UNIVERSITY AT ALBANY
State University of New York

Differential Impacts of COVID-19 in New York State

Understanding and eliminating minority health disparities in a 21st-century pandemic

FOREWORD

In April 2020, as evidence mounted that the COVID-19 pandemic was having a devastatingly disproportionate impact on New York's Black and Hispanic communities, Governor Andrew M. Cuomo commissioned the University at Albany (UAlbany) to closely examine the nature and causes of this unfolding public health crisis.

The resulting interdisciplinary research program at UAlbany has showcased the best of what the State University of New York System (SUNY) can be, drawing on its existing academic and research strengths in minority health disparities, emergency preparedness, public health, social welfare, and public policy, as well as on expertise from related disciplines in the arts and sciences and education. The full complement of work generated by UAlbany's interdisciplinary research teams will be released in the coming months, including work that reflects partnerships with SUNY Upstate Medical University and SUNY Downstate Health Sciences University.

The Rockefeller Institute of Government further leverages SUNY's capacity in this area, bridging expertise in data analysis and public policy to examine the nature and causes of COVID-19's disproportionate impacts on communities of color.

We are pleased to announce the release of two research briefs prepared by UAlbany and the Rockefeller Institute, which document the earliest phase of UAlbany's research. These reports reiterate a key point that permeates this research: pre-existing disparities in education, employment, income, and poverty, while not the result of COVID-19, have been exacerbated by this pandemic and brought to the forefront, locally and nationally.

Independently constructed from data collected and analyzed about nine months apart, the two briefs tell much the same story about the starkly disparate impact of COVID-19 on communities of color, in contrast to white New Yorkers. Estimates based on both datasets suggest important and nuanced differences in the way these disparities manifest themselves for Black, Hispanic, and white residents at different stages of the disease—from exposure to hospitalization to recovery or death.

This work also substantiates decades of research on the socioeconomic impacts of disasters, which clearly show that highly vulnerable (e.g., low-income, high-poverty, residing in high-risk areas) communities disproportionately suffer the impacts of disasters and have much more difficulty in recovering from their devastating consequences; the impacts of COVID-19 on communities of color are no different.

A key finding of the UAlbany brief suggests the need for targeted intervention strategies to mitigate these disparities in different groups. The Rockefeller Institute's work, which examines how existing differences in social determinants among racial and ethnic groups appear to correlate with disproportionate health outcomes, adds critical context and texture to the early UAlbany statistical analysis. For example, the Rockefeller Institute brief helps explain why Hispanic New Yorkers' higher death rates might have more to do with living in denser housing with someone who has a high-risk job than underlying health conditions.

From a policy perspective, these two reports suggest the need to understand why social determinants of health differ among racial and ethnic groups, and how they contribute to disparities at each point in the disease continuum. For example, UAlbany is examining the effects of urban public transit networks, neighborhood ethnicity and housing patterns, segregation and poverty, heavy metals in the environment, limited language proficiency within immigrant communities, and a historically justified distrust of the medical community and government.

Anticipating effective responses to future health crises also requires a deeper understanding of the disproportionate effects of pandemic-related economic and social consequences on communities of color. To that end, we are examining factors such as food insecurity, mental health, employment, healthcare policies, and access to technology skills and equipment.

Finally, as we continue to embark on these research initiatives and disseminate their outcomes, it is imperative that we develop a deeper understanding of systemic discrimination, segregation, and institutional racism—and address their profound impact on communities of color in terms of response and recovery from COVID-19 and other crises and disasters.

As we mark the one-year anniversary of the pandemic's heartbreaking toll across our state and our nation, we are reassured that New York is leveraging its considerable academic and research resources to prevent a repeat of the public health disaster that has so adversely impacted communities of color. Further, we are extremely proud that SUNY generally, and UAlbany and the Rockefeller Institute specifically, have played a pivotal role in these efforts.

Havidán Rodríguez
President, University at Albany

UNIVERSITY AT ALBANY
State University of New York

Robert Megna
President, Rockefeller Institute of Government

Rockefeller
Institute of Government

DIFFERENTIAL IMPACTS OF COVID-19 IN NEW YORK STATE

Understanding and eliminating minority health disparities in a 21st-century pandemic

In April 2020, the University at Albany was asked by Gov. Andrew Cuomo to research why communities of color in New York have been disproportionately impacted by COVID-19. The goal of this research, carried out in partnership with the New York State Department of Health and Northwell Health, is to add to the existing well of knowledge about health disparities in New York State by identifying the environmental, socioeconomic and occupational factors that explain why COVID-19 has disproportionately harmed Black and Hispanic New Yorkers – and to propose practical intervention strategies to eliminate these disparities and save lives.

