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Is the USA on Track to End the HIV Epidemic?

3rd National Ending the HIV Epidemic Partnerships for Research Meeting
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Los Angeles, CA

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Disclosures

Dr. Vincent Guilamo-Ramos serves as a member of:

- The U.S. Department of Health and Human Services (HHS) Panel on Antiretroviral Guidelines for Adults and Adolescents
- The HHS Presidential Advisory Council on HIV/AIDS, PACHA Co-Chair
- The CDC/HRSA Advisory Committee on HIV, Viral Hepatitis and STD Prevention and Treatment
- The National Academies of Sciences, Engineering, and Medicine's Committee on Unequal Treatment Revisited.
- Board of the Latino Commission on AIDS and Power to Decide

Dr. Vincent Guilamo-Ramos also reports grant funding from the NIH, CDC, ACF, ViiV, and private foundations.

Four Decades of Progress in Ending the US HIV Epidemic

Outcomes:

- ❑ **Biomedical innovations in testing, prevention, and treatment**
- ❑ **Overall reduction in annual new infections** (75% reduction from 1985–2021)
- ❑ **Improvements in overall life expectancy for PLWHIV**
- ❑ **Mobilization of a national/global response** (including affected populations)
- ❑ **Evolution of societal sentiment regarding HIV**
- ❑ **Development of systems, programs, and policies to respond to HIV and shape health/public health broadly**

Is the USA on Track to End the HIV Epidemic?

VIEWPOINT | VOLUME 10, ISSUE 8, E552-E556, AUGUST 2023

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Is the USA on track to end the HIV epidemic?

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Summary

Despite progress in reducing new HIV infections in the USA, publicly available data suggest that new HIV infections continue to occur at a rate. In this Viewpoint, we highlight the regularity with which existing systems for HIV prevention and treatment in the USA fail and the clearly inequitable effect of the epidemic among several priority populations of the Ending the HIV Epidemic (EHE) initiative. Existing data cast doubt on whether current EHE efforts will suffice to achieve its 2030 goal of reducing annual new HIV infections to fewer than 3000. We outline strategies in four priority areas to regain lost ground in achieving the 2030 EHE goals: reducing the stigma affecting people



THE LANCET
HIV

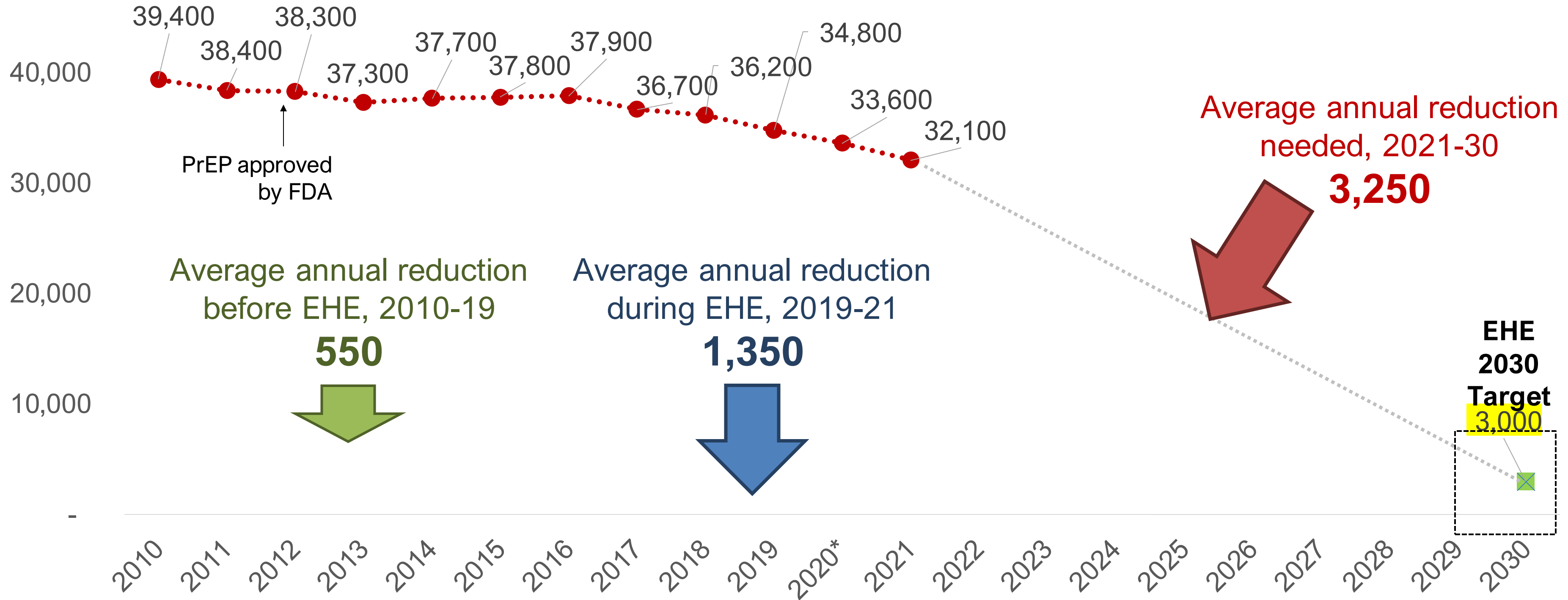
VIEWPOINT | VOLUME 10, ISSUE 8, E552-E556, AUGUST 2023

*“...we highlight the **regularity** with which **the existing systems** for HIV prevention and treatment delivery in the USA **fail** and the **clearly inequitable effect of the systems’ failure** among several priority populations of the Ending the HIV Epidemic (EHE) initiative”*

[Read here](#)



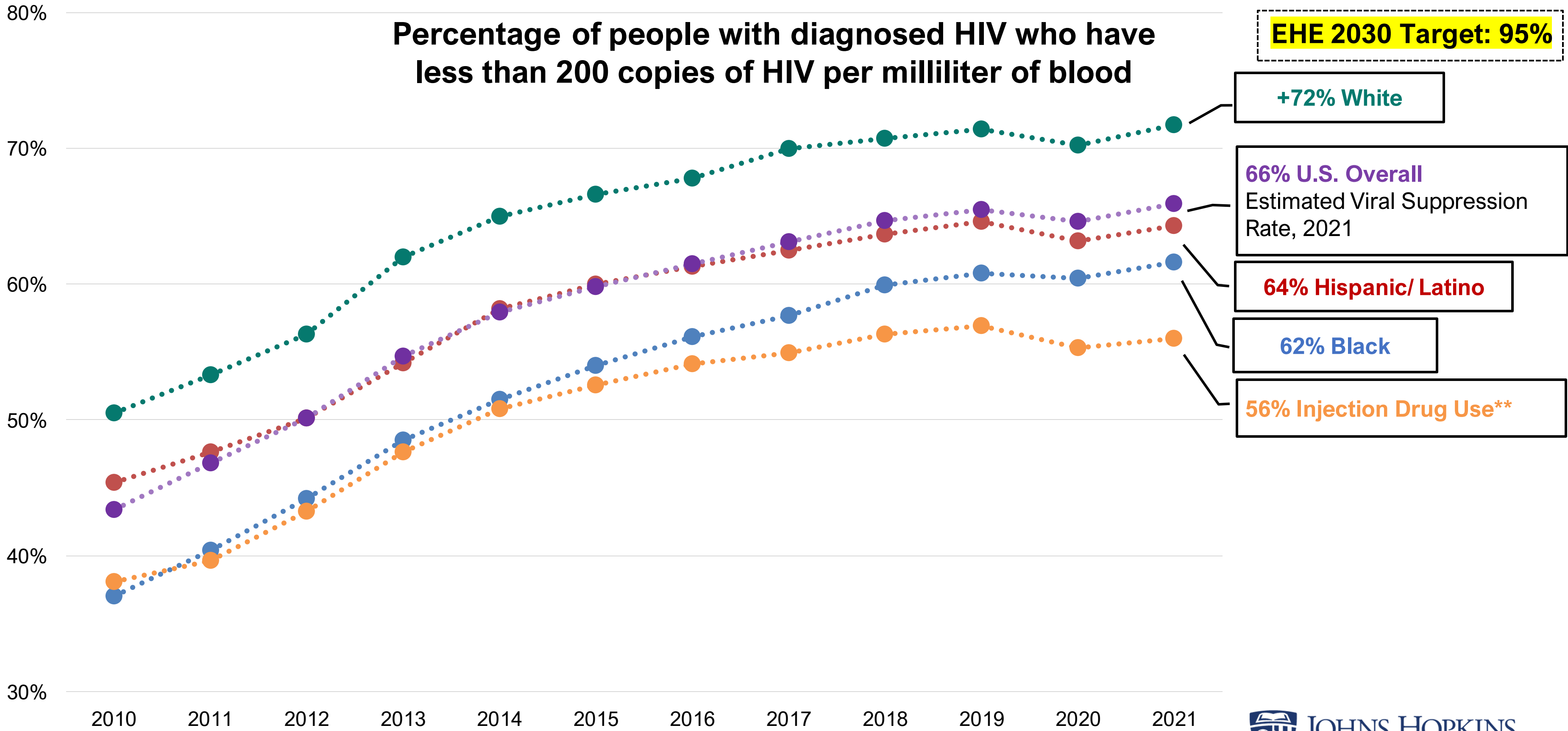
Annual HIV Infections in the U.S., 2010-2021



