

Well Vetted Facts about COVID-19 Pandemic as We Plan for CEEW's Future. Please Take Them Seriously.

By Dr. Mike Cummins, M.D. and Dr. Joe Dailey, Ph.D

As our CEEW community plans for its future, we need reliable facts about COVID-19. Our intention here is to publish well vetted, highly reliable, factually accurate information based on science related to the COVID-19 pandemic. For the sake of both clarity and credibility, we are including details about the sources of the information we are presenting.

Many of us may be overwhelmed by clusters of contradictory messages, by information overload, by sloppy reporting and by pure misinformation. As the American Medical Association (AMA) has said, "Misinformation about COVID-19 is being shared across social media and other platforms at alarming speed." (<https://www.ama-assn.org/delivering-care/public-health/covid-19-frequently-asked-questions>). That's why we are now publishing this information about the COVID-19 pandemic?

Will the scientists speak differently about COVID-19 as time goes by? Of course they will, to an extent. Scientists set out to add to previous knowledge by publishing what they learn. We can only report now on what scientists have had to say so far.

WHAT ARE THE MOST IMPORTANT THINGS TO KNOW?

—Scientists cannot see the future precisely; they don't own magic crystal balls that allow them to be fortune tellers.

Even so, they need to function as expert predictors in matters of public health. We should want our doctors to be able to tell us about potential future dangers to our health and what we can do to mitigate the impact of those dangers.

—The number of cases in Wisconsin continues to grow. (On Friday, May 29, when the state set a record with 733 new cases confirmed in one day, only about a third of the new cases came out of Milwaukee County.

(<https://www.milwaukeeemag.com/flattening-the-curve-update-17/>) The rate of growth, however, has slowed. The rate of growth in Wisconsin from April 1 to May 1 was approximately X 4.7. The rate of growth from May 1 to June 1 was approximately X 2.5. (*See below.*)

—Social distancing remains the best tool for protecting ourselves and others. Six feet is a minimum recommended distance. (*See below.*)

—Hand washing, not touching your face and avoiding crowds remain important measures as you set out to keep yourself safe. Wearing a mask is important as you set out to keep others safe. A mask should never be seen as a substitute for social distancing.

—The CDC continues to say, “Older adults and people who have severe underlying medical conditions like heart or lung disease or diabetes seem to be at higher risk for developing more serious complications from COVID-19 illness.” The CDC

recommends a number of things to keep such individuals safe; they include staying at home if possible, washing hands frequently, and of course keeping a social distance of a **minimum** of six feet. We could locate no CDC definition of an “older adult.” (<https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/older-adults.html>)

—As of June 11, collectively, statements about the likelihood of a fall spike in Wisconsin’s COVID-19 cases, have been ambiguous. We do seem to have agreement among experts that a fall spike is a possibility. A fall COVID-19 spike would strain the health care system because there’s always a good chance of lots of flu in the fall and winter.

—There is no room for doubt. People who are infected with COVID-19 can spread the coronavirus particles to others while showing no symptoms. On June 10, Dr. Anthony Fauci, the director of the National Institute of Allergy and Infectious Diseases, corrected the World Health Organization on that matter after they said that transmission by people without symptoms was “rare.” WHO reversed its original communication on the matter and said that its public statement had been a “misunderstanding.” Fauci said that evidence showed that between 25% and 45% of all infected people are without symptoms. (MSNBC at <https://www.cnbc.com/2020/06/10/dr-anthony-fauci-says-whos-remark-on-asymptomatic-coronavirus-spread-was-not-correct.html>)

WHAT IS SAFE SOCIAL DISTANCE?

Public health experts have repeatedly emphasized the fact that social distancing is the best tool we have to slow the current coronavirus pandemic. (Yuliya Parshina-Kottas, Bedel Saget, Karthik Patanjali, Or Fleisher and Gabriel Gianordoli, “This 3-D Simulation Shows Why Social Distancing Is So Important,” New York Times. April 14, 2020 at <https://www.nytimes.com/interactive/2020/04/14/science/coronavirus-transmission-cough-6-feet-ar-ul.html>). The state of Wisconsin put it this way: “Protective measures like staying at home and physical distancing are our best tools to ‘flatten the curve,’ in other words, decrease the daily number of cases of a contagious disease. Physical distancing is effective in slowing the rate of infection. During an outbreak like COVID-19, a large number of ill people at once can quickly overwhelm local hospitals and clinics.” (<https://www.dhs.wisconsin.gov/publications/p02620b.pdf>)

Be careful when thinking about six feet. The CDC continues to recommend that people stay at least six feet apart for coronavirus social distancing. Six feet is a MINIMUM. The CDC is not saying that you cannot be exposed to the current coronavirus (called *SARS-CoV-2*) if you are more than six feet from an infected person.

