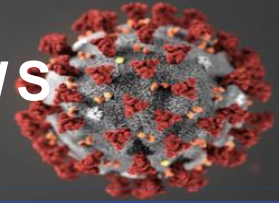


WEEK IN REVIEW

COVID-19 SCIENTIFIC NEWS

JUNE 1 – 5, 2020



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We dedicate this week's newsletter to the memory of Mr. George Floyd. In honor of him, we are focusing on articles that concern the effect that Covid 19 has on the Black population, and the attendant disparities.

The MS Literature Review Task Force is a group of UNC medical and pharmacy students who conduct daily literature searches for scientific updates on COVID-19. Contact Mary Chandler Gwin, mary_gwin@med.unc.edu for any comments, questions, etc.

LATEST ARTICLES:

PUBLIC HEALTH/EPIDEMOLOGY

[Assessing Differential Impacts of COVID-19 on Black Communities.](#) Millett, G. A., et al., *Annals of Epidemiology*. 14 May 2020.

- Nearly 97% percent of disproportionately black counties (656/677) reported a case and 49% (330/677) reported a death versus 81% (1987/2,465) and 28% (684/ 2465), respectively, for all other counties. Counties with higher proportions of black people have higher prevalence of comorbidities and greater air pollution. Counties with higher proportions of black residents had more COVID-19 diagnoses (RR 1.24, 95% CI 1.17-1.33) and deaths (RR 1.18, 95% CI 1.00-1.40), after adjusting for county-level characteristics such as age, poverty, comorbidities, and epidemic duration. COVID-19 deaths were higher in disproportionately black rural and small metro counties.

[Awareness, Attitudes, and Actions Related to COVID-19 Among Adults with Chronic Conditions at the Onset of the U.S. Outbreak. A Cross-sectional Survey.](#) Wolf M, et al., *Annals of Internal Medicine*, 9 Apr. 2020.

- This cross-sectional survey includes participants of more than 600 socioeconomically diverse adults who have at least one chronic health conditions from the Greater Chicago area. The results show that at the time of the study (Mar. 13-20), nearly one third of the participants could not identify symptoms of COVID or ways to prevent infection. Participants who are black, are from lower socioeconomical classes, or have low health literacy were more likely to underestimate the risk of COVID and less prepared for the outbreak.

[COVID-19 is Out of Proportion in African Americans. This will come as no surprise...](#) Fouad M, et al., *The American Journal of Medicine*, 20 May 2020.

- This article identifies racial disparities within the COVID-19 pandemic in three states: Michigan, Louisiana and Alabama. Each state has a disproportionate amount of COVID-19 cases compared to the percentage of the population that African Americans actually comprise. Several methods to address African American communities that have been hit the hardest by COVID-19 are outlined.

[Hospitalization and Mortality among Black Patients and White Patients with Covid-19](#). Price-Haywood, E. G., et al., *NEJM*. 27 May 2020.

- This retrospective cohort study analyzed data from patients seen within the Ochsner Health system in Louisiana between March 1 and April 11 who tested positive for SARS-CoV-2. The Ochsner Health population is 31% black non-Hispanic and 65% white non-Hispanic. Of the 3481 patients included in this study, 70.4% were black non-Hispanic and 29.6% were white non-Hispanic. 76.9% of the patients who were hospitalized with Covid-19 were black and 70.6% of those who died were black. Black race was not independently associated with higher mortality, after adjustment for differences in sociodemographic and clinical characteristics on admission.

[Hospitalization Rates and Characteristics of Patients Hospitalized with Laboratory-Confirmed Coronavirus Disease 2019](#). Garg., S., et al. *CDC*. 8 April 2020.

- Statistics from 14 states between March 1 and March 30, 2020 regarding patients hospitalized with Covid 19 showed that among patients with race/ethnicity data (580), 261 (45.0%) were non-Hispanic white (white), 192 (33.1%) were non-Hispanic black (black), 47 (8.1%) were Hispanic, 32 (5.5%) were Asian, two (0.3%) were American Indian/Alaskan Native, and 46 (7.9%) were of other or unknown race. Nearly 90% of persons hospitalized have one or more underlying medical conditions.

[Understanding COVID-19 Risks and Vulnerabilities among Black Communities in America: The Lethal Force of Syndemics](#) Poteat T, et al., *Annals of Epidemiology*. 14 May, 2020.

- This article applies syndemic theory as an explanation for racial differences in outcomes during the current COVID-19 pandemic. Syndemic theory applies historical and current social context to help explain biomedical observations of health disparities. The authors call for greater scientific action to address structural racism

[Variation in COVID-19 Hospitalizations and Deaths Across New York City Boroughs](#). Wadhera, R. K., et al., *JAMA*. 29 April 2020.

