Reducing HIV Diagnoses and Mortality Rate Further Increase Aging Resource Needs for PWH Into 2040

Siobhán M O'Connor[1]*, Ruiguang Song[1]*, Alex Viguerie[1], Kate Buchacz[1], Paul G Farnham[1], Cynthia M Lyles[1], Scott P Grytdal[1], Angela B Hutchinson[1], **John T Brooks[1]**
[1]Centers for Disease Control and Prevention, Division of HIV Prevention, Atlanta, GA USA (**Contributed equally*)

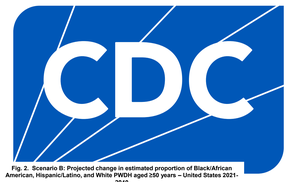


Fig. 2. Scenario B: Projected change in estimated proportion of Black/African American, Hispanic/Latino, and White PWDH aged ≥50 years – United States 2021-2040

BACKGROUND

As survival of people with HIV (PWH) in the U.S. improved over 2010-2022, age distribution shifted, and the proportion aged ≥50 years increased to 54%.[1] Updated forecasts with varied progress toward Ending the HIV Epidemic in the U.S. (EHE) are needed to inform resource planning.

METHODS

We used a newly developed life table-based, cohort-component model with age-specific mortality to forecast changes in age distribution of people aged ≥13 years with diagnosed HIV (PWDH) in the U.S. by age (overall and by race/ethnicity) during 2021-2040 under multiple scenarios, varying the annual percentage change (APC) in HIV diagnoses (Dx) and PWDH mortality rates (MR). National HIV surveillance data provided year-end numbers of PWDH in 2020 (n=1,053,300), 2021 HIV Dx, and 2021 PWDH deaths; 2021 U.S. Life Tables provided general population mortality estimates.[1,2] We present estimated numbers and age distributions of U.S. PWDH under the following scenarios:

- Over 2021-2030: A) -3.0% APC in Dx (proximate pre-COVID trend), with 0% change in MR; and B) -22.3% APC in Dx through 2030 (to reach EHE goal: 90% decrease in Dx by 2030, from 2017 baseline), with linear decrease in MR to equal general population MR in 2030.
- Over 2021-2040: A) -3.0% APC in Dx through 2040, with 0% change in MR; and B) -11.2% APC in Dx through 2040 (to reach 90% decrease by 2040), with linear decrease in MR to equal general population MR in 2040.

REFERENCES

1. Centers for Disease Control and Prevention. HIV Surveillance Report, 2022; vol. 35. https://stacks.cdc.gov/view/cdc/156509/cdc_156509_DS1.pdf.
2. Arias E, Xu J, Kochanek K. United States Life Tables, 2021. Natl Vital Stat Rep. 2023 Nov;72(12):1-64. https://dx.doi.org/10.15620/cdc:132418.

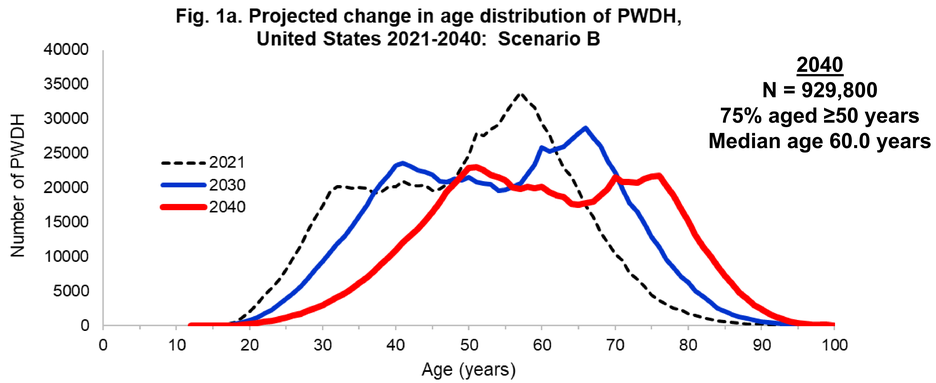
ACKNOWLEDGEMENTS

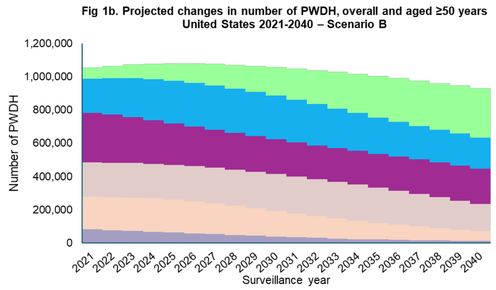
We thank the dedicated state and local departments of public health and CDC staff who conduct surveillance.