Also, the CDC guidance on safe social distancing is a three-part guidance. Once the CDC says, “Stay at least 6 feet (about 2 arms’ length) from other people,” it immediately says two more things: “Do not gather in groups. Stay out of crowded places and avoid mass gatherings.”

Scientists have argued that small droplets — known as aerosols — can remain suspended or travel through the air before they eventually settle on surfaces. Donald K. Milton, an infectious aerosols scientist at the University of Maryland’s School of Public Health explained, “It’s not like, ‘Oh, it’s six feet, they’ve all fallen and there’s nothing.’ It’s more like it’s a continuum.” (Yuliya Parshina-Kottas, Bedel Saget, Karthik Patanjali, Or Fleisher and Gabriel Gianordoli, “This 3-D Simulation Shows Why Social Distancing Is So Important,” New York Times. April 14, 2020)

Note that, “If a person is infected, the droplets in a single cough or sneeze may contain as many as 200,000,000 (two hundred million) virus particles which can all be dispersed into the environment around them,” according to Dr. Erin Bromage of the University of Massachusetts Dartmouth. (WRAL at <https://www.wral.com/coronavirus/erin-bromage-virus-spread-particles-droplets/19094009/>)

“In order to get infected, you need to get exposed to an infectious dose of the virus,” Dr. Bromage wrote. Based on infectious dose studies, “it is estimated that as few as 1,000 SARS-CoV2 viral particles are needed for an infection to take hold” in a person, he said.

You could take in those 1000 viral particles sufficient to get infected all in one breath, or in one eye-rub. You could also take in 1,000 viral particles as 100 viral particles in each of 10 breaths or as 10 viral particles in each of 100 breaths, according to Dr. Bromage.

Viral particles are released in coughing, sneezing and breathing.

—**A Cough:** “A single cough releases about 3,000 droplets and droplets travels at 50 miles per hour. Most droplets are large, and fall quickly (gravity), but many do stay in the air and can travel across a room in a few seconds,” Dr. Bromage wrote. (See below for more information related to a single cough.)

It helps us if we understand what happens when an infected person coughs indoors. A team created a simulation using data from the Kyoto Institute of Technology, and the New York Times reported on both the simulation and the data. The *Times* story explained that understanding “the possible transmission routes for the virus” can help our understanding of why social distancing is so important.

The *Times* story said, “The heaviest coughs release about a quarter teaspoon of fluid, with droplets dispersing quickly throughout the room. The simulation shows their spread over a minute, inside a room of about 600 square feet. Under other conditions, the particles could behave differently.” (Yuliya Parshina-Kottas, Bedel Saget, Karthik Patanjali, Or Fleisher and Gabriel Gianordoli, “This 3-D Simulation Shows Why Social Distancing Is So Important,” New York Times. April 14, 2020. <https://www.nytimes.com/interactive/2020/04/14/science/corona-virus-transmission-cough-6-feet-ar-ul.html> — April 14, 2020.)

New York Times reporters explained that researchers at M.I.T. “observed particles from a cough traveling as far as 16

feet and those from a sneeze traveling as far as 26 feet.” The further away from such a source, the more diluted the aerosol is.

—**A Sneeze:** “A single sneeze releases about 30,000 droplets, with droplets traveling at up to 200 miles per hour. Most droplets are small and travel great distances (easily across a room),” Dr. Bromage wrote.

—**A Breath:** “A single breath releases 50 - 5000 droplets. Most of these droplets are low velocity and fall to the ground quickly. There are even fewer droplets released through nose-breathing. Importantly, due to the lack of exhalation force with a breath, viral particles from the lower respiratory areas are not expelled,” Dr. Bromage wrote.