- The Bronx had the highest number of hospitalizations per 100,000 with 634. The number of deaths per 100,000 population was highest in the Bronx with 224 and lowest in Manhattan with 122. The borough with the lowest number of hospitalizations and deaths was Manhattan which is the wealthiest and mostly white, even though Manhattan had the highest population density. These findings suggest that comorbid illnesses, occupational exposures, socioeconomic determinants, and race-based structural inequities are contributing to these different outcomes.

[What's Behind the COVID-19 Racial Disparity?](#) Wood G. *The Atlantic*, 27 May 2020.

- This article emphasizes that data collection surrounding health disparities during the COVID-19 pandemic must be precise. By only reporting that there are racial health disparities, the false belief that there is a biological or behavioral difference among the African American populations is perpetuated. There is more work to be done to find solutions for these health disparities and elucidate their cause at a deeper level.

[Stop Blaming Black People for Dying of the Coronavirus: New data from 29 states confirm the extent of the racial disparities](#). Kendi, I. *The Atlantic*. 14 April 2020.

- Disproportionate infection and mortality rates from COVID-19 in the Black community is evidence of systemic racism in the US, and is NOT evidence that Black populations are taking COVID-19 less seriously, or are to blame for these differences in infection/mortality rates. Evidence of these disparities must be used to fight and address systemic racism in the US rather than be weaponized to blame POC.

CLINICAL INFORMATION

[Description of COVID-19 in HIV-infected individuals: a single-centre, prospective cohort](#). Vizcarra, P. et al., *The Lancet*. 28 May 2020.

- For 51 HIV-infected individuals in Spain diagnosed with COVID-19, the mean age was 53.3 years, 16% were women, 84% were men and 55% required hospital admission. 63% had a least one comorbidity vs 38% without COVID-19. 73% had received tenofovir before COVID-19 diagnosis vs 38% without. The rate of infection in HIV-infected individuals was 1.2-1.8% was like the general population's: 0.96%.

[Premorbid IL-6 levels may predict mortality from COVID-19](#). Silberstein, M. *Research Square*, Preprint. 28 May 2020.

- There was a highly significant correlation ($r = 0.9883$; $p = 0.00025$) between age-stratified mortality rates and IL-6 levels from similar healthy individuals. Levels of IL-6 were proportionately higher in males, the elderly, individuals of black ethnicity and obese individuals, with similar findings in relation to COVID-19 mortality in these groups.

THERAPEUTIC DEVELOPMENTS

[Anakinra for severe forms of COVID-19: a cohort study](#) Huet T, et al., *The Lancet*. 29 May, 2020.

- A single center study of a prospective cohort of 52 patients given a 10 day course of anakinra were compared to an historical group of 44 patients given "standard treatment". Both cohorts had the same inclusion criteria of age > 18, hypoxia, and radiographic evidence of COVID-19 infection. The main outcome was a composite of ICU admission or death. **Results:** 13 (25%) patients in anakinra group were admitted to ICU vs. 32 (73%) in historical group. HR 0.22 [95% CI 0.11–0.41; $p < 0.0001$]. Multivariate analysis of anakinra treatment showed a HR 0.22 [95% CI 0.10–0.49]; $p = 0.0002$.

[Remdesivir for 5 or 10 Days in Patients with Severe Covid-19](#). Goldman, J. D., et al. *NEJM*. 27 May 2020.

- A multicenter, randomized, open-label, phase 3 trial explored the efficacy between a 5-day and 10-day course of remdesivir. In total, 200 patients were included in the 5-day group and 197 patients in the 10-day group. The median duration of treatment was 5 days (interquartile range, 5 to 5) in the 5-day group and 9 days (interquartile range, 5 to 10) in the 10-day group. After adjustment for baseline clinical status, patients in the 10-day group had a distribution in clinical status at day 14 that was similar to that among patients in the 5-day group ($P = 0.14$). They concluded that for people with severe COVID-19 who don't require mechanical ventilation, there is no significant difference in efficacy between a 5-day course and a 10-day course of IC remdesivir treatment.

BASIC SCIENCE

[Predicting infectious SARS-CoV-2 from diagnostic samples](#). Bullard T, et al., *Clin. Infect. Dis.* 22 May 2020.

- A cohort of 90 COVID-19 patients with positive RT-PCR diagnostic tests were used to culture SARS-CoV-2 virus to assess infectivity of patients. Time from symptom onset to test and cycle threshold were both predictive of whether a sample would yield virus. Samples from patients who were tested 8 days or later after symptom onset did not culture viruses. Similarly, samples with cycle thresholds greater than 24 also did not grow viruses. These data suggest persistent positive RT-PCR tests in patients do not necessarily indicate infectivity, and other markers (such as time from symptom onset to test and Ct) may be used to infer patient infectivity and inform isolation and return to work protocols.

