

Prison Policy Modeling

A Summary of the Methodology

Analytic approach

To model the potential impact of policy changes on the New York State prison population, Vera researchers first created baseline projections—that is, estimates of how the prison population could be expected to change over time *without* any policy interventions. Researchers then estimated the number of incarcerated people who could be impacted by each policy. Lastly, Vera researchers subtracted these estimates from the baseline projections to calculate the possible impact of the policy reforms.

Projection of baseline prison populations, 2021 to 2030

Vera researchers applied a projection method introduced by the Urban Institute.¹ Researchers used two parameters to project the prison population in 2030: (1) the average total prison population between 2016 and 2020 and (2) the average yearly population changes between those years.² In calculating these averages, researchers took into account the relative importance of yearly populations and gave greater weight to more recent years. Researchers divided the yearly prison population into 28 groups based on four data metrics including age, admission type, charge class, and commitment region. Researchers projected the prison population in 2030 for each group and summed all 28 subgroup projected populations to calculate the total prison population. The researchers assumed that the change would be linear in order to estimate the population in the years between 2020 and 2030.

Modeling policy impact

Vera estimated the impact of policy reforms based on the hypothetical scenario that the given policy reform went into effect on January 1, 2021. For all policy reforms modeled using this tool, Vera estimated the number of people who would be impacted by each policy reform each year between 2021 and 2030. The model first identifies the number of people who would meet the eligibility criteria for a given policy reform scenario in each year of the baseline projection and then assumes a proportion of those who met the eligibility would be released.

Projection of post-reform prison populations, 2021 to 2030

To estimate the prison population after the implementation of policy reforms, researchers subtracted the number of people who are expected to be released each year from the baseline projection.

Data sources

Vera researchers used multiple datasets to calculate the prison population projections and policy impact estimates. For the projection of future prison populations, researchers used yearly custody population and admission data downloaded from the New York Open Data website.³ For policy reforms that would impact people who had served 10 years or more, researchers used a snapshot of the prison population from February 14, 2020 to estimate the number of people who would be expected to be released by each policy reform over time. Lastly, researchers used data from the parole hearing calendar to estimate 10-year parole release rates for people who served long sentences before becoming eligible for parole. The parole hearing calendar data are published by the Department of Corrections and Community Supervision (DOCCS) and can be downloaded from the DOCCS website.⁴

For more information contact Jaeok Kim, senior research associate, at jkim@vera.org.

¹ Elizabeth Pelletier, Bryce Peterson, and Ryan King, *The Prison Population Forecaster: Methodology and Appendixes* (Washington, DC: The Urban Institute, 2018), <https://perma.cc/3Q23-8GML>.

² Because the COVID-19 pandemic was a random shock, researchers did not include the post-pandemic incarceration trends in the projection. The yearly prison population is a snapshot in February/March each year.

³ New York Open Data, "Inmates Under Custody: Beginning 2008," <https://data.ny.gov/Public-Safety/Inmates-Under-Custody-Beginning-2008/55zc-sp6m>; New York Open Data, "Prison Admissions: Beginning 2008," <https://data.ny.gov/Public-Safety/Prison-Admissions-Beginning-2008/m2rg-xjan>.

⁴ New York State Department of Corrections and Community Supervision, "Parole Board Interview Calendar," <https://publicapps.doccs.ny.gov/ParoleBoardCalendar/default>.