For additional information about this project please see: albany.edu/mhd or contact Theresa Pardo, special assistant to the president and project director for this initiative at tpardo@ctg.albany.edu.

DIFFERENTIAL IMPACTS OF COVID-19 IN NEW YORK STATE

*Understanding and eliminating minority
health disparities in a 21st-century pandemic*

Issue Brief 1: Quantifying the Extent of Disparities between Black, Hispanic and White New Yorkers in the Context of COVID-19

BRIEFING SUMMARY

COVID-19 fatality rates for Black and Hispanic New Yorkers are more than double those for White residents, with even greater disparities outside New York City. The rates of hospitalization, test-confirmed COVID-19 diagnosis and exposure in New York City also reveal substantial racial and ethnic disparities. In short, there is stark, though incomplete, evidence of racial and ethnic inequalities in the virus's toll in New York to date. Further, estimates based on the available data suggest important differences in the way these disparities manifest for different groups at different stages of the disease from exposure to death or recovery. This baseline should be expanded to include more data about the virus's impact on Native Americans in New York as well as information about pre-existing conditions among COVID-19 patients generally, long-term outcomes for COVID-19 survivors, and an expansion of antibody studies. These measures will help policymakers better understand inequalities in the virus's spread in order to devise public health interventions that account for each demographic group's unique experience with the disease and evaluate their impact over time.

COVID-19 has cut an unequal path across New York. Members of racial and ethnic minority groups – especially Black and Hispanic New Yorkers – have experienced the COVID-19 pandemic very differently from White New Yorkers.[a] This issue brief, the first in a series from the University at Albany, analyzes available data to provide an overview of how the virus impacted New Yorkers unequally in the four months after the first case of COVID-19 was recorded in the state.[b] While there are limitations to the data, and while the story it tells is broadly familiar because of long-standing minority health disparities in the United States, it is nonetheless critical to establish an empirical baseline to gauge equitable progress against the disease and to identify gaps in the data that may impede the development of effective, actionable intervention strategies.

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[a] While we recognize that the terms used by members of different communities to refer to themselves vary, to simplify comparisons of COVID-19-related data to existing U.S. Census data, we use the term Black in this briefing in place of the full U.S. Census category "Black or African American alone", and we use the term Hispanic to refer to the full Census category "Hispanic or Latino." For the same reason, we use the term White to refer to individuals identified in the Census as "White alone, not Hispanic or Latino."

[b] Unless otherwise noted, we use the term New York to refer to the entire state. References to New York City will be specified as such in the text.
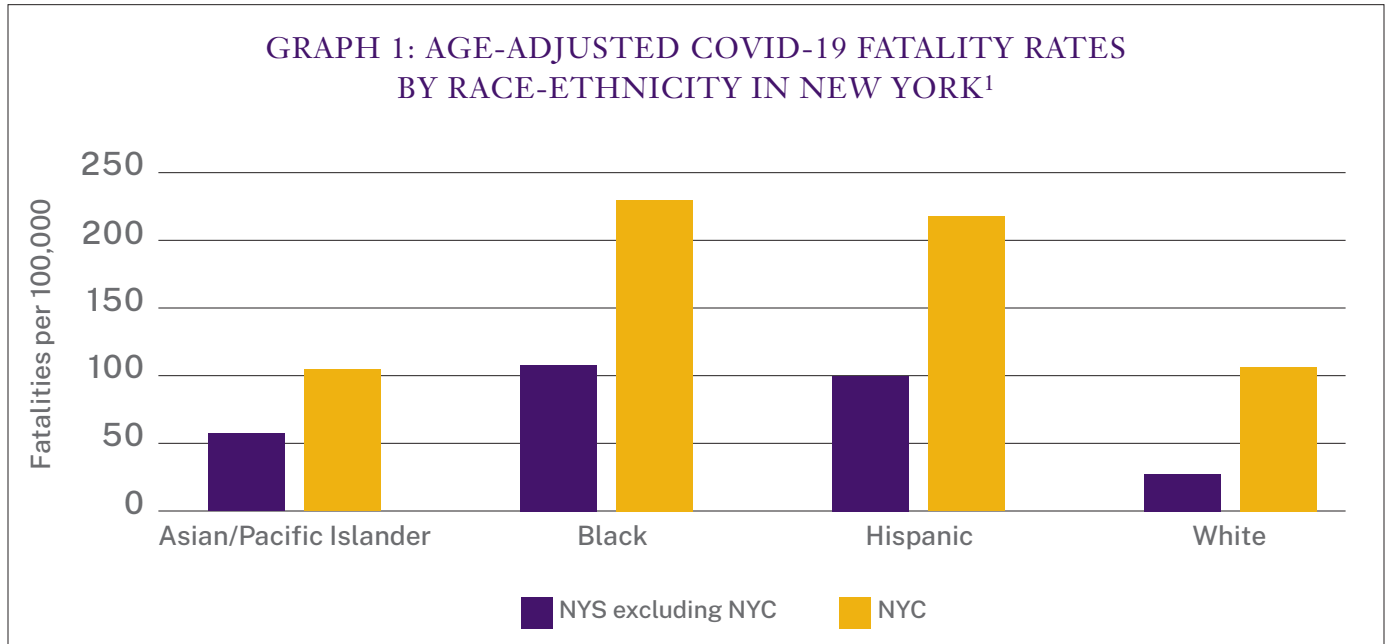
Inequality exists across all disease stages