—**Speaking:** “Speaking increases the release of respiratory droplets about 10 fold; ~200 copies of virus per minute. Again, assuming every virus is inhaled, it would take ~5 minutes of speaking face-to-face to receive the required dose,” Dr. Bromage wrote. (*The ~ sign means approximately. The sign is called a tilde.*) An article in *Scientific American* provides helpful insight. “Some evidence suggests that talking could be a significant mode of viral transmission. A study published on May 13 in *Proceedings of the National Academy of Sciences USA* used laser light scattering to visualize tiny saliva droplets expelled during speech. The research did not measure droplets with viable SARS-CoV-2 virus. But if one assumes the droplets contain seven million virus particles per milliliter, a minute of loud speech could generate more than 1,000 virus-containing droplets that could hang in the air for eight minutes or more, the researchers write in the study. ‘There is a substantial probability

that normal speaking causes airborne virus transmission in confined environments,' they conclude.”

(<https://www.scientificamerican.com/article/how-coronavirus-spreads-through-the-air-what-we-know-so-far1/>)

An infected person “talking for five minutes in a poorly ventilated space can produce as many viral droplets as one infectious cough,” about 3,000 droplets, a *New York Times* story said.

(<https://www.nytimes.com/interactive/2020/04/14/science/coronavirus-transmission-cough-6-feet-ar-ul.html>)

CHOIRS

The report “High SARS-CoV-2 Attack Rate Following Exposure at a Choir Practice — Skagit County, Washington, March 2020” was posted online by the CDC as an early release related to its *Morbidity and Mortality Weekly Report (MMWR)*. (That report was authored by: Lea Hamner, MPH¹; Polly Dubbel, MPH¹; Ian Capron¹; Andy Ross, MPH¹; Amber Jordan, MPH¹; Jaxon Lee, MPH¹; Joanne Lynn¹; Amelia Ball¹; Simranjit Narwal, MSc¹; Sam Russell¹; Dale Patrick¹; Howard Leibrand, MD¹.)

The first paragraph of the report said: “On March 17, 2020, a member of a Skagit County, Washington, choir informed Skagit County Public Health (SCPH) that several members of the 122-member choir had become ill. Three persons, two from Skagit County and one from another area, had test results positive for SARS-CoV-2, the virus that causes ... COVID-19. Another 25

persons had compatible symptoms. SCPH obtained the choir's member list and began an investigation on March 18. **Among 61 persons who attended** a March 10 choir practice at which **one person was known to be symptomatic**, 53 cases were identified, including 33 confirmed and 20 probable cases (secondary attack rates of 53.3% among confirmed cases and 86.7% among all cases). **Three of the 53 persons who became ill were hospitalized (5.7%), and two died (3.7%).** The 2.5-hour singing practice provided several opportunities for droplet and fomite transmission, including members sitting close to one another, sharing snacks, and stacking chairs at the end of the practice. The act of singing, itself, might have contributed to transmission through emission of aerosols, which is affected by loudness of vocalization (*1*). Certain persons, known as superemitters, who release more aerosol particles during speech than do their peers, might have contributed to this and previously reported COVID-19 superspreading events (*2–5*). These data demonstrate the high transmissibility of SARS-CoV-2 and the possibility of superemitters contributing to broad transmission in certain unique activities and circumstances. **It is recommended that persons avoid face-to-face contact with others, not gather in groups, avoid crowded places, maintain physical distancing of at least 6 feet to reduce transmission, and wear cloth face coverings in public settings where other social distancing measures are difficult to maintain. ”**

MASKS

By mid April, public health officials were suggesting that people should wear face masks to slow the spread of the virus. A mask, however, should not be thought of as a substitute for keeping appropriate social distance of a minimum of six feet. To help slow the spread of the virus, public health officials recommend both wearing a mask and social distancing.

(<https://www.nytimes.com/interactive/2020/04/14/science/coronavirus-transmission-cough-6-feet-ar-ul.html>)

Dr. Anthony Fauci emphasized in a May 27 interview the importance of wearing a mask, something he always does when he's outside. "I want to protect myself and protect others, and also (I wear it) because I want to make it be a symbol for people to see that that's the kind of thing you should be doing," he said. That, and avoiding groups of more than 10 people and hand washing are things that can help as we work toward a reopening. Those are things "that everyone should seriously consider doing," Fauci said. "I wear it (the mask) because it's effective. It's not 100 per cent effective.... You wear a mask. They wear a mask. You protect each other," he said.

