



TRENDS-in-MEDICINE

BULLETIN: UPDATE ON CORONAVIRUS 3/30

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by Lynne Peterson

Be careful, be safe, and be well.

The SARS-CoV-2 virus and the disease it causes, Covid-19, not only dominate the news, they also dominate the everyday lives of many Americans. Here are the latest news highlights. Our charts are on Page 6. Watch the chart on *additional* cases per day to track the U.S. curve.

Tidbits

■ The world

- Covid-19 infections have been reported in at least 151 countries.
- **Germany.** Researchers there reportedly want to send out hundreds of thousands of coronavirus-antibody tests over the coming weeks. When people test antibody-positive, it indicates that they were infected at one time and may have built up immunity. Then, people who test autoantibody-positive could be given an “immunity certificate” that allows them to get out of coronavirus lockdown. The U.K. also reportedly is considering mass testing to ease lockdown.
- **Spain** had to return tens of thousand of rapid coronavirus tests it got from a Chinese company after they were found to provide inconsistent results.

■ U.S.

- Anthony Fauci, MD, director of the National Institute of Allergy and Infectious Diseases (NIAID), said he expects millions of cases of Covid-19 in the U.S. and “**between 100,000 and 200,000 deaths**” – unless more action is taken.
- At least 38 **sailors** on the USS Theodore Roosevelt aircraft carrier, which is docked in Guam, have Covid-19, and the Navy plans to test the other >5,000 sailors. The USS Ronald Reagan aircraft carrier, which is docked in Yokosuka, Japan, also is reported to have cases of Covid-19.
- The current U.S. **hotspots** are New York, Louisiana, and maybe Illinois and Florida. Detroit was described as “showing signs it make take off,” and Indianapolis has heated up, while Seattle appears to have slowed a little.
- **Churches** in Florida, Louisiana, and Ohio held services this past weekend, attended by large numbers of parishioners ignoring stay-at-home orders. The Florida pastor was arrested.
- Treasury Secretary Steven Mnuchin said the administration is expecting “a big bounce back” in the **economy** in the third quarter of this year.

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- Former FDA Commissioner Scott Gottlieb, MD, and colleagues offered a paper outlining their **Road Map to Reopening** after Covid-19. Among the perhaps controversial suggestions/predictions were:
 - ✓ During the crisis, encourage people to wear a mask. After the crisis passes, people will still be asked to wear fabric masks and limit gatherings.
 - ✓ States and even counties within states may “reopen” on different schedules and will be based on surveillance (testing) data.
 - ✓ Ending the stay-at-home advisories shouldn’t start until there has been a decline in new cases for 14 days *and* everyone seeking care for Covid-19 symptoms can be tested.
 - ✓ Offering sites for voluntary isolation of affected individuals (e.g., the member of a large family who doesn’t want to risk infecting other family members).
 - ✓ Enforce home isolation with technology, such as GPS tracking on cell phone apps.

■ President Trump

- Extended the **social distancing guidelines** for another 30 days, keeping the ban on travel from Europe and China, keeping the borders with Canada and Mexico closed, and urging people to stay home. He also suggested they “may be toughened up a bit.”
- Met with medical supply and shipping companies at the White House and announced a number of steps those companies are taking to get **medical supplies** produced and delivered.
- Accused some healthcare workers and hospitals of **hoarding** medical supplies, “We do have a problem of **hoarding**...Some healthcare workers and some hospitals and hospital chains...have been hoarding, including ventilators. They have to release them. It’s no different than people going into grocery stores and hoarding certain items...They don’t want to lose their ventilators in case they need them...but those are areas that may not need them.”
- A 51-plane “**air bridge**” has started flying supplies from Shanghai to the U.S.
- On March 29, he asked **why more masks aren’t being sterilized** and re-used, “I spoke to the governor of Ohio, and he has a company [Battelle] that can do [sterilize] 10,000 masks, but needs approval from the FDA to make [sterilize] 80,000 and can’t get approval...I spoke with FDA Commissioner Stephen Hahn and asked, ‘Can you push that for me?’...They are approved for 10,000 but would like to be approved for 80,000.” The next day (March 30) the FDA issued an emergency use authorization (EUA), allowing the Battelle Decontamination System to do the extra sterilization volume.
- He called healthcare workers treating Covid-19 patients “warriors” and said he is considering some kind of **bonus or hazard pay** – paid through the hospitals – for them.

