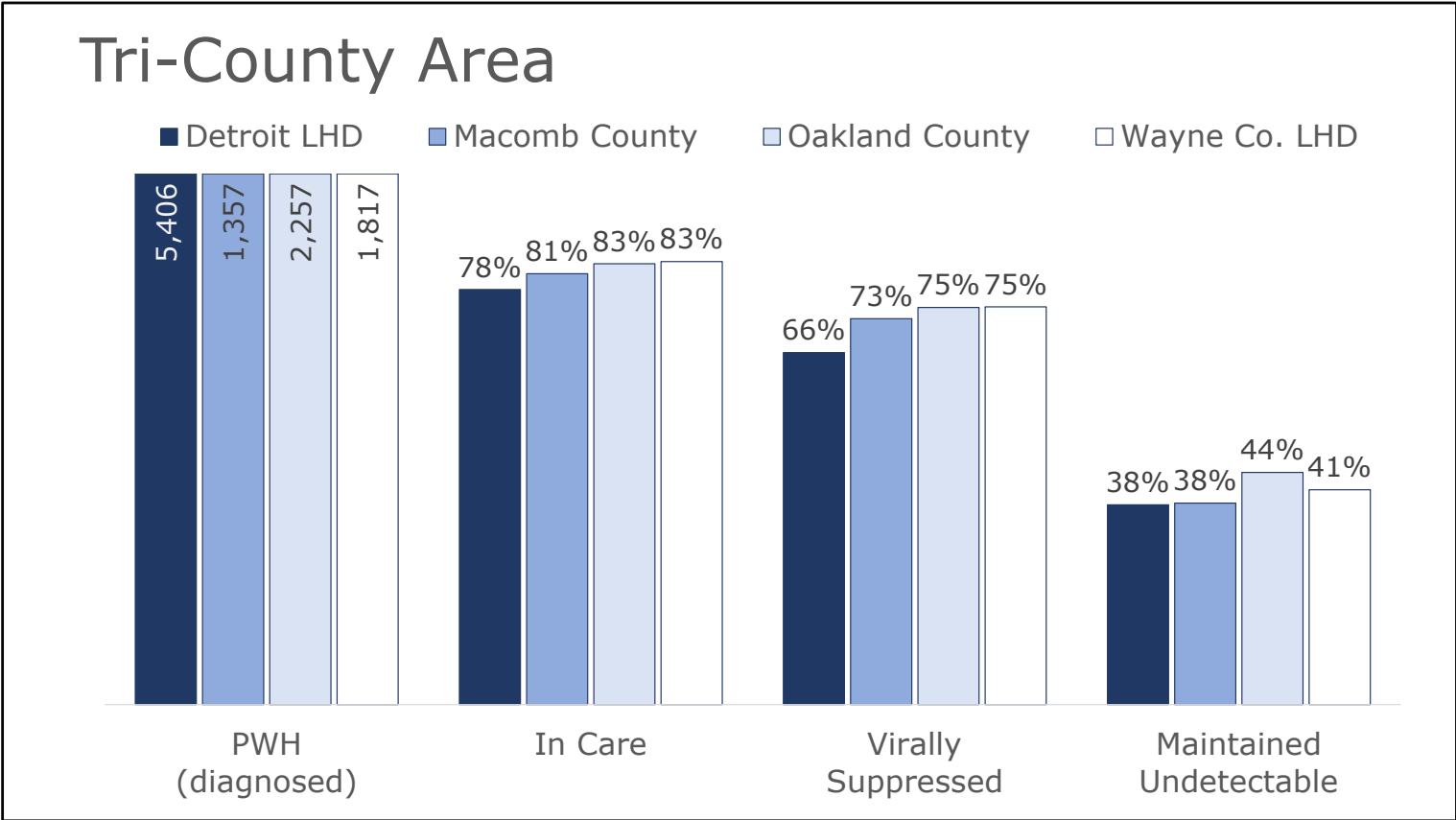
In 2023, only 46% of all PWH received two viral load lab tests 4-8 months apart ("eligible" for MU measure). Of them, 90% (or 41% of all PWH) were MU. This is good news – the vast majority of persons receiving consistent viral load monitoring, are maintaining a suppressed viral load. The remaining "ineligible" 54% of PWH 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 PWH learn about U=U as a prevention method, it is likely this measure will increase.

2023 Care Continuums

for select populations

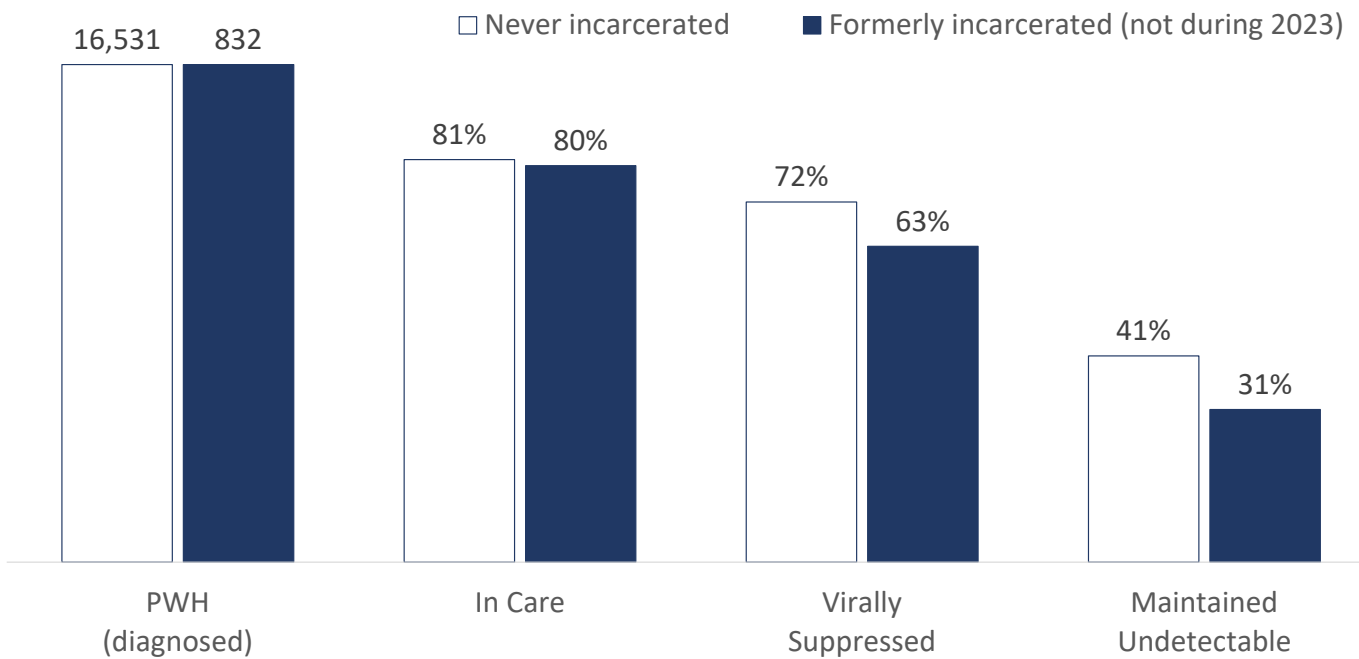
Calculations involving populations with a small number of PWH (45-99 PWH) should be interpreted with caution as proportions may fluctuate year to year due to small changes in the numerator.



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.

