AAMC Novel Coronavirus Update
April 3, 2020

To help filter through the large volume of news about the novel coronavirus, Ross McKinney Jr., MD, AAMC chief scientific officer, with assistance from his team in the Scientific Affairs unit at the AAMC, has initiated a new, science-focused newsletter. This limited-run newsletter will be issued every Monday, Wednesday, and Friday during these weeks of the initial phase of the coronavirus crisis.

Only the first few issues will be disseminated broadly — if you would like to opt-in to receive future updates, add your name, email, and institution to this survey.

Contact AAMC Senior Science Policy Specialist Amanda Field, PhD, with any other questions or requests.

To access the latest AAMC updates and resources on COVID-19, visit aamc.org/coronavirus.

Please share/forward this newsletter freely.

Today's Numbers

- World: 1,041,126 total cases (55,132 deaths)
- United States: 245,958 (6,069)
- U.S. Hotspots:
  - New York: 92,743 (2,473)
  - New Jersey: 25,950 (537)
  - California: 11,126 (246)
  - Michigan: 10,791 (417)
  - Louisiana: 9,159 (310)

For the most up-to-date data, refer to the Johns Hopkins COVID-19 Map.

The Institute for Health Metrics and Evaluation at the University of Washington Medicine is projecting hospital resource use in the United States based on COVID-19 deaths. It predicts a peak resource use date of April 15 in the country, though its projections show that this timing can vary greatly by state.

Lead News

The White House is expected to recommend that everyone wear cloth masks in public settings, based on guidance from the Centers for Disease Control and Prevention (CDC). These face coverings could be homemade masks or bandanas and are intended to prevent the spread of droplets to others and to surfaces rather than to protect the wearer.
[Editor’s comment: It may cause confusion since masks were at first discounted and are now recommended. In retrospect, the shortages of PPE led to compromise recommendations that weren’t necessary, because people can make their own masks and because surgical masks aren’t that protective. However, surgical masks and homemade masks do limit spread by an infected person, and since most people infected with SARS-CoV-2 (the coronavirus) have several days of being contagious before they have any symptoms, there is an important role for masks short of an N95 respirator. Masks also remind a person not to touch their face, and in a community, they demonstrate that we’re all in this together. So, it’s time to bring out the bandanas and home-sewn masks.]

Because of the limited supplies of personal protective equipment (PPE), it is important that medical equipment, such as surgical and N95 masks, are saved for hospitals and health care workers.

**Treatment News**

The Food and Drug Administration (FDA) is working hard to fast-track therapies and diagnostics for COVID-19. This article in *Modern Healthcare* has one error of note: in addition to remdesivir (an antiviral), studies are underway of IL-6 Receptor inhibitors (tocilizumab and sarilumab), not IL-6 itself.

**PCORI Funds Registry and Large-Scale Study of Effectiveness of Hydroxychloroquine to Prevent COVID-19 Infection in U.S. Healthcare Workers**

**Clinical News**

The *Hastings Center* has developed resources for health care institutions and institutional ethics services to support leadership and practice. It is providing a free document: *Ethical Framework for Health Care Institutions & Guidelines for Institutional Ethics Services Responding to the Coronavirus Pandemic: Managing Uncertainty, Safeguarding Communities, Guiding Practice*. A related resource is aimed at hospital ethics committees and clinical ethics consultation.

The FDA formally authorized Cellex Inc’s serologic test that detects two types of antibodies, IgG and IgM, to SARS-CoV-2. In general, when infected by a pathogen, IgM antibodies are produced only slightly before IgG antibodies, but the IgG antibodies persist while the IgM antibody levels decline fairly quickly. A positive IgM and a negative IgG should be cause for skepticism. Neither test is useful to diagnose acute COVID-19. As noted in our newsletter on April 1, they can be used to determine that a resolved (or almost resolved) infection was caused by SARS-CoV-2 — or at least that a person is immune to the virus.

**Policy News**

An important aspect of COVID-19 is the question of how it is spread. There is little doubt that it is spread by droplets, but is it also spread by smaller aerosols? This difference matters because prevention of aerosol spread requires negative pressure rooms, which are not that common, and N95 respirators instead of surgical masks. N95 respirators are in short supply, although hospitals are now figuring out how to sterilize and recycle them. The key question is the infectivity of aerosols. Studies of air outside of patient rooms has demonstrated virus RNA, but that’s not evidence of infectiousness. To infect someone
requires intact virus, so studies need to look at the presence or absence of infectious virus, not just the virus RNA that is more easily measurable by polymerase chain reaction (PCR). N95 masks remain preferable if available for intense patient contact in hospital, and necessary for procedures that generate aerosols, such as intubation. Surgical masks are at least acceptable for routine patient contacts and procedures that do not generate aerosols.

David J. Skorton, MD, AAMC president and CEO, wrote an op-ed for USA Today on the “5 steps the U.S. should take now to prepare for the next pandemic,” stating, “Preparedness is not a fixed ‘one and done’ state. It is a continual process, a mindset of constant readiness.” Dr. Skorton recommends: 1) assigning the highest priority to creating a stockpile of supplies 2), increasing the number of physicians coming into the health care workforce, 3) allowing nonphysicians to perform a wider range of basic medical procedures and prescribe certain treatments, 4) partnering with the private and nonprofit sectors, and 5) increasing long-term federal investment in medical research.

Coronavirus and Health Equity

Rural health care systems, which are already underfunded and must work with limited resources, are less likely to withstand the financial blow of accepting uninsured coronavirus patients. They will need government support to prevent further rural hospital closures. A lack of access to adequate health care in the South — the poorest region of the United States — and slow government responses, higher incarceration rates, and fewer physicians per patient, has resulted in young people dying from COVID-19 at a higher rate in this region.

The FDA recently relaxed restriction on blood donations from gay men, changing the requirement from 12 months to three months since a man has had sex with a man to be able to donate. [Editor’s comment: This is not an improvement. No such restriction should exist.] This restriction both limits the sources of blood during the current shortage and prevents recovered COVID-19 gay men from donating convalescent plasma as potential treatment for COVID-19 patients. Senators and gay rights advocates are “citing the recent blood shortages caused by the novel coronavirus pandemic as a catalyst for change.”

There is little demographic data on which Americans are being infected and killed by the coronavirus, which makes it difficult to determine “the disproportionate impact on some communities.” One reason for this problem is that laboratories don’t typically have access to patient demographic information. If we want to understand the effect of COVID-19 on diverse communities across the country, studies will need to begin with a fair sampling of community populations, rather than with patients who test positive and are likely to have greater access to health care — and testing — to start.

Close quarters in jails and prisons make safe conditions and social distancing nearly impossible during the coronavirus pandemic. While some local governments are releasing prisoners and delaying arrests, in other areas, arrests continue while courts are closed, leading to even more overcrowding. Another concern is keeping the movement of prisoners to a minimum by holding court hearings virtually and postponing routine checkups and prison transfers.

Research News

NIH Director's Blog: Bringing Needed Structure to COVID-19 Drug Development

Science: Vaccine Designers Take First Shots at COVID-19
Other COVID-19 News

*Science: Infect Volunteers to Speed a Coronavirus Vaccine?*

*Journal of Experimental Medicine: Forty Years with Coronaviruses*

*Washington Post: My Hospital Used to Have All Kinds of ICUs. Now We Just Have the Covid-19 One.*

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