

# System hurdles for COVID-19 in older minority population: before, during and post-COVID-19 infection and all the way to vaccine protection

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## Background

- Nationwide lockdown on top of the ongoing COVID-19 pandemic had a profound impact on society.
- Already vulnerable populations, such as LatinX and African American older adults, have been deeply affected.

## Methods

- Literature and government health records addressing current health statuses among minority older adults due to the pandemic were retrieved.
- Existing healthcare disparities deepened by the pandemic were studied from health, social, and economic dimensions.
- We characterized the epidemiological situation before, during, and post COVID-19 pandemic, including known data about the vaccination campaign progress.

## Results

### Baseline risk

- Older African American adults were at the greatest baseline risk of contracting COVID-19 given their high prevalence of at least two chronic conditions (1).



Prevalence of two or more chronic conditions among Medicare-enrolled people aged ≥65 years old in the United States

Race/Ethnicity	Crude Prevalence (%)
Black Non-Hispanic	71.1
White Non-Hispanic	68.1
American Indian/Alaska Native Non-Hispanic	67.0
Asian or Pacific Islander	64.4
Hispanic	63.6

Adapted from the Leading Health Indicators of Chronic Disease and Risk Factors from the Center for Disease Control and Prevention (1)

## Results

### Risk of COVID-19 Outcomes Stratified by Age

Compared to 5-17 years old:

- Despite similar rates of contracting COVID-19 after age 30, hospitalization rates went from **15** times higher at ages 40 to 49 years old, to **55** times higher at ages 75 to 84 years old (2).
- The rate of death due to COVID-19 went from **130** times higher at ages 40 to 49, to **2800** times higher at ages 75 to 84 (2).

Risk for COVID-19 Infection, Hospitalization, and Death By Age Group									
Rate compared to 5-17 years <sup>a</sup>	0-4 years	5-17 years	18-29 years	30-39 years	40-49 years	50-64 years	65-74 years	75-84 years	85+ years
Cases <sup>b</sup>	<1x	Reference group	3x	2x	2x	2x	2x	2x	2x
Hospitalization <sup>c</sup>	2x	Reference group	7x	10x	15x	25x	35x	55x	80x
Death <sup>d</sup>	2x	Reference group	15x	45x	130x	400x	1100x	2800x	7900x

All rates are relative to the 5-17-year age category. Sample interpretation: Compared with 5-17-year-olds, the rate of death is 45 times higher in 30-39-year-olds and 7,900 times higher in 85+ year-olds. Compared with 18-29-year-olds, the rate of hospitalization is 8 times higher in 75-84-year-olds (55 divided by 7 equals 7.9).

Table from the brochure about Risk for COVID-19 Infection, Hospitalization, and Death by Age Group from the Center for Disease Control and Prevention (2)

### Risk of COVID-19 Outcomes Stratified by Race/Ethnicity

Compared to White, Non-Hispanics:

- African American, Non-Hispanic persons were **1.1** times more likely to contract COVID-19, **2.9** times more likely to be hospitalized, and **1.9** times more likely to die from COVID-19 (3).
- Hispanic or Latino persons were **1.3** times more likely to contract COVID, **3.2** times more likely to be hospitalized, and **2.3** times more likely to die from COVID-19 (3).

Risk for COVID-19 Infection, Hospitalization, and Death By Race/Ethnicity				
Rate ratios compared to White, Non-Hispanic persons	American Indian or Alaska Native, Non-Hispanic persons	Asian, Non-Hispanic persons	Black or African American, Non-Hispanic persons	Hispanic or Latino persons
Cases <sup>a</sup>	1.9x	0.7x	1.1x	1.3x
Hospitalization <sup>b</sup>	3.7x	1.1x	2.9x	3.2x
Death <sup>c</sup>	2.4x	1.0x	1.9x	2.3x

Race and ethnicity are risk markers for other underlying conditions that affect health, including socioeconomic status, access to health care, and exposure to the virus related to occupation, e.g., among frontline, essential, and critical infrastructure workers.