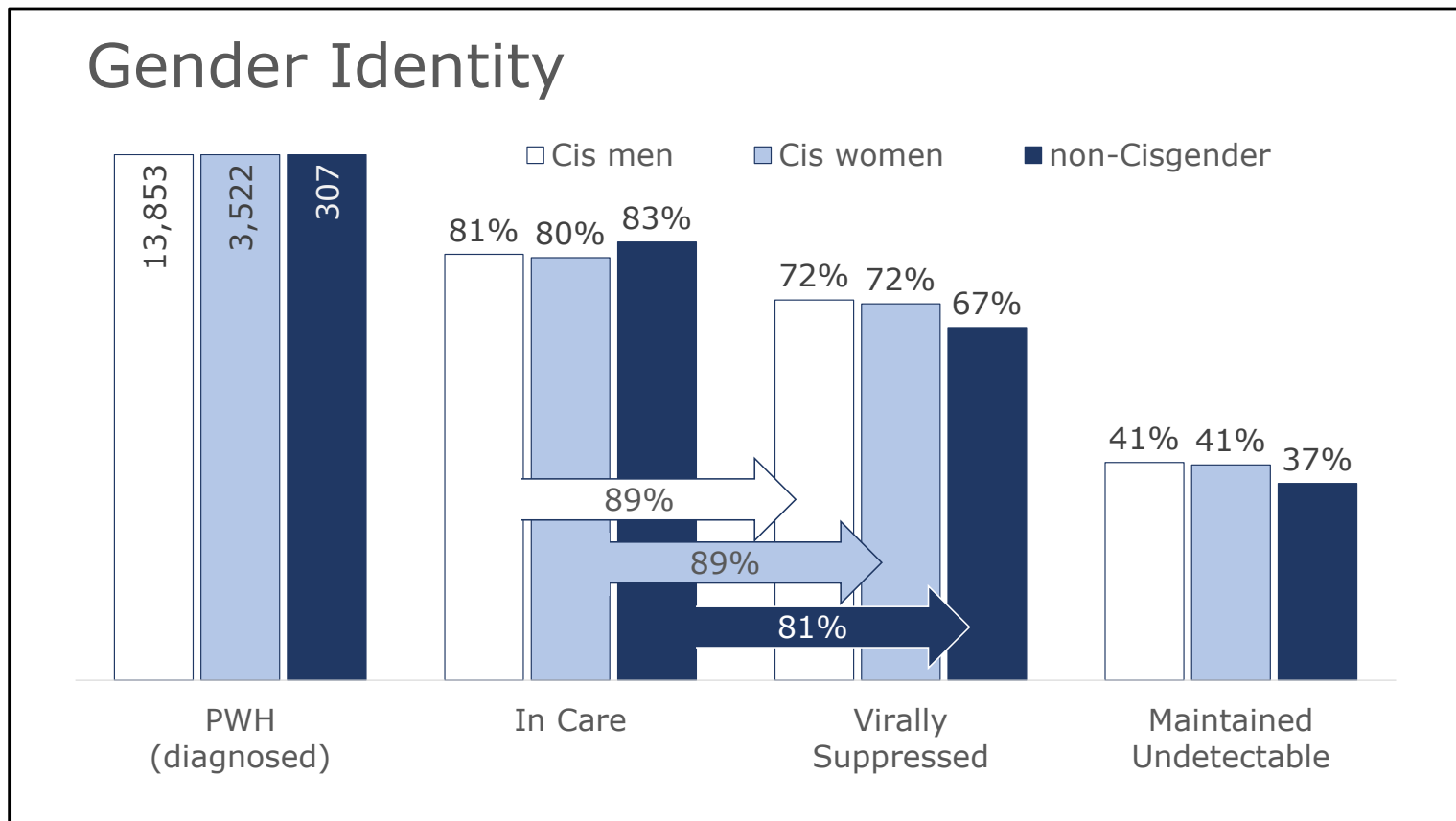
Historic prison status



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 dependence 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 PWH 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 2023 but who were not incarcerated during 2023 are included in the “Formerly incarcerated” group. Persons incarcerated during 2023 are excluded.

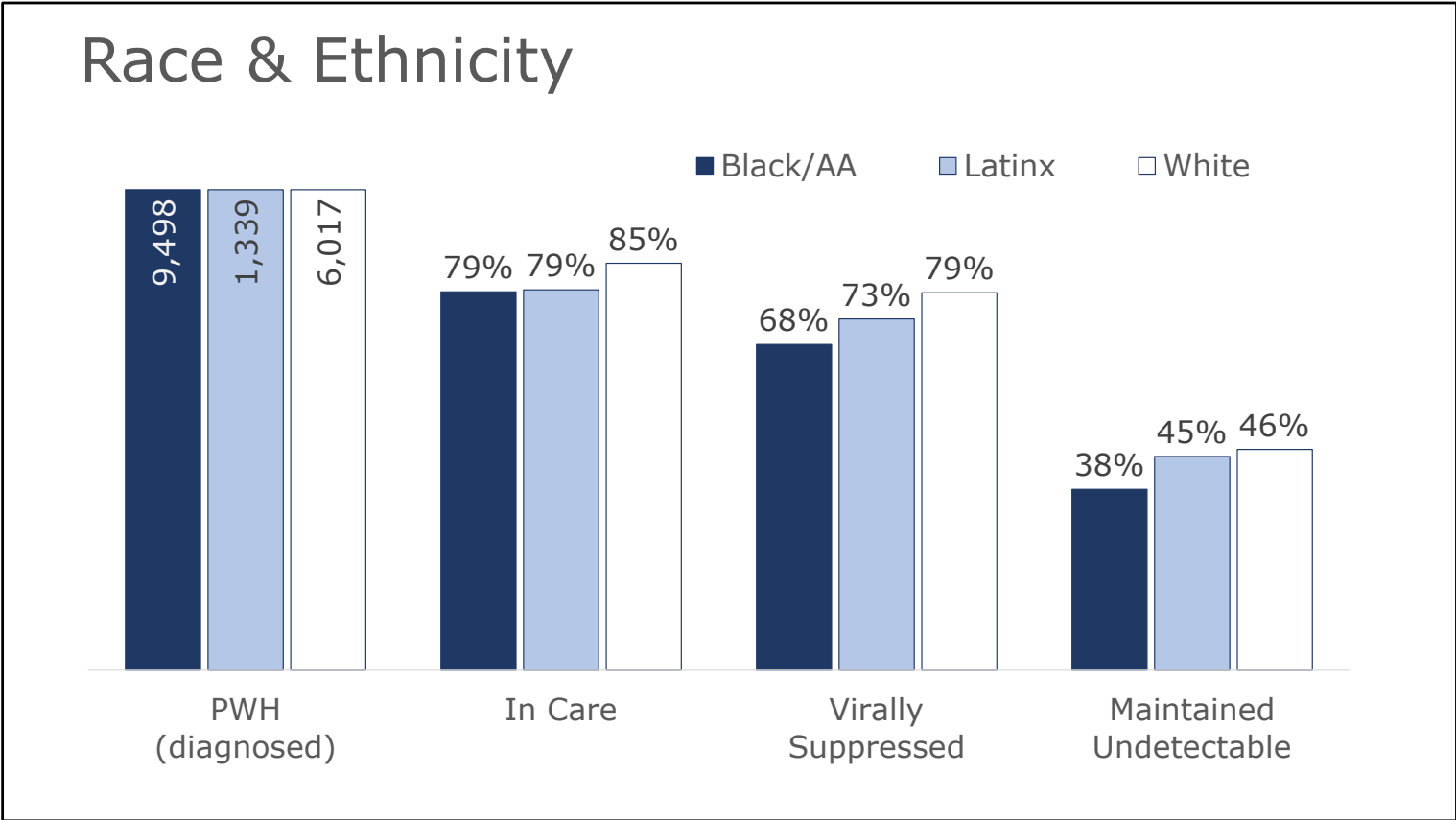
Note: Prison refers to state and federal prisons, not local jails.



Of the 307 non-Cis persons represented, 293 are trans women, 10 are trans men and 4 identify as “additional gender identity”.

