



# TRENDS-in-MEDICINE

## BULLETIN: UPDATE ON CORONAVIRUS

March 19, 2020  
by Lynne Peterson

**Be careful, be safe, and be well.**

Based on the latest data available as of 9 am EDT on March 19, 2020, this is the newest information about the SARS-CoV-2 virus and the disease it causes, Covid-19.

The U.S. is now sixth in the world in terms of the number of Covid-19 cases, and Anthony Fauci, MD, director of the National Institute of Allergy and Infectious Diseases (NIAID), said the country is still in the “escalation phase.” Here are some sobering numbers:

Covid-19 Statistics (as of March 18)			
Country	Cases	Deaths	Fatality rate
Worldwide	217,242	8,704	4.0%
China	81,137	3,130	3.9%
Italy	35,713	2,978	8.3%
Iran	17,061	1,135	6.7%
Spain	13,176	638	4.8%
Germany	12,327	28	0.2%
U.S.	9,249	145	1.6%
U.K.	>2,600	104	4.0%

Coronavirus is now in >150 countries and all 50 U.S. states plus the District of Columbia. China reported no new cases this week, but in Europe and the U.S. infections are rising rapidly. In Florida, 19 (yes, 19) long-term care facilities have either a suspected or confirmed case of Covid-19. State officials refused to identify the facilities.

What else happened so far this week:

■ President Trump:

- Said the coronavirus crisis could last until July or August.
- Invoked the Defense Production Act.
- Closed the border with Canada to non-essential travel (but not trade) by mutual agreement with Canadian Prime Minister Trudeau. And Canada closed its borders to all non-citizens.
- Signed a \$100 billion bipartisan coronavirus aid package, which includes emergency paid leave for workers who catch Covid-19 and free coronavirus testing. A second stimulus package is being drawn up and negotiated.
- Is dispatching two military hospital ships – the USNS Mercy to TBD, and the USNS Comfort to New York harbor – to help with non-Covid-19 patients.

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- Asked construction companies to donate their N95 masks to hospitals – and not to order any more during the Covid-19 crisis.
- When asked if the U.S. is heading for a recession, President Trump said, “It may be...I think there is tremendous pent-up demand. Once this goes away and we are done with it, I think we will see a tremendous surge.”
- Treasury Sec. Steven Mnuchin said, “We absolutely believe in keeping the markets open...We intend to keep the markets open.”
- White House Advisor Peter Navarro said now is the time to “Buy American,” and he expects President Trump to sign an executive order to reduce U.S. dependence on foreign medicines. But he insisted it would not interfere with anything for treating the coronavirus pandemic.
- The Centers for Medicare and Medicaid Services (CMS) issued guidance to hospitals, urging them to cancel/postpone all non-essential and elective procedures (including dental procedures) and dramatically expanding the use of telehealth for Medicare beneficiaries, relaxing HIPAA regulations. Administrator Seema Verma said, “This is part of a broader effort to ensure government regulations don’t get in the way of patient care...As we encourage patients to stay home, we don’t want Medicare policies to get in the way.” Doctors will even be able to provide advice from their home using their cellphone.
- Covid-19 is not just a risk for seniors. Children and even millennials are at greater risk than previously thought, and in the U.S. nearly half the Covid-19 patients in intensive care are under age 65.
- Another [study](#), published in the *New England Journal of Medicine*, found that the duration of SARS-CoV-2 on surfaces is: up to 72 hours on plastic, 48 hours on stainless steel, 24 hours on cardboard, 4 hours on copper, and 3 hours in the air.
- New York Governor Andrew Cuomo said Covid-19 cases may not peak in New York for 45 days.
- The European Union closed its external borders.

### Supply chain

Premier, a healthcare improvement company – which also does group purchasing – held a webcast on the healthcare supply chain that was pretty interesting. A recent Premier survey of senior living facilities found that the supply chain is “unquestionably strained.” Premier noted its survey of assisted-living facilities and skilled nursing facilities found that, like hospitals, they face supply shortages.