*COVID-19 Pandemic

Viral Suppression Rates in the U.S., 2010-2021

Percentage of people with diagnosed HIV who have less than 200 copies of HIV per milliliter of blood



EHE 2030 Target: 95%

+72% White

66% U.S. Overall
Estimated Viral Suppression Rate, 2021

64% Hispanic/ Latino

62% Black

56% Injection Drug Use**

2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021
 *2010 VL ≤ 200 copies/ML, 2011-2021 VL < 200 copies/ML
 **IDU rates for 2010-2016 reflect the average % for Men and Women who inject drugs

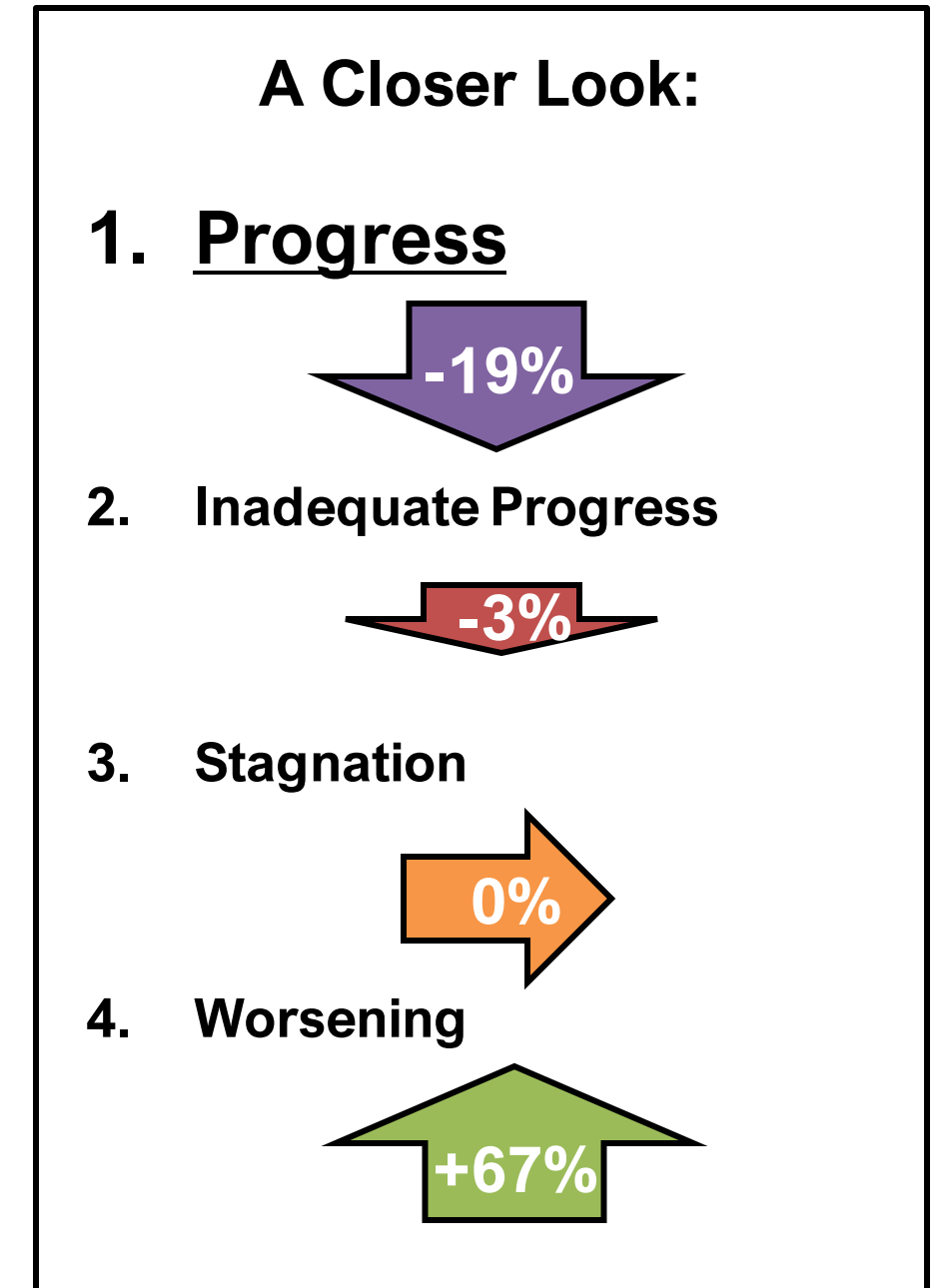
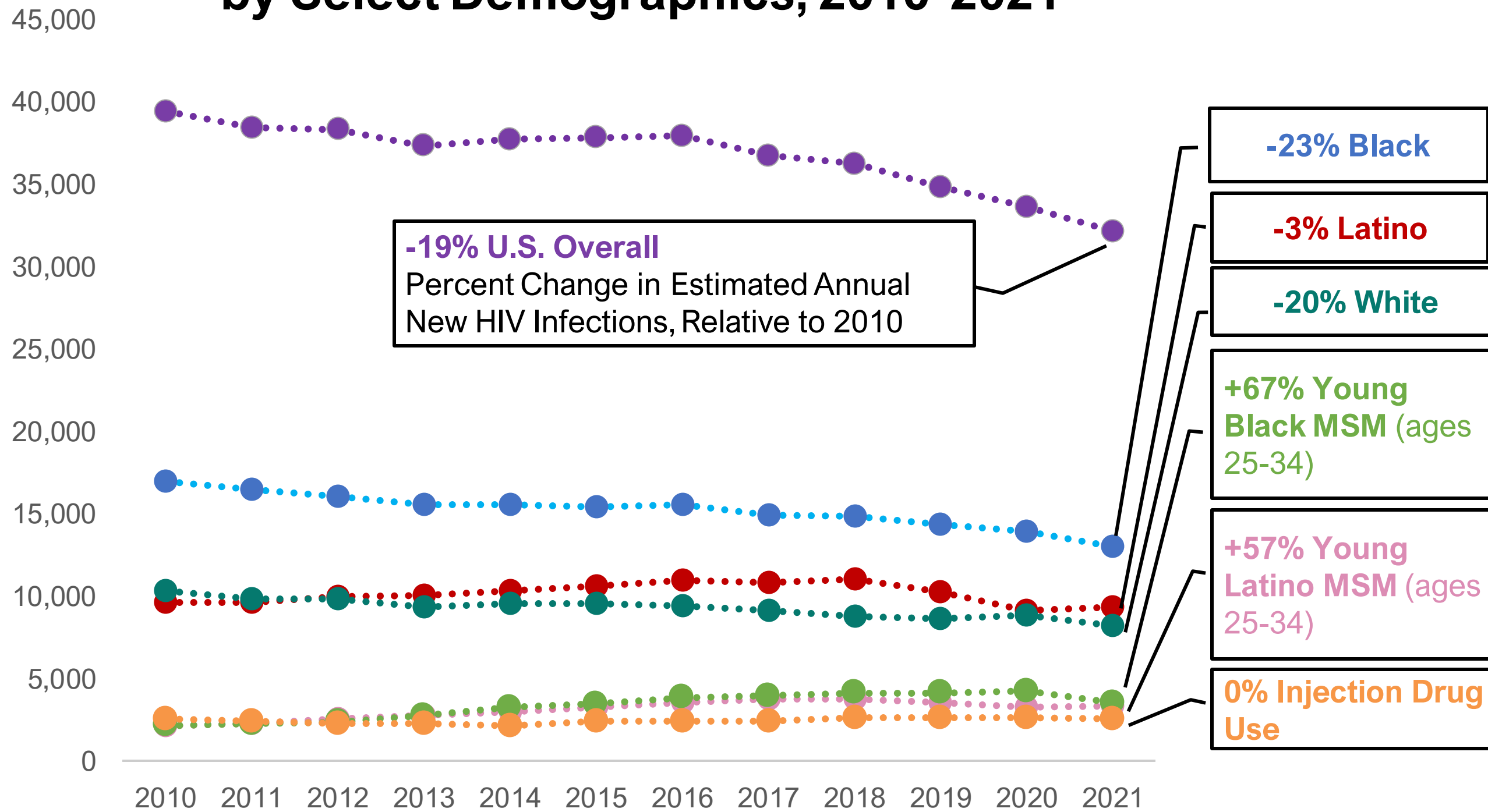