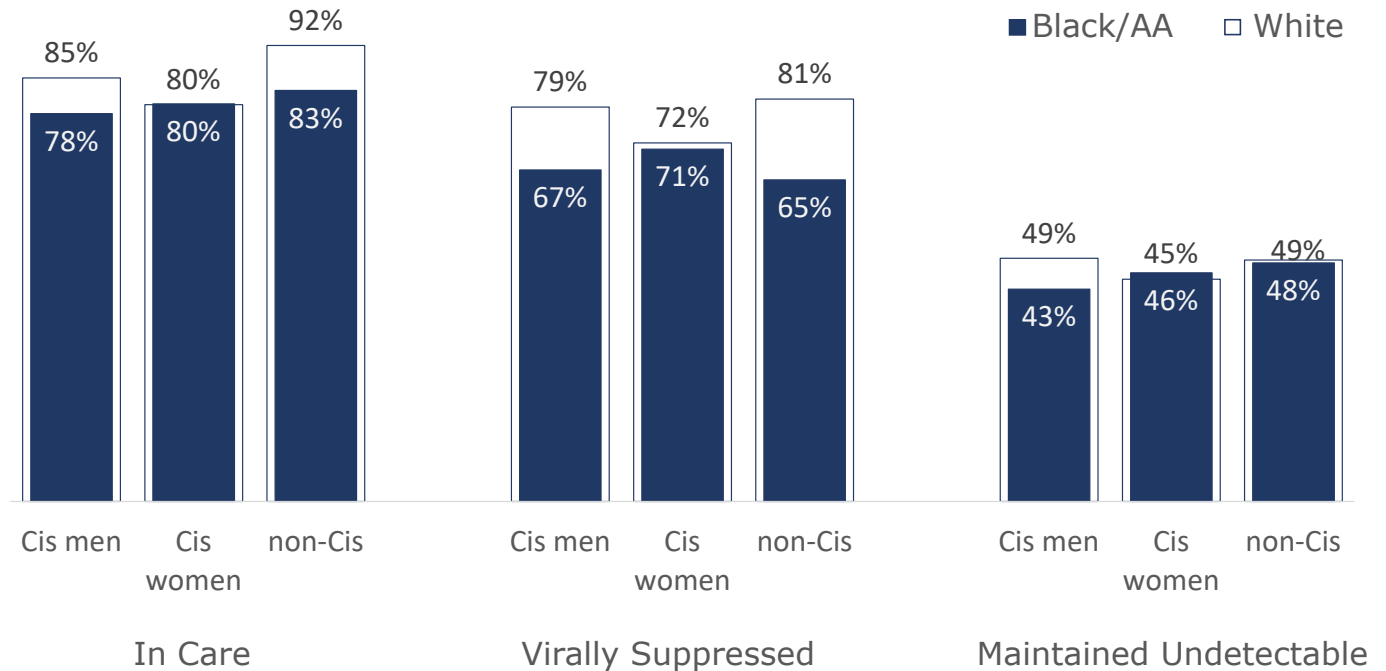
The proportion of non-Cis persons who are In Care may be artificially high due to historic limitations within the HIV surveillance system. *Current gender identity* with transgender options was added to the system by the CDC in 2010. In 2021, an *additional gender identity* option was added. Since the 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 relative to those in care (the percentages inside the arrows). Of the cis men and cis women in care, 89% were virally suppressed. However, of the non-Cis individuals in care, only 81% were virally suppressed. This indicates receiving and maintaining care is more challenging for this population.



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

Care disparities - Race & Gender

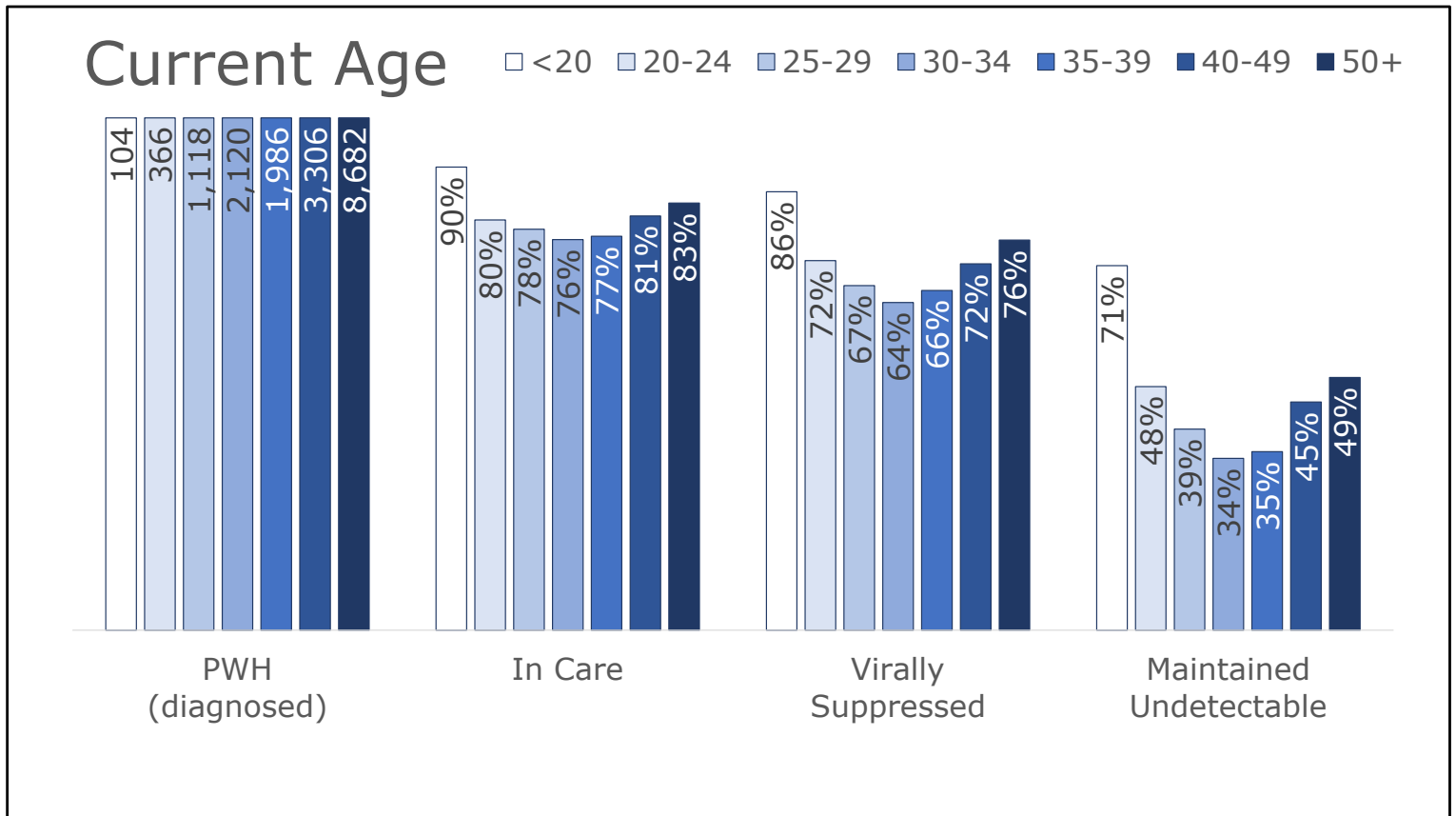


The previous two slides show gender and race alone. Those slides show:

- Black/AA persons 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.