Among respondents:

- 87% are not receiving full quantities of the personal protection equipment (PPE) they order.
- 30% had no N95 face masks on hand. Hospitals are receiving only 44% of their allocation for N95 masks, and more than 11,000 N95 masks are backordered.
- 60% had limited to no ability to access gowns.
- 65% had limited to no ability to obtain disinfecting products such as wipes, sprays, and hand sanitizer.
- 70% had limited to no ability to acquire face shields and other facial protection equipment.

Premier cautioned that the next tier of precuts that could be impacted include cleaning agents, sanitizers, air filters, physician preference products, and IV tubing that requires clean-room packaging. The good news was that raw materials are becoming more available and Chinese manufacturers are getting production going again. A Premier official said, “This is good news for Stryker, Braun, Baxter, Medtronic, etc.”

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*How soon will production increases translate to better supply availability?* Premier said some Chinese factories are still only at 50% capacity, and it can take 2-4 weeks for shipments to get to the U.S. when they are on the boat, though a few distributors have airlifted some critical equipment. Basically, supply “will start to trickle in over the next 24 weeks.” Premier said it is also exploring partnerships with domestic companies with extra capacity that could add extra lines and factories with adjacent capabilities that could be converted to PPE products. A Premier official said, “Expect more information on that over the next 24-72 hours.”

Yet, that is not enough, and some sites are looking at alternative channels – with products at highly inflated prices – and at products that do not have FDA clearance. Premier warned that this is a bad idea, “Ask for validation that the product is registered with the FDA...or you may put yourself and your organization at legal risk...You could consider working with the Strategic National Stockpile [SNS].”

On **ventilators**, Premier said there are 12,000 ventilators and 11 million N95 masks in the SNS. The Department of Defense is offering another 5 million N95 masks, but that is still a huge shortfall according to Premier’s estimate: “Coming out of February, based on our data, national consumption was 54-56 million masks a year or 4.5 million/month. With the surge, we now estimate consumption, even with conservation, to be 75-150 million masks/year, which is a dramatic increase. We went from months-on-hand inventory to less than 30 days.”

On **testing**, Premier pointed out that a big issue in ramping up testing is the specimen collection kits, which are produced in Italy and patent protected. However, Quest and LabCorp are working to validate other collection kits because “without alternatives we will not be able to test all patients in need.”

On active **pharmaceutical ingredients** (APIs), Premier said it is closely monitoring products utilized in the treatment for Covid-19:

- The pharmaceutical supply chain has not experienced the same immediate impact as the PPE supply chain.
- Most of Premier’s generic manufacturers are reporting at least 4-6 months of API on hand.
- The strain on PPE availability is “beginning to impact drug production capacity that requires clean rooms and sterile environments.”
- Spot shortages are being reported from certain locations in the U.S. “and may become more prevalent.”

### Infection prevention

Premier also held a webcast for clinicians on infection control. Maureen Spencer, BSN, an infection prevention consultant, gave a pretty basic overview, but there were some points worth mentioning, including:

- Many hospitals have only one infection prevention person, “and that is too few.” Premier does offer customers help with that, through support, remote surveillance, and more.
  - Some hospital **systems** are considering identifying one of their hospitals as the “Covid-19 hospital.”
  - The patients to worry about are the ones who are so short of breath that they can’t hold their breath for 10 seconds.
  - She recommends Tylenol and not ibuprofen because “there could be worsening with ibuprofen.”
  - Do not bring workstations on wheels into Covid-19 patient rooms!
  - Healthcare workers can use an over-the-counter nasal antiseptic – Global Life Technologies’ Nozin – under their mask for a “little extra protection” from methicillin-resistant *Staphylococcus aureus* (MRSA) and other pathogens other than Covid-19.
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- A temperature of 99 can be considered a high temperature for Covid-19 purposes in elderly patients.