Opportunities for Systems Change to End the HIV Epidemic

1. Elimination of HIV prevention and treatment **inequities – ensure impact.**
2. Ensure evidence-based **policies and laws reflect scientific advances** in our understanding of HIV.
3. Restore and build **trustworthiness** of health and public health systems.
4. Address the harmful **social determinants of health** that drive HIV inequities.
5. Adopt a paradigm shift toward **health vs. healthcare**, including an HIV/AIDS cure/remission.
6. Broaden and **diversify** the HIV scientific, clinical, and community **workforce.**
7. Transform the societal sentiment toward and **commitment to ending HIV.**
8. Financial **investment** in public health and healthcare infrastructure.

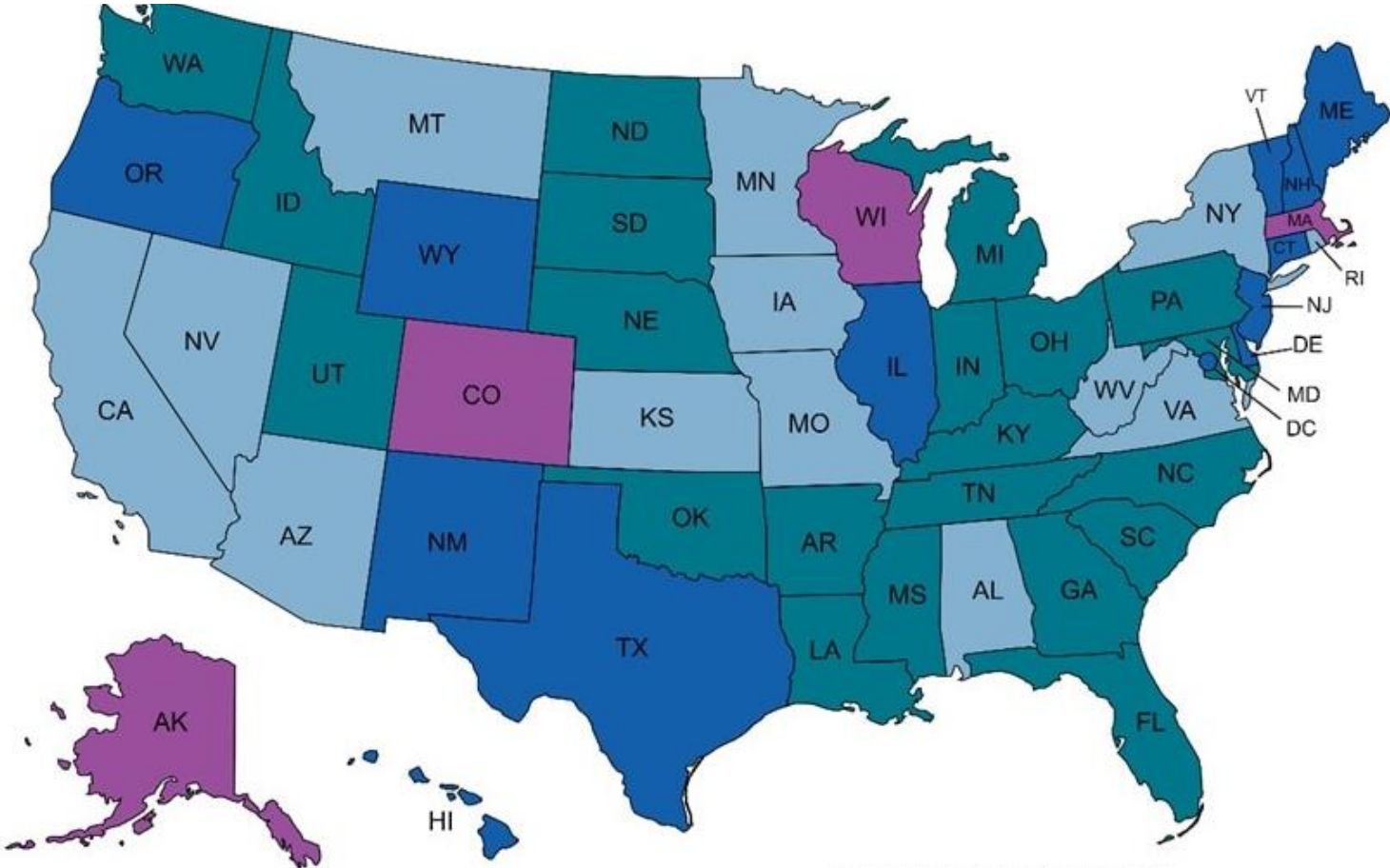
1. Eliminate HIV prevention and treatment inequities – ensure impact