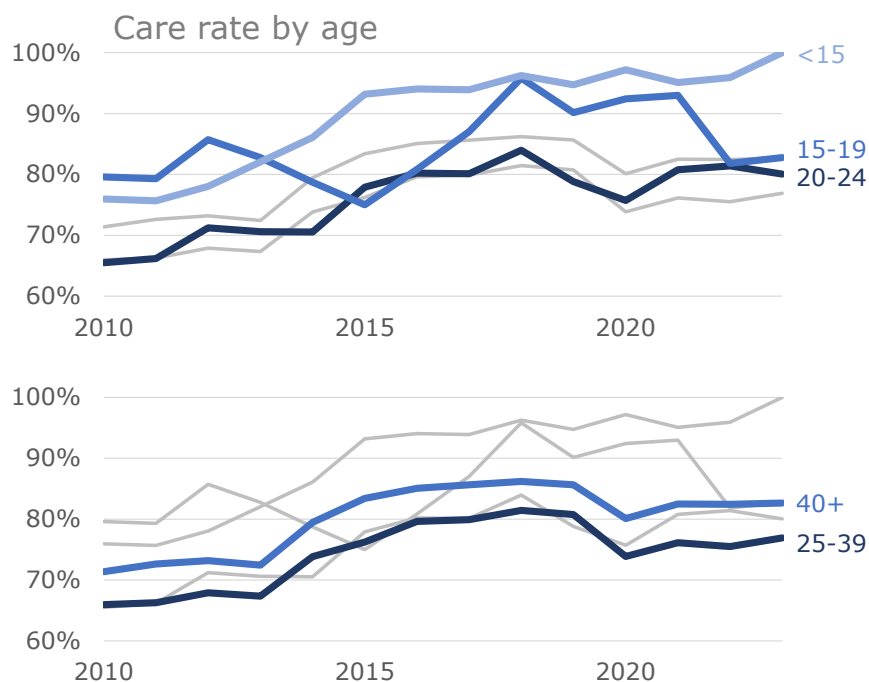
Stratifying by race and gender shows some variation in that overarching picture.

- Care outcomes among Black/AA persons are lower than white persons for cis men and non-cis individuals, but care outcomes among cis women are similar for both races.
- While Black/AA cis women have slightly better outcomes than Black/AA cis men, white cis women have poorer outcomes than white cis men.
- There is a very small number of white non-cis persons (37), so care outcomes should be interpreted with caution, but the disparity between Black/AA and white non-cis persons remains large.



During 2022 and 2023, persons 25-39 years old experienced the lowest care outcomes. The age groups of concern with regards to care seems to be shifting away from the 15-29 group as the cohort ages. 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. those 40 and older) have been combined for ease of viewing. Both graphs are identical with different age groups highlighted.

First figure:

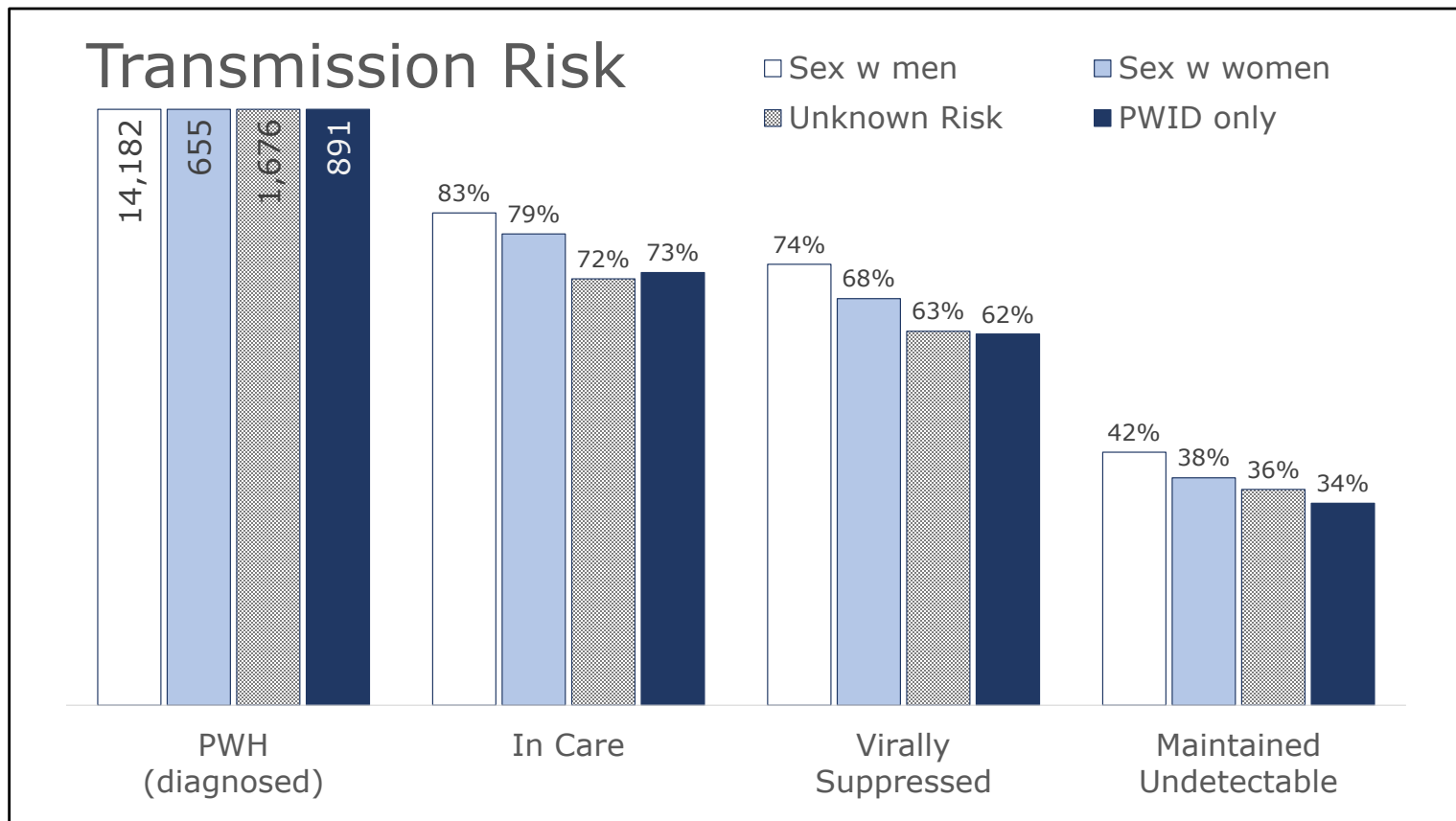
Persons 15-19 years old. Between 2014 and 2017, care rates among persons 15-19 dropped significantly below those under 15, returned to similar rates in 2018, and dropped again in 2022.

Persons 20-24 years old. After a decade of similar care rates to those 25-30, care among 20-24 year olds seems to be breaking off and improving/recovering from the COVID dip more rapidly. As care rates in this age group fluctuate often, this age cohort should remain a focus population for now.

Second figure:

Persons 25+ years old. These age groups have had the same trajectory for over a decade. After a marginal rebound in 2021 from the COVID dip, care either declined or did not improve in 2022.

General note: The prevalence of PWH under 30 has been declining as diagnoses decrease and individuals age into the other groups.

