



HIV and Its Syndemic Partners

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Medical Director HIV/STI/VH

Objectives

- **Review Tennessee epidemiologic data**
 - **HIV**
 - **Hepatitis C**
 - **STI**
 - **Overdose deaths**
- **Describe End the Syndemic Tennessee**

The logo consists of a red square with the letters 'TN' in white, serif font. Below the red square is a thin white horizontal line, and below that is a dark blue horizontal bar. A small 'TM' trademark symbol is located at the bottom right corner of the blue bar.

TN

Current Epidemiology of HIV in Tennessee

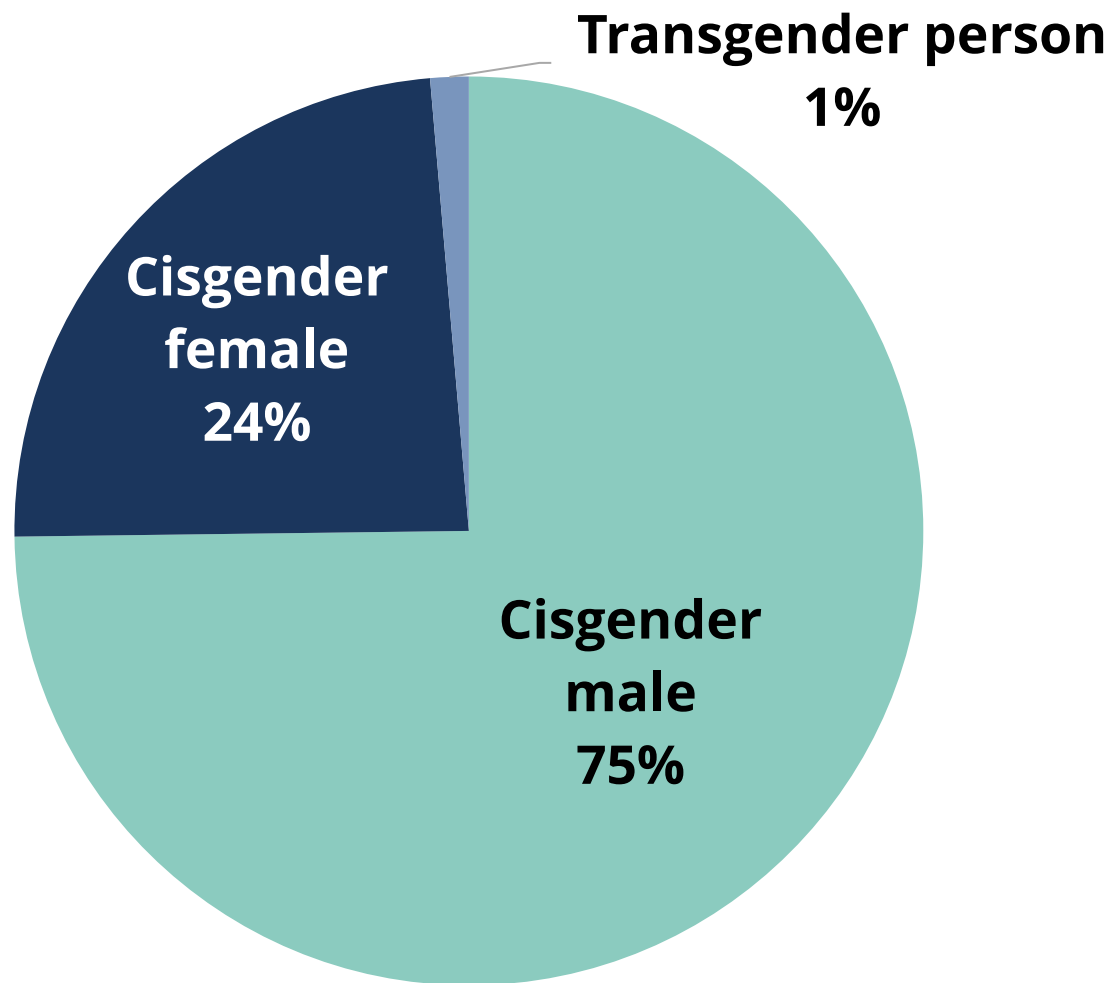
Current overview of HIV, Tennessee 2020

19,214 Persons living with HIV
(PLWH)

651 Persons newly diagnosed with
HIV

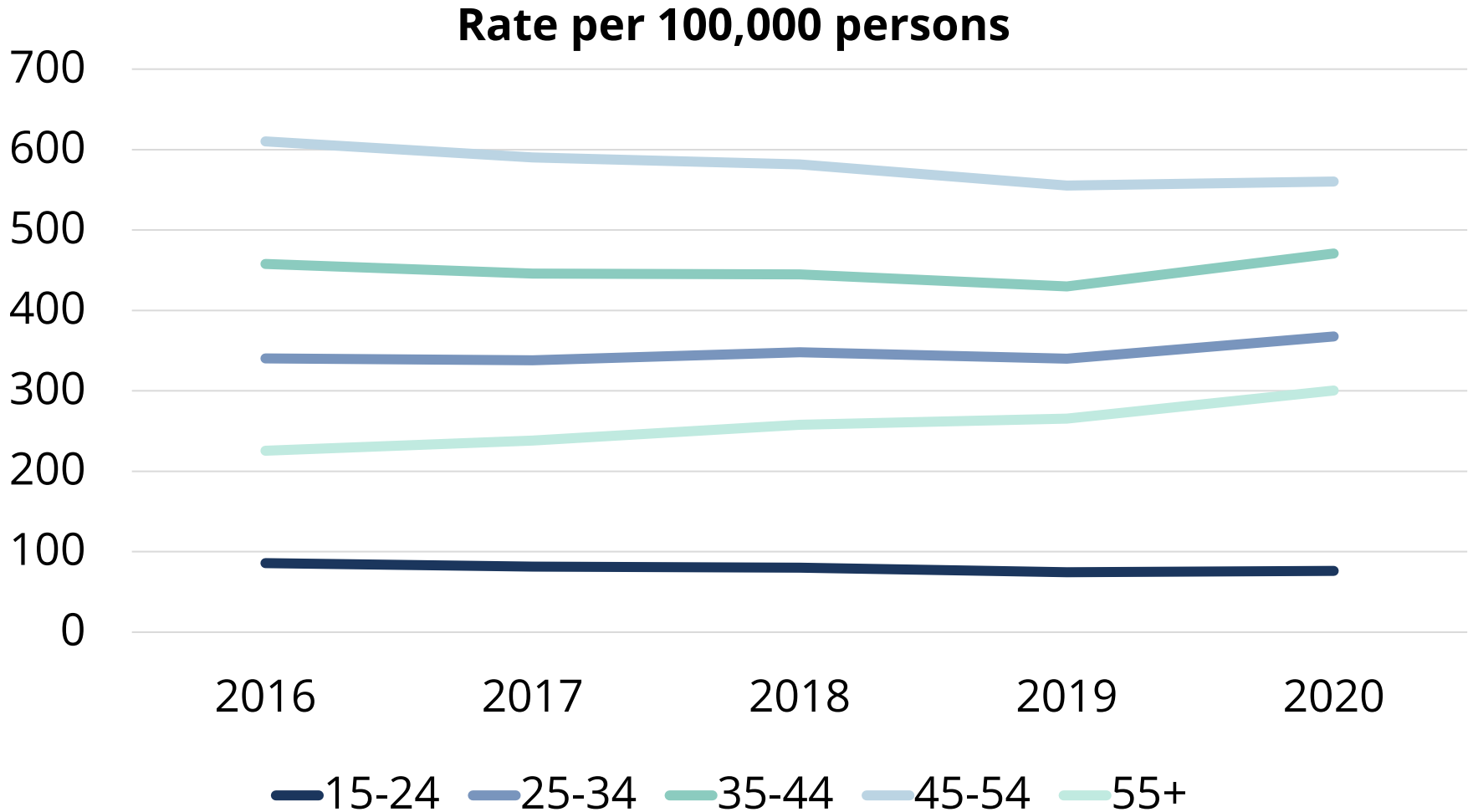
300 Deaths among persons
living with HIV

PLWH identified by gender, Tennessee 2020



Data source: Tennessee eHARS, accessed July 27, 2021

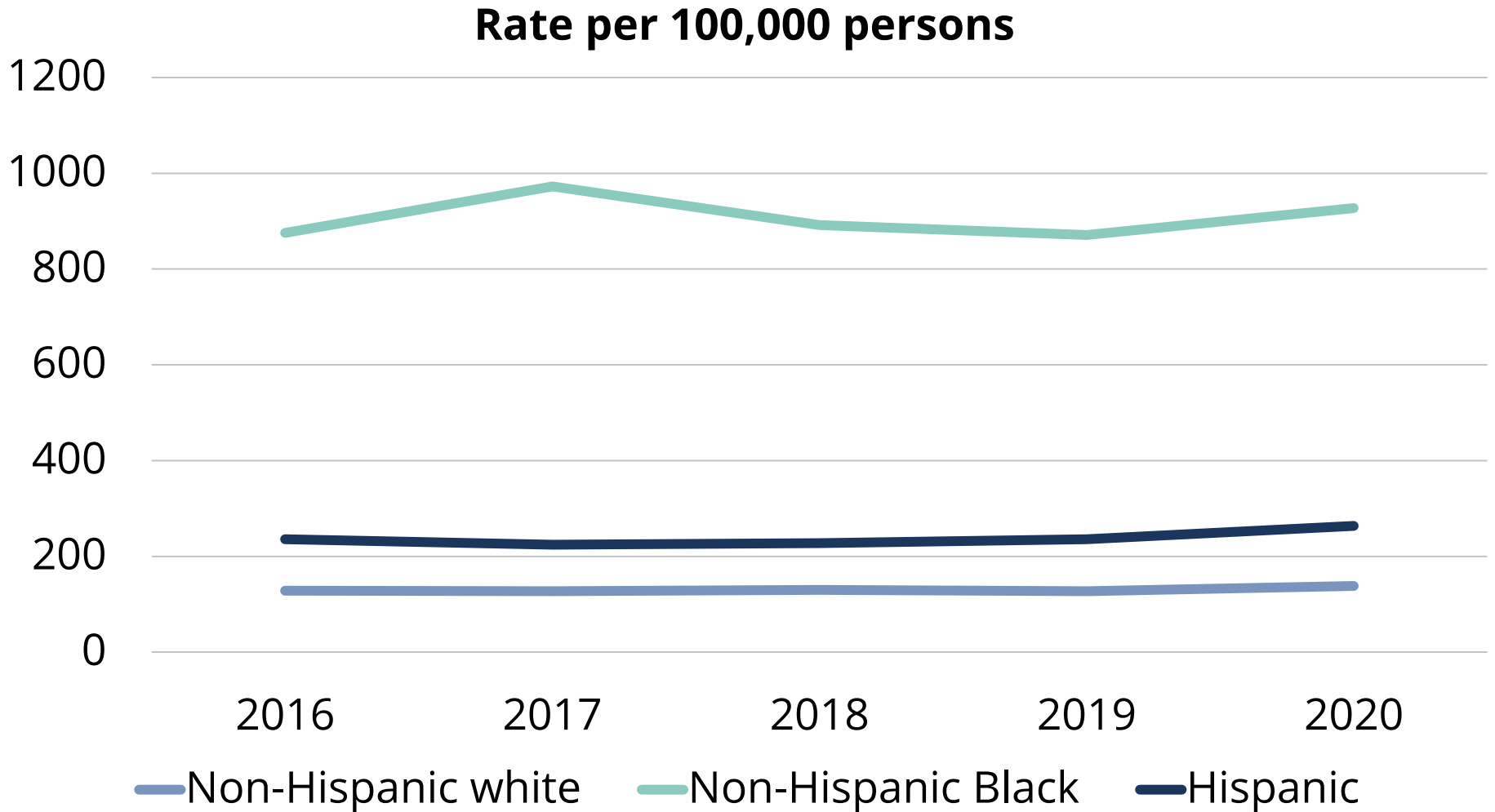
Persons living with HIV by age group, Tennessee, 2016–2020