GUIDELINES AND FIGURES:

FROM CDC

May 30 – [Recommendations for Higher Institutions of Learning](#)

- Recommendations for low, moderate and high-risk scenarios
- How to decrease the spread among institutions of higher learning (virtual classes, cloth covers, hand hygiene, posting signs)

June 1 - [Use PPE for patients with confirmed or suspected Covid-19](#)

- Reminders of how to don/doff proper PPE

June 3 - [14 guidelines updated](#)

- [Agriculture workers and employees](#)
 - Perform work-site assessments
 - Provide basic information and training about infection prevention
- [Keeping workplaces, homes, or commercial establishments safe](#)
 - Hand hygiene, be careful with meetings, handle food carefully, stay home if sick or family member is sick
- CDC's role in helping cruise ship travelers during the COVID-19 pandemic
- Appendices
- Contact tracing
- Cruise ship new member disembarkations
- Staffing resources
- Interim COVID-19 contact tracing communications toolkit for health departments
- [K-12 schools and childcare programs](#)
 - How to prepare to reopen schools
- Testing in the US
 - 11% positive test results (2,265,135 positive tests/19,811,243 total tests)
- [Data visualization](#)
- Special considerations for patients on home dialysis
- COVID-19 travel recommendations by country
- [Pets and other animals](#)
 - Limited data on pets transmitting infection to humans

June 4 - [7 guidelines updated](#)

- [Contact Tracing](#)
 - Health Dept Checklist to develop contact tracing plan
 - Daily Temperature log for close contacts
 - Self-isolation and Self-Quarantine home assessment check list
- Cruise Ship Crew Member Disembarkations
- COVID-19 Forecasts for the United States
- Previous COVID-19 Forecasts
- [Other At-Risk Populations](#)
 - Recommendations for populations that need extra precautions:
 - Racial and Ethnic Minority Groups
 - People with Disabilities
 - People with Developmental and Behavioral Disorders
 - Pregnant People

- People experiencing Homelessness
- [COVID-19 in Racial and Ethnic Minority Groups](#)
 - Potential factors contributing to the disproportionate Covid burden on black communities and other minority communities
 - Ways public health officials and community organizations can reduce the spread/burden
- COVID-19 Travel Restrictions by Country

June 5 – Updated Guidelines

- [Public Health Guidance for Community Related Exposure](#)
 - Added exposure to people with confirmed Covid-19 who have not had any of the symptoms

FROM WHO

June 1 – [Situation Report 133](#)

- WHO published case report form for suspected cases of MIS in children and adolescents
- During last 2 weeks, WHO delivered 55 tons of health supplies to northeast Syria
- “Clean hands save lives” and “Applaud healthcare workers” celebrated in North Macedonia
- WHO supporting effort to accelerate research and development of Covid-19
 - Over 120 candidate vaccines have been mapped and site in 40 countries have expressed interest to join Vaccine Solidarity Trial

June 2 – [Situation Report 134](#)

- WHO Director-General Dr. Tedros urged the COVID-19 response to not forget about the treatment of non-communicable diseases
- New guidelines published regarding ways to [maintain essential health services](#)
- Highlights of the logistics involved in transporting Covid-19 medical supplies

June 3 – [Situation Report 135](#)

- Guidelines [on basic psychosocial skills](#) to assist those involved in Covid-19 response
- Dr. Mike Ryan spoke at the Yemen High-Level Pledging Conference about how Covid-19 has placed an incredible burden on an already collapsing health system in Yemen and requires additional support and assistance
- Countries have a record number of antimicrobial resistance being reported and WHO is concerned the number will increase with inappropriate use of antibiotics during the pandemic

June 4 – [Situation Report 136](#)

- WHO is supporting the response to a new Ebola outbreak in northwest Democratic Republic of the Congo
- The WHO representative in Mauritius met the President of Mauritius to discuss COVID-19
- Maintaining social distancing measures, improving surveillance, and strengthening health systems are key to controlling the COVID-19 pandemic in the Americas
 - WHO Regional Director for the Americas stated: “a region of massive inequalities,” are facing simultaneous health, economic and social emergencies from the pandemic

FROM JOHNS HOPKINS

CASES/DEATHS: WORLD/US/NC/ORANGE COUNTY AS OF 11:30AM

- World: 6,675,011/391,848
- US: 1,875,402/108,278

- NC: 32,075/1,006
- Orange County, NC: 370/40