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**COVID-19: A Health  
Disparity  
Preliminary Findings**

**Minority Health and Health  
Disparities Research Center**

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The coronavirus 2019 (COVID-19) first emerged in late 2019 in Wuhan, China and, at first, seemed to be a problem far away for the United States. In early January 2020, China announced that Wuhan and other cities were locked down in attempt to stop the spread of the virus. Still, the United States deemed it a China problem, although travel to and from China was prohibited. It was thought that this would reduce the risk that the COVID-19 would not become a problem in the United States. But, despite these travel restrictions, it soon became evident that the COVID-19 was spreading throughout the world, including the United States. We are now in the midst of a pandemic that is arguably the worse ever experienced in our country and other countries in the world.

Preliminary studies in China have provided important information about the risks of infection, as well as the endpoints. These studies should be used to inform health care professionals who are fighting COVID-19. A retrospective cohort study evaluated laboratory confirmed cases of COVID-19 who were admitted to a hospital (Zhou, Yu, Du, & et al., 2020). The study found that the median time from illness symptoms to death, which occurred in 28% of patients, was 18.5 days. These who were discharged were hospitalized 22 days. Of the hospitalized patients nearly half had at least one comorbidity. Nearly 50% of those hospitalized had hypertension and diabetes as a comorbidity, with coronary heart disease found in 8% of patients.

Another retrospective study examined data from laboratory-confirmed cases across China. Over 1500 hospitalized patients in 31 hospitals were evaluated using endpoints of admission to an intensive care unit, invasive ventilation, or death (Guan, Liang, & Zhao, 2020). Across the 31 hospitals, as many as 51% of these admitted presented with at least one comorbidity. The most common comorbidities were diabetes and hypertension. Data analysis

confirmed the admission information that diabetes, hypertension, and other cardiovascular diseases were notable comorbidities. Interesting, none of the patients had physician-diagnosed asthma. The percentage of patients with renal disease or malignancy was relatively low. The presence of a comorbidity was most common in severe cases. As expected, those with comorbidities were older patients.

A meta-analysis of the prevalence of comorbidities in the COVID-19 infection evaluated eight studies (Yang, J., Zheng, Y., Gou, X., et al. (2020). The meta-analysis revealed that the most common comorbidities were hypertension and diabetes. Other comorbidities were cardiovascular disease and respiratory disease. The risk of COVID-19 infection was 2.36 times greater in severe cases who also had hypertension. Similarly, the risk factors for non-severe cases were hypertension and respiratory disease.

Unfortunately, Louisiana, and specifically New Orleans, has become a hot spot for coronavirus cases and subsequent deaths. There are several theories why New Orleans is a hot spot, many suggesting the epidemic here can be traced to Mardi Gras. Other hotspots have emerged, including Detroit, Michigan, Jackson, Mississippi, and Shreveport, Louisiana. These areas have similar demographic characteristics.

A troubling preliminary finding is that the COVID-19 may be another example of a health disparity. Briefly, a health disparity can be defined as a higher burden of an illness or death experienced by one group relative to others. Data from studies from China indicate that hypertension is a significant comorbidity for COVID-19 infection, and subsequent death. Both hypertension and diabetes are examples of health disparities in the United States (CDC, 2013).

Preliminary data in from Louisiana Department of Health and Hospitals indicate that over 40% of the people who have died due to COVID-19 also had diabetes. According to the CDC

the prevalence of diagnosed plus undiagnosed diabetes in Louisiana is 13.9% of the population. According to the America's Health Rankings 17.7% of adult Black citizens in Louisiana have diabetes; compared to 12.8% of Whites. Over 35% of Louisiana citizens who earn less than \$45,000 a year have diabetes. Twenty percent of Louisianans who have completed high school have diabetes.

With respect to hypertension, Louisiana has a higher prevalence than the average in the United States. In Louisiana, 38% females and 40.4% males are hypertensive. As is seen in diabetes, more Blacks have hypertension than other races. Based on data from America's Health Rankings, over 50% of those who earn less than \$25,000 annually are hypertensive. More than half of people who have not graduated from high school have hypertension. Over 60% of people in New Orleans are Black. The median household income in New Orleans, according to the U.S. Census Bureau, is \$38,721, with the average income per person equal to \$29,275. These data illustrate the problem for Black citizens in New Orleans.

Jackson Mississippi, according to the Mississippi Department of Health, has the highest number of cases of coronavirus. Jackson's population is 81.4% Black. According to the CDC's 500 Cities Project, the prevalence of diabetes in Jackson is 15.5 % and 44.1% of adults have hypertension. The median household income is \$43,005, and the average income per person is \$23,114. As in New Orleans, COVID-19 is disproportionately occurring in the Black population.

Another emerging hotspot is Detroit Michigan. The diabetes prevalence in Detroit is 10.3% and Blacks make up 77.3% of the city population. The prevalence of hypertension is 56.7%. The average income per person in Detroit is \$17,338, and the median household income

is \$29,481. Detroit has the greatest number of cases in the entire state, and Wayne and Oakland counties account for the majority of deaths in Michigan, with the most in the Detroit city.

Shreveport, Louisiana is the metropolitan hub of Caddo and Bossier Parishes. Outside of the New Orleans metropolitan area, Shreveport has the most COVID-19 cases and deaths.

Demographically, Shreveport resembles New Orleans, with a population of 57.1% Blacks and 37.0% Whites. The median household income is \$38,279 and the average individual income is \$25,022. The prevalence of diabetes and hypertension are 14.4 % and 41.4%, respectively.

New Orleans, Jackson, Detroit, and Shreveport are currently facing health challenges that are due to health disparities. The majority of these are chronic conditions, such as hypertension, diabetes, and heart disease; the same COVID-19 comorbidities found in the preliminary data from China. New Orleans, Jackson, Detroit, and Shreveport all have relatively high prevalences of hypertension and diabetes. If the preliminary findings are validated as this pandemic continues, COVID-19 may end out of being an infectious disease which must be added to the list of health disparities that are challenges to public health and the health care system.

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## **Dillard University Minority Health and Health Disparities Research Center**

The mission of the Minority Health and Health Disparities Research Center (MHHDRC) is to take a comprehensive approach to advancing research across disciplinary areas, to enhance and promote coordination and collaboration throughout the scientific community, and to improve the overall quality of health for racial and ethnic minorities.

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