Data source: Tennessee eHARS accessed July 27, 2021

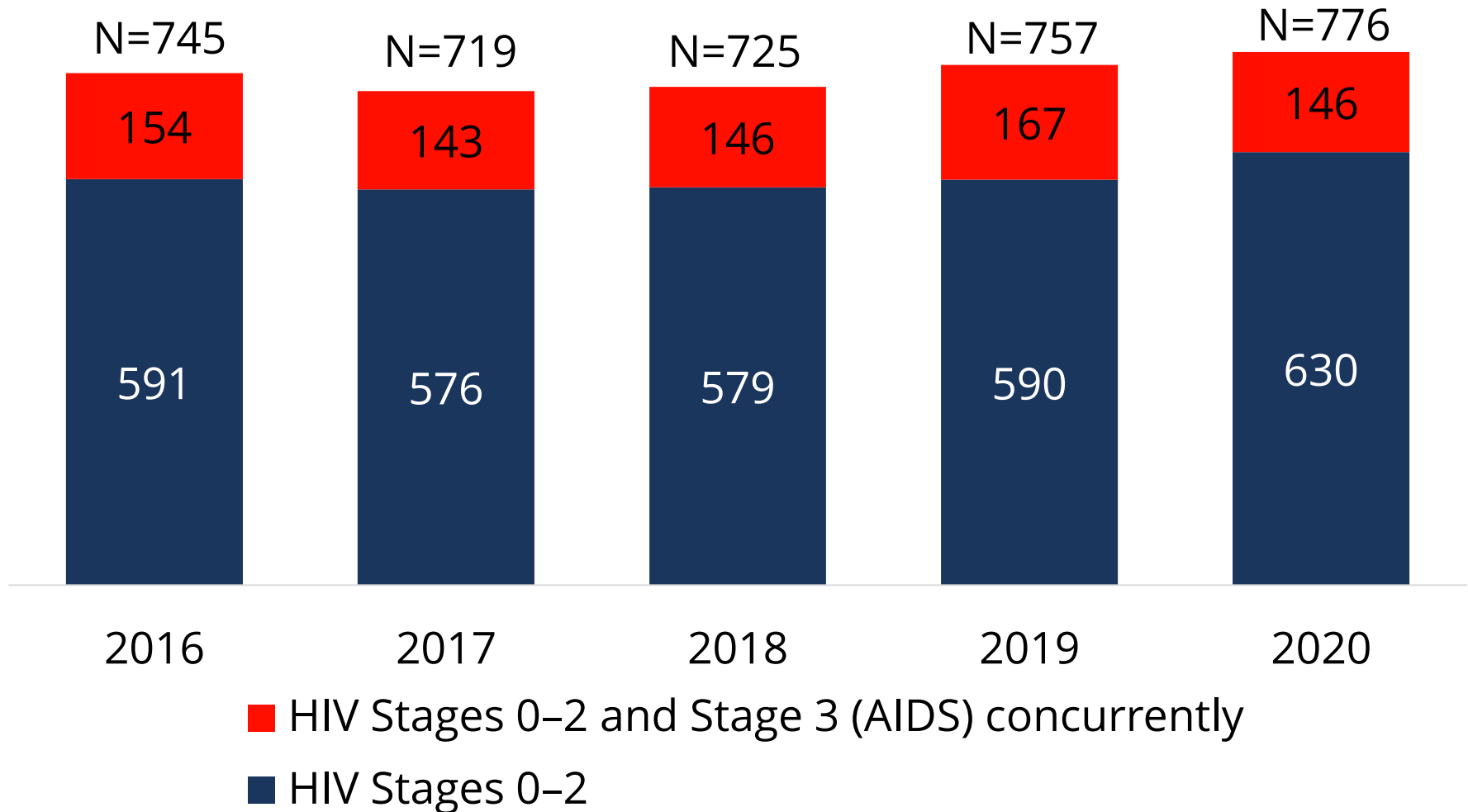


Persons living with HIV by race/ethnicity, Tennessee, 2016–2020



Data source: Tennessee eHARS, accessed July 27, 2021

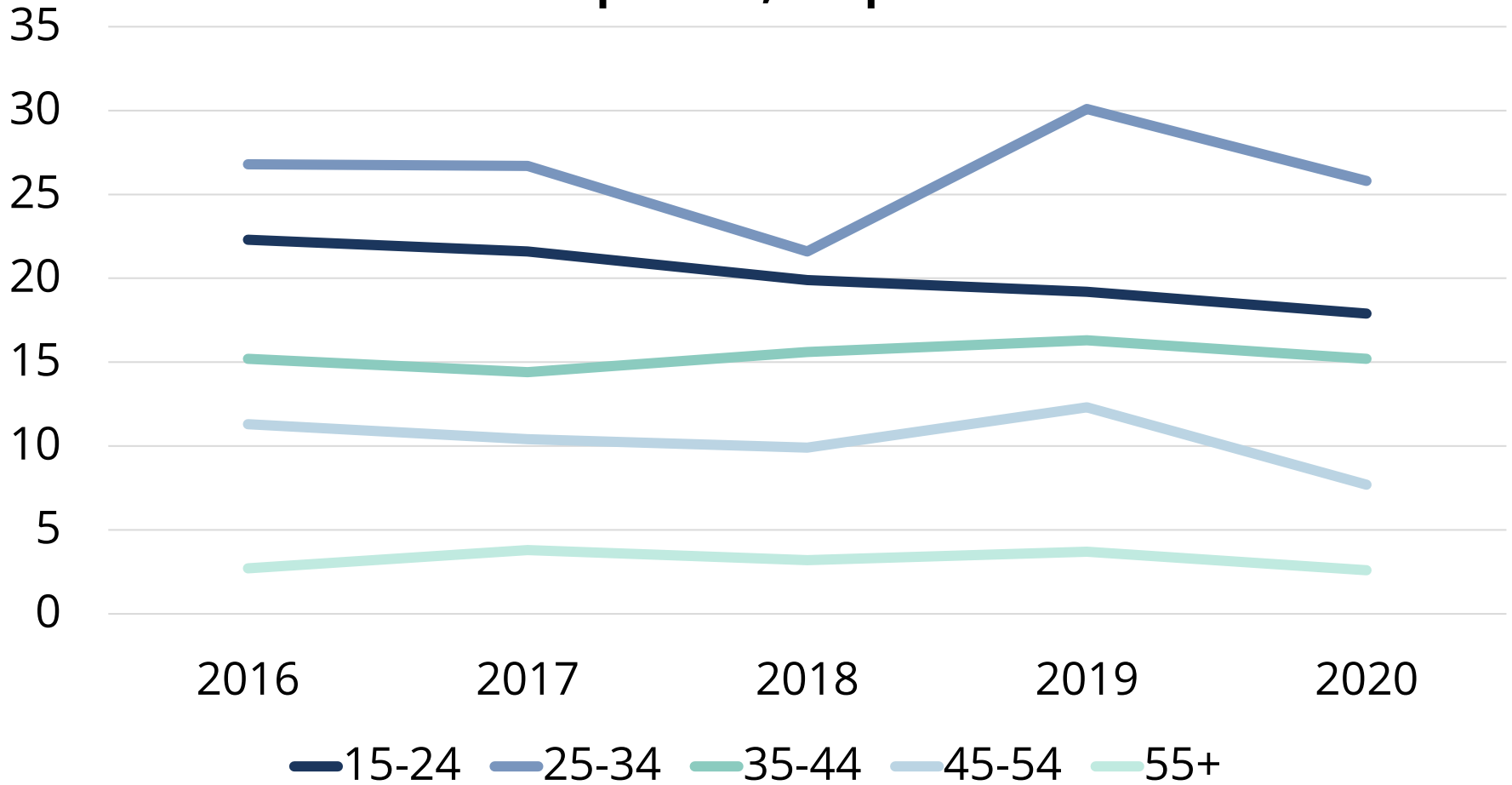
Persons newly diagnosed with HIV, by stage within 12 months of diagnosis, Tennessee, 2016–2020



Data source: Tennessee eHARS, accessed July 27, 2021

Persons newly diagnosed with HIV by age group, Tennessee, 2016–2020

Rate per 100,000 persons

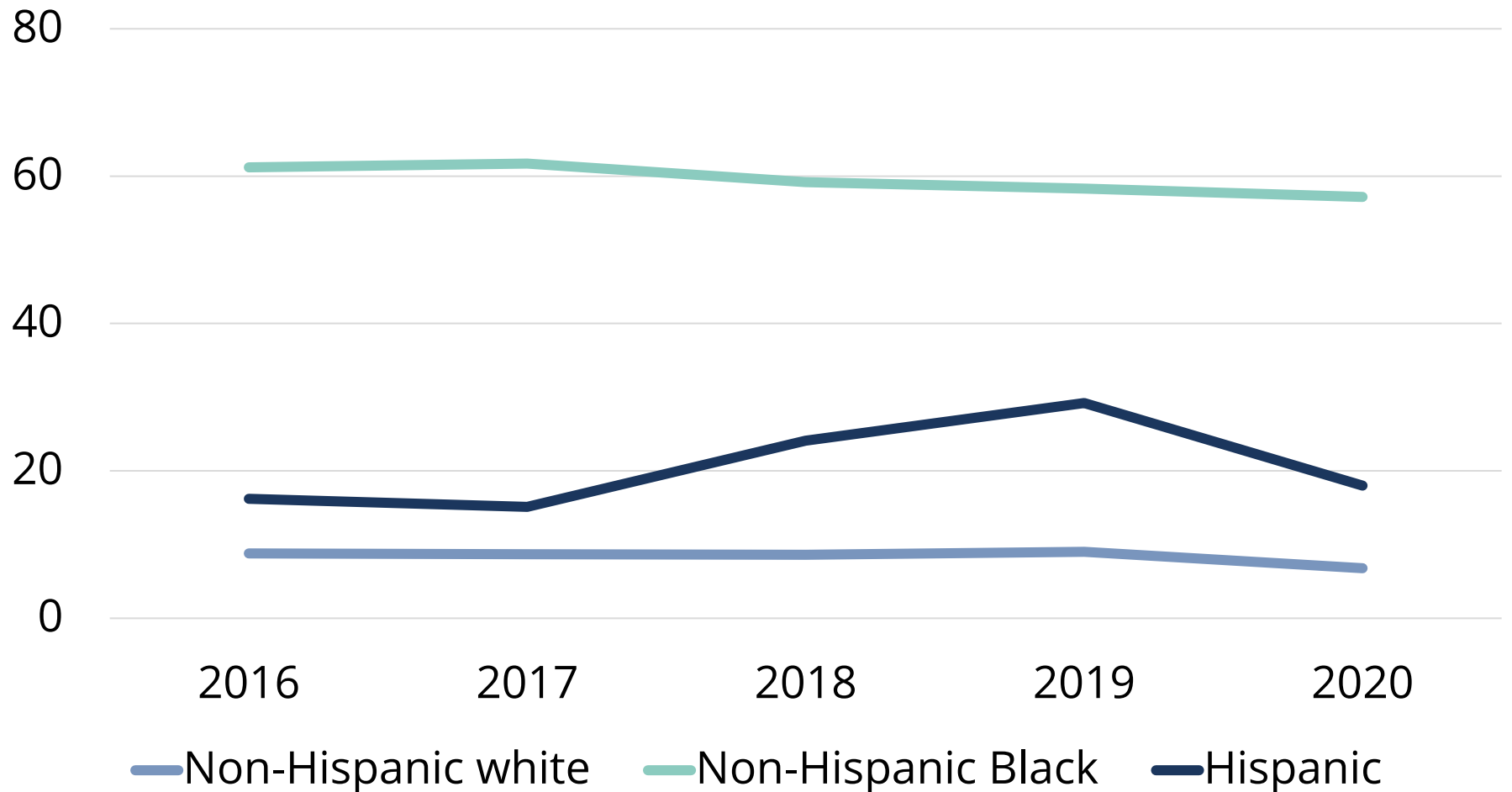


Data source: Tennessee eHARS, accessed July 27, 2021



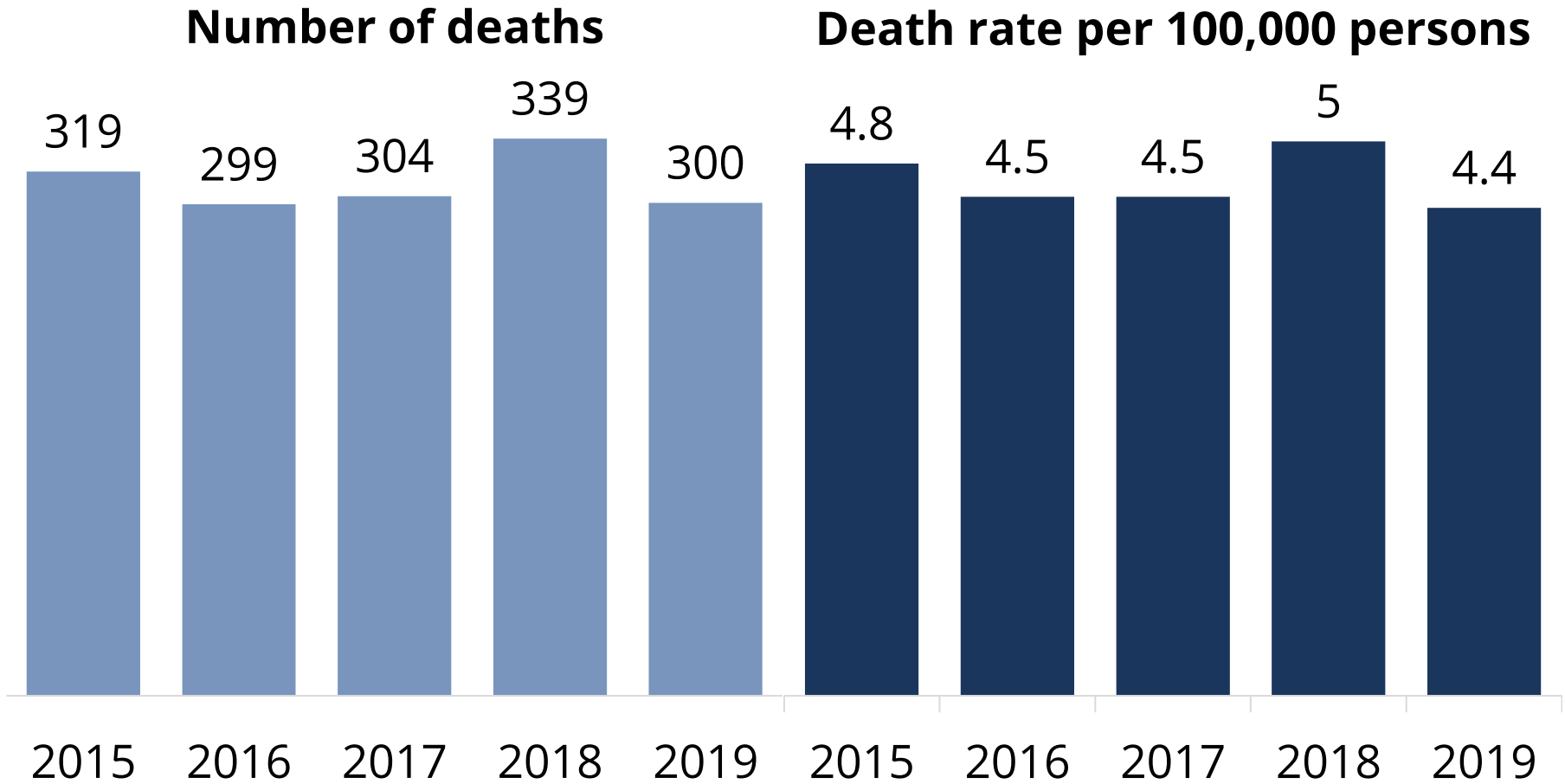
MSM newly diagnosed with HIV by race/ethnicity, Tennessee 2016–2020