(<https://www.cnn.com/videos/health/2020/05/27/cnngo-dr-anthony-fauci-may-27-interview-sciutto-intv.cnn>)

The Mayo Clinic has published a detailed article about masks at <https://www.mayoclinic.org/diseases-conditions/coronavirus/in-depth/coronavirus-mask/art-20485449>. That Mayo article said, "... countries that required face masks, testing, isolation and social distancing early in the pandemic seem to have had some success slowing the spread of the virus."

NUMBERS, GRAPHS, CURVES AND WHAT THEY MEAN

All of us should try to gauge, no matter how informally, our risk of coming into contact with an infected person. We should try to grasp the overall trend in case rates and death rates near where we live. Also, it helps greatly to know how the virus particles move, so keep reading below. (See “5 Rules to Live By During a Pandemic” by Tara Parker-Pope, *New York Times* at

<https://www.nytimes.com/2020/06/09/well/live/coronavirus-rules-pandemic-infection-prevention.html>.)

Doubling of COVID 19 cases in Waukesha County

According to the Waukesha County Health Department, the number of cases in the county doubled from May 8 to June 5. If that double-every-month exponential growth were to continue, the county would have experienced 6,296 cases and 256 deaths by early September.

Curves and graphs illustrate data, and if we look at the Waukesha County bar graph (from the Wisconsin Department of Health Services at www.dhs.wisconsin.gov/covid-19/county.htm), it might seem extreme to talk in mid-June about continued exponential growth close to home. Read below about the spikes in mid-June in 21 states and Puerto Rico. Try to understand what is possible. Try to protect yourself and others by taking the very best advice.

The Waukesha County graph shows a gradual decline in the number of cases — by date of symptom onset or diagnosis —

since a one-day all-time high in April. The graph shows a downward trend, but it's not news that's all optimistic. Look at how rapidly the two earlier upward trends moved. Look at how the first downward trend was followed by an even stronger upward trend. As you interpret Waukesha County's experience, look at what experts say below about reopening with too little caution.

Understanding exponential growth of the number of cases during a pandemic is valuable. According to the CDC, the following figures represent accurately the growth in the number of U.S.A. cases reported:

1-22-20 2

2-01-20 8

3-01-20 30

4-01-20 213,144

4-27-20 981,246. (from

<https://www.cdc.gov/coronavirus/2019-ncov/cases-updates/previouscases.html>)

According to the CDC, the following figures represent accurately the numbers of new cases reported per day in the U.S.A.:

1-22-20 1

2-01-20 1

3-01-20 6

4-01-20 27,043

5-01-20 30,369

6-01-20 14,790

(CDC at <https://www.cdc.gov/coronavirus/2019-ncov/cases-updates/cases-in-us.html>) Those numbers rise and fall. They do not tell a story of constant exponential growth in new cases.

Numbers of Wisconsin deaths

(From <https://covidtracking.com/data/state/wisconsin#historical>)

3-04-20 “N/A”

3-20-20 3

4-01-20 24

5-01-20 327

6-01-20 595

6-12-20 689

Note that the number of deaths more than doubled in 42 days.

Numbers of Wisconsin cases

(From <https://www.dhs.wisconsin.gov/covid-19/index.htm>)

3-15-20 32

4-01-20 1,550

5.01-20 7,314

6-01-20 18,543

6-10-20 21,593

Note that the number of cases more than doubled between May 1 and June 1.

The numbers tell us just how very deadly COVID-19 is. As scientists sometimes say, the virus will do what the virus will do, whether I like it or not.

There had been 21,308 positive cases of COVID-19 in Wisconsin as of June 10, and 661 people had died. The confirmed cases in Milwaukee County totaled about 9,000, with 301 deaths. (That from “COVID-19 Is Still Here, But Fewer and Fewer People Are Getting Tested” by Rich Rovito in *Milwaukee Magazine* online at <https://www.milwaukeeemag.com/flattening-the-curve-update-17/>. That was a report that had been updated on June 10.)

