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GW Covid-19 Intelligence Reports: June 29, 2020

George Washington University

GW COVID-19 Intelligence Report June 29, 2020

Epidemiology:

- Multiple states set single day records as case counts and positivity rates increase:
  - Florida breaks single day record for third day in a row
  - In Arizona, health officials also reported a record, with 2,577 current hospitalizations.
  - Texas set a record for coronavirus-related hospitalizations for the 16th day in a row on Saturday, with 5,523 patients being treated. Following a record single-day increase of COVID-19 cases in the state, TX Gov. Greg Abbott has paused further phases of the state's reopening plan and halted elective surgeries in four counties.

Updates for the District of Columbia:

- As of June 28th, the District's overall positive case total was 10,248 with 550 deaths.
  - DC's positivity rate has risen from low of 2% on 6/12 to 4.4% on 6/20. However, this may be a reflection of the drop in number of residents tested: 3498 on 6/12 down to only 745 on 6/20.
  - Hospital occupancy is 78 % in DC; the proportion of occupancy due to COVID-19 continues to decrease (126 of 1,944 total) and ventilator utilization remains below 50%.
- Sharp increases in cases in the Latino community: 42.6% of Latinos in the Baltimore-DC metro area who were tested for SARS-CoV-2 were positive- a much higher proportion than for any other racial/ethnic group possibly reflecting higher exposure rates and/or barriers to testing.

Treatment:

- Tocilizumab
  - A retrospective case-control study of patients with severe COVID-19 found a non-statistically significant lower mortality in the treatment group (52% versus 62.1% P = 0.09). When excluding intubated patients, there was statistically significant lower mortality in patients treated with tocilizumab (6% vs. 27% P = 0.024).
  - A 21-day observational study published in CHEST found that in tocilizumab-treated patients, oxygenation and inflammatory biomarkers (hsCRP and IL-6) improved. However, sIL-2R and D-Dimer levels increased. Survival of severe patients treated with tocilizumab was similar to non-severe patients: (83% vs 91%; p=0.11).
  - A retrospective, observational cohort study found that in patients with severe COVID-19 pneumonia, treatment with tocilizumab, whether administered intravenously or subcutaneously, might reduce the risk of invasive mechanical ventilation or death
    - Tocilizumab treatment was associated with a reduced risk of invasive mechanical ventilation or death (adjusted hazard ratio 0·61, 95% CI 0·40–0·92; p=0·020).
    - Follow-up for outcomes was brief - between 4-18 days.
- Colchicine: Results from the GRECCO-19 randomized clinical trial found that participants who received colchicine had statistically significantly improved time to clinical deterioration. There were no significant differences in high-sensitivity cardiac troponin or C-reactive protein levels.

Emerging Evidence:

- As mentioned last week, preliminary results from the RECOVERY trial show mortality reduction in patients on oxygen or invasive mechanical ventilation who received dexamethasone 6 mg given once daily for up to ten days vs. usual case. Overall, 454 (21.6%) patients allocated dexamethasone and 1065 (24.6%) patients allocated usual care died within 28 days (age-adjusted rate ratio [RR] 0.83; 95% confidence interval [CI] 0.74 to 0.92; P<0.001). There was no benefit to people without an oxygen requirement and may be a trend towards harm in that group.

    - MGH FLARE summary of evidence on steroids, ARDS, and COVID-19 suggest clinicians should "strongly consider the use of dexamethasone in their COVID-19 patients with an oxygen requirement or hypoxemic respiratory failure."
- A study looking at the association between renin–angiotensin system inhibitors and COVID-19 complications found the risk of admission to ICU or death prior to ICU admission was 1.73 times higher (odds ratio 1.73, 95% confidence interval 1.02–2.93) in patients treated at baseline with a RASI than in patients not treated with this drug class. This association was confirmed when the analysis was restricted to patients treated with antihypertensive agents. Further study on this potential link needs to be done. This is counter to the finding of the earlier study in NEJM that found no increased risk of death in patients on ACEs/ARBs - a study that was retracted.
- Mounting clues suggest the coronavirus might trigger diabetes: There have been reports of patients who spontaneously developed diabetes after being infected with SARS-CoV-2. A recent experimental study in miniature lab-grown pancreases published last week suggests that the virus might trigger diabetes by damaging the cells that control blood sugar. An online registry has been developed to evaluate COVID-19 related diabetes further.

Government/Policy Updates:

- CDC updates, expands list of people at risk of severe COVID-19 illness:
    - Removes age threshold (over 65) from the older adult classification, now stating that risk increases steadily as you age.
    - Conditions the increase risk for severe COVID-19 disease: Chronic kidney disease; COPD; Obesity (BMI of 30 or higher); Immunocompromised state from solid organ transplant; Serious heart conditions, such as heart failure, coronary artery disease, or cardiomyopathies; Sickle cell disease; Type 2 diabetes
- New Bill introduced this week - the Equal Access to Care Act- would allow licensed providers to use telehealth in any state to treat patients in any location for up to 180 days after the end of the national emergency.

Public health interventions:

- A JAMA article studying health disparities found that African American participants, men, and people younger than 55 years were less likely to know how the disease is spread, were less likely to know the symptoms of coronavirus disease 2019, washed their hands less frequently, and left the home more often.
- A JAMA Cardiology study found out-of-hospital cardiac arrests and deaths during the COVID-19 pandemic significantly increased compared with the same period the previous year and were associated with older age, nonwhite race/ethnicity, hypertension, diabetes, physical limitations, and nonshockable presenting rhythms
- A telemedicine system reduced the risks of delayed hospitalization for COVID-19 patients quarantined at home due to disease progression. Through the comparison of monitored symptoms between hospitalized and non-hospitalized patients, this study found the prolonged persistence and deterioration of fever, dyspnea, lack of strength, and muscle soreness to be diagnostic for identifying patients for hospitalization.

This report was produced by Sara Feeley, PA and Elaine Sullo (Himmelfarb Librarian) and the GW Covid-19 Intelligence Unit. If you have a question that the Intelligence Unit can assist you with, or if you would like to provide suggestions or feedback, please email Dr. Lawrence "Bopper" Deyton, lead for the Intelligence at LDeyton@gwu.edu.

NOTE: Starting June 29, Intelligence Reports will be issued monthly with Special Intelligence Reports issued on topics of immediate interest on an as needed basis. Interim updates will be forwarded using Dr. Akselrod's Department of Medicine weekly Infectious Disease Update.

Searchable GW Covid-19 resources can be found through the following links:
GW Covid-19 Research Guide: https://guides.himmelfarb.gwu.edu/covid-19
GW Covid-19 Intelligence Reports: https://guides.himmelfarb.gwu.edu/SituationReport