Rate per 100,000 males



Data source: Tennessee eHARS, accessed July 27, 2021

Deaths among persons diagnosed with HIV, Tennessee 2015–2019



Data source: Tennessee eHARS, accessed July 27, 2021



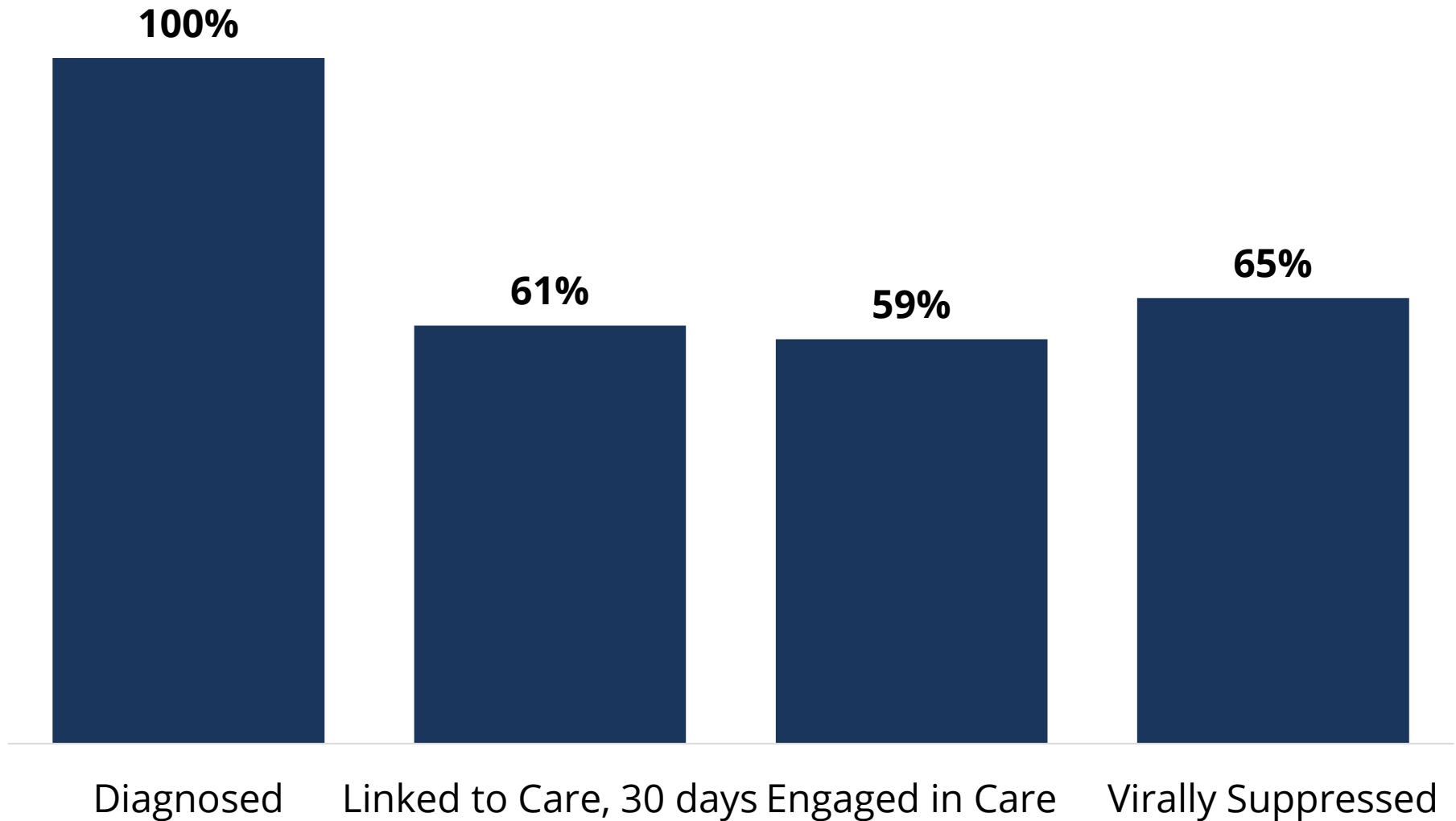


HIV Continuum of Care

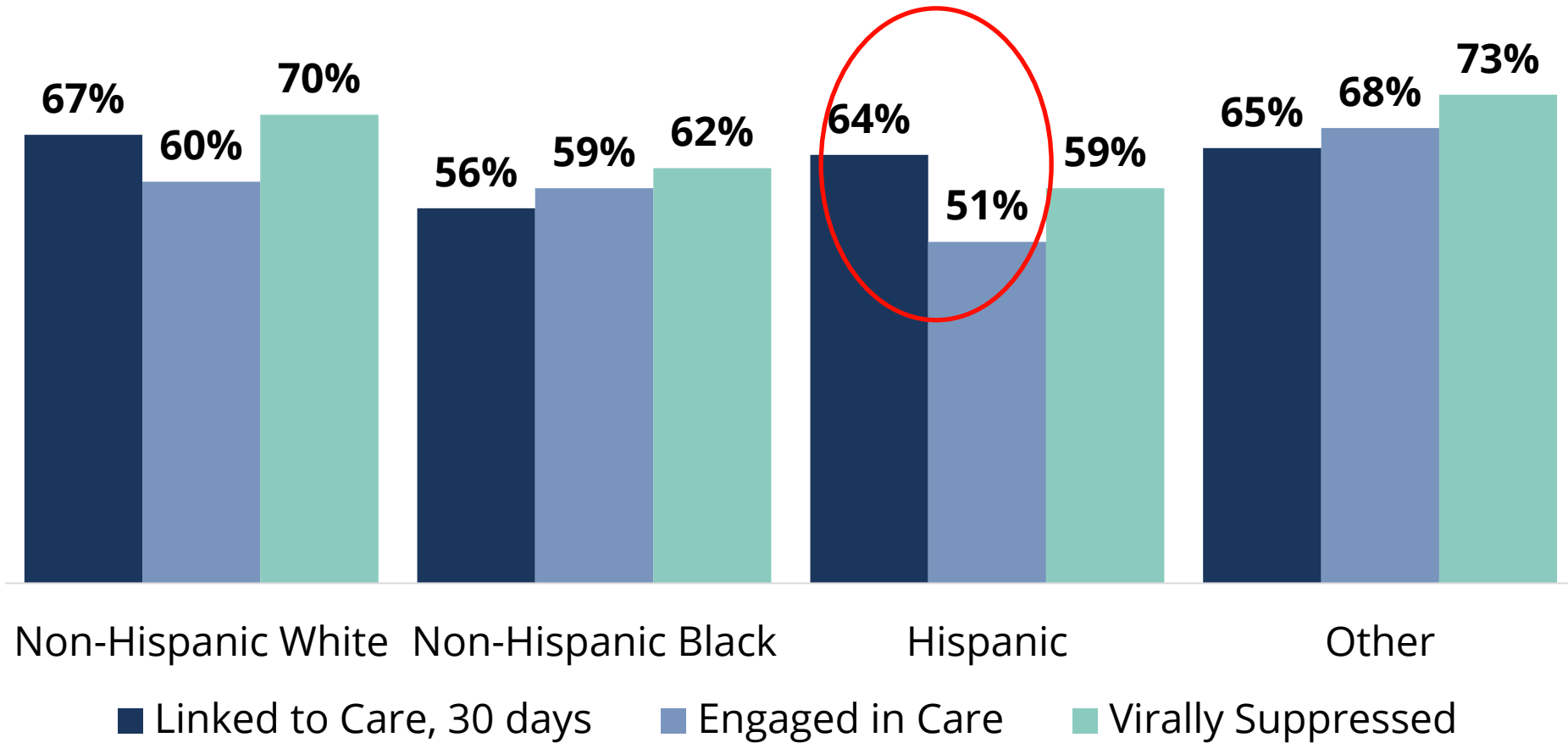
HIV continuum of care metrics Tennessee, 2019

- **Diagnosed:** Living with diagnosed HIV in TN at end of 2019
- **Linked to Care:** Among newly diagnosed in 2019, ≥ 1 CD4 or viral load result within 30 days after HIV diagnosis
- **Engaged in Care:** Among those diagnosed with HIV before 2010 and living with diagnosed HIV in TN at end of 2019, ≥ 2 CD4 and/or viral load results ≥ 3 months apart
- **Virally Suppressed:** Among those living with diagnosed HIV in TN at end of 2019, ≥ 1 viral load result in 2018, and ≥ 1 viral load result in 2019 with the last ≤ 200 copies/mL

Continuum of care, Tennessee, 2019

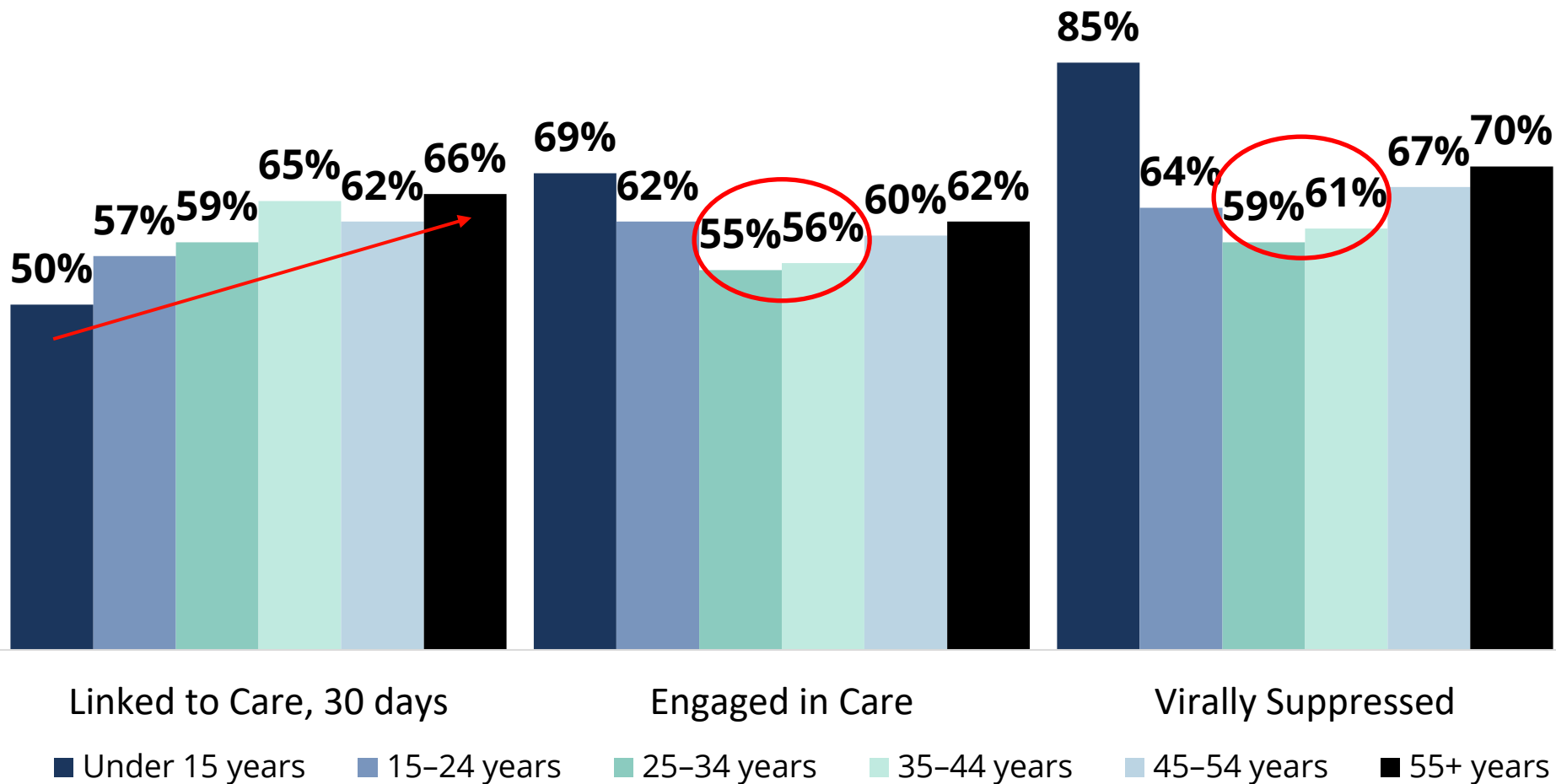


Continuum of care by race/ethnicity, Tennessee, 2019

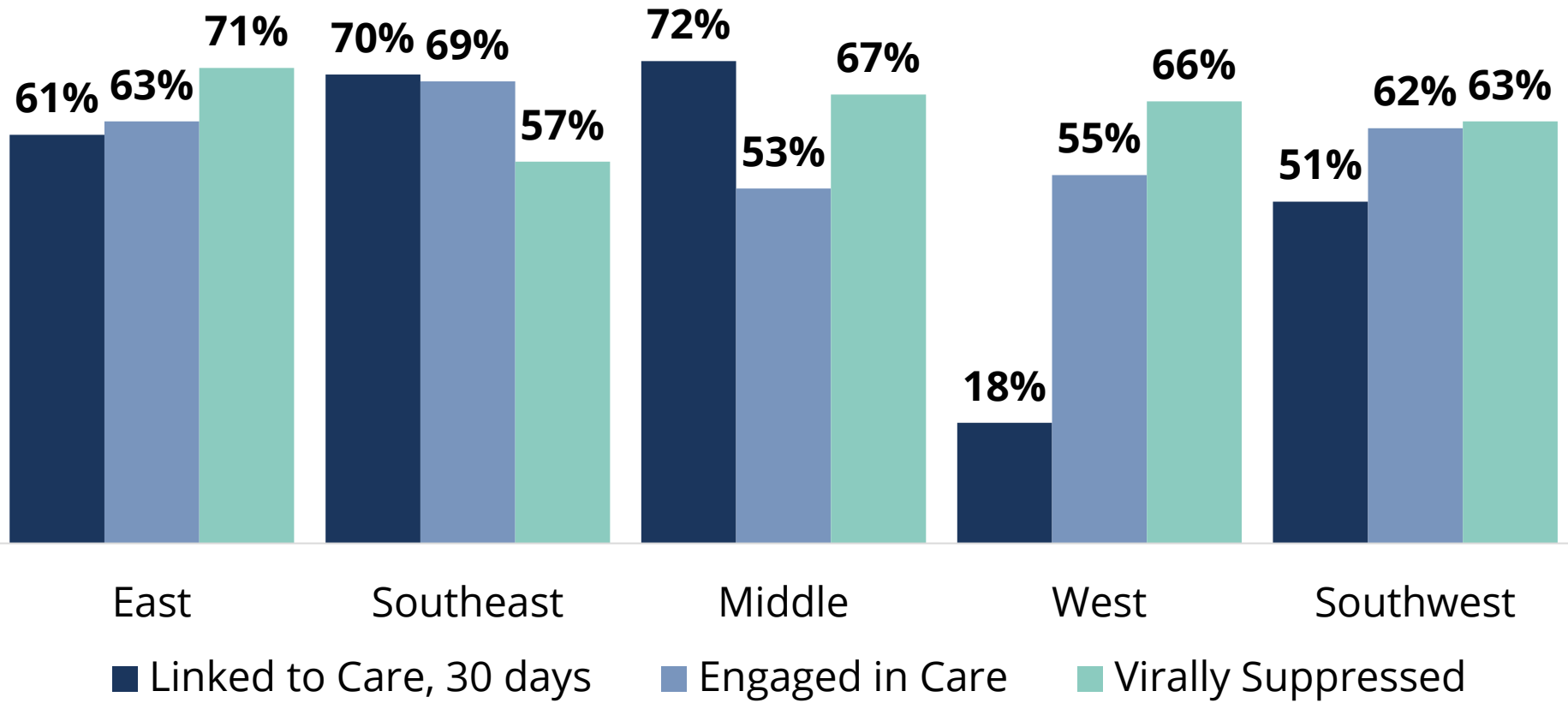


*Other Race includes Asian, Native American/Alaskan Native, and Native Hawaiian/Pacific Islander.

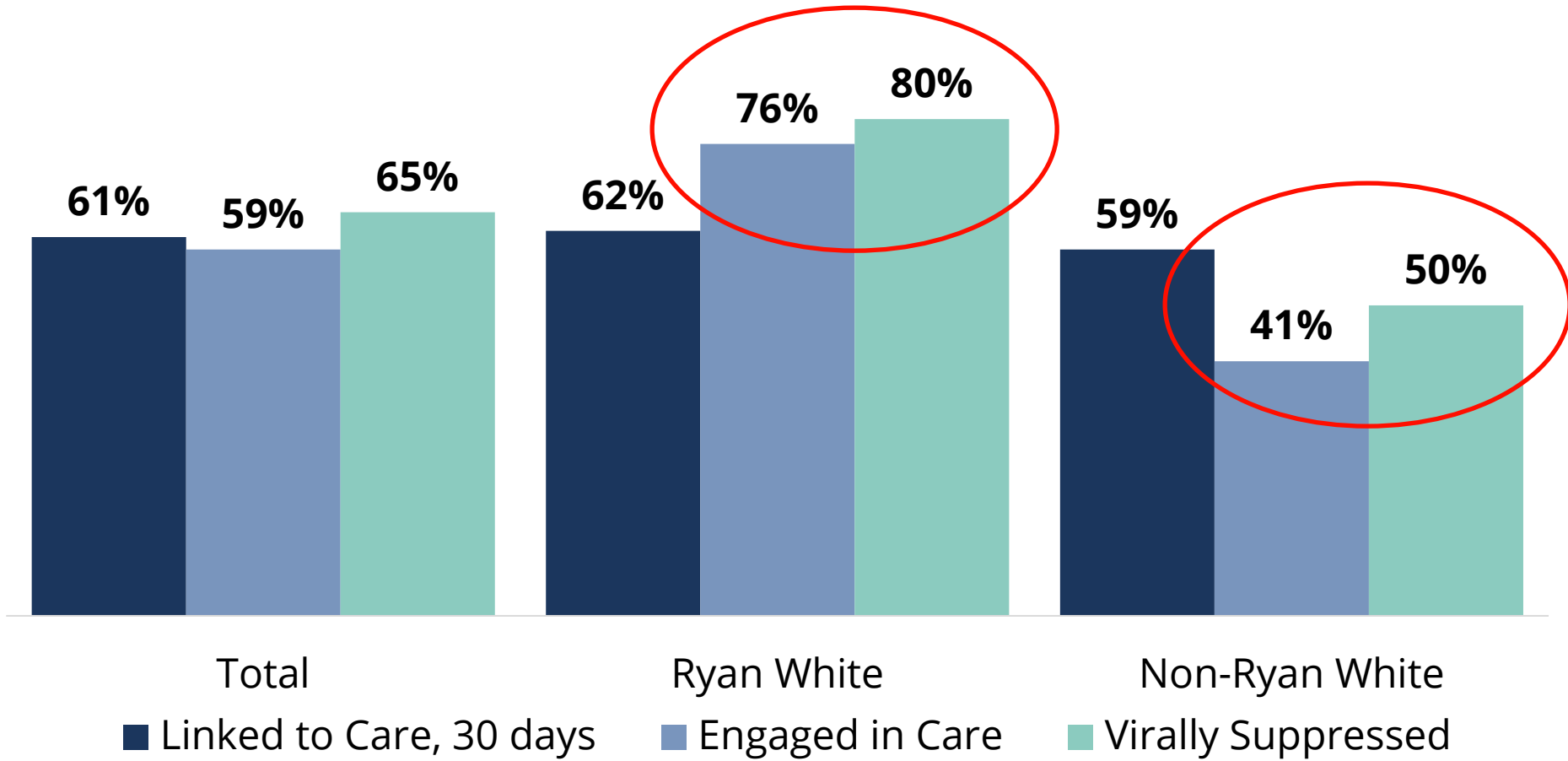
Continuum of care by age group, Tennessee, 2019