To help to put all of these numbers into perspective, you might want to examine “How the Coronavirus Compares With 100 Years of Deadly Events” by McCann, Wu and Katz in the June 10 *New York Times* at <https://www.nytimes.com/interactive/2020/06/10/world/coronavirus-history.html>. The authors provide us with an abundance of figures that put today’s pandemic in the U.S. into perspective. The authors tell us, for example, that in New York City in October of 1918, the death rate was almost four times normal.

They also tell us that five times the normal death rate is almost never seen outside of war or famine.

Here in the United States, the authors tell us, “New York City, long the epicenter of the U.S. outbreak, has experienced one of the most extreme increases in deaths. Mortality in April grew to almost six times the usual number.” And five times the usual number is rarely seen outside of war or famine.

In Bergamo, a province in northern Italy, nearly 6,000 people died from COVID-19. That was 6.7 times the normal rate. And five times the usual number is rarely seen outside of war or famine.

(<https://www.nytimes.com/interactive/2020/06/10/world/corona-virus-history.html>)

WHAT WILL THE FUTURE BRING?

As stated above, scientists are not equipped with magic crystal balls that show them the future. They can, however, look at past experience as they try to anticipate the future.

Also as stated above, as of June 15, collectively, statements about the likelihood of a fall spike in Wisconsin’s COVID-19 cases have been ambiguous. We do seem to have agreement among experts that a fall spike is a possibility. A fall COVID-19 spike would strain the health care system because there’s always a good chance of lots of flu in the fall and winter.

Dr. Gregory Poland, a Professor of Medicine and Infectious Diseases with the Mayo Clinic, said in early May that a second

wave would most likely occur alongside the expected seasonal influenza outbreak during the fall and winter months. That could present major challenges to the health care system. “I think among those of us who study (infectious diseases), we believe a second wave will be an inevitability,” Poland said in an interview with Dayton’s WDTN.

According to the WDTN story, “Whether COVID-19 becomes seasonal is a question Poland said medical experts don’t have an answer for. He said the flu mutates rapidly from season to season. Poland said influenza viruses tend to mutate more than coronaviruses, but it would take at least two seasons to determine if COVID-19 would become a regular seasonal virus.” (see

<https://www.wdtn.com/community/health/coronavirus/mayo-clinic-second-covid-19-wave-during-fall-winter-an-inevitability/> “Mayo Clinic: Second COVID-19 wave during fall, winter ‘an inevitability’,” B. J. Bethel, WDTN, Dayton, Ohio.)

Dr. Anthony Fauci — director of the National Institute of Allergy and Infectious Diseases at National Institutes of Health — took a position that was close to being the opposite. He had grown a bit more optimistic in his own predictions by late May. He had consistently warned of the virus coming back strongly in the fall and winter. Such a pattern would mirror that of the 1918 pandemic when the second wave was more damaging than the first.

Even so, in a May 27 interview with CNN’s Jim Sciutto, he said, “I’m feeling better about it ... we see that we’re getting more and more capability of testing.... The CDC is putting more of a

workforce out there to help us do the ... identification, isolation, and contact tracing.”

Unfortunately, by June 15, the national situation was worsening. Numbers were going rapidly up in 22 states. (See below.)

In that CNN interview, before the national uptick, Dr. Fauci said that people should be vigilant about the fall, but that the second wave would be preventable. "We often talk about the possibility of a second wave, or of an outbreak when you reopen. We don't have to accept that as an inevitability," Fauci noted.

"Particularly when people start thinking about the fall, I want people to really appreciate that it could happen, but it is not inevitable. If we do ... the clear and effective identification, isolation and contact tracing, we can prevent this second wave that we're talking about," he said.

He warned people to avoid “leap-frogging” over the recommendations and guidelines, “because that’s really tempting fate and asking for trouble.”