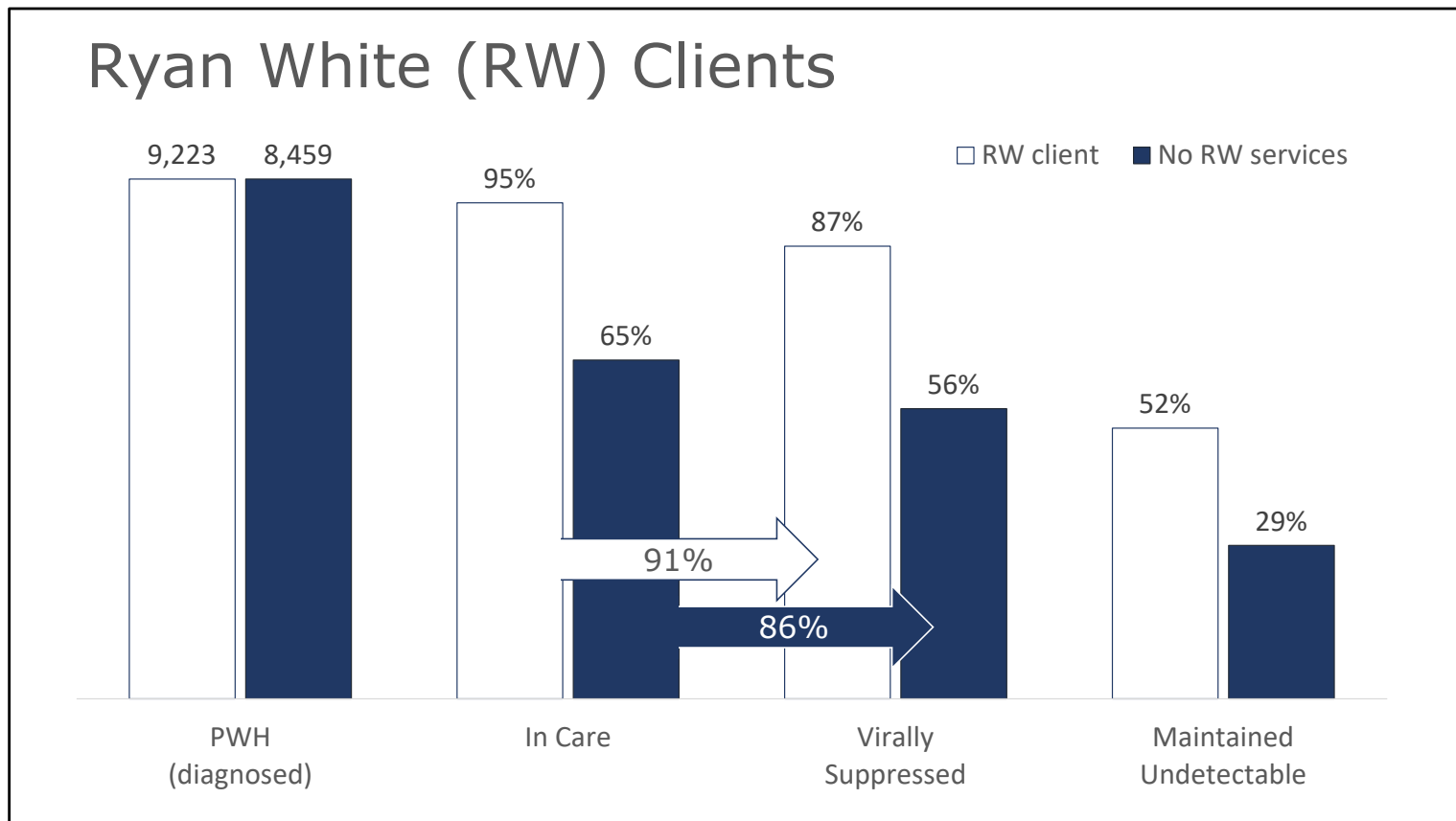


Sex w men includes all persons who reported sex with men (gay/bisexual cis men, non-Cis persons who reported sex with men, and heterosexual women who do not inject drugs). This risk accounts for the majority of PWH.

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 PWH 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.



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

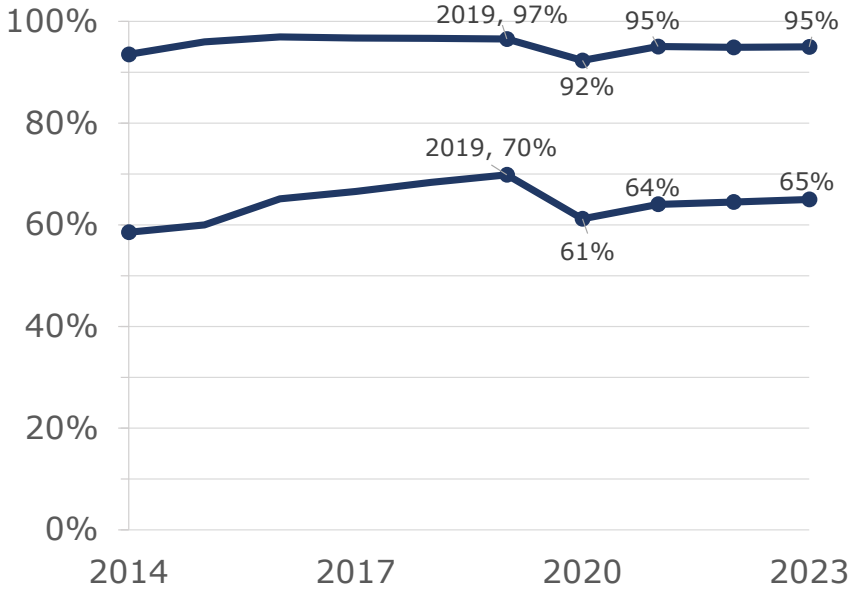
The largest care disparity is between those enrolled and not enrolled in Ryan White (RW). **Care programs should focus on engaging and retaining all eligible PWH in RW.** Of Medical Monitoring Project (MMP) participants 2015-2019, 89-97% were eligible for RW, but only 72% received a service during the year of their MMP interview. Of all PWH, 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 PWH, 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 PWH 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 2023, 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 PWH In Care by RW enrollment



Ryan White client
 - Only 2% lower than the 2019 rate
 - No improvement 2021-2023

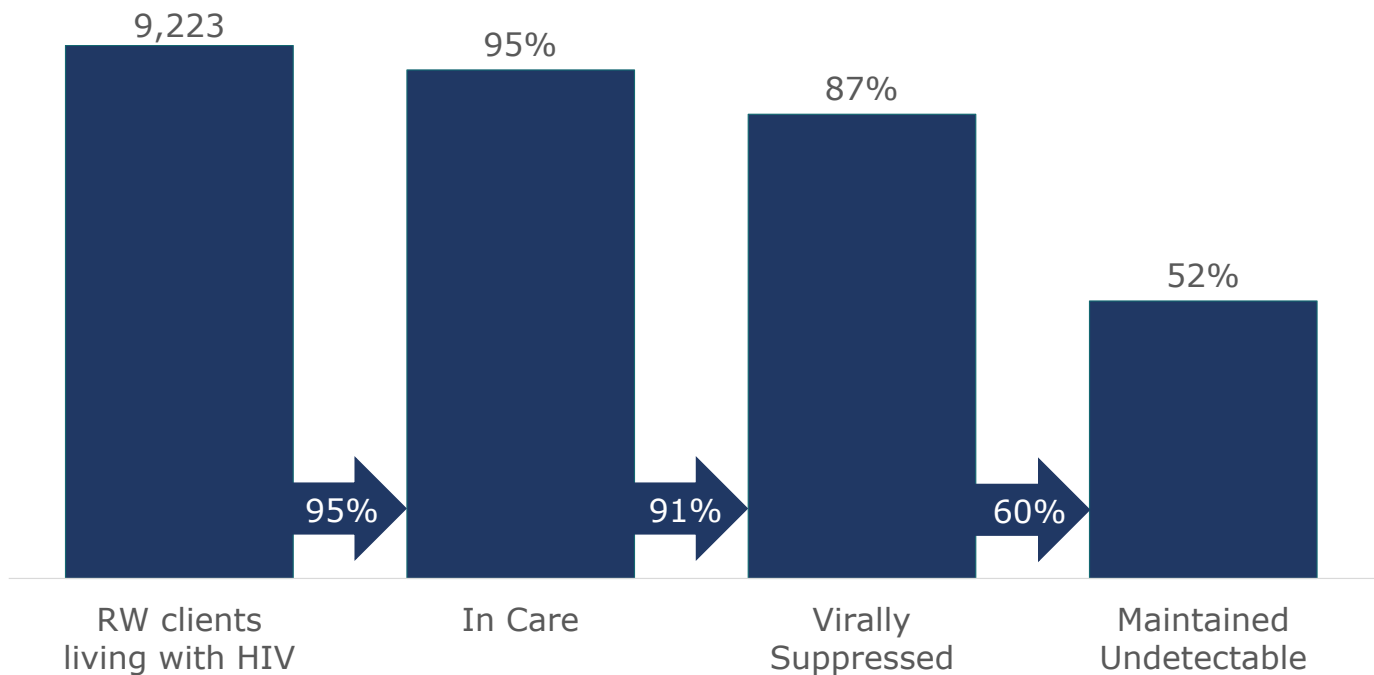
No Ryan White services
 - Still 5% lower than 2019 rate
 - Only 1% improvement 2021-2023

2023 Ryan White Care Continuums

Includes persons who received at least one
Ryan White (RW) service during 2023.