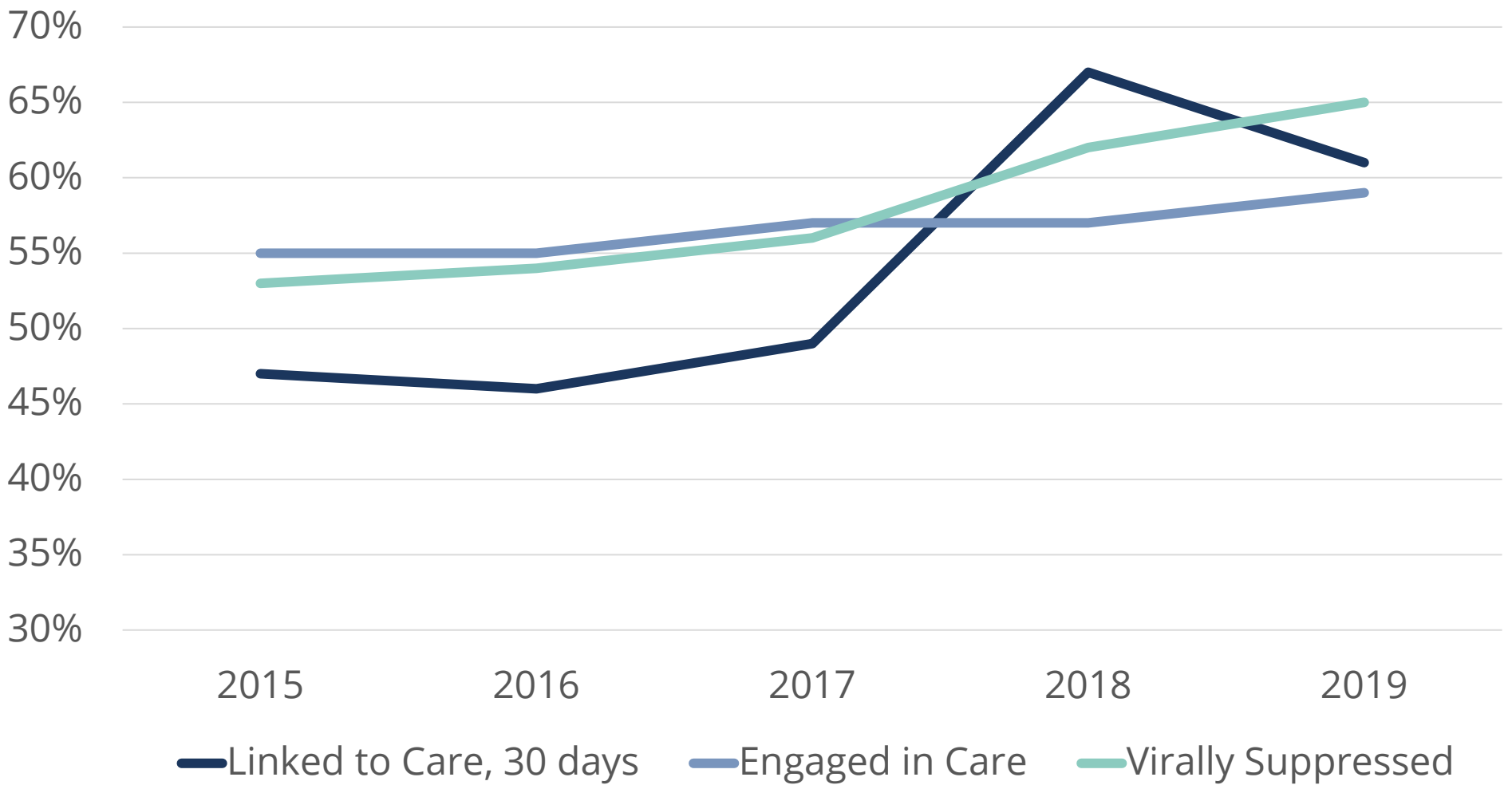
Continuum of care by region, Tennessee, 2019



Continuum of care by Ryan White Part B status, Tennessee, 2019



Continuum of care, Tennessee, 2015–2019

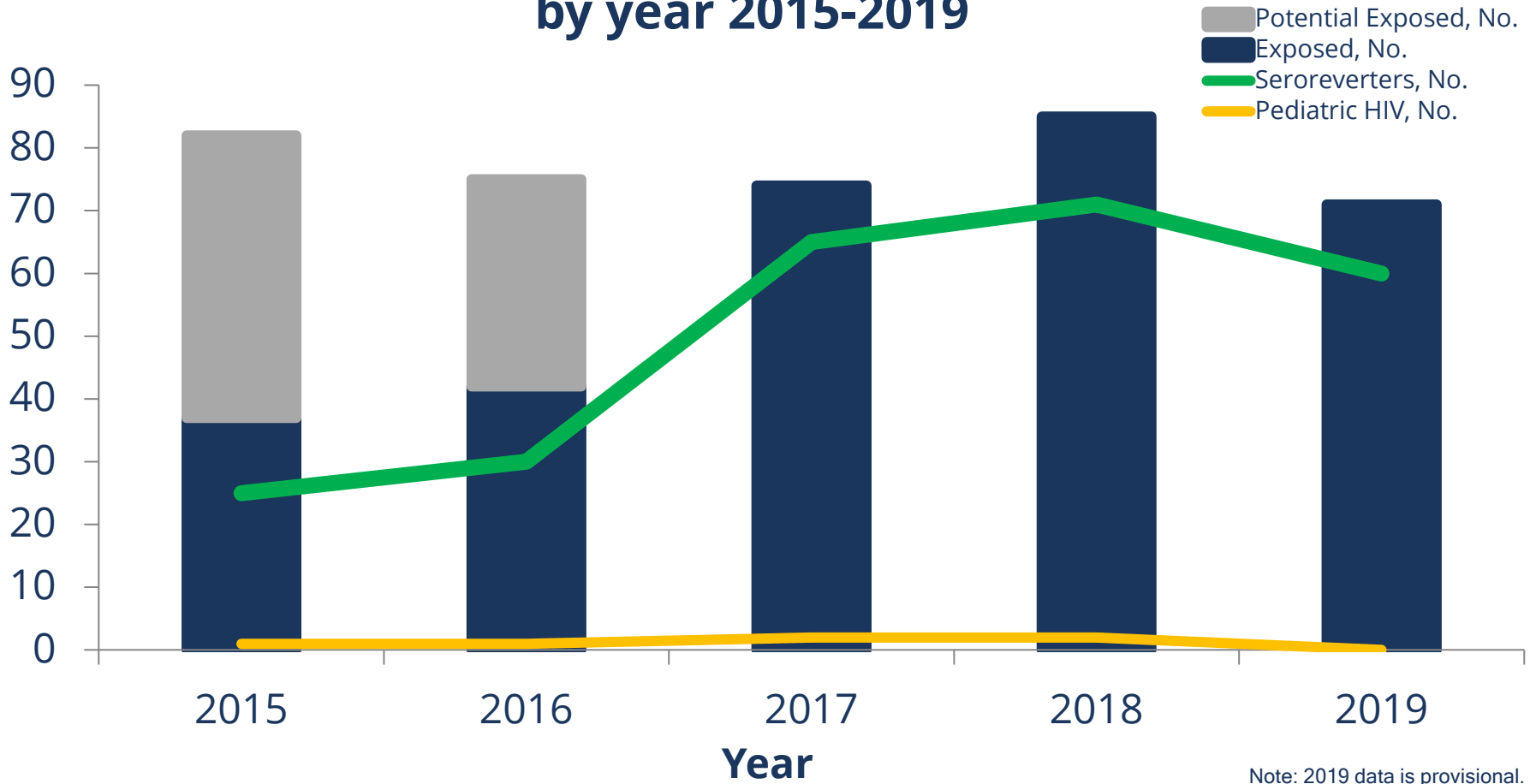




Perinatal HIV Exposure in TN

Perinatal HIV Exposure in TN

Perinatal HIV exposure among infants born in TN, by year 2015-2019



Note: 2019 data is provisional.

Birthing Parent Characteristics (2015–2019)

1%

Known HIV+ at delivery



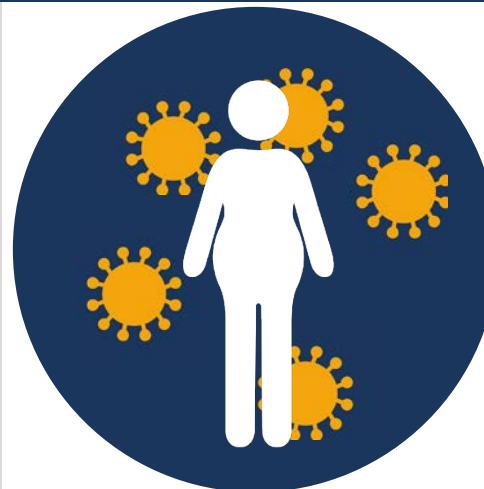
80%

Known HIV+ before pregnancy

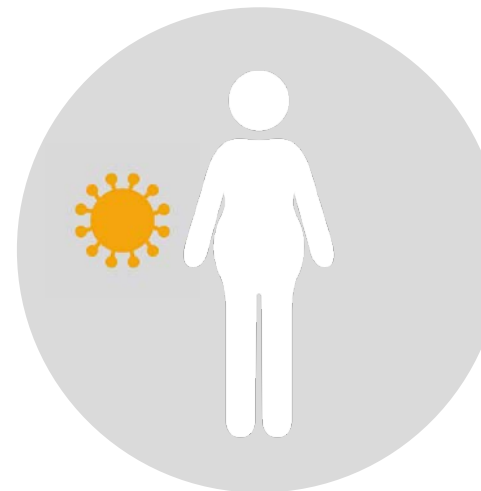


19%

Known HIV+ during pregnancy



22%
Not virally-suppressed



78%
Virally-suppressed

Note: 2019 data is provisional.



TM

Hepatitis C in Tennessee

HCV trends in TN, 2014–2018

193% increase in the number of newly reported chronic HCV cases

Individuals <45 years of age accounted for

- 52% of new chronic HCV cases
- 81% of acute HCV cases

Women accounted for

- 48% of acute and 49% of newly reported chronic HCV cases among individuals <45 years of age

Adult HCV testing recommendations



Testing every adult **at least once**



Testing pregnant persons during **every pregnancy**



Testing persons who **currently inject drugs** and share needles, syringes, and other drug preparation equipment **regularly**

HCV vertical transmission

HCV monoinfection: 6%

- HCV RNA levels correlate with risk of vertical HCV transmission
- Persons who are HCV antibody (+) and HCV RNA (–) have a negligible risk of transmission

Risk factors for vertical transmission

- Prolonged rupture of membranes (longer than 6 hours)
- Obstetric procedures and intrapartum events that lead to infant exposure to HCV-infected blood (e.g., internal fetal monitoring, vaginal/perineal lacerations)
- Injection-drug use
- HIV coinfection

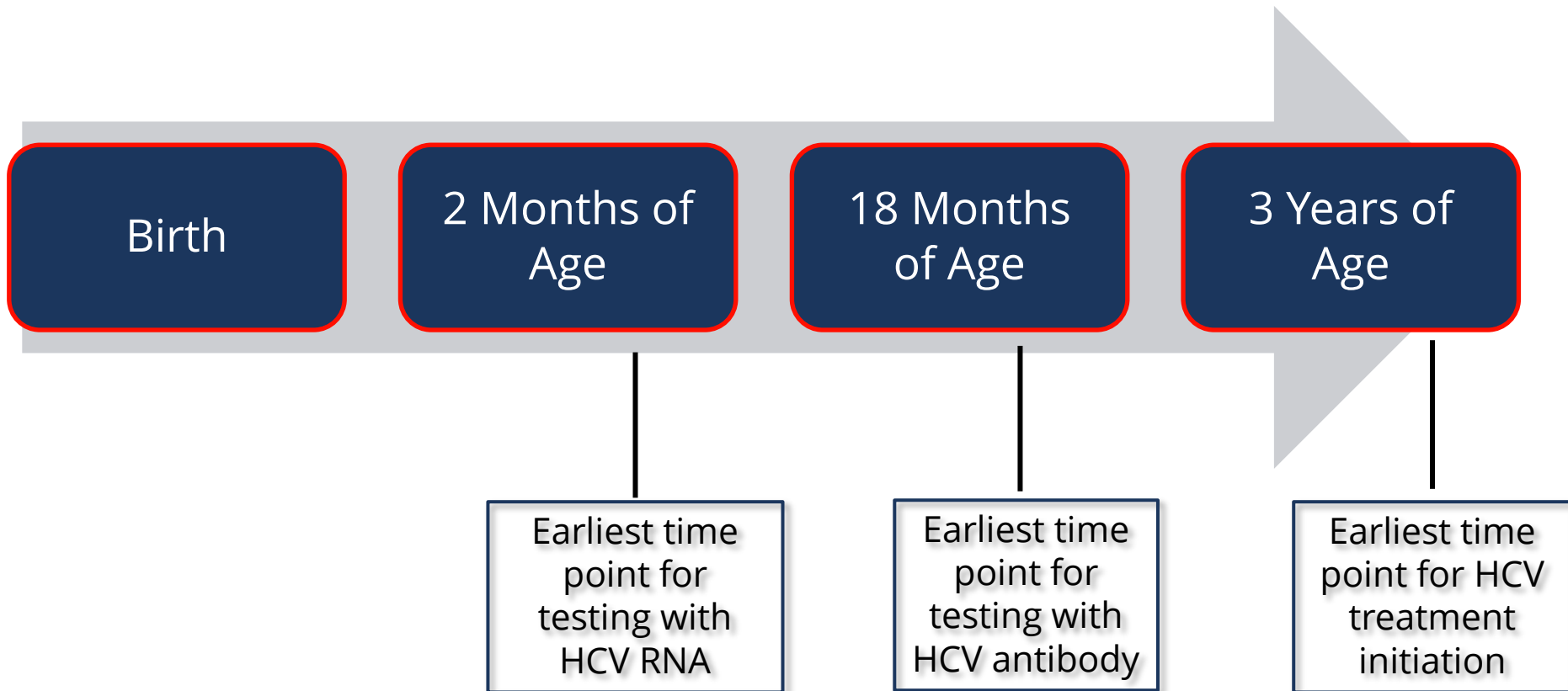
Benova L, et al. Clin Infect Dis. 2014;59(6):765-773;

European Paediatric Hepatitis C Virus Network. J Infect Dis. 2005;192(11):1872-1879;

Tosone G, et al. World J Hepatol. 2014;6(8):538-548; Resti M, et al. J Infect Dis. 2002;185(5):567-572.



