



COVID-19 Science and Medicine Updates

Compiled by University of Maine faculty and students

Maine Updates – April 28, 2020

From Maine CDC:

<https://www.maine.gov/dhhs/mecdc/infectious-disease/epi/airborne/coronavirus.shtml>

Data updated at April 28 at 11:45AM:

Confirmed Cases: 1040

Recovered: 585

Hospitalized: 163

Deaths: 51

Negative test results, updated April 22 (now published weekly): 16,784

Maine/Penobscot County Data - Online Dashboard Links

Desktop version:

<https://arcg.is/1Knarr>

Mobile version:

<https://arcg.is/5qGGr>

News from Maine:

Governor Mills Presents Safe, Gradual Plan to Restart Maine's Economy

“Progression through the stages will occur month-by-month, depending on the success of previous stages. For example, Stage 1 will begin on May 1, if there are no new trends that change the plan. Stage 2 will begin in June, and Stage 3 will begin in July and continue through August. Stage 4, which lifts the most restrictions, will start at a point to be determined in the future. A month-by-month breakdown of the stages allows for sufficient time to assess the effectiveness of the health and safety precautions adopted and evaluate the potential need to adjust course.”

Stage 1 (May): Beginning May 1st, Stage 1 continues the prohibition on gatherings of more than 10 people, the quarantine of all people entering or returning to Maine for a period of 14 days, and the special precautions for older Mainers and others at risk of COVID-19. It calls for people who are able to work from home to continue to do so, including State employees. It will also newly require that Maine people wear cloth face

coverings in public settings where physical distancing measures are difficult to maintain, and continue strict requirements for long-term care facilities. Guidance on cloth face coverings will be issued in the coming days. Stage 1 also allows for the limited expansion of certain business, religious, and quality of life activities, with appropriate safety precautions. These include:

- Health care from Maine-licensed providers, with recommendations that they prioritize care for patients with time-sensitive conditions; assure the safety of patients, staff, and communities; manage the use of essential resources such as personal protective equipment and testing supplies; and pace re-opening services to the level of community COVID-19 activity, maintaining capacity in our hospitals for potential outbreaks
- Personal services: Barber shops, hair salons, and pet grooming
- Limited drive-in, stay-in-your-vehicle religious services
- Drive-in movie theaters
- Outdoor recreation: guided outdoor activities (hunting & fishing) and restricted use of golf and disc golf courses
- State parks, state-owned public land trails, and historic sites; although certain coastal state parks will remain closed
- Auto dealerships and car washes

<https://www.maine.gov/governor/mills/news/governor-mills-presents-safe-gradual-plan-restart-maines-economy-2020-04-28>

Summary of Maine data as cases reached nearly 1000:

- Highest rates in Cumberland County, roughly 1:700 residents tested positive
- Health care workers make largest group of confirmed cases, but have higher rates of testing availability
- According to the CDC: Roughly 68 in every 100,000 Maine residents have tested positive; lower than all but six other states – West Virginia, Oregon, Minnesota, Alaska, Montana and Hawaii
- Maine is among the 18 states reporting three or fewer deaths per 100,000 residents
- 53 percent of deaths have occurred at nursing homes or other long-term care communities.

<https://www.pressherald.com/2020/04/25/covid-19-trends-emerging-in-maine-but-limited-testing-makes-conclusions-harder-to-reach/>

Other COVID-19 News:

DEBUNKING COVID-19 MYTHS:

- **Using disinfectants in or on the body:** Disinfectants like bleach should never be utilized in or on the body, where they can cause serious tissue damage, poisoning, or even death. Disinfectants are meant to kill virus on inanimate surfaces. In our body, viruses reside largely inside our cells, not on surfaces. The fact that disinfectants are so effective at killing viruses indicates their toxicity to human cells. No reputable scientific or medical body has ever recommended ingesting disinfectants.
- **Using UV light in or on the body:** UV light is also effective at killing microorganisms, including viruses, on inanimate surfaces. However, UV causes

DNA damage and thus is a carcinogen in humans. No reputable scientific or medical body has ever recommended using UV light to kill viruses in or on the human body

- **Foods to stop COVID-19:** Much misinformation about “miracle” foods or diets that can prevent or mitigate COVID-19 can be found in the media. To date, no food or diet has been shown to stop viral infections.

<https://www.nature.com/articles/d41586-020-01266-z>

<https://theconversation.com/coronavirus-there-are-no-miracle-foods-or-diets-that-can-prevent-or-cure-covid-19-136666>

Questions to ask yourself when finding reputable health resources:

1. Is the information recommended by a recognized academic hospital? (common sources of information are Cleveland Clinic, Mayo Clinic, Harvard Medical)
2. Is the same information provided by multiple, reputable sources?
3. Is the information backed by research (from reliable peer-reviewed journals)?
4. Does the information make sense, biologically and physiologically? Is it too good to be true? Does it seem like a potential mechanism of action for a proposed treatment is not feasible?
5. Is the source trying to sell you something, or are they being paid to provide medical advice online?
6. Are experts cited as being supportive of the evidence? Or are they more cautious, perhaps indicating that evidence is conflicting, more studies need to be done, the approach works for only a subset of patients, there are serious adverse side-effects, or more rigorous experiments need to be carried out before conclusions can be made?