Estimated Annual New HIV Infections by Select Demographics, 2010-2021



2. Ensure policies and laws reflect scientific advances in our understanding of HIV.

2023 HIV Criminalization Laws



2023 Anti-LGBTQ+ State Legislative Activity

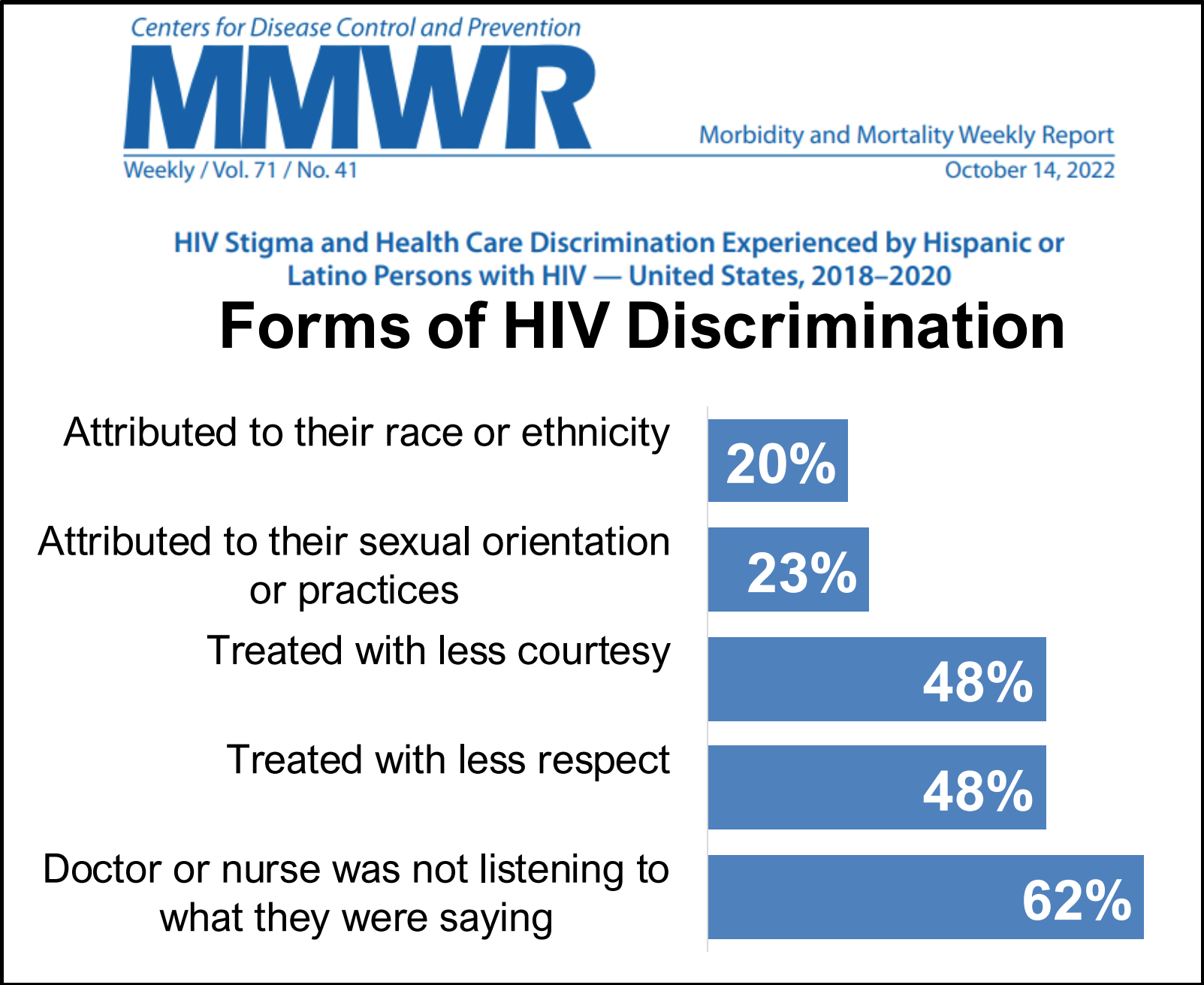
- **Over 520** anti-LGBTQ+ bills have been introduced in state legislatures, a record;
- **Over 220** bills specifically target transgender and non-binary people, also a record; and
- **A record 70** anti-LGBTQ laws have been enacted so far this year

(Source: Human Rights Campaign)



Tran NM, Rebeiro P, McKay T. Tennessee Rejects Federal HIV Prevention Funds: A Looming Public Health And Financial Disaster. *Health Affairs Forefront.*; Roundup of Anti-LGBTQ+ Legislation Advancing In States Across the Country. Human Rights Campaign. Published May 23, 2023. Accessed April 11, 2024.; 2023 U.S. National Survey on the Mental Health of LGBTQ Young People. The Trevor Project. Accessed April 11, 2024.; What is U=U? - LGBT Foundation. Accessed April 14, 2024

3. Restore and build trustworthiness of health and public health systems.



©CBS NEWS

A quarter of Americans distrust CDC recommendations, survey finds

By Alexander Tin
March 7, 2023 / 8:22 PM EST / CBS News

POLITICO
HEALTH CARE

The CDC wants your trust back: It'll 'take time to rebuild.'

The CDC's new director is traveling the country, meeting with state leaders and using social media to win back the public's trust.

Padilla M. HIV Stigma and Health Care Discrimination Experienced by Hispanic or Latino Persons with HIV — United States, 2018–2020. *MMWR Morb Mortal Wkly Rep.* 2022;71; Cirruzzo C. The CDC wants your trust back: It'll 'take time to rebuild.' POLITICO. Published September 16, 2023. Accessed April 14, 2024. <https://www.politico.com/news/2023/09/16/cdc-director-public-trust-00116348>; Tin A. A quarter of Americans distrust CDC recommendations, survey finds - CBS News. Published March 7, 2023. Accessed April 14, 2024. <https://www.cbsnews.com/news/cdc-recommendations-survey-trust/>

4. Eliminate the harmful social determinants of health that drive HIV inequities.

Conceptual Evolution of SDOH as Reflected in the Extant Literature:



- Recognition of SDOH shaping health outcomes
- Mechanisms largely unrecognized



- Recognition of SDOH as underlying systematic health disparities
- Deficiency-focused (“vulnerability lens”)



- Inequity perspective on SDOH that highlights social processes and injustices

Important **constructs** and **dynamic mechanisms** identified in the literature are **missing** from the current conceptualization:

- **Dynamic** vs. static SDOH influence
- Accommodates both **SDOH capital** & **SDOH processes**
- **Multilevel and broad application**
- Goes beyond individual focus and centers on the **family context**
- Incorporates **co-occurring synergistic inequities**
- Takes a **life course perspective**
- Focuses on **exposure** and **susceptibility** (vs. “vulnerability”)
- Integrates **social/behavioral and biological** factors
- Leverages assets and **resilience**



Upcoming Special Issue Highlights Design and Analytic Methods for Multi-Level Interventions to Eliminate Health Inequities



National Institutes of Health
Office of Disease Prevention

Director's Messages

Call for Papers: Design and Analytic Methods to Evaluate Multilevel Interventions to Reduce Health Disparities

David M. Murray, Ph.D.

Associate Director for
Prevention

Director, Office of Disease
Prevention

Prevention Science

*The Official Journal of the
Society for Prevention Research*

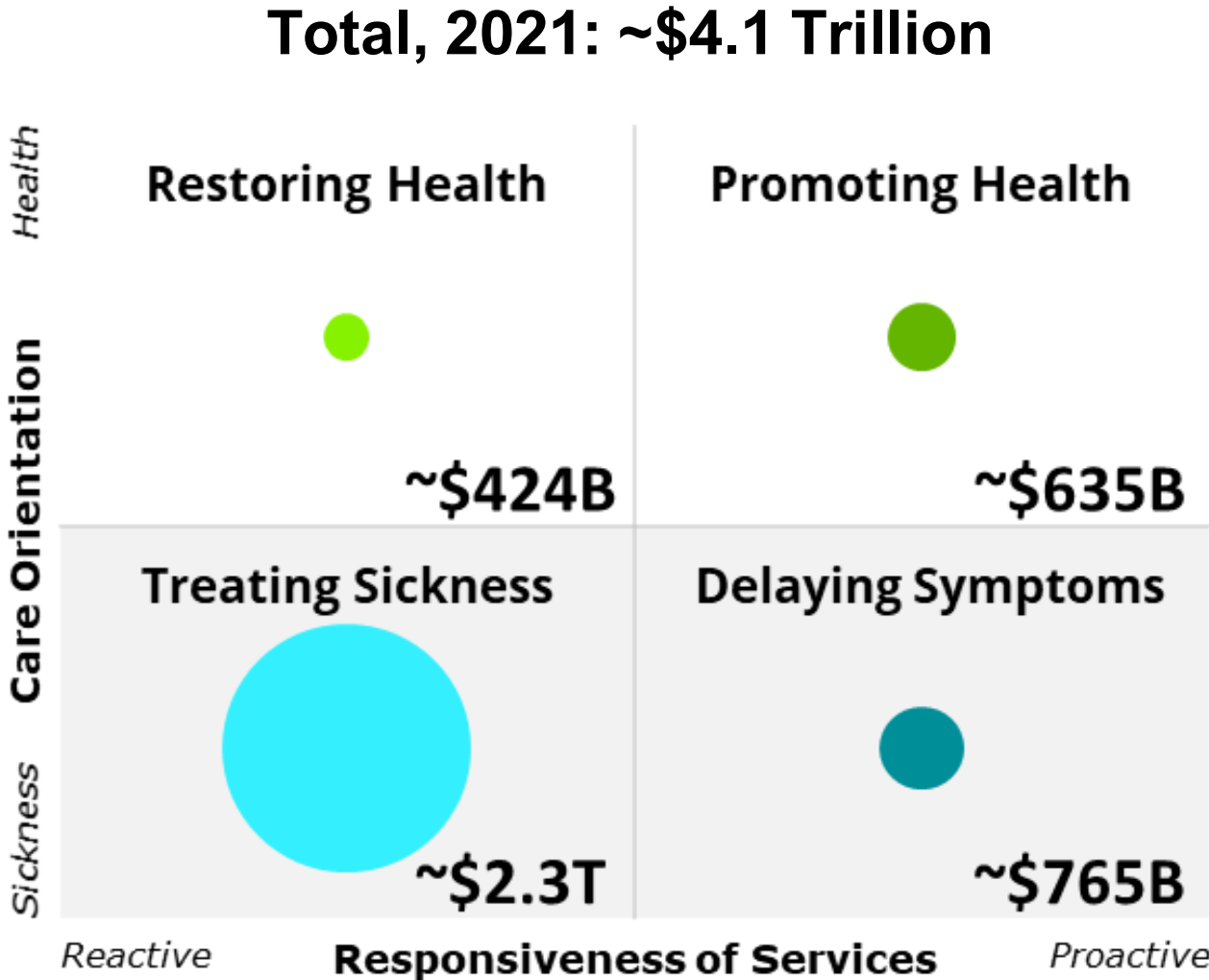
Application of a Heuristic Framework for Multilevel Interventions to Address and Mitigate the Impact of Unjust Social Processes and Other Social Determinants of Health.

