

Advancing Health Equity: The Role of a Community–Academic–Public Health–Practice (CAPP) Partnership in Addressing COVID-19 Disparities in Louisiana

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We assessed the impact of an innovative Louisiana community–academic–public health–practice (CAPP) partnership in addressing COVID-19–associated Black–White vaccination disparities over 19 months. Initially (April 2021), the cumulative vaccinations for Black versus White Louisianans were 54 542 per 100 000 versus 62 435 per 100 000, respectively. By October 2022, cumulative vaccinations for Black versus White Louisianans were 142 437 per 100 000 versus 132 488 per 100 000, respectively. The vaccination equity score increased from 908 out of 1000 in April 2021 to 942 out of 1000 in October 2022. CAPP partnership efforts contributed to addressing initial Black–White COVID-19 vaccination disparities. (*Am J Public Health*. 2024;114(S1):S55–S58. <https://doi.org/10.2105/AJPH.2023.307509>)

We describe an innovative community–academic–public health–practice (CAPP) partnership (Table A, available as a supplement to the online version of this article at <http://www.ajph.org>), including the Louisiana COVID-19 Health Equity Task Force, the Louisiana Department of Health, the Louisiana Community Engagement Alliance Against COVID-19 Disparities, and the Louisiana Rapid Acceleration of Diagnostics–Underserved Populations initiative. The partnership shared goals to address Black–White racial disparities via rapid community engagement to ensure equitable access to COVID-19 vaccines, testing, and education.

INTERVENTION AND IMPLEMENTATION

With support from the Louisiana COVID-19 Health Equity Task Force, CAPP partnership leaders supported activities addressing COVID-19 challenges (Table B, available as a supplement to the online version of this article at <http://www.ajph.org>). Initial efforts focused on the three Louisiana hotspot parishes (Orleans, Jefferson, and East Baton Rouge) and later expanded to rural parishes statewide. The Louisiana Department of Health led the effort in subdividing large federal vaccine minimum shipments of COVID-19 vaccines into smaller quantities to provide

vaccines to more providers, ensure allocations were made to socially vulnerable locations, and better align the allocations with patient volumes (thus optimizing the use of vaccines).

The Louisiana Community Engagement Alliance Against COVID-19 Disparities used bidirectional community feedback from community-based surveys, focus groups, and key informant interviews to design, implement, and evaluate education and communication programs addressing misinformation and barriers to vaccination for patients, providers, community leaders, and health care organizations. The Louisiana Rapid Acceleration of Diagnostics–Underserved Populations group

conducted community-based and medical clinic-based COVID-19 testing in underserved Black communities in Baton Rouge, Louisiana. Focus groups provided qualitative data about their perceptions and attitudes related to access and barriers to COVID-19 testing.

PLACE, TIME, AND PERSONS

We collected and summarized Louisiana statewide COVID-19 surges and initiatives and analyzed data from March 1, 2020, through October 31, 2022 (31 months). Statewide and region-specific COVID-19 vaccinations, cases, and deaths were captured. Louisiana's total population is 4.6 million, with a mean age of 38.0 years, 51% females, 19.6% living in poverty, 57.1% White, and 31.4% Black.¹ We obtained data on race primarily from laboratory test reports, supplemented with data from the Office of Motor Vehicles, Louisiana Medicaid, and health care providers.

PURPOSE

Louisiana Department of Health data showed that during March 2020, the COVID-19 case rate among Black versus White Louisianans was 561 per 100 000 and 110 per 100 000, respectively; the COVID-19 death rate among Black versus White Louisianans was 59 per 100 000 and 26 per 100 000, respectively.² These statistics signaled an urgent need for a community-engaged response to prevent the spread of COVID-19 and reduce health disparities.

EVALUATION AND ADVERSE EFFECTS

The Louisiana Department of Health developed a COVID-19 surge definition

to facilitate pandemic monitoring. We defined COVID-19 surges retrospectively with the start date being when the cases per day increased to half of the number of cases at the peak of the surge; the stop date was when the cases per day decreased to half of the number of cases at the peak (Table A).

We calculated parish and race breakdowns of cases (from laboratory reports) and deaths (from death certificates and health care facility and coroner reports) during each surge. We calculated statewide rates per 100 000 Black versus White Louisianans for COVID-19 cases and deaths over 31 months. We also calculated cumulative rates for COVID-19 cases and deaths for Black versus White Louisianans.