Mental Health effects on healthcare workers:

- The increased vigilance, risk to health and life, and preparation needed for healthcare workers to continue their essential work during the COVID-19 pandemic is taking a toll on mental health and wellbeing
- Researchers are only beginning to investigate this phenomenon
- In Maine, several resources are available for healthcare workers, including:
 - Mills Administration statewide telephone line for frontline workers:
<https://www.maine.gov/dhhs/press-release.shtml?id=2417012>
 - Medical Professionals Health Program
<https://www.mainemph.org/>
 - Hospital Peer Support groups (such as at Maine Medical Center)

<https://www.sciencemag.org/news/2020/04/health-care-workers-seek-flatten-covid-19-s-second-curve-their-rising-mental-anguish>

<https://www.mainepublic.org/post/maines-stressed-health-care-workers-find-support-peers-online>

Re-thinking widespread ventilator use for COVID-19 cases:

- Increasingly, medical doctors are questioning whether ventilator use may be contributing to increased mortality from COVID-19 and are investigating whether alternative approaches are useful.
- More research needs to be conducted before standard-of-care practice is changed in hospitals
- “Reuters interviewed 30 doctors and medical professionals in countries including China, Italy, Spain, Germany and the United States, who have experience of dealing with COVID-19 patients. Nearly all agreed that ventilators are vitally important and have helped save lives. At the same time, many highlighted the risks from using the most invasive types of them - mechanical ventilators - too early or too frequently, or from non-specialists using them without proper training in overwhelmed hospitals.”

<https://graphics.reuters.com/HEALTH-CORONAVIRUS/VENTILATORS/oakvekyxvrd/index.html>

<https://www.reuters.com/article/us-health-coronavirus-ventilators-specia/special-report-as-virus-advances-doctors-rethink-rush-to-ventilate-idUSKCN2251PE>

<https://www.medscape.com/viewarticle/928605>

Most contagious phase of COVID-19 is two days before symptoms start:

- By observing temporal patterns of viral shedding of SARS-Cov-2, researchers have demonstrated that the highest viral load in throat swabs at the time of symptom onset, indicating that infectiousness peaked on or before symptom onset

<https://www.sciencenews.org/article/coronavirus-covid-19-infection-contagious-days-before-symptoms-appear>

<https://www.nature.com/articles/s41591-020-0869-5>

Comparing Policies for COVID responses:

- Countries with the most effective responses that quickly “flattened the curve” provide lessons for the rest of the world
- For example, Hong Kong has used surveillance, quarantine, social distancing, school closures and widespread mask usage. Researchers are unable to tell how each measure contributed to the overall reduction in infection rates.
- WHO is leading the creation of a new database to collect data on these interventions
- A similar approach is Oxford’s COVID-19 Government Response Tracker

<https://www.nature.com/articles/d41586-020-01248-1>

<https://www.bsg.ox.ac.uk/research/research-projects/coronavirus-government-response-tracker>

RESOURCES AND RECOMMENDED READINGS:

Clinical and Administrative Guidance on COVID-19 shared by UW Hospitals:

As an early hot-spot in the US, Washington has been providing leadership and guidance around handling clinical cases of COVID-19. Documents are shared at this site, and constantly updated:

<https://covid-19.uwmedicine.org/Pages/default.aspx>

UMaine's Fogler Library COVID-19 Lib Guide:

<https://libguides.library.umaine.edu/coronavirus/maine>

Calculate your Pandemic Footprint, based on your behaviors:

<https://www.pandemic-footprint.com/>

NIH is Enrolling for a New Study to Quantify Undetected Cases of Coronavirus

Blood samples from healthy volunteers are needed, learn more here:

<https://www.niaid.nih.gov/news-events/nih-begins-study-quantify-undetected-cases-coronavirus-infection>

Comparison of COVID testing results, false positive and false negative rates across platforms:

<https://covidtestingproject.org/>

Reputable Online Resources with COVID-19 Data:

IHME Health Data and Projections:

<https://covid19.healthdata.org/united-states-of-america>

<https://covid19.healthdata.org/united-states-of-america/maine>

Johns Hopkins

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

Maine Small Business Resources during COVID

<http://www.mainstreamfinance.org/covid-19-updates/small-business-updates-and-resources-during-covid-19-outbreak/>

Questions about the production of these bulletins?

Contact kristy.townsend@maine.edu

All bulletins posted publicly online at:

<https://umaine.edu/coronavirus/umaine-science-and-medicine-updates/>

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