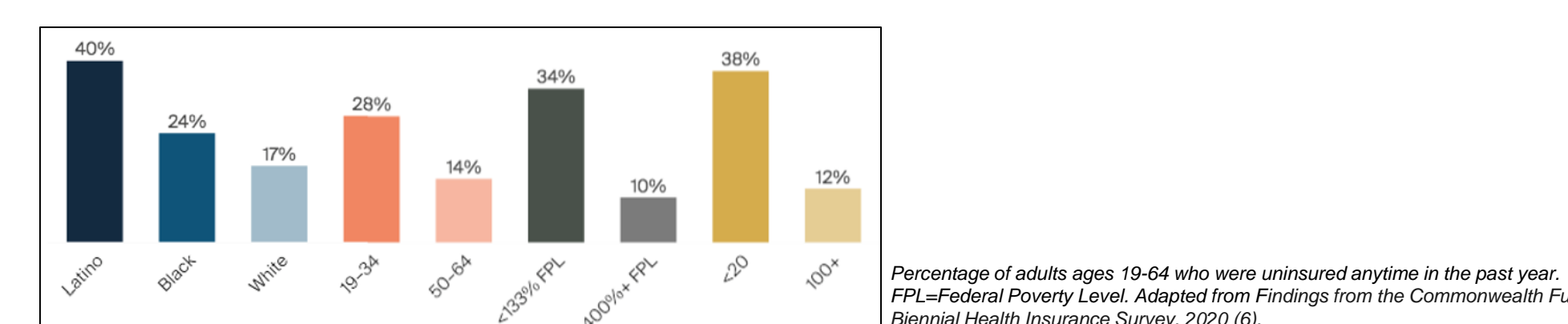
Table from the brochure about Risk for COVID-19 Infection, Hospitalization, and Death by Race/Ethnicity from the Center for Disease Control and Prevention (3)

### Labor Force Characteristics and Unemployment by Race/Ethnicity

- In 2018, unemployment rates were higher among African American and Hispanic/Latino communities compared to Whites' (4).
- In April 2020, unemployment rates reached **18.9%** and **16.7%** among Latin and African American communities, respectively, compared to **14.1%** among White communities (5).

Labor force Characteristics and Unemployment by Race/Ethnicity in the United States in 2018				
Race	% of Employment by Occupation			% of Unemployment
	Natural Resources, Construction, and Maintenance	Service	Management, professional, and related	
White	10.0	16.0	41.0	3.5
African American	6.0	24.0	31.0	6.5
Asian	3.0	17.0	54.0	3.0
Hispanic/Latino	17.0	24.0	22.0	4.7

Adapted from U.S. Bureau of Labor Statistics Report 1082 about Labor Force Characteristics by Race and Ethnicity 2018 (4)



Percentage of adults ages 19-64 who were uninsured anytime in the past year. FPL-Federal Poverty Level. Adapted from Findings from the Commonwealth Biennial Health Insurance Survey, 2020 (6)

### Health Insurance and Internet Access

- Greater lack of insurance among minorities and limited internet access among older adults present a barrier to adequate healthcare amidst the pandemic (6,7).

Characteristic	Without desktop or laptop computer with high-speed internet		Without Smartphone with data plan for wireless internet		Without any digital access	
	Proportion (95% CI)	P-value	Proportion (95% CI)	P-value	Proportion (95% CI)	P-value
Age, yrs						
<64	46.8 (45.8-47.8)	<.001	35.2 (34.2-36.1)	<.001	24.4 (23.6-25.2)	<.001
65-69	33.5 (32.5-34.3)		29.8 (28.8-30.7)		17.1 (16.4-17.8)	
70-74	36.2 (35.1-37.3)		36.1 (35.0-37.2)		21.1 (20.3-22.0)	
75-79	42.0 (40.8-43.1)		46.1 (44.9-47.3)		28.6 (27.5-29.6)	
80-84	49.9 (48.7-51.1)		56.9 (55.6-58.1)		38.4 (37.2-39.6)	
>85	59.1 (57.9-60.2)		66.5 (65.3-67.7)		50.0 (48.7-51.2)	

Adapted from Roberts, E. T., & Mehrotra, A. (2020)(7)

## Results

### Vaccine Distribution

- A reduced number of minority populations across the nation have received at least one dose of the vaccine compared to Whites (8).



People with One or More Vaccine Doses Administered in the United States by Race/Ethnicity		
Race/Ethnicity	Percentage	Count
Hispanic/Latino	8.7	2,089,536
White Non-Hispanic	64.1	15,400,903
American Indian/Alaska Native Non-Hispanic	1.7	413,427
Asian Non-Hispanic	5	1,211,394
Black Non-Hispanic	6.4	1,529,268
Native Hawaiian/Other Pacific Islander Non-Hispanic	0.3	61,901
Multiple/Other Non-Hispanic	13.8	3,301,284

Data from 44,138,118 people with one or more doses administered. Race/Ethnicity was available for 24,007,713 (54.4%) people with 1 or more doses administered.