While the first alarm to sound was the stark inequality seen in the death toll from COVID-19 during the early weeks of the pandemic in New York, available data reveals that inequalities are evident across all earlier stages of the disease. Black and Hispanic New Yorkers may have a higher risk of exposure to the SARS-CoV-2 virus, have higher rates of other chronic health conditions that amplify the impact of the virus, and are far more likely to die from it than White

Fatality rates among Black and Hispanic New Yorkers were more than double that of Whites

Black and Hispanic New Yorkers have experienced far higher fatality rates from COVID-19 than White New Yorkers (see Graph 1). In New York City (NYC), the age-adjusted fatality rates among Black and Hispanic New Yorkers were double or more the rate for White individuals (230, 218, and 109 deaths per 100,000 individuals, respectively).[1] Adjusting for

GRAPH 1: AGE-ADJUSTED COVID-19 FATALITY RATES BY RACE-ETHNICITY IN NEW YORK[1]

New Yorkers. We begin our review with fatality rates because fatality is the disease's most severe outcome and was the first indicator to reveal the disparities within the context of COVID-19. But it is important to recognize that fatality represents just one point of the disease's continuum – a continuum that begins several steps earlier with the disproportionate rates at which New Yorkers of color appear to be exposed to the virus. We also must acknowledge that many more New Yorkers will survive COVID-19 and potentially face serious and perhaps chronic future health complications as a result. At this early stage of the pandemic, little information is available about the virus's long-term impact on survivors' health. Future data collection should be designed to measure, track and analyze these long-term impacts and the potential racial and ethnic inequalities within them.

age allows for more appropriate comparisons across racial and ethnic groups given differences in age distribution by race and ethnicity. This disparity in fatality rates is even more stark in the rest of the state outside New York City, which reported a fatality rate per 100,000 individuals four times greater for Black residents (109) and more than 3.5 times greater for Hispanic residents (99) than White residents (27).[2] There is also evidence of disparities among Asian and Pacific Islander communities. While data on the disease's impact on Native American communities in New York are sparse, there are many accounts describing disproportionate fatality rates in Native American communities nationally.[3] Fatality rates, however, are just the most severe measure of the virus's unequal toll. To better understand how and why this disparate death toll is occurring, we must closely examine the available data on earlier stages of the disease continuum.

Hospitalization rates for Blacks and Hispanics in NYC were more than double that for Whites

Hospitalization rates are an important indicator of the way COVID-19 has disproportionately harmed communities of color in New York. In NYC, Black and Hispanic New Yorkers were hospitalized at more than double the age-adjusted rate of White New Yorkers (662, 605, and 298 per 100,000 individuals, respectively).[1] While data are not yet readily available for the rest of the state, the COVID-NET system run by the Centers for Disease Control and Prevention has provided the racial and ethnic breakdown of hospitalizations reported by some jurisdictions, including some areas throughout the rest of the state. Despite making up 18 percent and 14 percent of the COVID-NET catchment population respectively,[4] Black and Hispanic individuals comprise 34 percent and 18 percent of COVID-19 hospitalizations.[5]

1,533 and 1,400 diagnosed cases per 100,000, respectively, compared to 959 cases per 100,000 among White residents.[1] Improved collection and reporting of the race and ethnicity of individuals diagnosed with COVID-19 is needed, particularly throughout the rest of New York, to fully assess and address racial disparities in infection rates and health outcomes.