We calculated statewide vaccination rates (from Louisiana's Immunization Registry) from January 2021 (vaccines were first available December 2020) to October 2022 using the cumulative number of vaccine doses (initial and boosters) per 100 000 Black versus White Louisianans. A COVID-19 vaccination equity score was calculated by the Department of Health and Human Services (HHS) in Tiberius, a state-specific COVID-19 vaccine software platform.³ The cumulative score measures the state's efforts to equitably vaccinate citizens living in socially vulnerable locations and aggregates the Centers for Disease Control and Prevention's social vulnerability index^{4,5} to a zip code level (Table A). The vaccination equity score ranges from 0 to 1000, with higher scores indicating higher equity in vaccine distribution and administration. Louisiana is in HHS Region 6 along with Arkansas, New Mexico, Oklahoma, Texas, and 68 tribal nations.⁶ Louisiana's HHS vaccination equity scores from April 2021,

March 2022, and October 2022 are reported; national and regional scores are available for April 2021 and March 2022 only.

From March 2020 to October 2022, Louisiana experienced six COVID-19 surges (Figure A, available as a supplement to the online version of this article at <http://www.ajph.org>). Statewide COVID-19 vaccination doses for Black versus White Louisianans from January 2021 to October 2022 are presented in Figure 1. In April 2021, the cumulative statewide vaccination rates for Black versus White Louisianans were 54 542 per 100 000 versus 62 435 per 100 000, respectively; and by October 2022, they were 142 437 per 100 000 versus 132 488 per 100 000, respectively.

Louisiana's HHS COVID-19 vaccination equity score on April 23, 2021, was 908 out of 1000. This was 249 points higher than the nationwide score (659 out of 1000) and 716 points higher than the HHS Region 6 score (192 out of 1000). On March 21, 2022, Louisiana's vaccination equity score had risen 31 points to 939 out of 1000, whereas the nationwide and HHS Region 6 scores had decreased by 116 points to 543 out of 1000 and by 181 points to 11 out of 1000, respectively. By October 20, 2022, Louisiana had a vaccination equity score of 942 out of 1000.

Statewide COVID-19 cases and deaths per 100 000 for Black versus White Louisianans over 31 months are presented in Figure 1. By October 2022, the cumulative numbers of COVID-19 cases for Black versus White Louisianans were 30 249 per 100 000 versus 23 671 per 100 000, respectively. The cumulative COVID-19-associated number of deaths for Black versus White Louisianans were 406 per 100 000 versus 401 per 100 000, respectively.

