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**GW COVID-19 Intelligence Reports** 

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GW Covid-19 Intelligence Reports: June 8, 2020

George Washington University

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#### The local picture continues to improve:

In the District, which entered Phase I of recovery on 30MAY, there has been one week of <u>sustained</u> decrease in community <u>spread</u> of COVID-19 so far in this phase, and generally positive progress towards meeting other Phase II reopening requirements. <u>Hospital bed occupancy is at ~75% and ventilator utilization is <50%</u> of normal standard of care capacity for both.

### Many of the "big picture" questions remain around COVID-19 transmission dynamics:

- Although we have previously reported that <u>the SARS-CoV-2 virus can aerosolize and deposit itself in</u>
   <u>the patient care environment</u>, there is little evidence that it remains *infective* over distance and time,
   supporting the theory that <u>large droplets are the primary mode of transmission</u>.
- A Canadian meta-analysis recently demonstrated that for SARS-CoV-2, the <u>basic reproduction number</u> (R<sub>0</sub>) is 3.15, average incubation time was 5 days, the asymptomatic infection rate is 46%, and the case fatality rate is just over 3%. Here is an explainer about the importance and relevance of R<sub>0</sub>.
- What are the best utilization strategies for social distancing? Recent data from Sweden, where distancing was done with a "light touch," demonstrated a <u>per-capita death rate which was the highest in the world</u> at the beginning of June. The Lancet published a 172-study meta-analysis supporting a <u>one meter (good) or two meter (better) separation as being effective in reducing infection</u>. This study also demonstrated that face masks and possibly eye protection conferred additional benefit.
- The Lancet also <u>retracted its recent publication that demonstrated a higher risk of death for COVID</u> patients receiving hydroxychloroquine.
- On 05JUNE the WHO issued <u>extensive updated technical guidance on the use of face masks</u> in both the healthcare (Table 1 in the report) and general settings (Table 2 in the report). Important to note that this report does not compare the relative effectiveness of the different types of N95 vs. droplet masks, nor does it consider the use of patient masking.

#### Patient care research and best practices continue to be released at a fast clip:

Saliva was a topic in several reports this week. A Korean report highlighted a <u>"surprisingly high" viral load in saliva</u> in the subclinical period in a small case series, and in the same vein a study from Hong Kong demonstrated <u>non-inferiority in using saliva for COVID-19 testing</u>. However, a Chinese study in children demonstrated that <u>buccal swabs</u> (not saliva) were inferior to nasopharyngeal sampling.

- JAMA reported a <u>2000% increase in the number of prescription fills for</u>
   <u>hydroxychloroquine/chloroquine</u>, which could cause supply issues jeopardizing patient care for those with chronic conditions such as Systemic Lupus Erythematosus and Rheumatoid Arthritis.
- There is no convincing evidence that ICU patients with COVID-19 are more prone to developing right ventricular dysfunction, a common problem in patients with sepsis or ARDS.
- A report from California highlights the potential risk of increased domestic violence during COVID-19.
- In a case series of 1754 women, an <u>uptick in distress and psychiatric symptoms has been observed in pregnant women during the pandemic</u>.
- New York Presbyterian is using a proactive system of <u>"conscious proning" of non-intubated COVID-19</u> <u>patients</u> with respiratory illness, although the article does not discuss patient outcomes.
- Children's Hospital of Philadelphia published a <u>patient care protocol</u> for patients with possible Multisystem Inflammatory Syndrome in Children (MIS-C)
- A large observational study in Spain found that heparin was associated with lower mortality.
- An international multicenter study of 1128 patients found that <u>post-op pulmonary complications</u> occurred in half of patients with perioperative SARS-Cov-2 infection and are associated with high mortality.
- A small case series of 35 patients demonstrated <u>no detectable SARS-CoV-2 in the semen of recovering</u> patients at one month.
- Two small groups of patients and healthcare workers in a retrospective cohort study in China demonstrated a potential preventative effect for individuals receiving the antiviral therapy umifenovir.

#### Some highlights of articles that are focused on systems of care and COVID-19:

- In-hospital <u>cardiac arrest in COVID-19 is more likely to be from respiratory failure than cardiac etiology</u>, highlighting the need for early, aggressive respiratory support. The article also discusses the new American Heart Association strategies for responding to cardiac arrest in suspected cases of COVID-19.
- At least in some areas, the pandemic has negatively influenced two key metrics in the emergency care
  of patients presenting with life threatening illness, specifically an increase in <u>door-to-balloon time in</u>
  <u>STEMI</u> in a Spanish study, and a <u>longer time to reperfusion in suspected stroke patients</u> in Beijing.
- Do non-pharmaceuticals really have a hard expiration date? This study confirmed that for elastomeric respirators, expired P100 cartridges were non-inferior to an N95 respirator at removing virus-sized particles. It is noteworthy that this type of equipment was distributed via the Strategic National Stockpile during the 2009 H1N1 pandemic and although it would now be expired, it still may be usable for the COVID-19 response.
- If we ask will they tell? A COVID-19 contact tracing pilot program in the UK found that <u>two-thirds of</u> <u>people contacted did not "fully cooperate,"</u> calling into question the efficacy of test-and-trace approaches to mitigating the spread of the disease.
- Extensive contact tracing in Washington State's index COVID-19 case found <u>none</u> of the 78% of <u>identified contacts who agreed to testing were SARS-CoV-2 positive</u>. The article discusses why this may have happened.

• The CDC reports that surveillance data indicate <u>ED visits declined 42% in the early phases of the pandemic, with the steepest decrease in pediatric patients</u>.

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 Unit, at <a href="mailto:ldeyton@gwu.edu">ldeyton@gwu.edu</a>.

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