Exposure disparities revealed through antibody testing

Antibody testing, which reveals a history of infection, also provides an important opportunity to estimate the differing levels of virus exposure among communities because it captures even those who may never have exhibited COVID-19 symptoms. This is an important tool because it expands the dataset beyond those cases that are so severe that

TABLE 1: DISPARITIES IN THE SHARE OF ANTIBODY PREVALENCE IN NEW YORKERS 18 AND OVER BY RACE/ETHNICITY[7]

Race/Ethnicity[7]	Antibody (%)	Population (%)
Hispanic	36.6	17.4
Black	20.2	13.9
White	33.7	58.0
Asian	7.6	8.6
Multiple/Other	1.8	2.1

Diagnosed cases of COVID-19 are significantly higher among Blacks and Hispanics than Whites
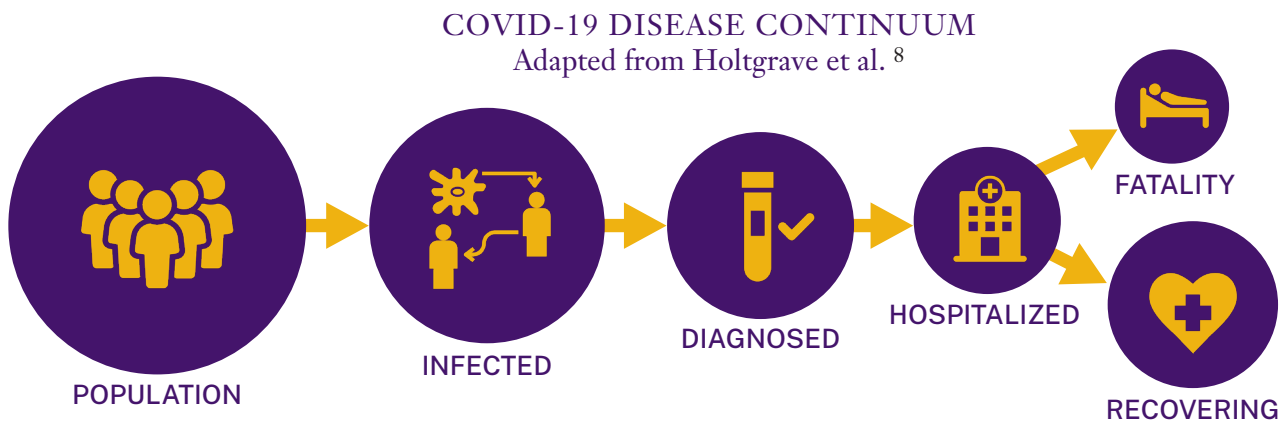
Data about COVID-19 diagnoses shed light on the breadth of exposure to the virus. Unfortunately, data on the race and ethnicity of non-hospitalized cases of COVID-19 are sparse. In NYC as of May 13, 2020, race and ethnicity data were available for 90 percent of fatalities and 77 percent of hospitalizations, but just 41 percent of non-hospitalized cases.[6] Among diagnosed cases with race and ethnicity data available, there are significant racial disparities. Black and Hispanic residents of New York City experienced

they result in hospitalization or death. A large-scale antibody testing program conducted in grocery stores throughout New York suggests racial and ethnic disparities among those with a history of SARS-CoV-2 infection (see Table 1).[7] While the population of adults in New York aged 18 and older is 13.9 percent Black and 17.4 percent Hispanic, the share of total adults with SARS-CoV-2 antibodies in these groups was significantly higher at 20.2 percent and 36.6 percent, respectively. Despite comprising 58.0 percent of New York's over-18 population, White New Yorkers accounted for just 33.7 percent of positive antibody tests.