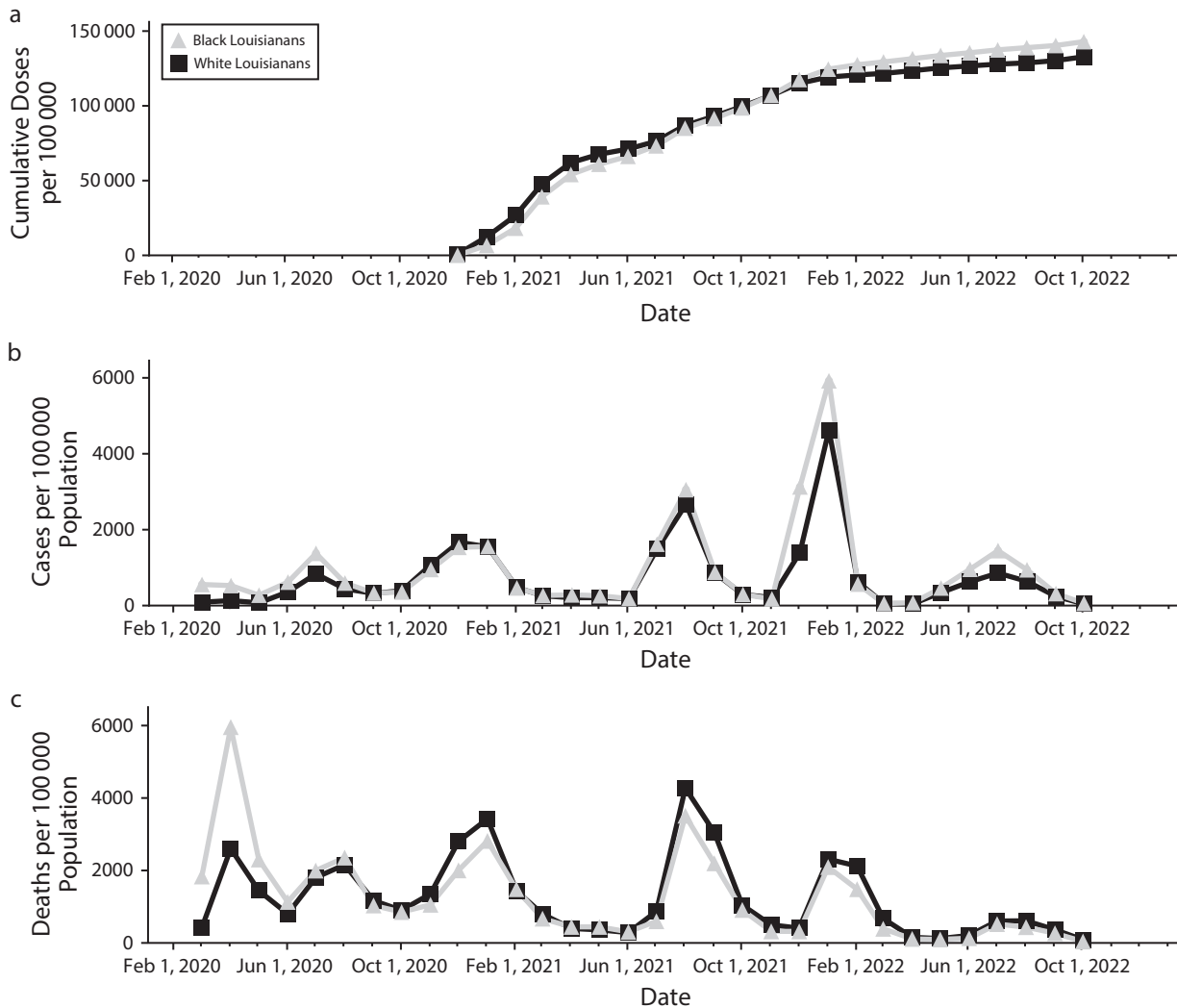


FIGURE 1— COVID-19 Vaccination Doses, Cases, and Deaths for Black vs White Individuals: Louisiana, March 2020–October 2022: (a) Total Cumulative COVID-19 Vaccination Doses in Black vs White Individuals, January 2021–October 2022; (b) COVID-19 Cases in Black vs White Individuals, March 2020–October 2022; and (c) COVID-19–Associated Deaths in Black vs White Individuals, March 2020–October 2022

Note. All values are per 100 000.

SUSTAINABILITY

The CAPP partnership focused on community outreach coupled with culturally appropriate education to address mistrust and misinformation while providing access to COVID-19 countermeasures to all of Louisiana’s citizens. The high level of engagement of leaders and members of vulnerable communities, including community partners,

advocates, faith-based leaders, and federally qualified health centers was critical in “moving the needle” for vaccination in Louisiana. These individuals informed strategies to address misinformation and increase access to testing and vaccination. Louisiana’s COVID-19 communication campaigns resulted in information delivered by trusted messengers appealing to Louisiana’s diverse populations.

Louisiana’s extensive network of traditional providers and mobile testing and vaccination events minimized access barriers. Importantly, the CAPP partnership established a solid statewide foundation to address future public health challenges.

Despite our progress, there are ongoing challenges to health resiliency in Louisiana. The overall initiated and completed vaccination rates in Louisiana

as of October 2022 were 59% and 53%, respectively, putting Louisiana among the 10 least vaccinated states. A recent report revealed higher excess mortality among the 10 least vaccinated compared with the 10 most vaccinated states (146.0 deaths per 100 000 vs 74.7 deaths per 100 000).⁷ Our data suggest that there are more COVID-19 associated deaths per 100 000 among White versus Black Louisianans in the most recent COVID-19 surges. This, coupled with lower vaccination rates among White versus Black Louisianans, signals an important need to engage more communities (across race and geographic region) to mitigate the impacts of COVID-19. Driven by the initial success, the CAPP partnership continues working with Louisiana communities to address barriers and implement solutions to improve health resilience.

PUBLIC HEALTH SIGNIFICANCE

Our findings reveal a positive effect of a unique CAPP partnership supporting Black-White and social vulnerability index equity in COVID-19 vaccinations in Louisiana. Access to regional, statewide, and national data disaggregated by race and geographic region throughout the pandemic was key to identifying hot-spots and monitoring progress. Through the collective efforts of the CAPP partnership, Louisiana achieved and maintained an equitable distribution and uptake of COVID-19 vaccines in vulnerable populations (while national and regional vaccination equity scores decreased) and mitigated the adverse impact of COVID-19 in Louisianans. *AJPH*

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CONTRIBUTORS

J. McClure and M. Krousel-Wood conceptualized and wrote the original draft of the article. J. McClure, L. Mendoza, and T. Sokol conducted analyses and prepared data visualizations. J. McClure, D. Brown, E. Peacock, L. Williams, and P. Katzmarzyk prepared the tables. E. Peacock, L. Williams, D. Sarpong, and M. Krousel-Wood acquired funding for Louisiana Community Engagement Alliance Against COVID-19 Disparities. P. Katzmarzyk acquired funding for Louisiana Rapid Acceleration of Diagnostics-Underserved Populations. All authors contributed to writing and provided critical review of the article.

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CONFLICTS OF INTEREST

The authors have no conflicts of interest to disclose.

HUMAN PARTICIPANT PROTECTION

The Tulane University institutional review board determined that this study was exempt research.

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