Open Access:



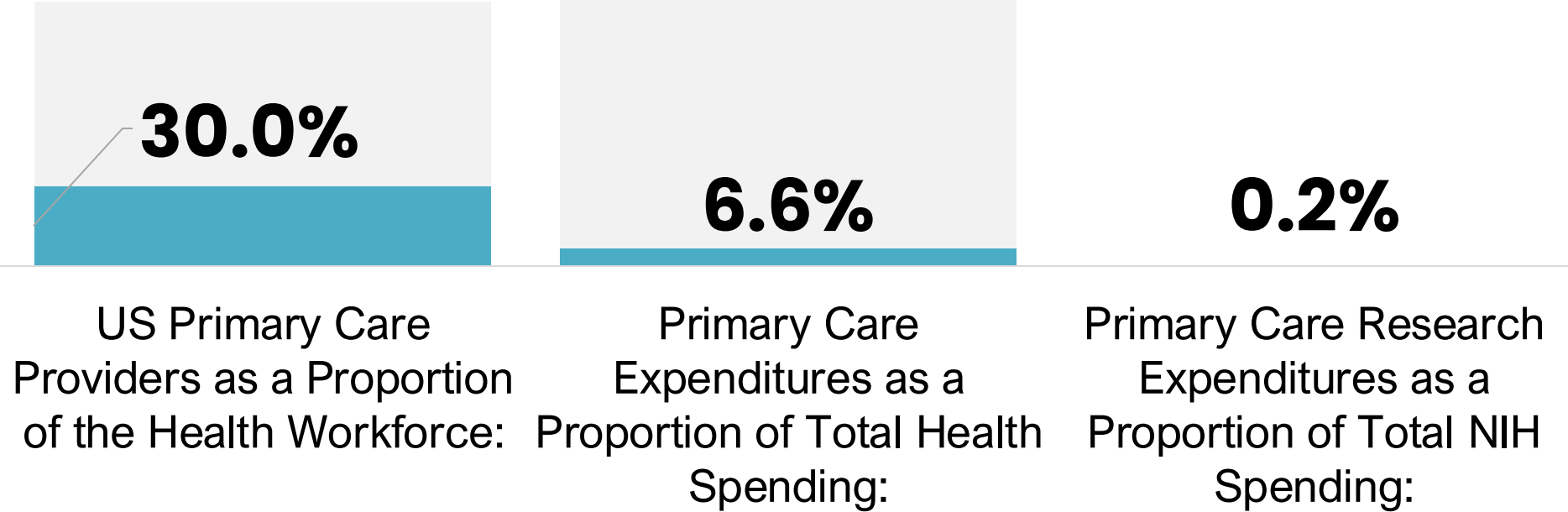
5. Adopt a paradigm shift from healthcare towards health – including HIV/AIDS cure/remission.

US Healthcare Expenditures, by service*



*Deloitte analysis

US Investment in Primary Care



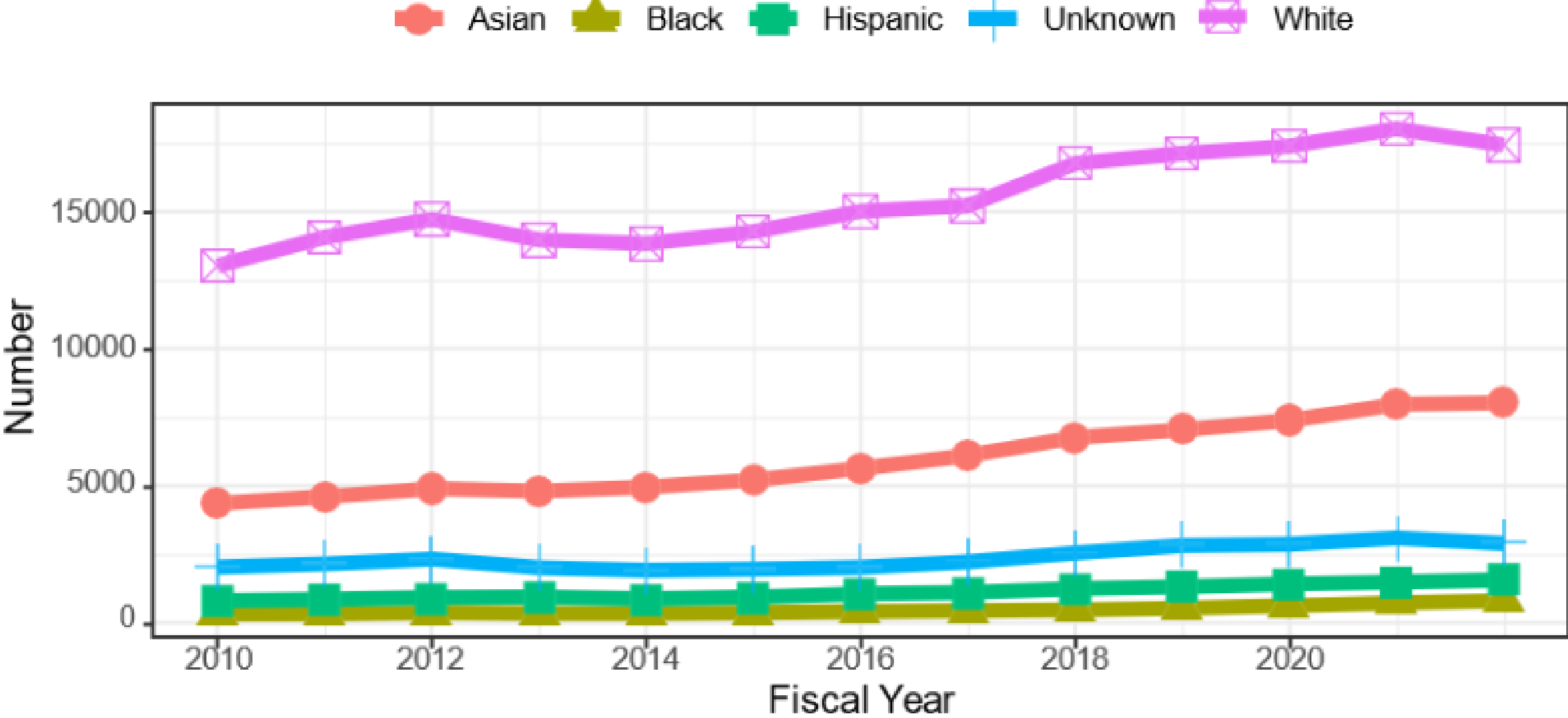
Primary care is the ONLY form of healthcare that is associated with:
Population health impact
AND improves health equity, healthcare quality, and lowers long-term healthcare expenditures
(Strange, K.C. et al., 2023)