■ U.S. states and cities

- **Florida**
 - ✓ The governor banned vacation rentals for the next two weeks. People already in a vacation rental will be allowed to complete their stay.
 - ✓ West Palm Beach county extended its stay-at-home order until May 15.
 - **Louisiana.** The governor said the state could run out of ventilators by this week and out of beds a few days later.
 - **Maryland**
 - ✓ At least 66 people in a nursing home have been confirmed to have Covid-19, and at least one has died so far.
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- ✓ More than half the people with Covid-19 in the state are age <50, and more than half the hospitalized patients are age <60.
 - ✓ Gov. Larry Hogan, Jr., issued an executive order with a **stay-at-home directive** for the entire state, effective 8pm March 30. Violators can be charged with a misdemeanor and face up to one year in prison and a \$5,000 fine.
 - **New York**
 - ✓ **Hospitals.** Gov. Andrew Cuomo first encouraged the 11 New York City public hospitals to operate as one system, and for the private hospitals that are members of the Greater New York Hospital Association to form their own network. Two days later, he said that **all** the hospitals in the state – public and private – need to work together in **one** system, and that they all agreed to do that, to share resources, share staff. This means hospitals need to “act as one, get out of their silos, out of their identities to work together.” That means when one hospital has too many patients, another hospital with a lower load has to take them; and when a hospital is short of masks or another item, other hospitals have to provide them to the hospital with the shortage. The public/private boundaries are erased.
 - ✓ The **stay-at-home order** for non-essential workers was extended, requiring them to work from home (if feasible) for another two weeks, to April 15. And additional 2-week extensions are likely. Asked about the impact of this on Easter and Passover, Gov. Cuomo pointed out that the situation in New Rochelle was started by a religious gathering.
 - ✓ Gov. Cuomo announced that the New York Department of Health has developed a “less intrusive saliva and short **nasal swab test.**” And he said a simple **home or point-of-care test** that can be used in volume is probably when there will be a “real return to normalcy in the workforce...If you could test today millions of people, you could send them to work tomorrow.”
 - ✓ The **hospitalization rate** is doubling less frequently – every 6 days now vs. every 2-3-4 days previously, but the number of cases is continuing to go up.
 - ✓ On the **fatality rate**, Gov. Cuomo said it is “hovering around 1% or less” of everyone tested. However, it is currently at 1.8% of all people testing positive. And he added, “I don’t see how you can look at the numbers and say anything less than thousands of people will pass away.”
 - ✓ 25% of New York deaths have been **nursing home patients.** Gov. Cuomo said, “We are lucky it is only one quarter. Coronavirus in a nursing home is a toxic mix...It can be like a fire through dry grass...This is a terrible virus to stop. Coronavirus in a nursing home is lethal. The only question is how many people will die.”
 - ✓ Gov. Cuomo called New York the “**canary in the coal mine,**” predicting the virus will “move across the states, the nation. There is no one who is immune...There is no American that is immune...What is happening to New York is not an anomaly.” He pleaded with healthcare professionals across the country to come and help New York, saying, “We need relief for doctors, attendants...If you are not busy, come help us, please. And we will return the favor.”
 - ✓ Gov. Cuomo **does not expect a quick economic rebound**, “I don’t believe it. I don’t believe credit agencies will believe it. Postponing a problem just makes it worse. Don’t deceive ourselves. You are not going to be saved by the federal government...This is not a quick down or quick up, and the recovery is going to be complicated...I’m not going to paper over the economic reality...I’m not going to pass or sign a phony budget.”
 - ✓ Volunteers set up a 68-bed field hospital in **Central Park** near Mount Sinai Hospital in New York City.
 - **Texas** announced new travel restrictions (a mandatory 14-day quarantine) to keep people from 7 states/cities from driving or flying into Texas in an effort to stem the spread of the coronavirus. Those locations are: California, Louisiana, Washington, Atlanta, Chicago, Detroit, and Miami.
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■ **ACE/ARBs.** There have been conflicting reports about the safety of ACE inhibitors and ARBs (RAAS blockers) in Covid-19 patients. A special report, published in the *New England Journal of Medicine*, by a group of heart failure experts, noted that the “data in humans are too limited to support or refute these hypotheses and concerns.” However, they suggest that, rather than harmful, RAAS blockers may be beneficial in patients with lung injury and their withdrawal could hurt certain high-risk patients.

■ **Insurance**

- The Centers for Medicare and Medicaid Services (CMS) is waiving a wide and unprecedented range of regulator requirements, but CMS Administrator Seema Verma urged healthcare systems that don't need the waivers not to use them.
 - ✓ Hospital Without Walls – which allows hospital systems to create new treatment sites outside of their facility to expand capacity and to separate Covid-19 patients from non-infected patients. This includes permission to use dorms, hotels, and gymnasiums for patient care.
 - ✓ Paying for labs to send people to the homes of people who can't leave their home or are in a nursing home to get testing done.
 - ✓ Relaxing regulations so hospitals can increase their workforce, and letting healthcare workers operate at the top of their license.
 - ✓ Allowing hospitals to provide workers with extra support, such as child care, meals, and laundry services.
 - ✓ Expanding telehealth by paying doctors – and emergency rooms – to make phone calls with patients and provide care over the phone.
 - ✓ Providing advance payments for healthcare providers that are experiencing cash flow problems.
- **Cigna and Humana** announced they are waiving customer cost-sharing and co-payments for Covid-19 treatment. Cigna offered these addition details:
 - ✓ The waiver is through May 31, 2020.
 - ✓ Telehealth capabilities have been expanded with MDLive.
 - ✓ A free, web-based interactive triage tool that assesses Covid-19 risk is available through a partnership with Buoy Health.