Do not compare to Care Continuums containing all PWH

Michigan's Ryan White Care Continuum, 2023



DO NOT COMPARE WITH NON RW CARE CONTINUUMS

RW clients living with HIV- PWH diagnosed before Jan 1 and alive Dec 31 of the given year and received at least one Ryan White service during the given year.

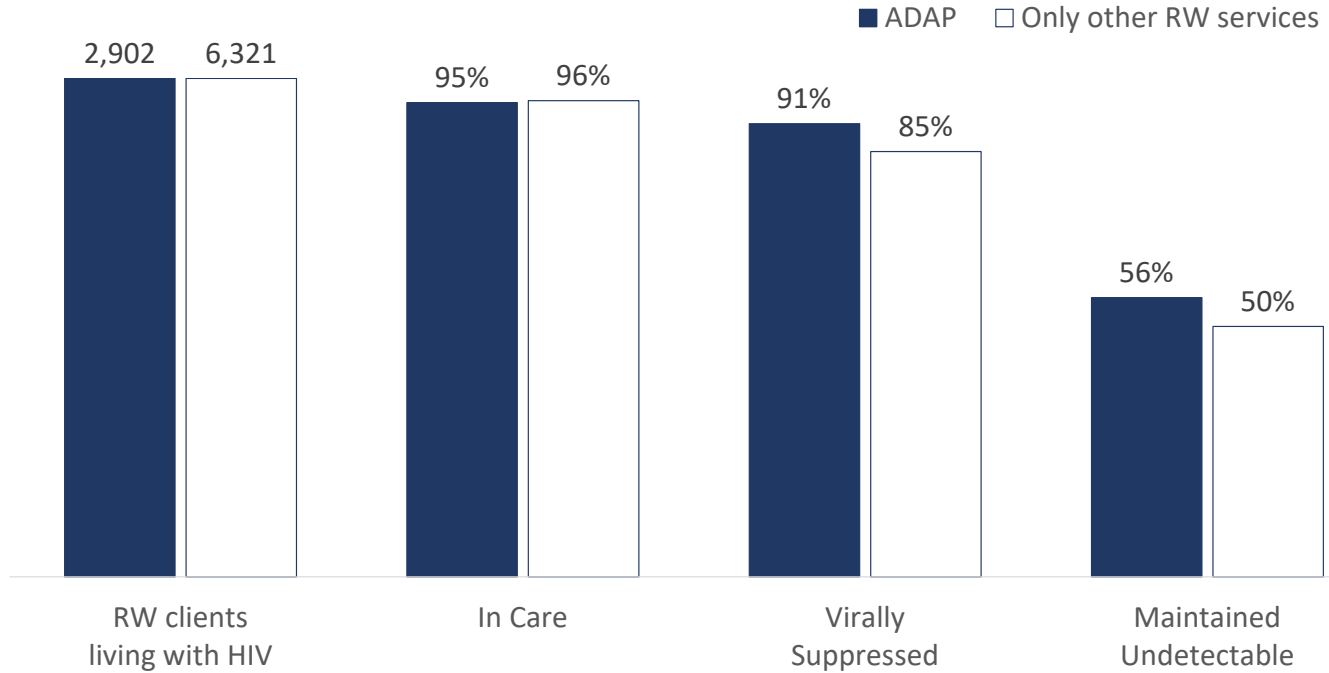
In Care - RW clients living with HIV with at least 1 CD4, viral load, or genotype lab test during the given year.

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 PWH 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)

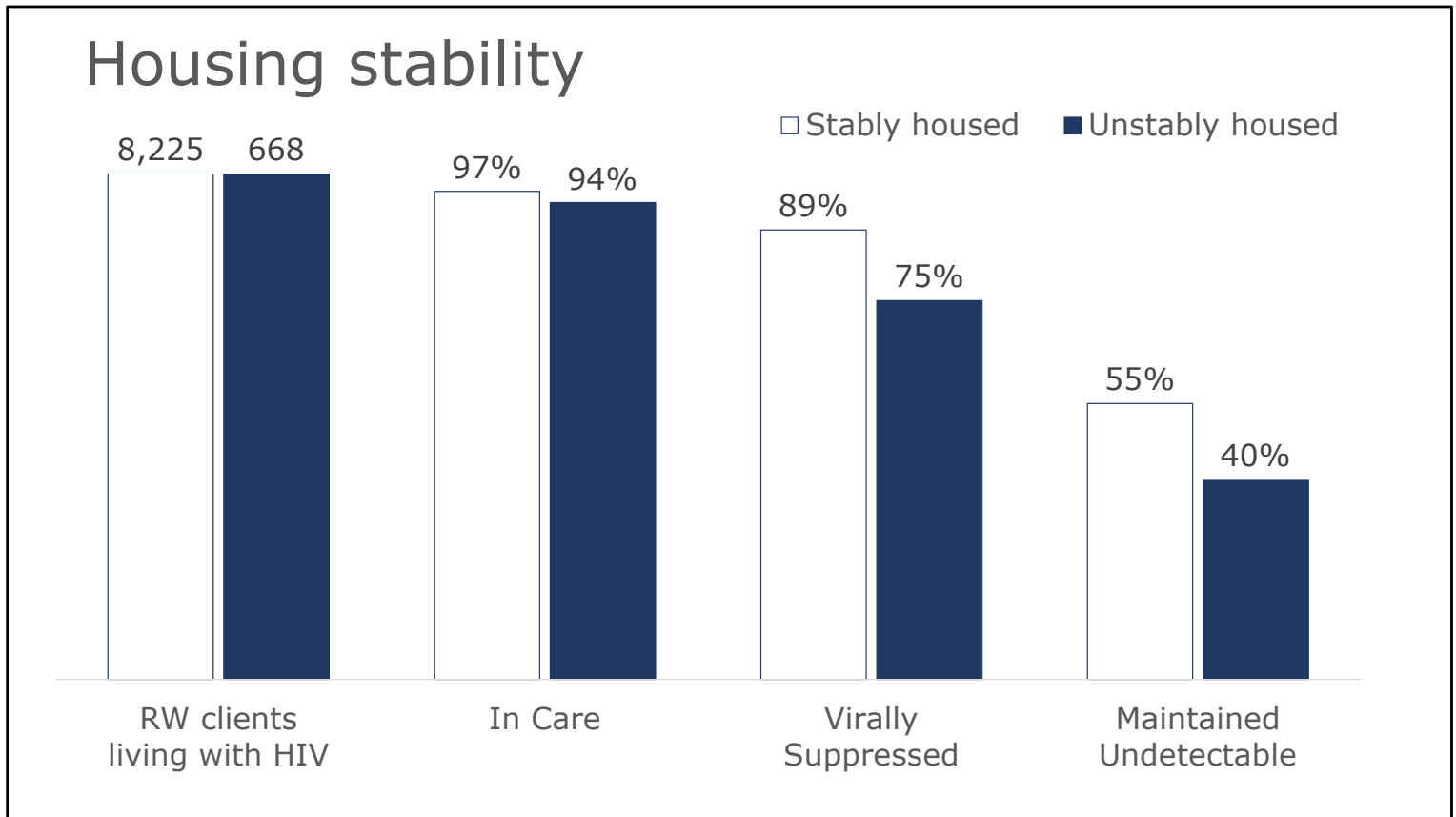


DO NOT COMPARE WITH NON RW CARE CONTINUUMS

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.