Infant HCV testing recommendations



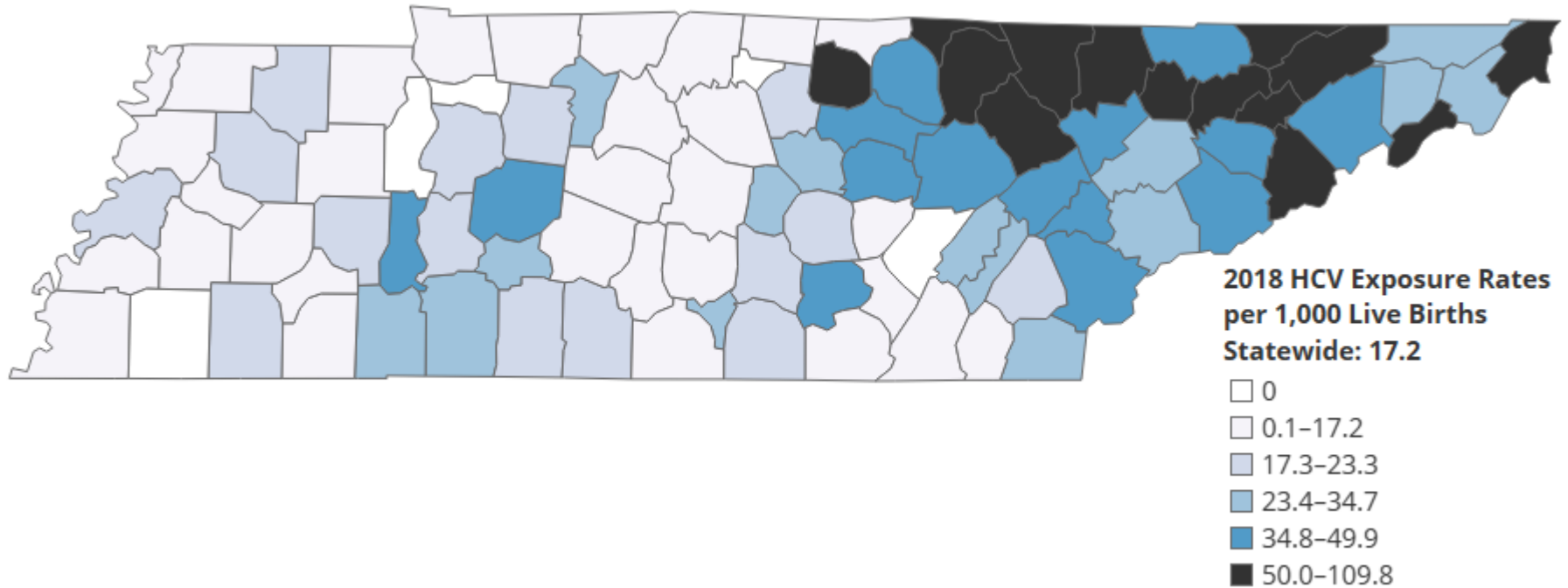
Convergence of risks in women

From 2000–2015, rates of HCV increased 148% among women with opioid use disorder

During the same time period the national rate of HCV among women giving birth increased >400%

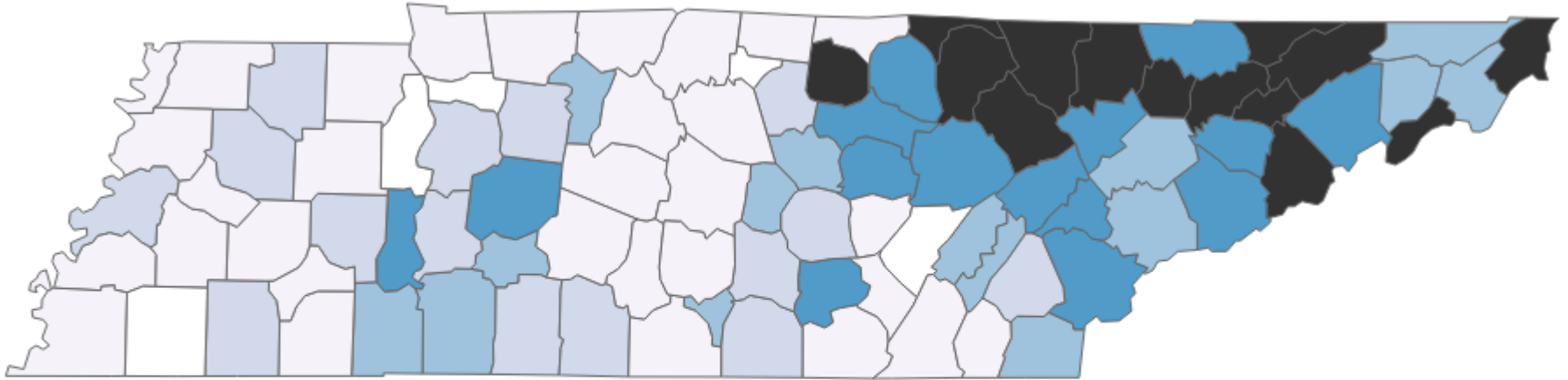


Rates of perinatal HCV exposures in TN



In 2018, there were 1,389 infants perinatally exposed to HCV statewide

Perinatal HCV exposures in Eastern TN



In 2018, there were 504 infants perinatally exposed to HCV in Knoxville and the 15 surrounding counties

Of these 504 exposures only 22 (4%) infants were tested appropriately for HCV and 482 *still* had an unknown HCV status in 2021

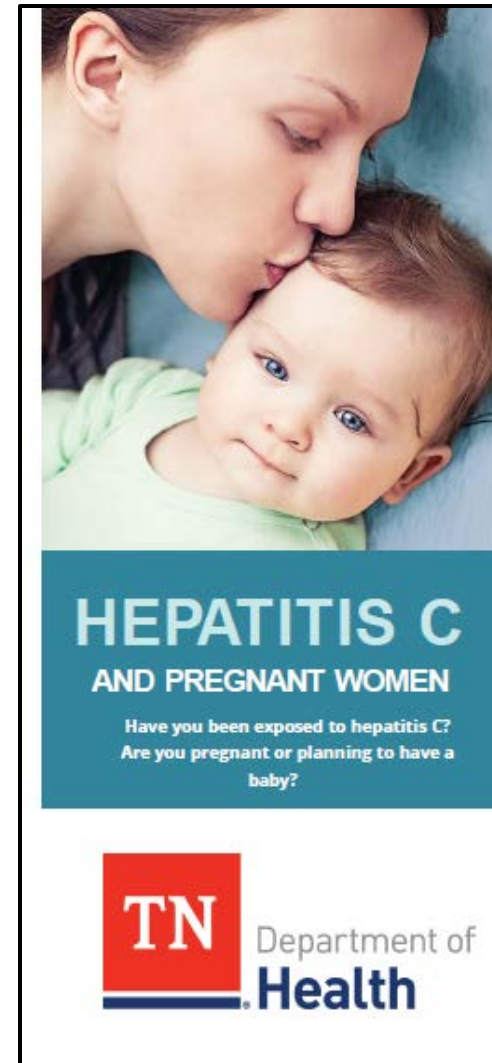
Educational materials—mothers

Hepatitis C and Pregnant Women Brochure

- English
- Spanish
- Arabic

Available on TDH Website

<https://www.tn.gov/health/cedep/vira-l-hepatitis/hepatitis-c.html>




Educational Materials—infants

Infant Hepatitis C Testing Recommendations One-Pager

To request a PDF copy, email **Laura Price**

— Laura.Price@tn.gov



Testing Recommendations for Children Born to Hepatitis C Virus-Positive Mothers

If Child is:	Order the Following Test(s):
2 Months of Age–18 Months of Age	Hepatitis C Virus RNA
18 Months of Age and Older	Hepatitis C Virus Antibody and, if positive, Hepatitis C Virus RNA

Frequently Asked Questions

Why are infants not tested with hepatitis C virus antibody prior to 18 months of age?

- Hepatitis C virus antibody testing before 18 months of age is not recommended as a positive result could likely reflect maternal hepatitis C virus antibodies

Is there a risk that a hepatitis C virus-positive mother will vertically transmit hepatitis C virus to her infant during pregnancy?

- A mother must be viremic (hepatitis C virus RNA-positive) during pregnancy in order to transmit hepatitis C virus to her infant
- The overall risk of a hepatitis C virus-positive mother transmitting hepatitis C virus to her infant is approximately 6% with each pregnancy
- Transmission occurs at the time of birth, and no intrapartum or newborn prophylaxis is available
- Most infants with hepatitis C virus show few or no signs of being sick, but if untreated, hepatitis c virus can lead to serious liver damage
- Treatment for hepatitis C virus is now available for children 3 years of age and older

Upcoming HCV training opportunity

From Diagnosis to Treatment: Building an HCV Toolkit



Register

Date & Time

12/17/2021 - 8:00 AM - 12:00 PM **Central Time**

Description

*Join the TN AETC and **Cody Chastain, MD** for a 3.5 hour clinical training program on diagnosing and treating hepatitis C!*

Target Audience:

This half-day training program is designed for clinical providers who are new to HCV treatment. It's best suited for **physicians, physician assistants, nurse practitioners, pharmacists, and nurses.**

https://www.seaetc.com/event/?ER_ID=83848



Sexually Transmitted Infections

December 18, 2020

Morbidity and Mortality Weekly Report

Update to CDC's Treatment Guidelines for Gonococcal Infection, 2020

Sancta St. Cyr, MD¹; Lindley Barbee, MD^{1,2}; Kimberly A. Workowski, MD^{1,3}; Laura H. Bachmann, MD¹; Cau Pham, PhD¹; Karen Schlanger, PhD¹; Elizabeth Torrone, PhD¹; Hillard Weinstock, MD¹; Ellen N. Kersh, PhD¹; Phoebe Thorpe, MD¹

https://www.cdc.gov/mmwr/volumes/69/wr/mm6950a6.htm?s_cid=mm6950a6_w



NEW Gonorrhea Treatment Guidelines

for uncomplicated infections



National Network of
STD Clinical Prevention
Training Centers

Ceftriaxone **500** mg IM x 1
for persons weighing <150kg*

*For persons weighing ≥ 150 kg, 1 g of IM
ceftriaxone should be administered

IF chlamydia has not been excluded, treat for
chlamydia with:

Doxycycline 100 mg PO
BID x 7 days

For pregnancy, allergy, or concern for non-
adherence, 1g PO azithromycin x 1 can be used

No longer recommending dual therapy with azithromycin

Update to CDC's Treatment Guidelines for Gonococcal infection, MMWR 2020

NEW Alternative Gonorrhea Treatment



National Network of
STD Clinical Prevention
Training Centers

for uncomplicated infections of the cervix, urethra, and rectum **if ceftriaxone is not available:**

Cefixime 800 mg PO x 1

IF chlamydia has not been excluded, treat
for chlamydia with:

Doxycycline 100 mg PO
BID x 7 days

For pregnancy, allergy, or concern for non-
adherence, 1g PO azithromycin x 1 can be
used

Cephalosporin allergy: Gentamicin 240 mg IM + azithromycin 2 g PO

No reliable alternative treatments are available for **pharyngeal** gonorrhea

Update to CDC's Treatment Guidelines for Gonococcal infection, MMWR 2020

Centers for Disease Control and Prevention

MMWR

Recommendations and Reports / Vol. 70 / No. 4

Morbidity and Mortality Weekly Report

July 23, 2021

Sexually Transmitted Infections Treatment Guidelines, 2021

NEW Chlamydia Treatment Guidelines

for uncomplicated infections



National Network of
STD Clinical Prevention
Training Centers

Doxycycline 100 mg
PO BID x 7 days

For pregnancy, allergy, or concern for
non-adherence

Azithromycin 1 gram
PO in single dose

OR

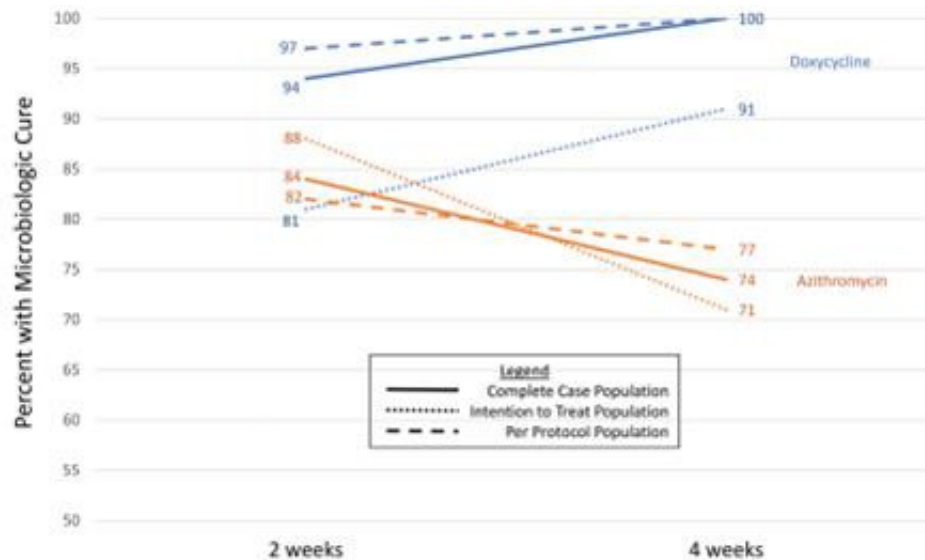
Levofloxacin 500 mg orally
orally once daily for 7 days

Strong doxycycline preference, especially for rectal infections

Source: CDC STI Treatment Guidelines, 2021

Doxycycline Versus Azithromycin for the Treatment of Rectal Chlamydia in Men Who Have Sex With Men: A Randomized Controlled Trial

Julia C. Dombrowski,^{1,2} Michael R. Wierzbicki,² Lori M. Newman,⁴ Jonathan A. Powell,² Ashley Miller,³ Dwyn Dithmer,² Oluosgun O. Soga,⁵ and Kenneth H. Mayer^{2,3}

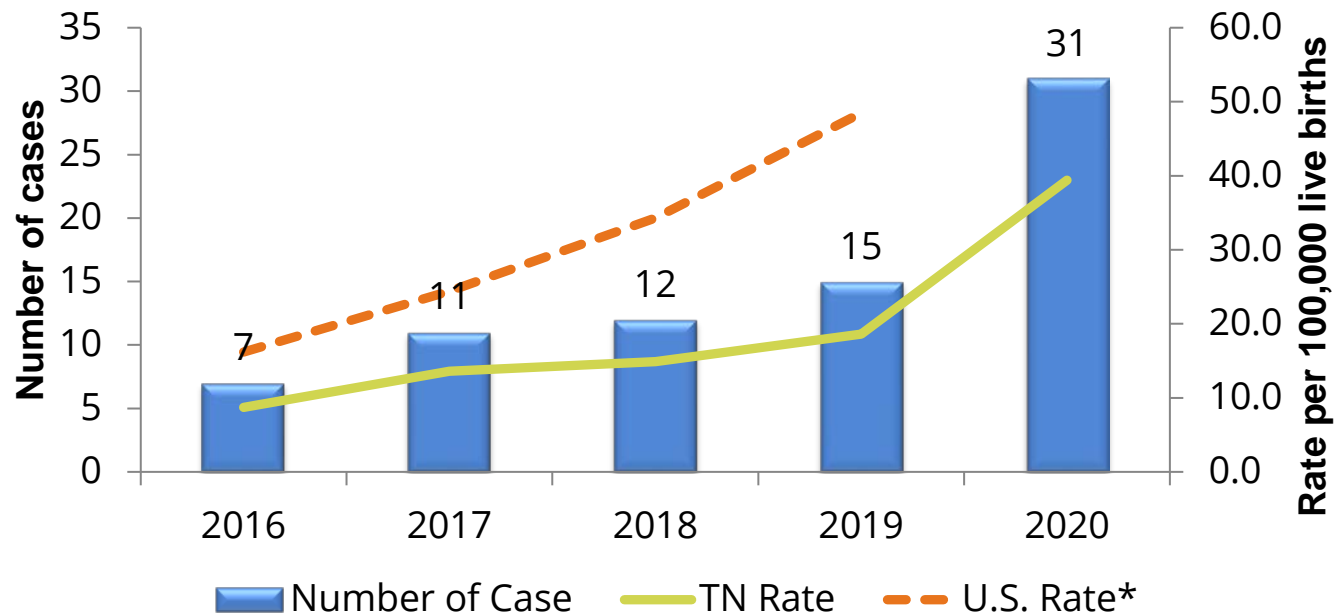


- Randomized placebo-controlled trial
- 177 participants enrolled, 135 (76%) met CC population
- 7-day course of doxycycline was significantly more effective than a single dose of azithromycin

Source: Dombrowski et al, CID 2021

Congenital syphilis trends, U.S. and Tennessee

Congenital Syphilis — Reported Cases by Year of Birth and Rates of Reported Cases of Primary & Secondary Syphilis Among Women Aged 15-44 Years, Tennessee, 2016–2020



Source: Patient Reporting Investigation Surveillance Manager (PRISM), 2016–2020.
*2020 national rates not available.