■ **Medical equipment.** There are now 10 companies making ventilators.

■ **Nursing homes and assisted living facilities.** How do families find a facility for a loved one during the coronavirus crisis? State officials usually decline to identify facilities with cases. In Florida, officials reported at one point that there were 19 nursing homes with Covid-19 cases but wouldn't identify them. That changed for at least one place – Atria Willow Wood in Fort Lauderdale – when residents started dying.

Yet, A Place for Mom, which claims to help 300,000 families a year with finding facilities for a loved one, continued to recommend it. On March 28 A Place for Mom sent a Florida family a list of recommended places to consider that included Atria Willow Wood, which by then had 6 deaths from Covid-19. That family, which already knew about the deaths at Atria Willow Wood, was horrified and complained to A Place for Mom.

The first person at the company to respond tried to say the deaths occurred after the email was sent, but Covid-19 deaths at that facility had been reported at least two weeks earlier. Then, the company's chief sales officer, Jennifer Mellet, who is based in Seattle WA, responded, “The intention was to not eliminate what may be a strong option in a future when the worst is behind us with the Coronavirus.” She also offered a different A Place for Mom adviser. The family declined.

■ Testing

- As of March 30 there were 20 different testing options with FDA clearance or an EUA, but the excitement is over **Abbott's ID NOW** COVID-19 test, which is run on a small, portable lab-in-a-box and can produce a positive Covid-19 result in 5 minutes and a negative one in <15 minutes. It was granted an EUA by the FDA on March 27. Some doctors are predicting it is a “game changer.”
- Vice President Pence wrote to hospitals asking them to report coronavirus **test results** *daily* to the Department of Health and Human Services (HHS), not just to state health departments.

■ **Transmission.** In a study by University of Nebraska researchers, on the preprint site *bioRxiv*, genetic material from SARS-CoV-2 was measured in high levels of virus contamination on commonly used surfaces and in the air in the rooms of Covid-19 patients. Air samples from hallways outside of rooms where staff were moving in and out of doors were also positive. The study suggests that Covid-19 patients, even those who are only mildly ill, may create aerosols of virus and contaminate surfaces that may pose a risk for transmission. The findings suggest that Covid-19 might be spread through both direct (droplet and person-to-person) as well as indirect contact (contaminated objects and airborne transmission) and suggests airborne isolation precautions could be appropriate. However, the researchers cautioned that these findings “**do not** confirm that this virus spreads in an airborne fashion,” but they said the study provides “limited” evidence of the potential for airborne transmission.

■ Treatment

• Hydroxychloroquine

- ✓ The FDA issued an EUA, allowing hydroxychloroquine and chloroquine products donated to the Strategic National Stockpile to be distributed and used for certain hospitalized Covid-19 patients.
 - ✓ Novartis/Sandoz **donated** 20,000 doses of hydroxychloroquine to the University of Washington for a Covid-19 trial and 30 million doses to the U.S. government. Teva donated 6 million doses of hydroxychloroquine to U.S. hospitals. Bayer donated 1 million doses of chloroquine to the states.
 - ✓ President Trump said there may be some U.S. efficacy data within the **next three days** on how well this antimalarial, combined with azithromycin, is working in New York, where ~1,100 people got it.
 - ✓ A number of doctors interviewed on television said they and/or their doctor friends are taking it prophylactically with azithromycin.
 - ✓ Updated data from a French study, this time on 80 patients, found that all but two of these patients improved with hydroxychloroquine + azithromycin and were released from the hospital earlier than expected, with a mean length of stay of just five days. Only 15% of the patients required oxygen.
- **Convalescent plasma.** The first patients to get this therapy were treated March 28 at Houston Methodist Hospital.