Leslie Schultz, PhD, RN, director of the Premier Safety Institute, offered this advice: “Elective surgery delays “are a *should*, not a *must*.”

### Treatment

President Trump promised an FDA announcement by March 19, and it is expected to be about access to an investigational treatment or perhaps about a self-swab test.

Five potential Covid-19 treatments have been getting attention this week.

1. **Gilead Sciences’ remdesivir** – Anecdotal reports indicate this antiviral is having a positive effect in Covid-19 patients.
2. **Hydroxychloroquine** (Sanofi’s Plaquenil and generic), an old anti-malarial. In a small, open-label French study – expected to be published soon in a major journal – hydroxychloroquine 600 mg/day ± azithromycin, an antibiotic, reportedly showed a 100% cure rate. This was likened to the discovery of Gilead Sciences’ Sovaldi (sofosbuvir) as a cure for hepatitis C virus (HCV).  
*Asked about hydroxychloroquine*, Dr. Fauci said, “When there’s so much out there on social media and even in medical letters...people are just going to start using it anyway, so hopefully we’ll be able to [start] a program where you could make it accessible to people at the same time as you’re studying it, but that’s in active discussion. No decisions have been made yet about that. But, I would imagine the more people read about that, the more likely they would want to just try it.”
3. **AbbVie’s Kaletra** (lopinavir + ritonavir), an HIV drug repurposed for Covid-19. This was being tried in China but apparently doesn’t work. A 199-patient Chinese study, published in the *New England Journal of Medicine*, found that the time to clinical improvement (the primary endpoint) was comparable (16 days). In addition, mortality at 28 days was not significantly better than placebo (19.2% vs. 25.0%).
4. Chinese researchers reported positive results in treating Covid-19 with **Fujifilm Toyama Chemical’s Avigan (favipiravir)**, an antiviral used to treat influenza in Japan, saying it “has a high degree of safety and is clearly effective.” However, a Japanese health official cautioned that the drug doesn’t work in patients with severe symptoms.
5. A global, 330-patient Phase III trial of standard of care ± **Roche’s Actemra (tocilizumab, RoActemra in Europe)**, an anti-IL-6, is planned to start in April in Covid-19 adult patients. The trial will be done in collaboration with the Biomedical Advanced Research and Development Authority (BARDA). The primary and secondary endpoints include clinical status, mortality, mechanical ventilation, and intensive care unit (ICU) variables.

### The controversies

- *Does blood type matter?* A study by Chinese researchers (that has not yet been peer reviewed) suggests that blood type may affect susceptibility to Covid-19, with Type A at more risk than Type O.
- *Does taking an angiotensin converting enzyme (ACE) inhibitor increase your susceptibility to Covid-19 or worsen the outcome if you do get the virus?* A study in Italy found that 99% of people there who died from Covid-19 had hypertension. Heart failure experts are concerned that linking the coronavirus to the ACE2 receptor will frighten patients and cause them to inappropriately – and dangerously – stop taking their medication.
  - The Heart Failure Society of America ([HFSA](#)) advised that patients with hypertension or heart failure who contract Covid-19 should *continue* to take their ACE inhibitor or angiotensin receptor blocker (ARB) unless otherwise advised by their physician.

- Clyde Yancy, MD, chief of cardiology at the Feinberg School of Medicine at Northwestern University, a past president of the American Heart Association, and a noted heart failure expert, said, “If you are taking these evidence-based drugs for appropriate indications, stay with your therapies. Do not yield to this initiative that is brewing that says that some of these therapies may be harmful. There is no evidence to support that. There are questions but no evidence to support that.”
- *Is ibuprofen safe to take?* The World Health Organization suggested people not take this NSAID, suggesting it might aggravate Covid-19. *Asked if this is true*, Dr. Fauci said, “There is no real scientific data that tells you that is a fact...or evidence-based...They want to be cautious...[because of Reyes syndrome in children]...but there is no study.” Asked if he would take ibuprofen, Dr. Fauci said he takes Tylenol (acetaminophen).
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