Adapted from a report about Vaccination Progress by Race/Ethnicity nationwide from the Center for Disease Control and Prevention (8)

## Policy Brief

### Issue:

- The older minority population have been the most affected population due to COVID-19.
- To reduce the spread of COVID-19, quarantines and lockdowns were implemented resulting in isolation throughout the population.
- Isolation enabled negative health outcomes among minority older adults, whose culture thrives on human interaction, family gatherings, and community togetherness.

### Examination of Main Findings:

#### Ageism (9)

- Media has focused on the deficits associated with aging.
- Older adults experienced depressive symptoms derived from financial stressors AND
- Lack of support in the community and workplace.

#### Policy Recommendations

- Reduce stereotyping in media
- Strengthening a view towards the beauty of older age as a source of wisdom

#### Racism (10)

Minority groups faced greater risks to contract the disease and greater challenges to recover.

#### Policy Recommendations

- Target aid to the most vulnerable to COVID-19
- Adopt Medicaid Expansion
- Enhance food assistance
- Prioritize stimulus checks
- Provide emergency funds for the community

#### Access to Healthcare (6,7)

Greater barriers due to uninsured status and limited internet access.

#### Policy Recommendations

- Target Community centers.
- Engage Primary Care Providers and healthcare navigators to do home visits and tackle minority older adults' issues
- Hire bilingual and/or multilingual staff
- Aim for an equitable distribution of vaccines

**In Summary:** An equitable recovery from COVID-19 requires ageism, racial discrimination, and access to healthcare and vaccines to be addressed aiming to impact health outcomes in an inclusive manner, in which older adult minority communities can be targeted.

## Conclusions

- The situation among older minority adults is a health, social, and economic emergency that need to be target at its root, given its impact on our medical and psychosocial systems.
- The pandemic has triggered a continuous learning process that, hopefully, will empower ourselves to better meet further challenges.
- It is crucial that we do not stand idle causing immense damage by doing nothing.

### References:

- Leading Indicators for Chronic Diseases and Risk Factors. Centers for Disease Control and Prevention, 2018. <https://www.cdc.gov/chronicdisease/> Accessed 24 Jan 2021
- Risk for COVID-19 Infection, Hospitalization, and Death by Age Group. Centers for Disease Control and Prevention, 2021. <https://www.cdc.gov/covid19/2019-ncov/downloads/covid-19-hospitalization-death-by-age.pdf> Accessed 24 Jan 2021
- Risk for COVID-19 Infection, Hospitalization, and Death by Race/Ethnicity. Centers for Disease Control and Prevention, 2021. <https://www.cdc.gov/covid19/2019-ncov/downloads/covid-19-hospitalization-death-by-race-ethnicity.pdf> Accessed 24 Jan 2021
- Labor Force Characteristics by Race and Ethnicity. U.S. Bureau of Labor Statistics, 2019. <https://www.bls.gov/publications/race-and-ethnicity/2019.pdf#page=1> Accessed 24 Jan 2021
- Unemployment Rate, seasonally adjusted. U.S. Bureau of Labor Statistics, 2021. <https://www.bls.gov/charts/unemployment-situation/civilian-unemployment-rate.html> Accessed 24 Jan 2021
- Sara R. Collins, Maria Z. Gupta, and Gabriela N. Abouali. U.S. Health Insurance Coverage in 2020: A Learning Crisis in Affordability - Findings from the Commonwealth Fund Biennial Health Insurance Survey, 2020 (Commonwealth Fund, Aug. 2020).
- Roberts, E. T., & Mehrotra, A. (2020). Assessment of Disparities in Digital Access Among Medicare Beneficiaries and Implications for Telemedicine. *JAMA Internal Medicine*, 180(10), 1386-1389. <https://doi.org/10.1001/iammed.2020.2566>
- Demographic Characteristics of People Receiving COVID-19 Vaccinations in the United States. Centers for Disease Control and Prevention, 2021. <https://www.cdc.gov/covid19-vaccines/data-research/characteristics-of-people-receiving-covid-19-vaccinations-in-the-united-states/>
- Bugaria, D.B. and Helman, J.A. (2007). Ageism: A Review of Research and Policy Implications. *Social Issues and Policy Review*, 1: 17-26.
- 3 Principles for an Antiracist, Equitable State Response to COVID-19 - And a Stronger Recovery. (n.d.). Center on Budget and Policy Priorities. Retrieved February 24, 2021, from <https://www.cbpp.org/research/state-budget-and-tax/3-principles-for-an-antiracist-equitable-state-response-to-covid-19>