Projecting State-Level Aging Patterns Among People with HIV in the United States

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BACKGROUND

As the population living with HIV in the US ages, state-level projections of the aging dynamics among people with diagnosed HIV (PWDH) will be needed to inform local planning and intervention efforts.

METHODS

- We used the **Johns Hopkins Epidemiologic and Economic Model (JHEEM)**, a dynamic model of HIV transmission calibrated to public HIV surveillance data.
- We forecasted changes in the age distribution of PWDH in 24 US states from 2025 to 2040.

Model Structure

RESULTS

State-level Characteristics vs. Projected Change in Median Age of People with Diagnosed HIV

- Our model projects that the median age of adult people with diagnosed HIV (PWDH) in 24 US states will rise from 51 years in 2025 to 62 years in 2040, with over half the population age 65 and older. However, there will be substantial differences in age distribution by state.
- Federal and local healthcare planning will need to adapt to changing state-level demographic patterns among PWDH.

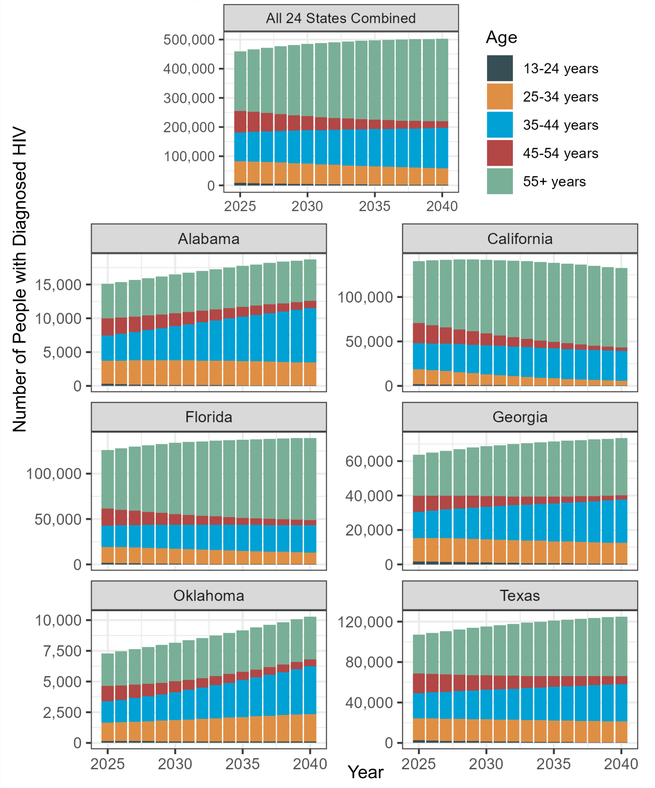
RESULTS

Change in Median Age of People with Diagnosed HIV from 2025 to 2040 in 24 US States

Boxplots show statistical median, 1st and 3rd quantiles, and 95% credible intervals of model projections of the change in median age across 1,000 simulations. States are labelled with their median ages in 2025 and 2040 and are ordered by median age in 2025.

RESULTS

Projected Age Distribution of People with Diagnosed HIV Over Time



State	Diagnosed Prevalence in 2025 (cases)	Percentage Aged 65 Years or Older			Median Age (years)		
		2025	*2040*	*change*	*2025*	*2040*	*change*
California	140,514	28% [24-32%]	64% [55-72%]	36% [29-43%]	53 [52-56]	71 [68-74]	18 [15-20]
Florida	126,261	28% [24-33%]	58% [44-71%]	30% [18-41%]	54 [53-56]	67 [60-74]	13 [7-18]
Texas	107,200	17% [14-19%]	39% [28-51%]	22% [13-33%]	46 [45-48]	49 [41-65]	3 [-4-18]
Georgia	63,841	20% [17-25%]	42% [29-56%]	22% [11-33%]	45 [44-47]	48 [40-71]	3 [-5-24]
Alabama	15,021	17% [14-20%]	29% [20-42%]	12% [6-23%]	44 [43-46]	40 [37-46]	-4 [-6-1]
Oklahoma	7,307	20% [15-24%]	30% [22-40%]	10% [4-18%]	46 [45-48]	39 [38-43]	-7 [-8, -3]
All 24 States	917,115	25% [24-26%]	50% [47-53%]	25% [23-27%]	51 [51-52]	62 [60-65]	11 [9-13]

Showing means & 95% credible intervals of model projections

36% decrease — 36% increase

18-year decrease — 18-year increase

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