(<https://www.cnn.com/videos/health/2020/05/27/cnngo-dr-anthony-fauci-may-27-interview-sciutto-intv.cnn>; “Dr. Anthony Fauci on importance of masks, reopening schools” at

<https://www.cnn.com/videos/health/2020/05/27/cnngo-dr-anthony-fauci-may-27-interview-sciutto-intv.cnn>; “Fauci Says Coronavirus Second Wave ‘Is Not Inevitable,’ Stresses CDC Guidelines ... the U.S. can avoid a resurgence of COVID-19 infections” by Jenna Amatulli, Huffpost at

https://www.huffpost.com/entry/fauci-coronavirus-not-inevitable_n_5ece838dc5b68063b7695844; ALSO

<https://www.msn.com/en-ca/health/health-news/dr-fauci-says-a->

[second-wave-of-covid-19-is-not-inevitable-in-the-fall/ar-BB14FVGJ.](#))

In an online message that was updated on May 20, Dr. Erin Bromage of the University of Massachusetts Dartmouth, set out “to try to guide you away from situations of high risk.” He said this **about the future**: “As states reopen, and we give the virus more fuel, **all bets are off**. I understand the reasons for reopening the economy, but I’ve said before, if you don’t solve the biology, the economy won’t recover. There are very few states that have demonstrated a sustained decline in numbers of new infections.” (“Dr. Bromage joined the Faculty of the University of Massachusetts Dartmouth in 2007 where he teaches courses in immunology and infectious diseases, including a course this semester on the Ecology of Infectious Disease which focused on the emerging SARS-CoV2 outbreak in China.”)

Again, **statements about the likelihood of a fall spike COVID-19 cases have been ambiguous.**

After weeks of protests against police brutality, public officials were “warily watching for signs of a spike in new cases,” according to a June 7 *New York Times* story. (See June 15 below.) Medical professionals have discussed how to estimate the impact of the protests on the pandemic. One professional who had published estimates on the matter said that his estimates contained a lot of uncertainty.

(<https://www.nytimes.com/2020/06/07/world/coronavirus-updates-us-usa.html>).

By June 6, as we moved toward the July bulletin deadline, the majority of states were reopening even though their COVID-19 numbers continued to increase. By June 12, it was clear that some states were experiencing spikes, leaving experts asking about the causes of those spikes. Even as national numbers were indicating a flattening of the curve, some states and localities were experiencing strong increases in their COVID-19 numbers.

The total number of U.S. COVID-19 cases reached 2,107,632 and 116,029 people had died in the U.S. by June 15, according to the COVID-19 Dashboard published by Johns Hopkins University at <https://coronavirus.jhu.edu/map.html>. Since May 28, Wisconsin had been experiencing a downward trend in its daily numbers of confirmed cases, according to that source.

By mid-June, some states were seeing problem trends, alarming trends, some would say. CNN reported early on **June 15**, “Cases have increased in 18 states over the past week, with six states reporting more than a 50% jump. This has led some government and health officials to hit pause on reopening efforts.”

(https://www.cnn.com/world/live-news/coronavirus-pandemic-06-15-20-intl/h_590a1536f54c9a48c1ead5ea1c7f2e6) Before the day was finished, CNN was reporting that **increase in 22 states**. **Not only were case numbers rising, but hospitalizations were increasing and the share of tests that come back positive had gone up, all of which suggest the coronavirus is spreading in that particular state.** If that kind of situation were to continue, we would be looking toward a troubled future.

—**In Arizona**, hospital intensive care units were filling up “and ventilator use had quadrupled since mid-May,” a Vox story reported. Arizona’s cases were up by 200 percent compared with the previous two weeks. (Vox, “The new coronavirus spikes, explained: Some states are seeing Covid-19 spikes. Here’s what we know.” ... <https://www.vox.com/2020/6/12/21288090/covid-19-coronavirus-us-cases-update-texas-arizona-florida>) In a CNN interview, Tucson internist Dr. Matthew Heinz spoke of some places in Arizona having no empty intensive care unit (ICU) beds and anticipating a shortage of nurses to care for the sick. In spite of the situation, the government was making no effort to slow the reopening in Arizona. **“It makes no sense.... It seems as if nobody is taking this seriously,” he said.** Beginning in 2008, Dr. Heinz served two terms in the Arizona legislature.