Connecting the dots along the disease continuum

Using available COVID-19 and U.S. Census population data for New York, it is possible to estimate the magnitude of disparities at each stage of the continuum and identify whether there are distinct patterns for Black and Hispanic populations.[8] For example, these estimates reveal that Hispanic New Yorkers are more likely to be infected with COVID-19 (28.4 percent) than Black (18.7 percent) and White (8 percent) New Yorkers. These recent estimates suggest the disproportionate fatality rates among Blacks and Hispanics are a function of factors at earlier disease stages. Specifically, the disparity in fatality rates for Hispanic New Yorkers relative to Whites appears to be a function of their disproportionately higher levels of exposure and

workers make up 14 percent and 18 percent of the labor force in New York but constitute 22 percent and 20 percent of essential workers, respectively.[9] While 30 percent of White workers are able to work from home, fewer Black (20 percent) and Hispanic (16 percent) workers have this flexibility.[10] Essential workers, especially in NYC, also are likely to rely on public transportation,[11] which increases their chances of exposure to the virus. While we highlight workforce differences here, we also note that a full accounting of the potential social determinants of these inequalities must include housing type and density, recency of immigration, English language proficiency as well as the effects of systemic racism, discrimination, income inequality and unequal social capital. Many of these factors are interrelated. For example, essential workers may live in close proximity to other persons in similar job categories and in relatively dense housing. These risk factors, while

COVID-19 DISEASE CONTINUUM
Adapted from Holtgrave et al. [8]

POPULATION → INFECTED → DIAGNOSED → HOSPITALIZED → FATALITY / RECOVERING

subsequent infection. The disparity in fatality rates for Black vs. White New Yorkers, however, appears to be driven by both greater exposure and greater illness severity (as measured by hospitalization once infected) among Black New Yorkers. These estimates are not age-adjusted, but they nevertheless strongly reinforce that interventions addressing disparities in fatalities must take place at earlier stages on the disease continuum.

Pathways for unequal exposure

Racial and ethnic inequalities in COVID-19 health outcomes are likely linked, at least in part, to demographic differences in the workforce. Essential service workers are more likely to be exposed to the virus due to the nature of their work, which requires their physical presence and may prevent them from practicing physical distancing. Black and Hispanic

not directly a function of race and ethnicity, are nonetheless inseparable from them in our society.

Recommendations: *New Uses of Existing Data, More Data, a Study on Long-Term Impacts in Communities of Color and an Executive-Level Task Force on COVID-19 and Health Equity*

The data and analyses above provide clear evidence of the stark racial and ethnic inequalities in the impact of COVID-19 across New York and the need for policymakers to tailor interventions to address the unique dimensions of the disparities for each ethnic and racial group, as well as those they share. Future issue briefs will explore more fully the roles played by demographic, socioeconomic, environmental and occupational factors in the spread and impact of COVID-19 on communities of color in New York. But to ensure the state has the comprehensive and

high-quality data necessary to develop and monitor policy to mitigate and prevent these unequal impacts going forward, we offer six specific recommendations. The first two recommendations call for changes in uses of existing data, the second two call for new data to be collected, and the fifth calls for a study to determine whether the impact of COVID-19 on communities of color is changing over time. The sixth and final recommendation suggests the formation of an executive-level mechanism with responsibility for COVID-19 data collection, especially as it relates to health equity.

1. Include race and ethnicity data for each metric in the COVID-19 dashboard to monitor if progress is occurring in all communities in a way that reduces health disparities and builds health equity over time.

2. Incorporate information about pre-existing underlying health conditions into data collection and analyses of COVID-19 health disparities and develop a systematic method to track the health of COVID-19 survivors to detect and analyze disparities in chronic health problems that develop, or intensify, as a result of SARS-CoV-2 infection.

3. Collect more complete demographic information across all metrics in the COVID-19 dashboard and in particular about the impact of COVID-19 among Native Americans in New York.

4. Expand the demographic information that is collected to include not only race and ethnicity but also gender, age, nativity (country of birth), occupation, and other important and potentially interrelated factors.

5. Conduct a coordinated, systematic and repeated series of epidemiologically rigorous antibody serosurveys to determine if the impact of COVID-19 on communities of color is changing over time.

6. Appoint an executive-level task force composed of leadership from relevant entities, including representatives of disproportionately affected communities, to ensure the state has the data necessary to understand and eliminate minority health disparities in the context of COVID-19 and a framework to guide public health-related data collection for the foreseeable future.

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