Drug Overdose Deaths in Tennessee

Increase in drug overdoses during COVID-19, Tennessee

Published August 2020

Nonfatal Opioid Overdose



From March-June of 2020, TN saw a **33% increase** in nonfatal opioid overdoses compared to March-June of 2019



Among ages 18-44, nonfatal overdoses increased roughly **40%**

Tennessee is divided into **13 public health regions**

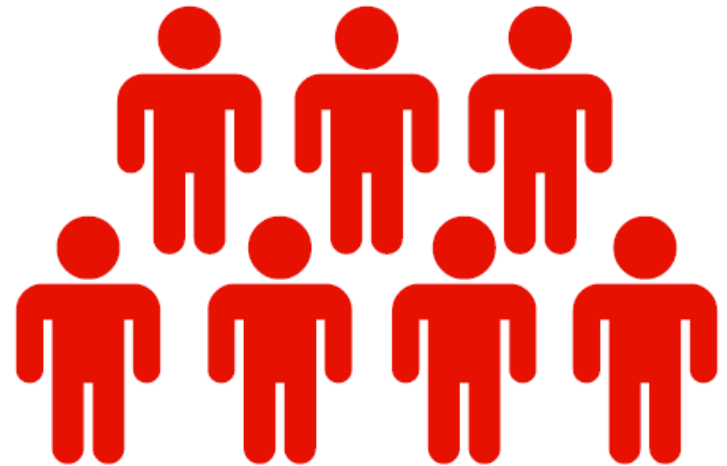


All 13 regions have seen **above average** nonfatal opioid overdose counts during COVID-19, and 11 have seen **remarkably elevated** counts

Overdose deaths, Tennessee Jan–June 2020

1,390

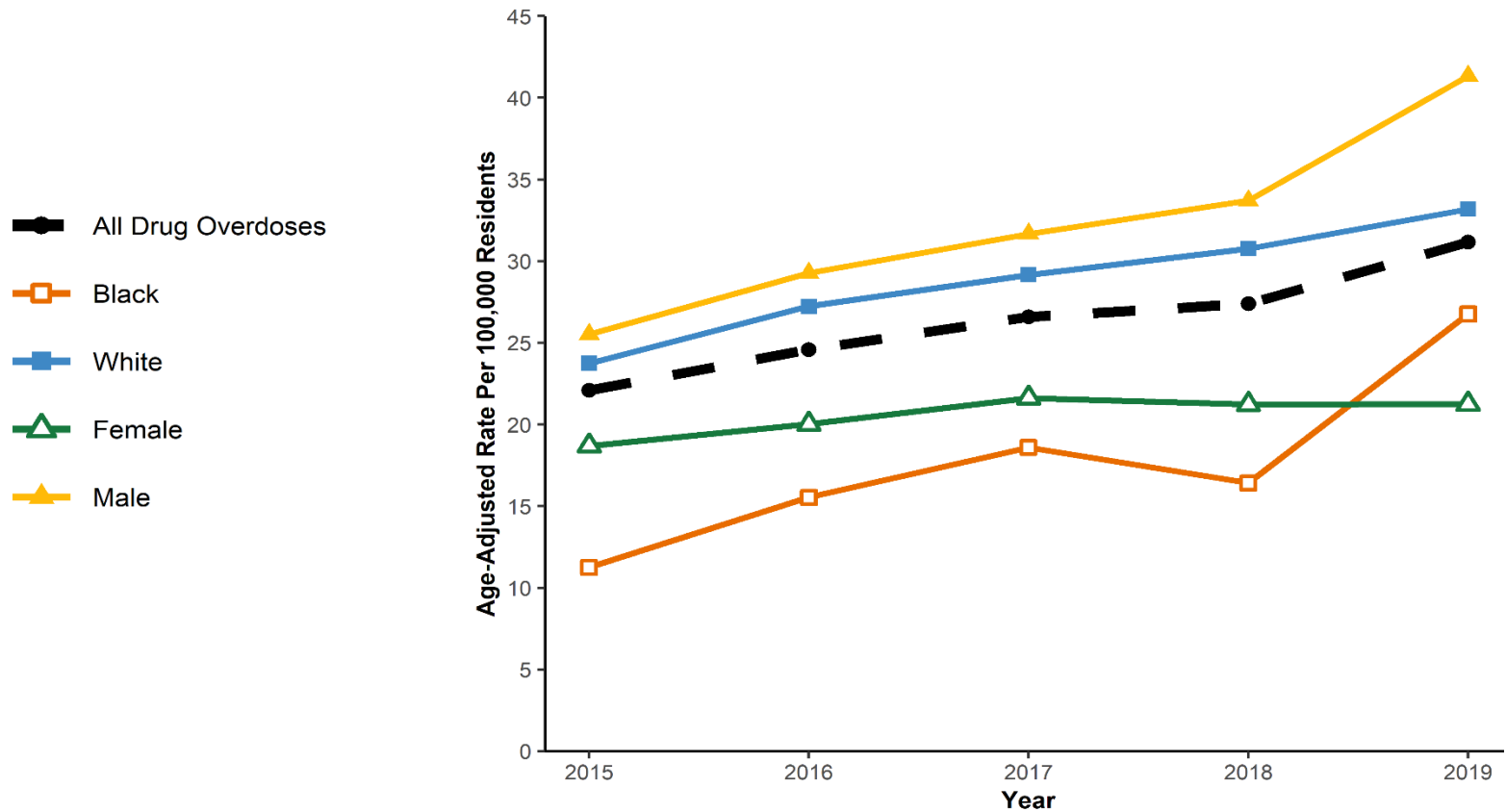
Tennesseans died of a
drug overdose between
January - June 2020



That's **7** deaths per day

All drug overdose deaths

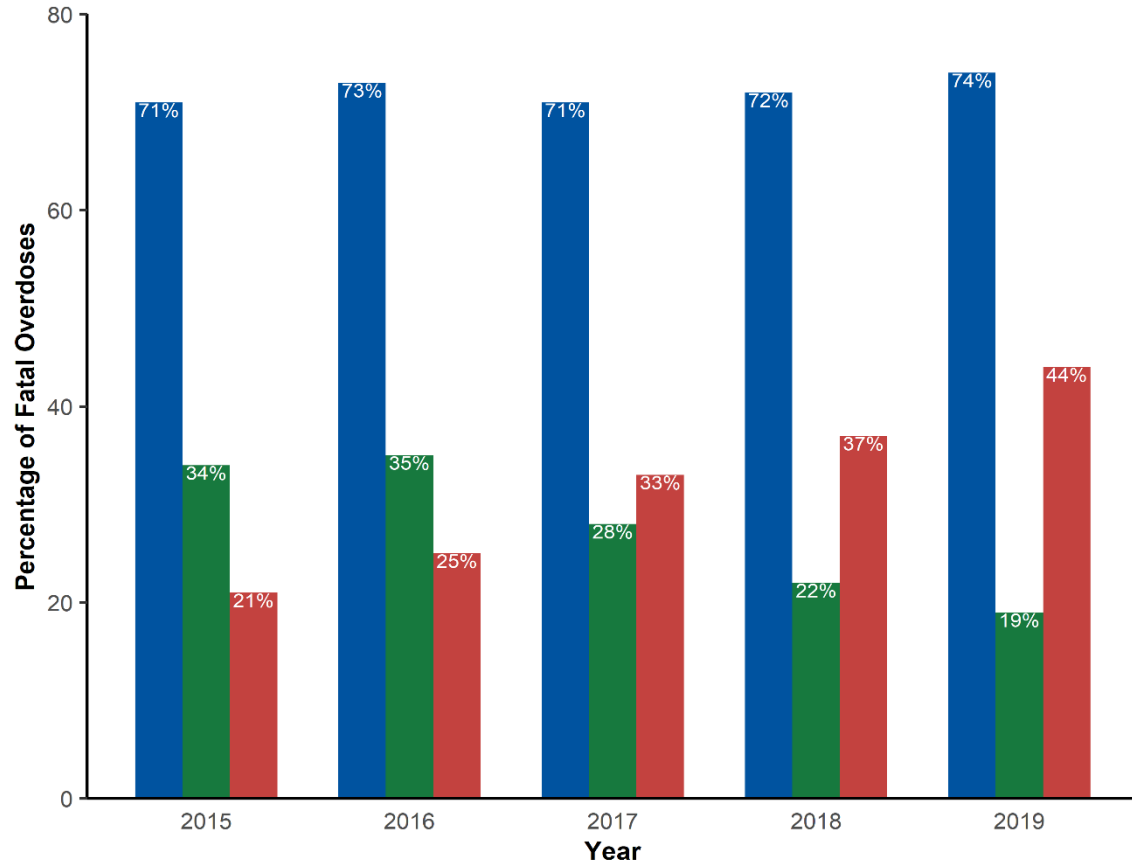
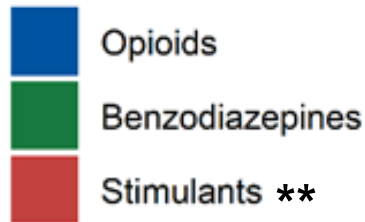
Age-Adjusted Rates for All Drug Overdose Deaths by Sex and Race in TN by Year for 2015-2019*



*Analysis by the Office of Informatics and Analytics, TDH (last updated December 10, 2020). Limited to TN residents. Data Source: TN Death Statistical File

All drug overdose deaths

Opioids, Benzodiazepines, and Stimulants Present in All Drug Overdoses in TN by Year for 2015-2019*



**Major stimulants include cocaine and methamphetamines

*Analysis by the Office of Informatics and Analytics, TDH (last updated November 12, 2020). Limited to TN residents. Data Source: TN Death Statistical File. Categories in this graph are not mutually exclusive.

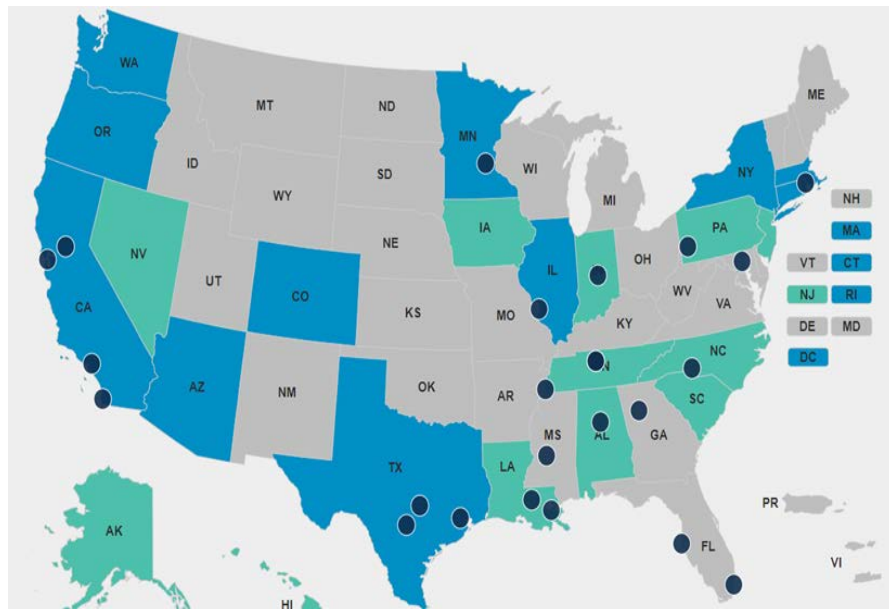


**End the Syndemic
Tennessee**



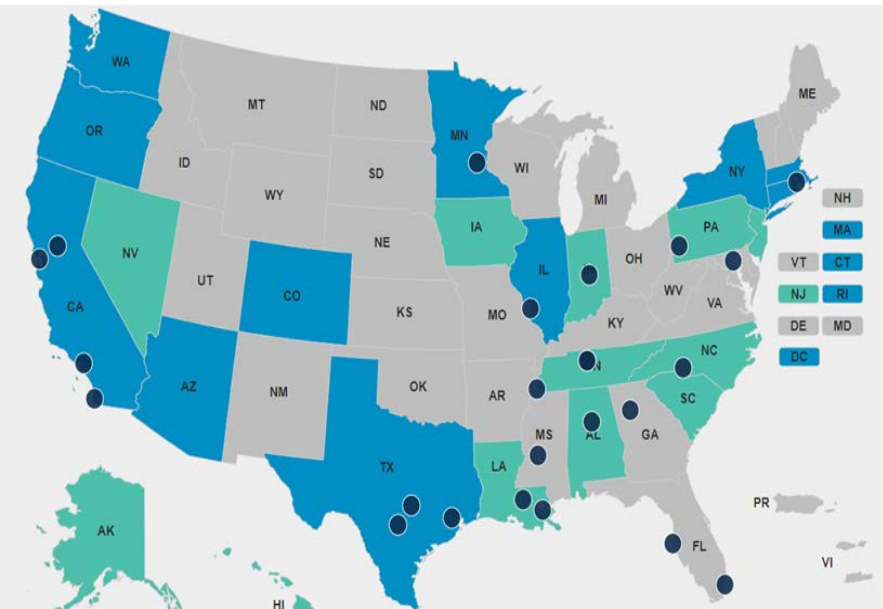
Amber Coyne, MPH
End the Syndemic Coordinator
amber.coyne@tn.gov
endthesyndemic.tn@tn.gov

What inspired End the Syndemic Tennessee?



**Ending the HIV Epidemic plans
that exist or are in development
(NASTAD)**

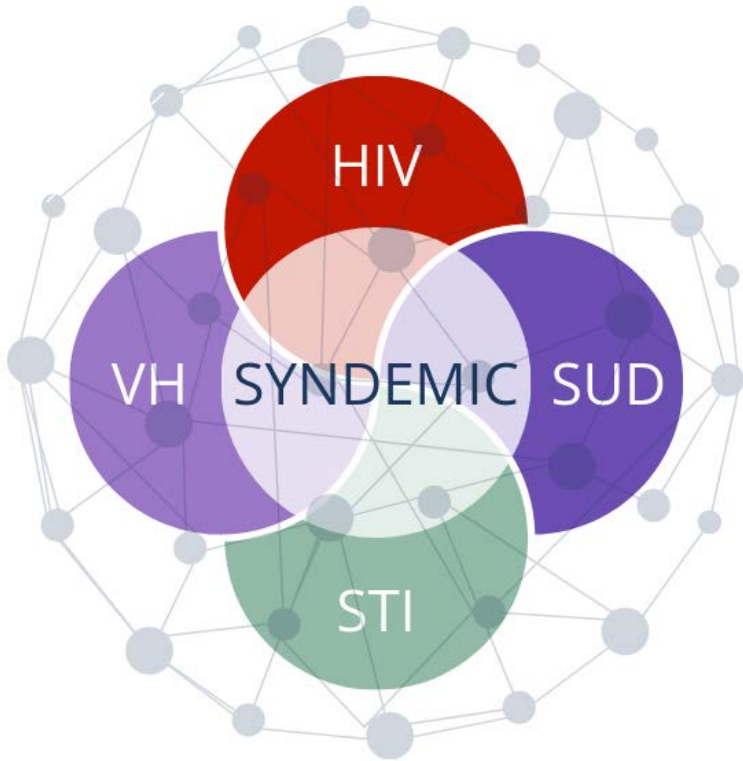
What inspired End the Syndemic Tennessee?