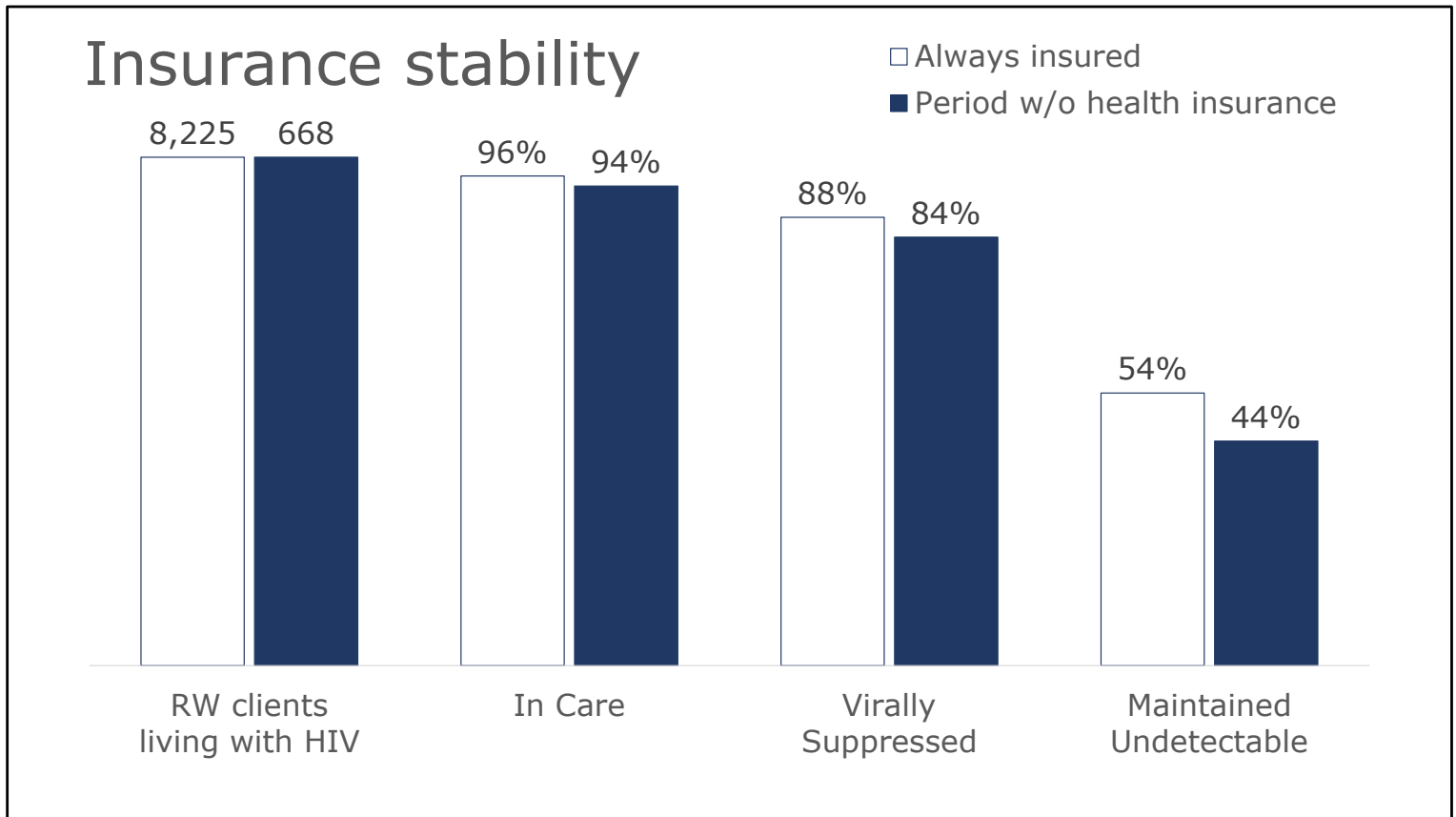


DO NOT COMPARE WITH NON RW CARE CONTINUUMS

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.



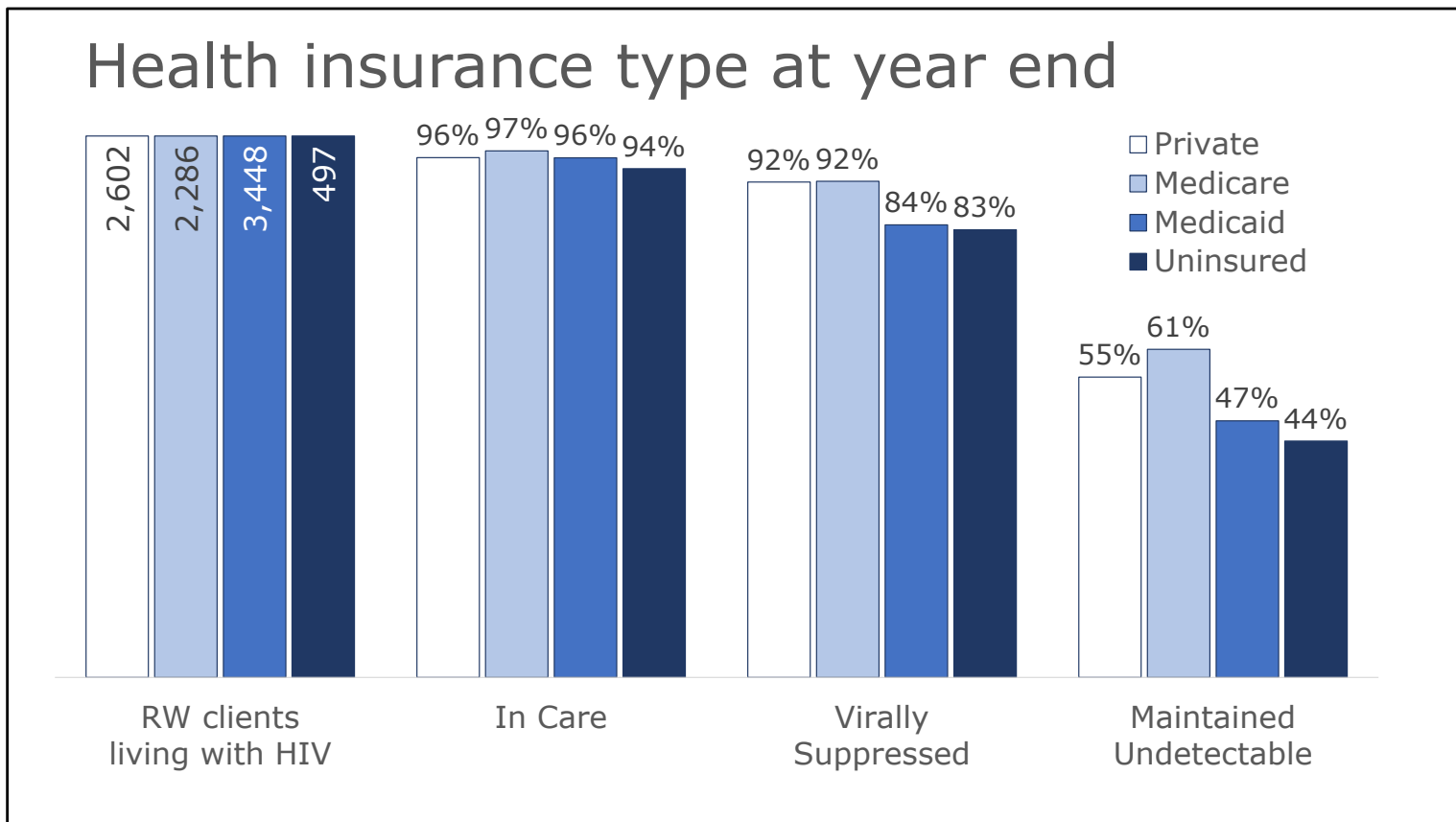
DO NOT COMPARE WITH NON RW CARE CONTINUUMS

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).