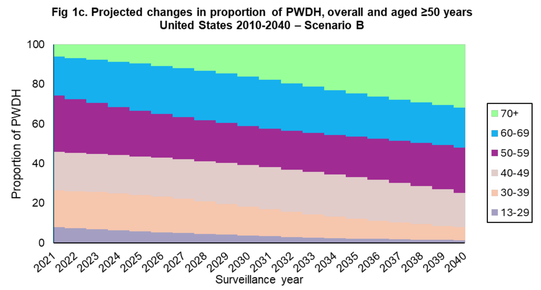
New projections estimate by 2030, 54-57% of >1 million PWDH in the U.S. will be aged ≥50y. If the U.S. reaches 90% reduction in HIV diagnoses by 2040 and PWDH lifespans continue to improve, ~75% of >900,000 PWDH will be aged ≥50 years. Projections emphasize growing need for aging resources in HIV care.

RESULTS

Figure 1. Scenario B: Projected changes in age distribution, number, and proportion of people with diagnosed HIV (PWDH), overall and aged ≥50 years – United States 2021-2040**







**Scenario B: 90% reduction in HIV diagnoses by 2040, linear decrease in mortality rate (MR) to equal general population MR in 2040. PWDH, people with diagnosed HIV aged ≥13 years in the United States at surveillance year-end.

RESULTS

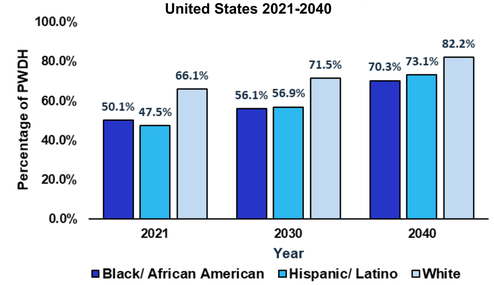
By 2030, the model projects that in the U.S. there will be

- Scenario A: An estimated **1,116,600 PWDH – 57% (n = 640,100) aged ≥50 years,** 27% aged ≥65 years.
- Scenario B: An aspirational estimated **1,016,800 PWDH – 64% (651,800) aged ≥50 years**, and 31% aged ≥ 65 years.

By 2040, the model projects that in the U.S. there will be

- Scenario A: An estimated **1,057,500 PWDH – 64% aged ≥50 years**, and 33% aged ≥65 years.
- Scenario B: An estimated **929,800 PWDH – 75% aged ≥50 years**, and 42% aged ≥65 years (Fig 1).
- Scenario B: An estimated **354,300 Black/African American (38%), 250,600 Hispanic/Latino (27%), and 245,500 White (26%)** PWDH – 70%, 73% and 82%, respectively, aged ≥50 years.(Fig. 2).

Fig. 2. Scenario B: Projected change in estimated proportion of Black/African American, Hispanic/Latino, and White PWDH aged ≥50 years United States 2021-2040**



CONCLUSIONS

If rates of decline in HIV Dx and PWDH MR remain stable, by 2030 the absolute number of PWDH in the U.S. is projected to increase, with 57% aged ≥ 50 years. Greater decreases in Dx with decreases in MR are projected to reduce the absolute number of PWDH by 2040, but the fraction aged ≥50 years may increase to >70%. Demand for aging-related resources to care for more and older PWDH in coming years, including more older Black/African American and Hispanic/Latino PWDH, will grow.

CONTACT INFO

Siobhán M. O'Connor, MD, MPH
Email: sbo5@cdc.gov
Tel: 1-404-639-2337