■ Vaccines

- **Johnson & Johnson** said it has selected a lead vaccine candidate and can start human studies in September 2020. J&J partnered with the U.S. Biomedical Advanced Research and Development Authority (BARDA). Together they are committing up to \$1 billion for vaccine research, development, and testing. J&J also is expanding its global manufacturing capacity to allow “rapid production” of up to 1 billion doses if the vaccine works.
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Worldwide Covid-19 Statistics												
Country	As of March 18			As of March 25 (1 week)			As of March 28			As of March 30		
	Cases	Deaths	Fatality rate	Cases	Deaths	Fatality rate	Cases	Deaths	Fatality rate	Cases	Deaths	Fatality rate
Worldwide	217,242	8,704	4.0%	470,973	21,287	4.5%	665,616	30,857	4.6%	786,228	37,820	4.8%
U.S.	9,249	145	1.6%	68,960	1,041	1.5%	124,686	2,192	1.8%	164,603	3,170	1.9%
Italy	35,713	2,978	8.3%	74,386	7,503	10.1%	92,472	10,023	10.6%	101,739	11,591	11.4%
Spain	13,176	638	4.8%	49,515	3,647	7.4%	73,235	5,982	8.2%	87,956	7,716	8.8%
China	81,137	3,130	3.9%	81,667	3,285	4.0%	82,061	3,304	4.0%	82,240	3,309	4.0%
Germany	12,327	28	0.2%	37,323	206	0.6%	57,695	433	0.8%	66,885	645	1.0%
France	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	45,170	3,030	6.7%
Iran	17,061	1,135	6.7%	27,017	2,077	7.7%	35,408	2,517	7.1%	41,495	2,757	6.6%
U.K.	>2,600	104	4.0%	9,640	466	4.8%	17,315	1,021	5.9%	22,454	1,411	6.3%

Source: <https://coronavirus.jhu.edu/map.html>

U.S. Covid-19 Statistics												
State	As of March 18			As of March 25			As of March 28			As of March 30		
	Cases	Deaths	Fatality rate	Cases	Deaths	Fatality rate	Cases	Deaths	Fatality rate	Cases	Deaths	Fatality rate
New York *	2,382	12	0.05%	30,811	285	0.9%	52,318	728	1.4%	66,497	1,218	1.8%
New Jersey	427	5	1.2%	4,402	62	1.2%	11,124	140	1.3%	16,636	198	1.2%
Washington	1,012	52	5.1%	2,469	123	5.0%	3,723	175	4.7%	4,896	195	4.0%
California	611	13	2.1%	2,102	40	1.9%	4,643	101	2.2%	7,398	146	2.0%
Michigan	80	0	0	2,294	43	1.3%	3,657	92	2.5%	6,498	184	2.8%
Illinois	289	1	0.3%	1,884	19	1.0%	3,491	47	1.3%	5,057	73	1.4%
Florida	314	7	2.2%	1,682	22	1.3%	3,763	54	1.4%	5,704	71	1.2%
Louisiana	240	6	2.5%	1,795	65	3.3%	3,315	137	4.1%	4,025	185	4.6%
Massachusetts	256	0	0	1,838	15	0.7%	4,257	44	1.0%	5,752	56	1.0%


Source: <https://covidtracking.com/data/> * New York state dropped from ~58% of U.S. cases on March 25 to 42% on March 28

Watching for When the Coronavirus Curve Flattens (Additional cases each day, not total cases) *							
Location	March 23	March 24	March 25	March 26	March 27	March 28	March 30
Worldwide	45,321	36,289	53,391	60,711	58,910	75,022	120,612
U.S.	13,056	7,328	14,912	16,545	15,212	23,969	39,917
China	107	77	76	115	1115	164	179
Spain	6,368	4,749	9,630	8,271	6,499	8,950	14,721
Italy	4,789	5,249	5,210	6,203	5,909	5,974	7,267
Iran	1,411	1,762	2,206	2,389	2,926	3,076	6,087
New York	6,521	6,976	5,146	6,447	7,377	7,683	14,179

* This is the metric that Dr. Deborah Birx, director of the White House Task Force on Coronavirus, said to watch.

Death Toll Increases (Additional deaths, not total deaths)							
Location	March 23	March 24	March 25	March 26	March 27	March 28	March 30
Worldwide	1,940	2,040	2,664	3,217	2,889	3,914	6,963
China	107	7	4	6	5	8	5
Italy	601	743	683	712	919	889	1,568
Spain	539	497	839	718	575	1,042	1,734
U.S.	193	93	328	248	255	648	978
New York	43	53	75	100	134	209	490

Unanswered questions (*Items will remain on this list until answered.*)

- ? People who get mild Covid-19 and recover continue to shed virus for at least 8 days *after* symptoms resolve. Is that virus capable of infecting other people? Should those people be quarantined longer?
 - ? What do we know about Covid-19 patients who are put on a ventilator and recover? Is it a functional recovery?
 - ? Are there long-term effects from getting Covid-19, even mild Covid-19? Will there be long-lasting lung abnormalities or pulmonary fibrosis?
 - ? Can people get Covid-19 more than once? There are still conflicting reports on this.
 - ? What more can be done to protect nursing home residents?
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