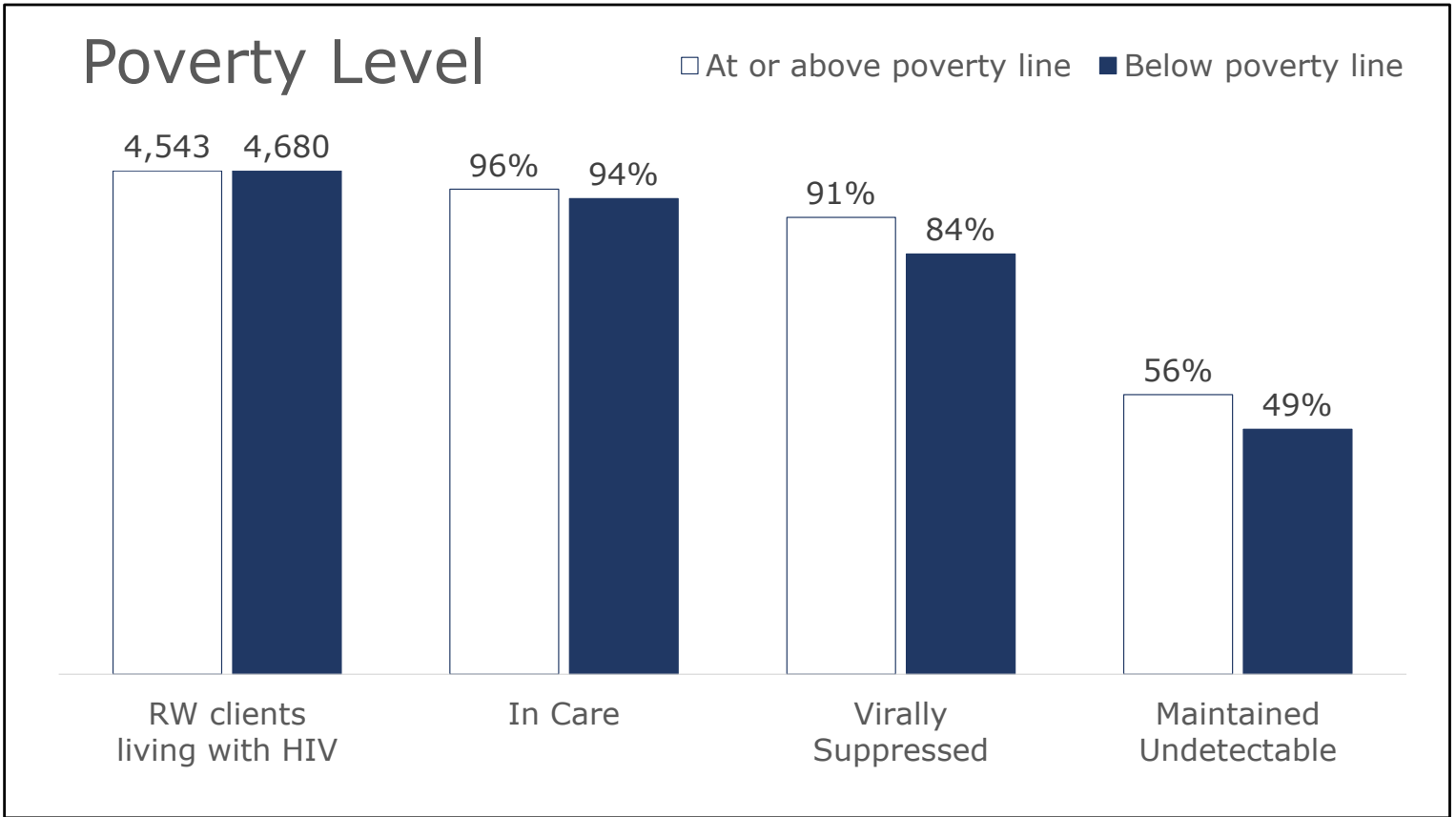
Note: persons lacking an insurance report were excluded.



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.



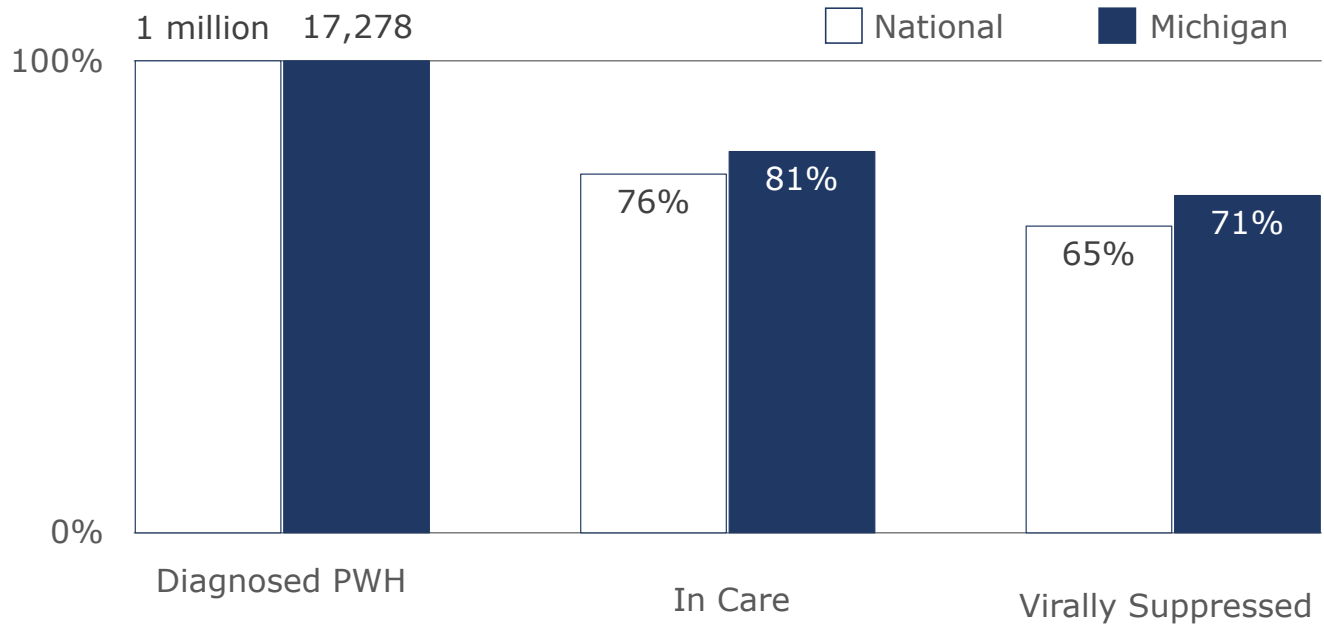
DO NOT COMPARE WITH NON RW CARE CONTINUUMS

Ryan White clients with higher incomes experience better care outcomes.

National comparison

2018

2018 National & Michigan Care Continuum



Compared to PWH nationally, Michigan residents experience better care outcomes.



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