Bhatt J et al. Future of Health x Health Equity. Deloitte at the Duke University School of Nursing: 60th Annual Harriet Cook Carter Lecture. February 22, 2023.; Strange KC, Miller WL, Etz RS. The Role of Primary Care in Improving Health Equity. JAMA Internal Medicine. 2023;183(1):1-11. doi:10.1001/jamainternmed.2022.11111. Apr 1;101(S1):795-840.; Martin S, Phillips RL Jr, Petterson S, Levin Z, Bazemore AW. Primary Care Spending in the United States, 2002-2016. JAMA Internal Medicine. 2020;180(7):1019-1020. doi:10.1001/jamainternmed.2020.11111. Engineering, and Medicine. 2021. Implementing High-Quality Primary Care: Rebuilding the Foundation of Health Care. Washington, DC: The National Academies Press. <https://doi.org/10.17226/25983>

6. Broaden and diversify the HIV scientific, clinical, and community workforce

Number of PI applicants by race-ethnicity for R01 awards by fiscal year.

- 2020: Mean age at first R01: 42



Analyses of Demographic-Specific Funding Rates for Type 1 Research Project Grant and R01-Equivalent Applications. NIH Extramural Nexus. Published March 16, 2023. Accessed April 12, 2024.; R01 teams and grantee age trends in grant funding. National Institute on Aging. Published April 22, 2015. Accessed April 12, 2024; 1. Snyder JE, Upton RD, Hassett TC, Lee H, Nouri Z, Dill M. Black Representation in the Primary Care Physician Workforce and Its Association With Population Life Expectancy and Mortality Rates in the US. JAMA Network Open. 2023;6(4):e236687. doi:10.1001/jamanetworkopen.2023.6687

6. Broaden and diversify the HIV scientific, clinical, and community workforce

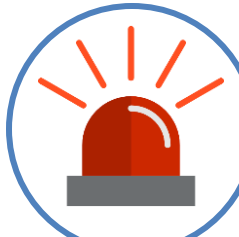
Factors Limiting Clinical Workforce Capacity:



Aging HIV workforce



Insufficient trainees entering HIV specialties



Strain on the health workforce

JAMA Network | Open™

Black Representation in the Primary Care Physician Workforce and Its Association With Population Life Expectancy and Mortality Rates in the US

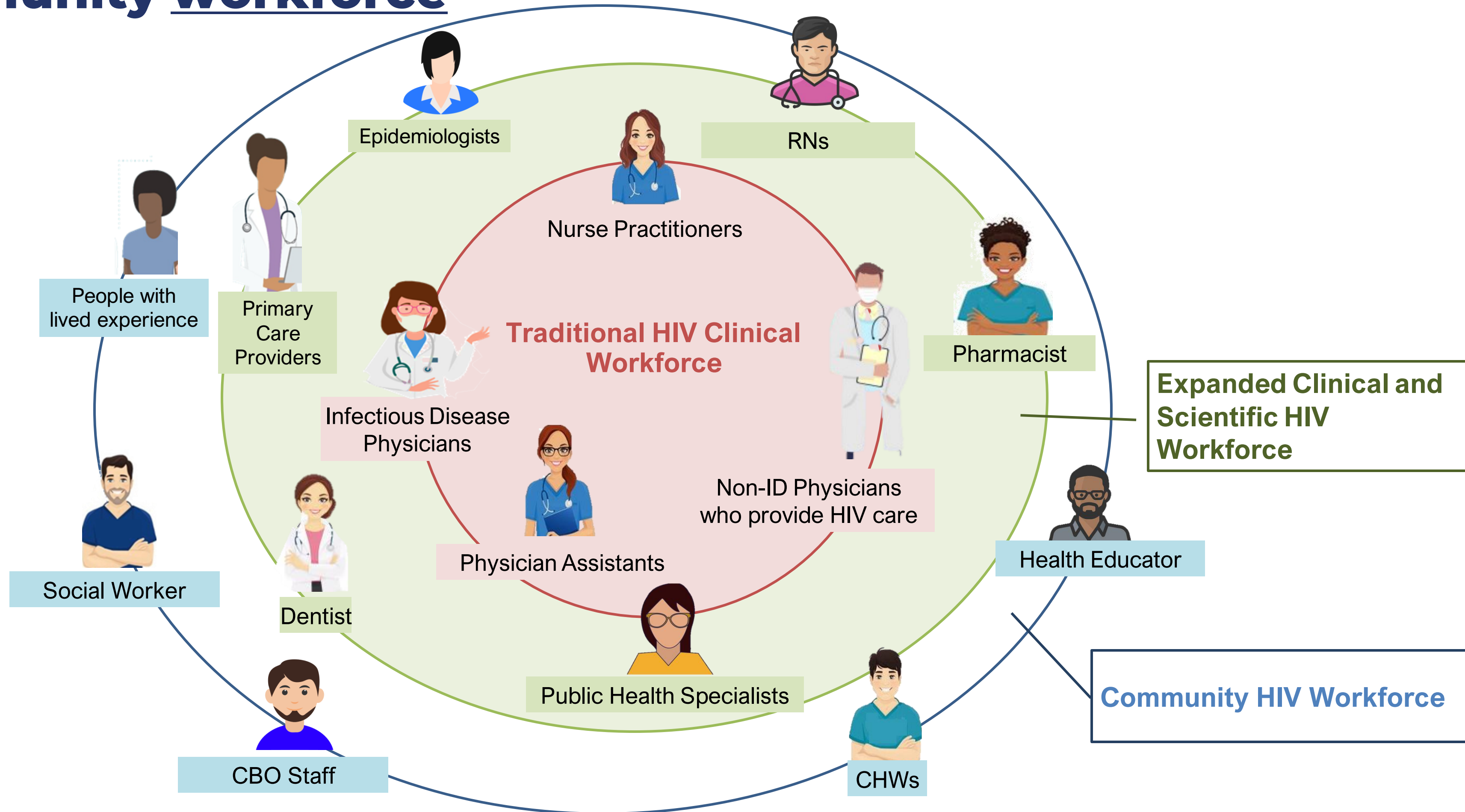
John E. Snyder, MD,MS, MPH; Rachel D. Upton, PhD; Thomas C. Hassett, PhD; Hyunjung Lee, PhD, MS, MPP, MBA; Zakia Nouri, MA; Michael Dill, MAPP

“...greater Black PCP workforce representation is associated with better population health measures for Black individuals...”