Ending the HIV Epidemic plans that exist or are in development (NASTAD)

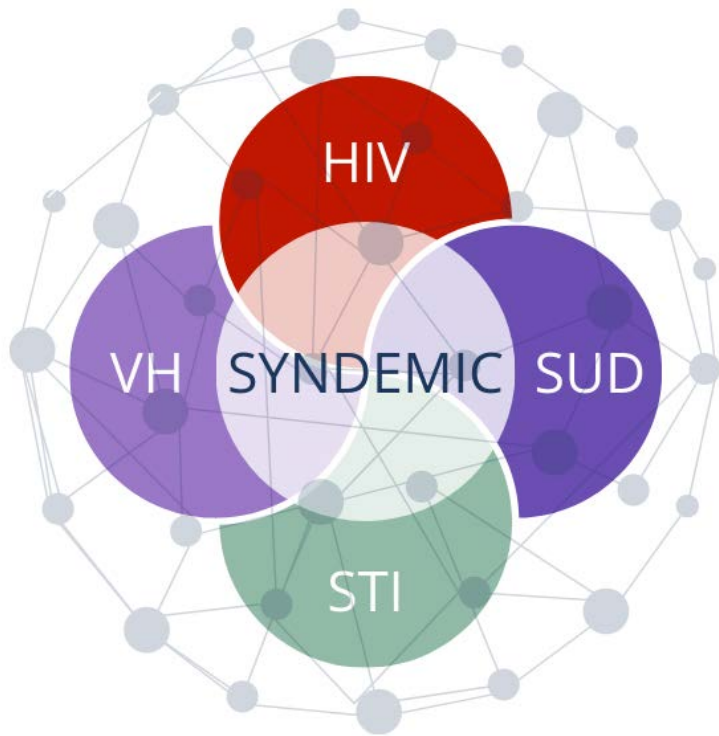


Federal assessment showing the most vulnerable counties to a HIV/hepatitis C outbreak due to injection drug use (CDC)

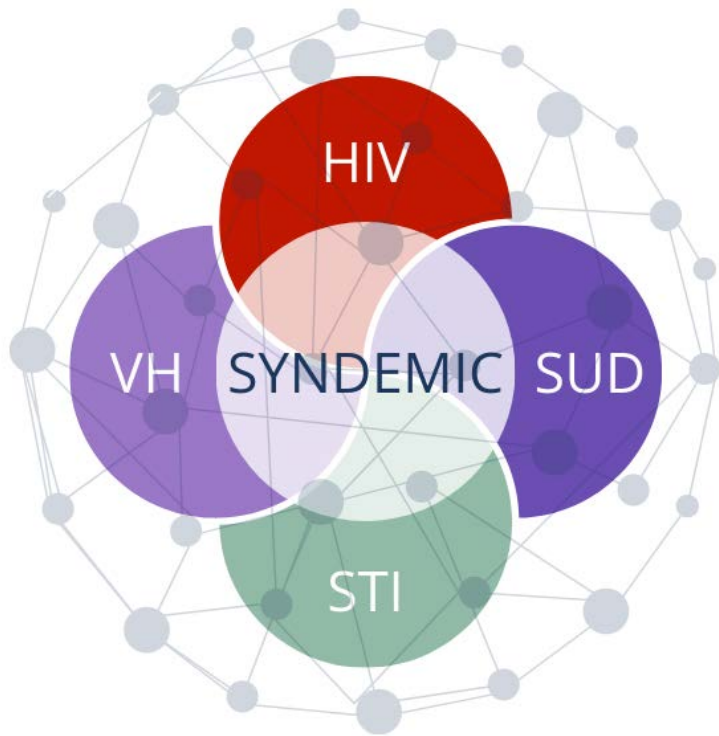


**Overlapping epidemics
that fuel each other are
called a**

SYNDEMIC

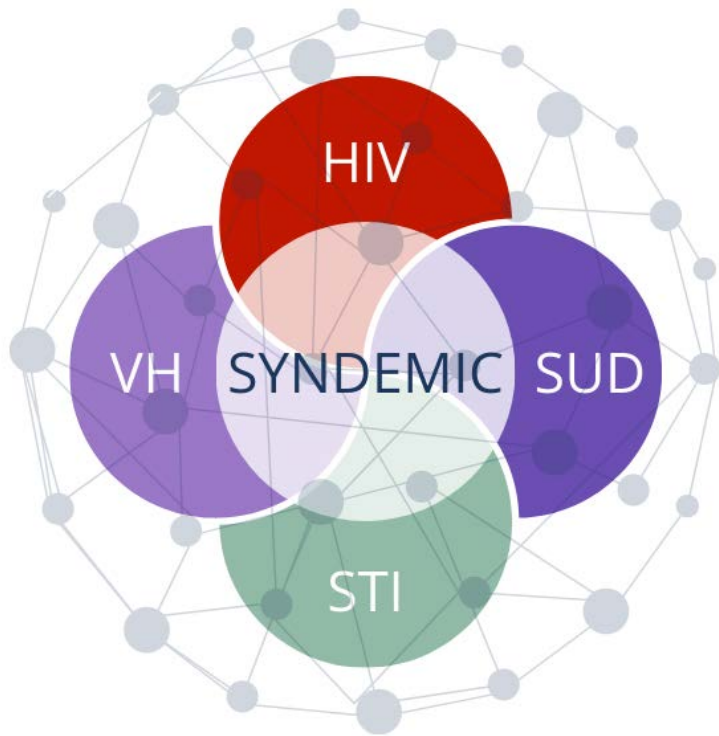


Health conditions in a syndemic are connected by



Health conditions in a syndemic are connected by

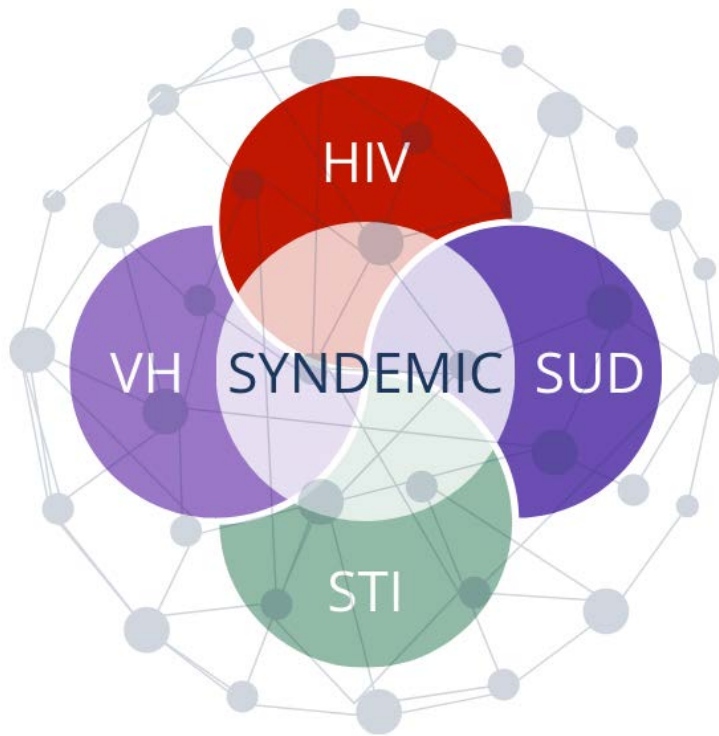
DATA



Health conditions in a syndemic are connected by

DATA

BIOLOGY

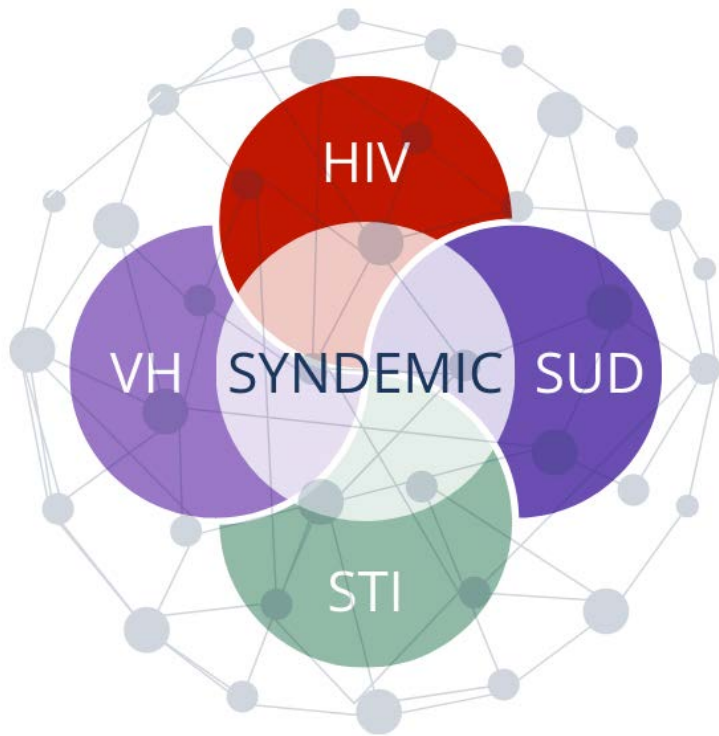


Health conditions in a syndemic are connected by

DATA

BIOLOGY

BEHAVIOR



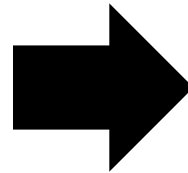
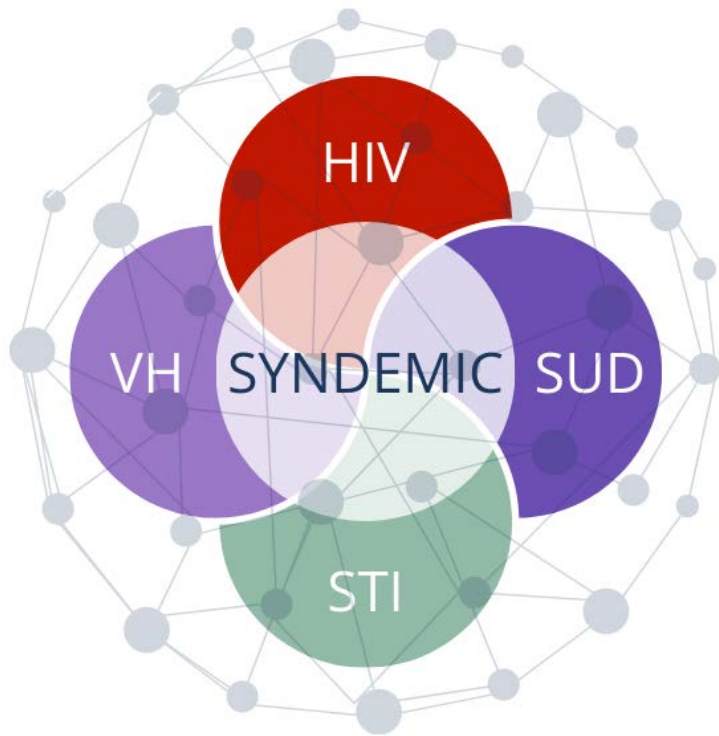
Health conditions in a syndemic are connected by

DATA

BIOLOGY

BEHAVIOR

SOCIAL DETERMINANTS OF
HEALTH

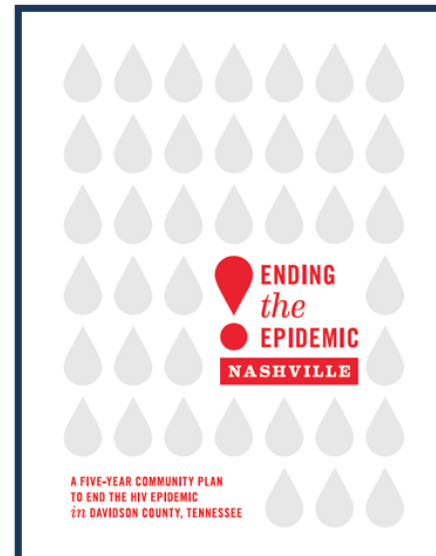
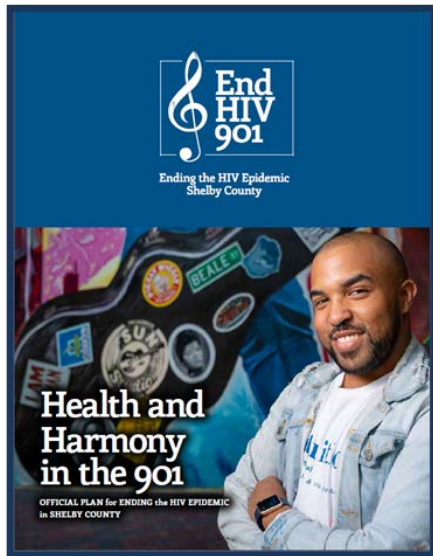


End the Syndemic Tennessee (ETS TN)

An integrated prevention and treatment plan for HIV, sexually transmitted infections, substance use disorder and viral hepatitis in Tennessee

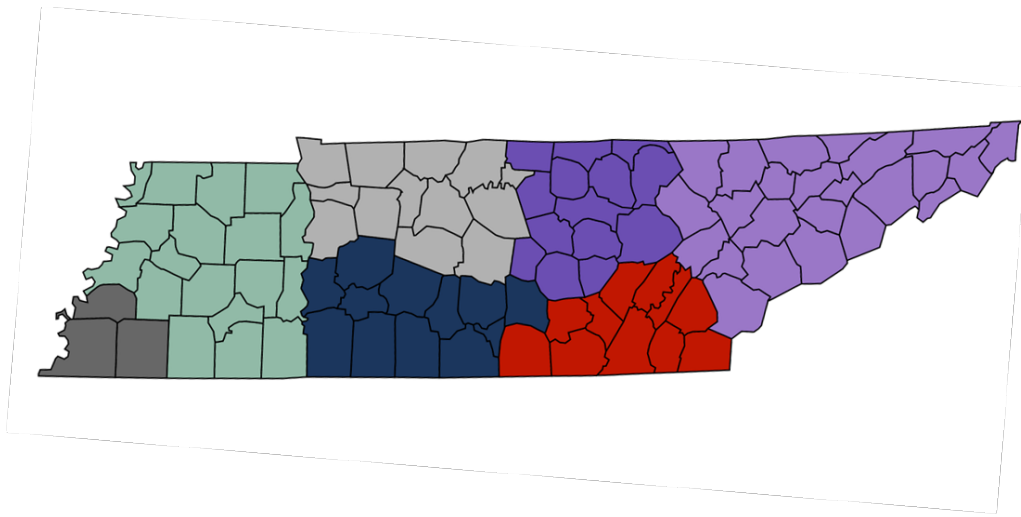


- Internal workgroup including key staff from relevant communicable disease programs, the Ryan White Part B program, TN Department of Mental Health and Substance Abuse Services and the Opioid Response Coordination Office
- Aligned with existing national and local planning guidance



ETS TN (cont.)

- Established regional planning groups



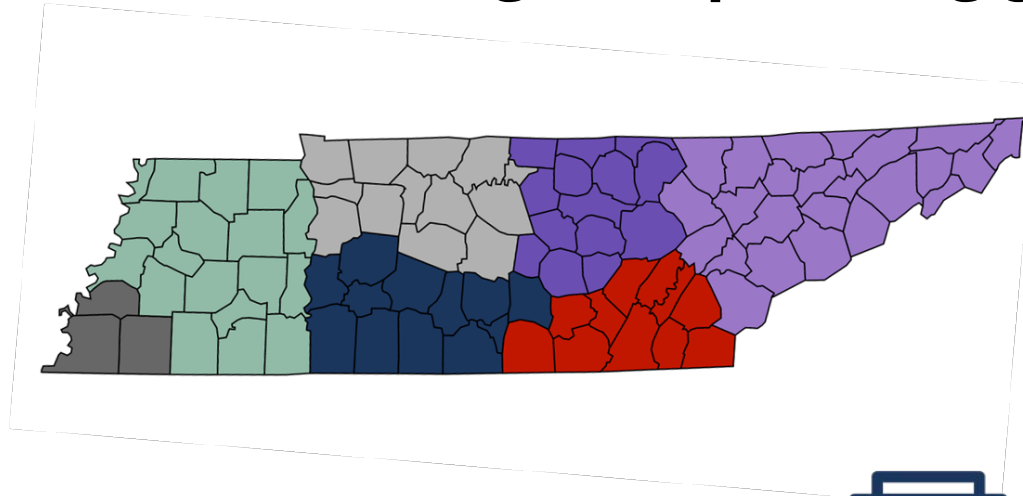
End The Syndemic Regions

- Southwest
- West
- Southcentral
- Midcumberland
- Uppercumberland
- Southeast
- East



ETS TN (cont.)