—**On June 12, Vox reported:**

- Arkansas (cases up 113 percent in two weeks, positive test rate increasing, current hospitalizations up from 64 on May 10 to 181 on June 10)
- Florida (cases up 87 percent in two weeks, positive test rate increasing, the state does not report current hospitalizations)
- North Carolina (cases up 62 percent in two weeks, positive test rate increasing, current hospitalizations up from 442 on May 10 to 780 on June 10)
- South Carolina (cases up 93 percent in two weeks, positive test rate increasing, the state does not routinely report current hospitalizations but there was a reported recent spike)

- Texas (cases up 53 percent in two weeks, positive test rate increasing, current hospitalizations up from 1,626 on May 10 to 2,153 on June 10)
- Utah (cases up 126 percent in two weeks, positive test rate increasing, current hospitalizations up from 93 on May 10 to 130 on June 10) (Vox, “The new coronavirus spikes, explained: Some states are seeing Covid-19 spikes. Here’s what we know.” ... <https://www.vox.com/2020/6/12/21288090/covid-19-coronavirus-us-cases-update-texas-arizona-florida>)

The FUTURE in Waukesha County, what will it be?

A series of facts help us understand the situation in Wisconsin and in Waukesha County.

—The state of Wisconsin started its Safer at Home program in March. (The program’s essential document is the lengthy “EMERGENCY ORDER #12 SAFER AT HOME ORDER, which can be found at <https://milwaukee-record.com/city-life/read-the-full-text-of-wisconsins-safer-at-home-order-and-then-please-stay-safe-at-home/>. See also <https://www.dhs.wisconsin.gov/publications/p02620b.pdf>.) The state also made a plan — called “Badger Bounce Back” — to reopen using recommendations based on science and coming from public health experts. It advocated a gradual, phased-in process as the safest way to open Wisconsin. The plan called for lifting the Safer at Home restrictions once all six “gating criteria” were met. However, in mid-May the Wisconsin Supreme Court’s decision removed the administration’s ability

to enforce its plan for COVID-19 mitigation, and the legislature refused to act. Mitigation planning was left to local municipalities.

Those Badger Bounce Back criteria were:

1. “Downward trajectory of influenza-like illnesses (ILI) reported within a 14-day period.”
2. “Downward trajectory of COVID-like syndromic cases reported within a 14-day period.”
3. “Downward trajectory of positive tests as a percent of total tests within a 14-day period.”
4. “95% of hospitals affirm that they can treat all patients without crisis standards of care.”
5. “95% of all hospitals affirm that they have arranged for testing for all symptomatic clinical staff treating patients at the hospital per CDC guidelines.”
6. “Downward trend of COVID-19 cases among health care workers calculated weekly.”

—As of June 5, Wisconsin had met only four of the six gating criteria.

—As of June 6, Waukesha County had met all of the gating criteria. This would suggest A) safely opening restaurants with best practices, B) partial opening of small business, and C) limiting gatherings to 10 or fewer people with social distancing.

—It is very important to note that even in this early June reopening phase, people over 60 and those with serious illnesses should continue to shelter at home if at all possible.

We are still looking for indicators that will help us to anticipate the future, a future that one cannot know with certainty in advance.

Dr. Bromage wrote for his May 20 posting (above),
“...throughout most of the country we are going to add fuel to the viral fire by reopening. It's going to happen if I like it or not....” (<https://www.neumc.org/virus-reentry>)

That sentiment was echoed in a June 12 story that quoted Harvard University epidemiologist William Hanage as saying, “In the face of increasing numbers of case counts, the continued relaxation will only provide more opportunity for community transmission.... The virus is getting highways along which to transmit.” (<https://www.vox.com/2020/6/12/21288090/covid-19-coronavirus-us-cases-update-texas-arizona-florida>)

By late May, the situation in New York provided some cause for optimism about the future. The New York City epidemic had been large, but by May 20, it was being contained, according to Dr. Bromage. (<https://www.neumc.org/virus-reentry>)

Will the SARS-CoV-2 virus ever go away? “There’s a good chance the coronavirus will never go away, even with a vaccine. Experts say it will likely remain for decades to come, circulating among the world’s population and becoming

‘endemic’ — like measles, HIV and chickenpox,” the Washington Post’s Angela Fritz reported on May 27, 2020. (Angela Fritz, “Coronavirus may never go away, even with a vaccine.” in “Coronavirus Updates: Important developments in the pandemic.”)