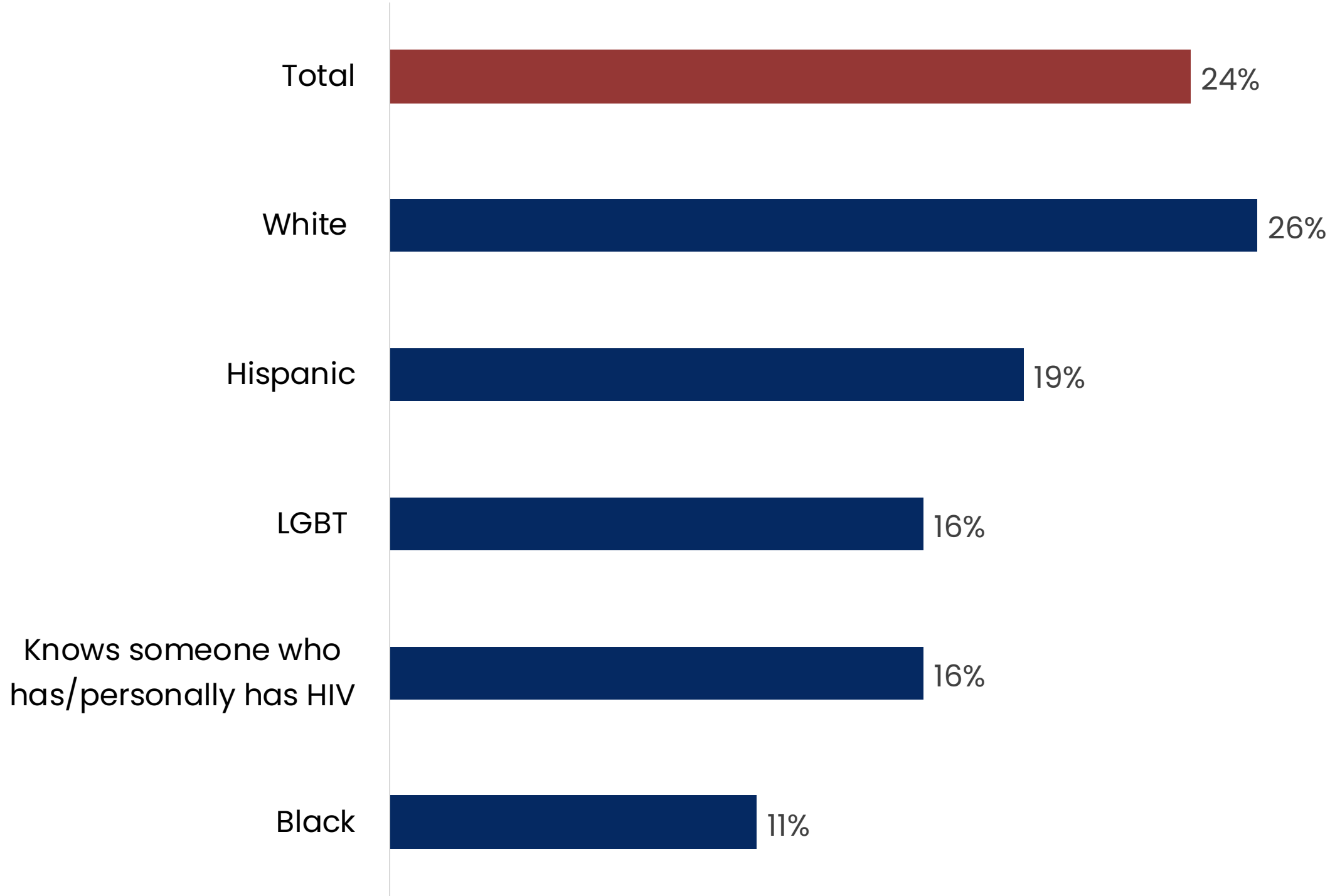
Analyses of Demographic-Specific Funding Rates for Type 1 Research Project Grant and R01-Equivalent Applications. NIH Extramural Nexus. Published March 16, 2023. Accessed April 12, 2024.; R01 teams and grantee age trends in grant funding. National Institute on Aging. Published April 22, 2015. Accessed April 12, 2024. ;Armstrong WS. The Human Immunodeficiency Virus Workforce in Crisis: An Urgent Need to Build the Foundation Required to End the Epidemic. Clinical Infectious Diseases. 2021;72(9):1627-1630. doi:10.1093/cid/ciaa302

6. Broaden and diversify the HIV scientific, clinical, and community workforce



7. Transform the societal sentiment toward and commitment to ending HIV.

% of American Adults Who Do Not View HIV/AIDS as a Serious Problem in the US Today, 2023



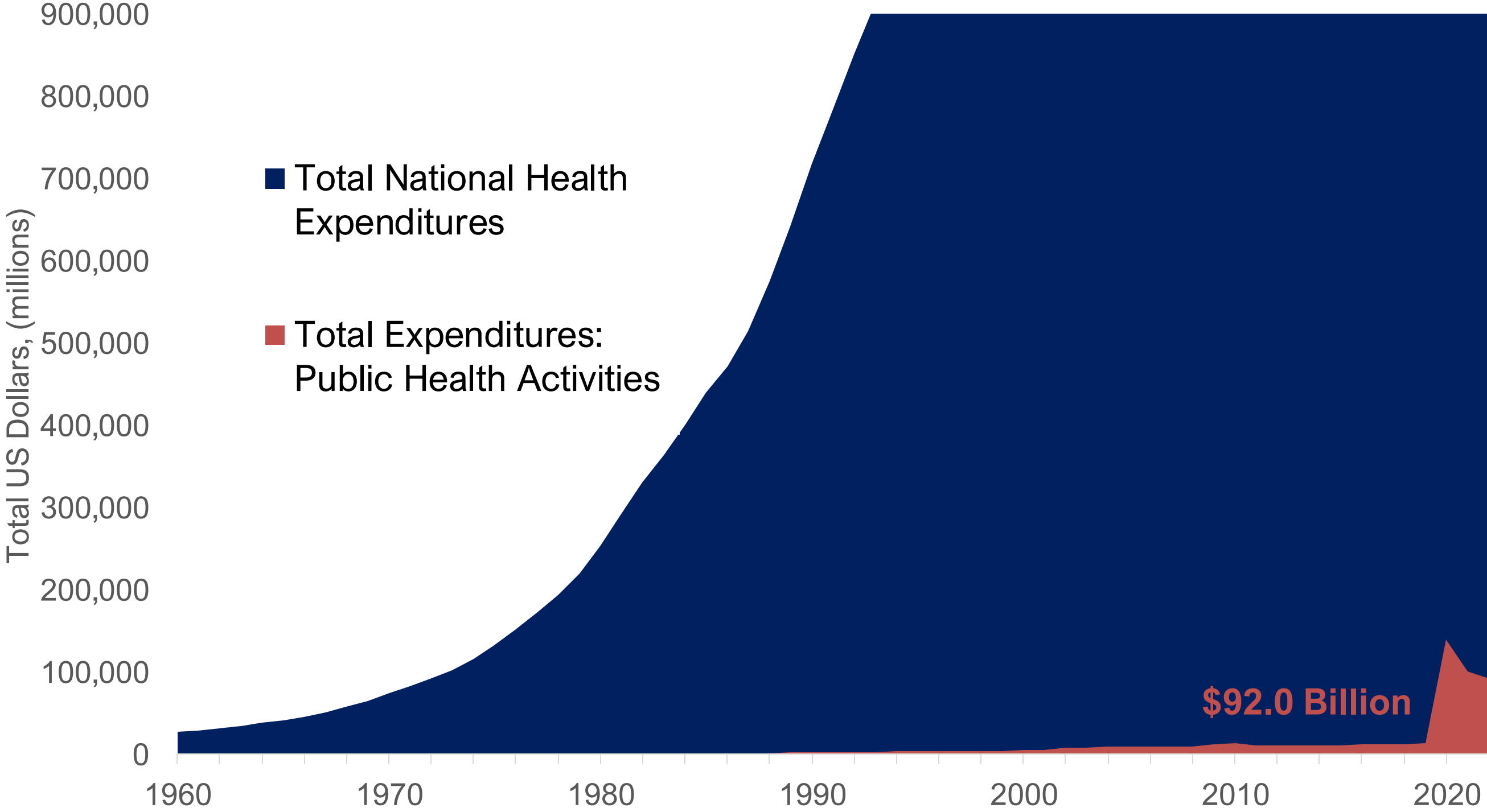
1 in 4 (24%) Americans **Don't View HIV/AIDS as a Serious Problem** in the U.S. Today (Up from 17% in March 2019)