- Established regional planning groups



End The Syndemic Regions

- Southwest
- West
- Southcentral
- Midcumberland
- Uppercumberland
- Southeast
- East



Local
Tri-Chairs



State Department
Representatives

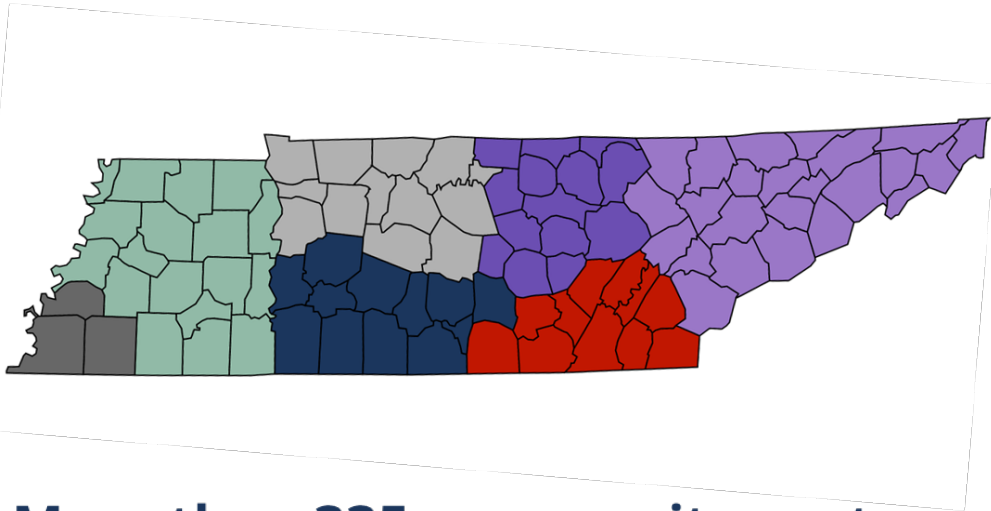


Regional Core
Leadership Team



ETS TN (cont.)

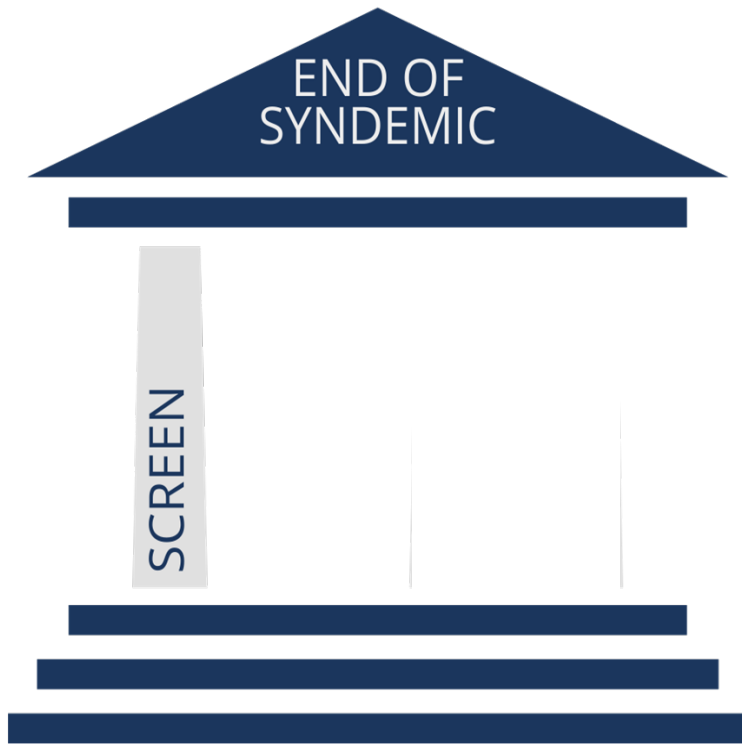
- **Invite community partners**



**More than 335 community partners
formally registered**

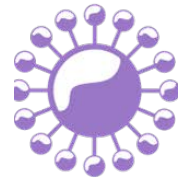
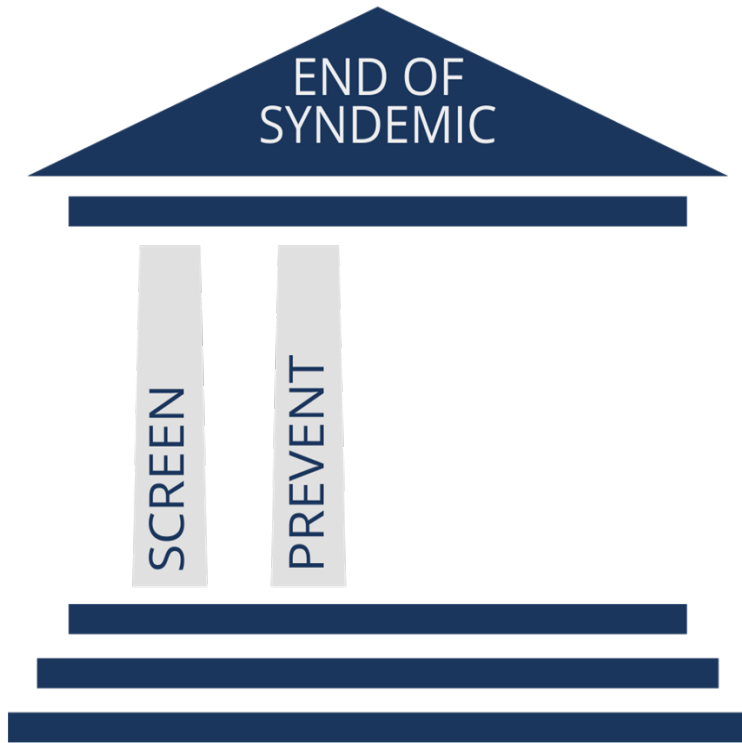
- HIV Planning Groups
- Ryan White Providers
- Funded Prevention Partners
- Drug Prevention Coalitions
- County Health Councils
- Navigators
- Academics
- Students
- Advocacy Groups
- LGBT Organizations
- Housing Organizations
- Public Education
- And More...





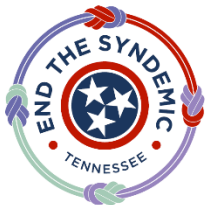
Increase combined screening of HIV, sexually transmitted infections, substance use disorder, and viral hepatitis at individual points of care

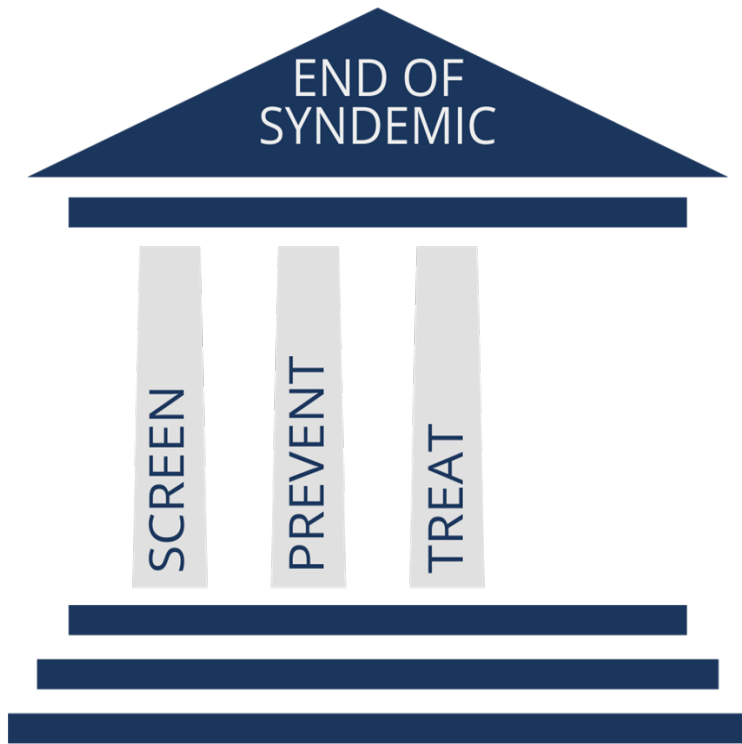




PREVENT

Increase access to appropriate HIV, sexually transmitted infection, substance use disorder, and viral hepatitis prevention services including harm reduction

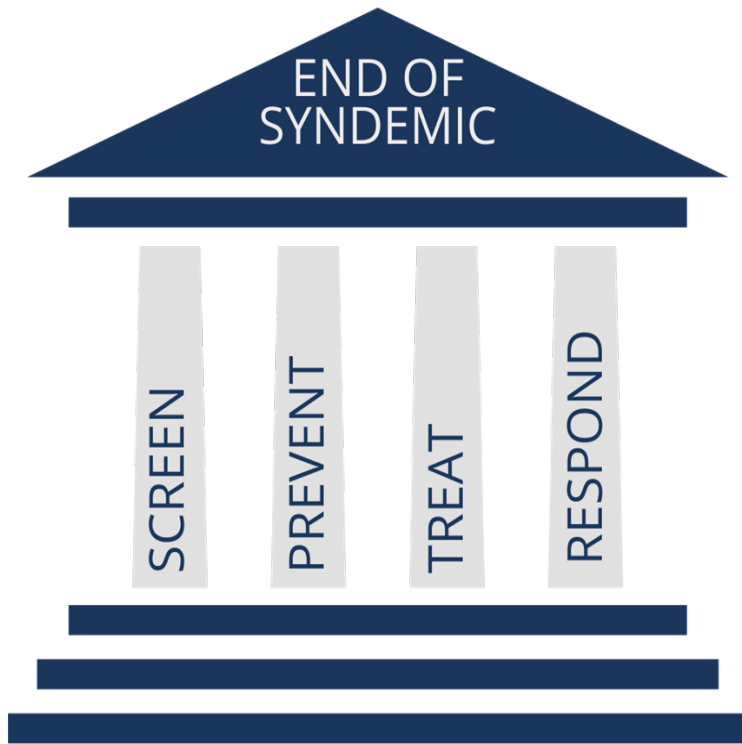




TREAT

Increase engagement in appropriate HIV, sexually transmitted infection, substance use disorder, and viral hepatitis treatment services



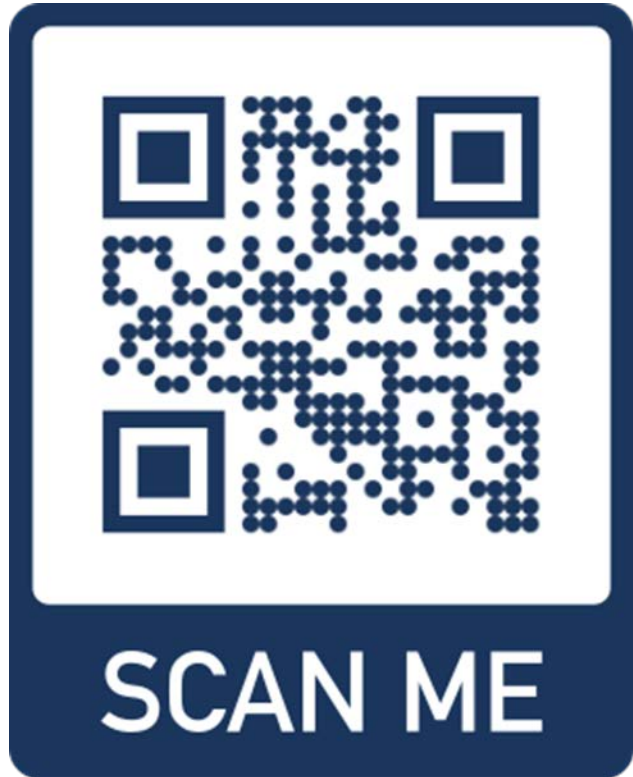


RESPOND

Build resilient communities through coordinated care systems and reducing social and structural barriers to health



Public website



Website Features

- End the Syndemic Tennessee Overview
- Project Goals
- Calendar of Events
- Access Meeting Notes
- Survey for Anonymous Feedback
- Registration for the Planning Process
- Syndemic-related Data
- Syndemic-related Programs and Resources



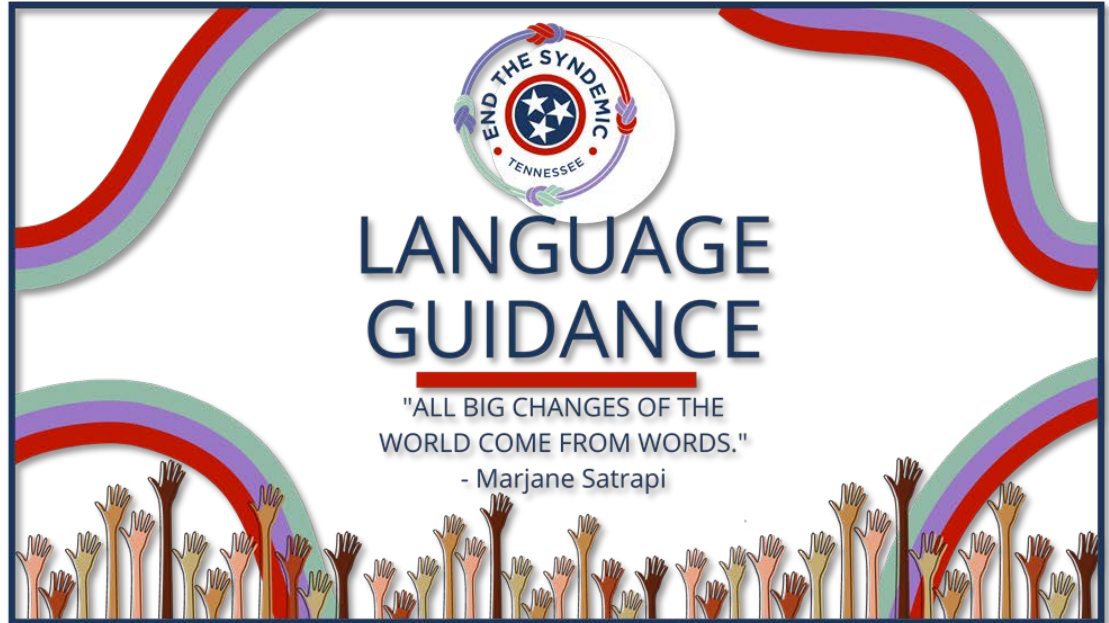
www.endthesyndemictn.org



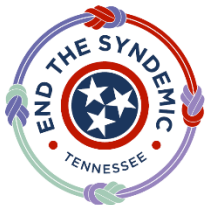
ETS TN Language Guidance Document



SCAN ME



Contains preferred terminology related to HIV, sexually transmitted infections, substance use disorder, viral hepatitis, and the communities that have been disproportionately impacted by the syndemic



Accomplishments

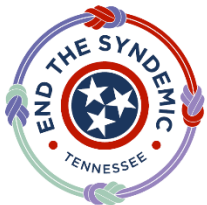
- ETS funded pilot projects statewide
- Regional Overdose Prevention Specialists begin doing PrEP education during naloxone distribution
- New condom distribution partners statewide including an SSP, a sex worker-led organization and the Regional Overdose Prevention Specialists
- One organization adds U=U page to their website
- HIV and HCV testing offered at a rural county fair
- Two new International Overdose Awareness Day Events

*Working outside silos to
End the Syndemic in Tennessee*



ETS Questions?

Email us at Endthesyndemic.tn@tn.gov



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