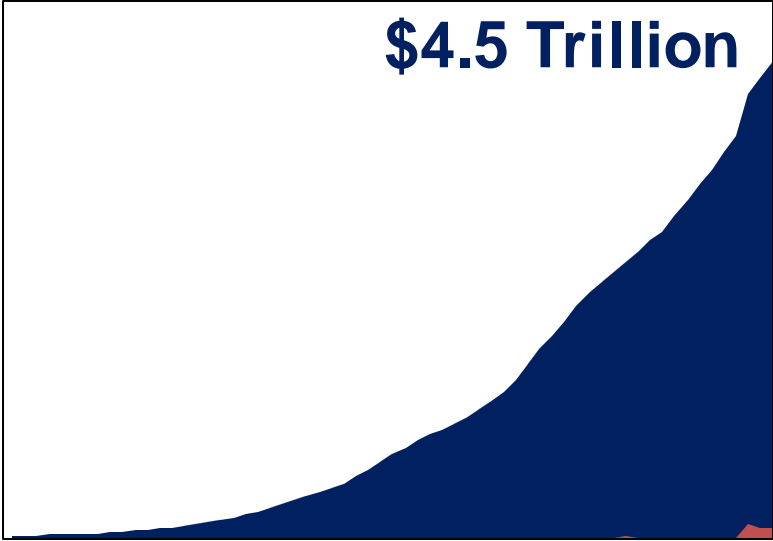
Kaiser Family Foundation. KFF Health Tracking Poll May 2023: Health Care in the 2024 Election and in the Courts. <https://www.kff.org/report-section/kff-tracking-poll-may-2023-health-care-in-the-2024-election-and-in-the-courts-prep-and-preventive-care/>. KFF Health Tracking Poll – March 2019: Public Opinion on the Domestic HIV Epidemic, Affordable Care Act, and Medicare for All.

8. Commit to financial investment in public health infrastructure.

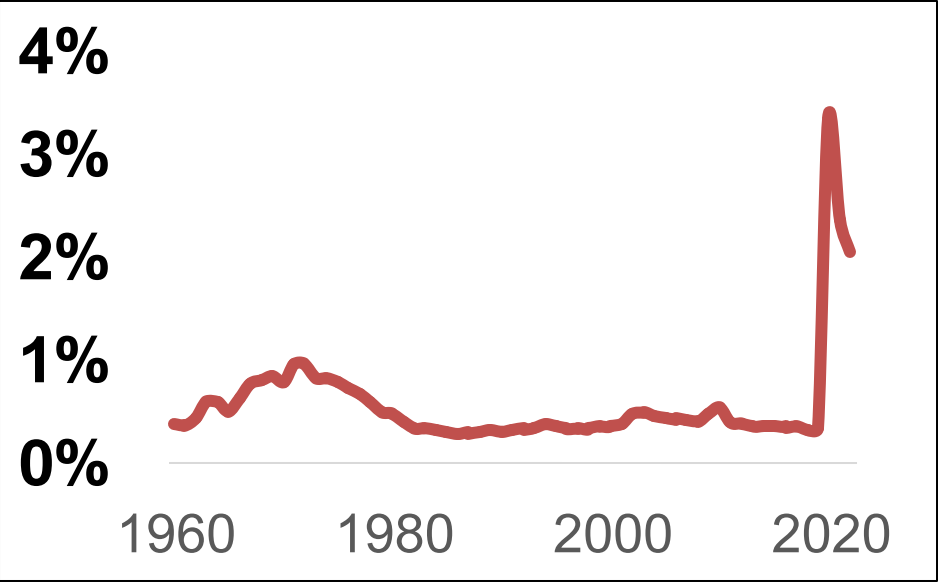
National Health Expenditures by Category, 1960-2022



Full-Scale



Public Health Expenditures as a Proportion of Total NHE



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Centers for Medicare & Medicaid Services. National Health Expenditures by type of service and source of funds, CY 1960-2022. <https://www.cms.gov/data-research/statistics-trends-and-reports/national-health-expenditure-data/historical>

Scientific Opportunities: New NIH HIV Research Strategic Plan



Upcoming: NIH Office of AIDS Research's Strategic Goals FY 2026 – 2030

Goal 1: Enhance discovery and advance HIV science through fundamental research.

Description: Fundamental research seeks to expand understanding of the **biological, physiological, interpersonal, and social-structural mechanisms of HIV**—i.e., how it operates as a virus and as an infectious disease pandemic—at the molecular, cellular, individual, community, and population level. This understanding provides the foundation for the **development of safe, effective, and scalable tools to prevent, treat, and ultimately cure HIV infection**, as well as **reduce the risk and impact of comorbid conditions and co-occurring infections**.

Overlap:

- Development and scale-up of HIV prevention and treatment tools.
- HIV cure/remission.

Scientific and Programmatic Opportunities:

- Eliminate HIV prevention and treatment **inequities**.
- Adopt a **paradigm shift toward health** vs. healthcare.

Scientific Opportunities: New NIH HIV Research Strategic Plan



Upcoming: NIH Office of AIDS Research's Strategic Goals FY 2026 – 2030

Goal 2: Advance the development and assessment of novel interventions for HIV prevention, treatment, and cure.

*Description: Knowledge gleaned from fundamental, pre-clinical, and translational research to inform clinical trials and other intervention studies to **test the most promising products, tools, or strategies for HIV prevention, treatment, and cure and management of its complications.** Rigorous randomized control trials, observational studies, and other methodologies **assess biological, behavioral, and social outcomes of novel interventions, as well as their feasibility, acceptability, effectiveness, and scalability** in differing **populations and across the lifespan.***

Overlap:

- **Novel intervention development and evaluation** for prevention, treatment, and cure.
- Commitment to **scale-up of most efficacious interventions** and **address implementation issues.**

Scientific and Programmatic Opportunities:

- Greater scientific emphasis on the elimination of harmful **social determinants of health.**

Scientific Opportunities: New NIH HIV Research Strategic Plan



Upcoming: NIH Office of AIDS Research's Strategic Goals FY 2026 – 2030

Goal 3: Optimize public health impact of HIV discoveries through translation, dissemination, and implementation of research findings.

Description: As HIV prevention, treatment, and cure interventions are shown to be efficacious, their findings must be translated to **inform practice and to connect with communities** and the general public in order to **maximize their public health impact**. Implementation research can identify how best to facilitate effective adaptation, uptake, integration, and scale-up of evidence-based HIV interventions. **Information-sharing through community partnerships, research collaborations, and dissemination activities** can amplify the impact of research and **promote health equity**.

Overlap:

- **Community partnerships** and collaboration; national scale-up and **impact**.

Scientific and Programmatic Opportunities:

- Transform the **societal sentiment** toward and commitment to ending HIV.
- Develop the science of **trustworthiness**.
- Ensure **policies** and **laws** reflect scientific advances in our understanding of HIV.
- Investments/**funding for prevention** and health promotion vs. specialty care.

Scientific Opportunities: New NIH HIV Research Strategic Plan



Upcoming: NIH Office of AIDS Research's Strategic Goals FY 2026 – 2030

Goal 4: Build research workforce and infrastructure capacity to enhance sustainability of HIV scientific discovery.

*Description: Continued progress in HIV science and its application requires **robust support for research tools, computational resources, instrumentation, data and physical infrastructure, and workforce development**, particularly in **institutions that serve underrepresented or high HIV burden populations or that historically have been underfunded in the United States and globally**. Such enhanced capacity-strengthening efforts will **promote diversity and inclusion** in the HIV research workforce.*

Overlap:

- **Financial investment in public health workforce** and infrastructure; diversity and inclusion.
- **Diversity and inclusion of underrepresented individuals** in scientific, clinical, and community workforce.

Scientific and Programmatic Opportunities:

- **Broaden definition** and **diversify** the HIV **scientific, clinical,** and **community** workforce.
- Develop the science of **workforce congruence & competence.**
- Examine impact of **policies and laws related to workforce** and impact on health (e.g. Harvard vs. UNC supreme court decision).

Thank You!

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Please send any questions or comments to:
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