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2020-05-15 DAILY UNM GLOBAL HEALTH COVID-19 BRIEFING

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DAILY UNM GLOBAL HEALTH COVID-19 BRIEFING

May 15, 2020

Executive Summary

Governor clarifies health orders. NM childhood deaths high. NM workplace investigations. NM case count. Navajo emergency orders. \$77M NM testing/tracing. NM convalescent plasma. NM unemployment claims slow. NM food bank challenges. Farmington Mall protest. \$3T bill opposition. Lancet FDA revival call. UK Roche antibody testing. Swedish excess mortality. End of Slovenia pandemic. US invest in COVID-19 vaccine. Safe decontamination N95 respirators. Business occupancy load. 10 years of life lost burden. Forecasting models predict deaths. Infection fatality rate 8%. Resilient medical education. Restrictions: human rights law. Guidelines for nursing homes. Managing hematology and oncology patients. Abbott test accuracy. Lab specimen pooling. Sample self-collection. Improving test accuracy. NIH HCQ+azithromycin RCT. Tocilizumab ineffective -- retrospective study. Aerosolized HCQ. 42 new clinical trials. Smoking link. Cardiovascular disease link. Prone positioning. Alcohol withdrawal. Vitamin D lower.

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Our continuously curated practice guidelines in the context of COVID-19 can be found [here](#).

Our continuously curated therapeutic evidence is maintained [here](#).

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NM Highlights

- [NM Governor clarifies public health order and discusses current COVID-19 effort today \(5/15\)](#)
The new emergency order requires everyone to cover their faces in public, with exceptions for eating, drinking and exercise. All retailers and houses of worship beginning Saturday may also operate at 25 percent occupancy. Motor Vehicle Division field offices will reopen in a limited fashion June 1 with COVID-safe practices for appointment-only services that can't be completed online. The governor was joined by state health and elections officials this afternoon and gave an update on New Mexico's COVID-19 efforts. A video of her comments is [here](#).
- [NM: 2nd highest rate of coronavirus infections in children nationwide](#)
According to the secretary of NMDOH, NM has 13% pediatric cases (US averages 3.2%). Dr. Walter Dehority, UNM SOM, says the reason for the increase "could be multi factorial".
- [Interactive NM map of COVID-19 related workplace investigations](#)
The [map](#) shows the businesses the Occupational Health and Safety Bureau of the New Mexico Environment Department has received complaints about and how the state responded. Complaints include a lack of PPE, improper cleaning and lack of social distancing. The state says it has cleared many of the businesses investigated of any wrongdoing. To file a workplace complaint, email complaints.OSHA@state.nm.us or call 505-476-8700.
- [NM reports 11 more COVID-19 deaths and 164 additional cases on May 15](#)
As of today (5/15), the total positive cases and total deaths in the state are 5,662 and 253, respectively. The state has performed 124,458 tests, there are 223 individuals currently hospitalized for COVID-19, and 1,671 COVID-19 cases have recovered. [NMDOH portal featuring epidemiologic breakdown of cases](#).

- [Navajo Nation implements weekend lockdown and extends emergency declaration until June 7](#)

The ongoing rise in individuals testing positive has prompted leaders on the Navajo Nation to implement a 57-hour lockdown for the upcoming weekend, with stricter measures than previous weekend lockdowns. Under the [executive order](#) the Navajo Nation President and Vice President signed on 5/12, the tribe will continue nightly curfews and a partial shutdown of the tribal government until June 7. The current emergency declaration that closes government offices and nonessential programs was set to expire May 17. A stay-at-home order for residents on the vast reservation also remains in place.

- [NM receives \\$77.3 million for testing and tracing](#)

The money, which will come from the U.S. Department of Health and Human Services, is part of \$25 billion in funding for testing, health care providers and small businesses passed by Congress last month. The funds will also be used for tracing efforts, which typically include in-depth interviews with positive cases to identify those who they may have met with. The tracing effort will employ NM state employees. Accenture has been contracted to manage the effort, monitor quality control, and ensure privacy protections.

- [New Mexico's healthcare industry to collect plasma from recovered patients to treat active cases](#)

TriCore Labs, Vitalant Blood Center and New Mexico hospitals across the state including Lovelace, Presbyterian and University of New Mexico Hospital are working together to collect plasma from recovered patients. Use of antibodies from recovered patients are helpful for active cases. 50 recovered patients (recovered for 28 days) have enrolled. The collected plasma goes to any hospital and any patient. Doctors say this plasma can help buy time until a vaccine or other definitive therapies are available.

- [New unemployment claims in New Mexico begin to subside](#)

New Mexico saw a 35 percent drop in initial unemployment claims for the week ending May 9, according to the U.S. Department of Labor. The first-time filings for state unemployment benefits dropped below 10,000 since mass layoffs due to coronavirus business closings started the week of March 13. New Mexico's unemployment rate for the week ending May 2 was 11.98 percent, the Labor Department reported.

- [NM food banks see increasing need and fewer volunteers](#)

Many volunteers have been unable to help due to the heightened risk, as the volunteers are often elderly. Food insecurity has been a major concern during the pandemic and food pantries are seeing a rise in the number of food boxes they are giving out. Multiple food banks across the state have opted for a drive-through model to minimize viral transmission. Local grocery stores and food vendors have been donating to the food banks to help ease the burden.

- [Crowds gather in front of the Farmington Mall to protest businesses staying closed](#)

In San Juan County, people protested Thursday businesses should be open. San Juan currently has more coronavirus cases than Bernalillo County.

US Highlights

- [Opposition to house democrats' \\$3 trillion Coronavirus relief bill](#)

Forbes: As House Democrats try to pass a new \$3 trillion coronavirus relief package on Friday, the bill faces opposition from Republicans and moderate Democrats concerned with its cost, and Progressives saying the legislation doesn't go far enough.

- [Lancet editorial: "Reviving the US CDC"](#)

Lancet: "The US Centers for Disease Control and Prevention (CDC), the flagship agency for the nation's public health, has seen its role minimized and become an ineffective and nominal adviser in the response to contain the spread of the virus." "Only a steadfast reliance on basic public health principles, like test, trace, and isolate, will see the emergency brought to an end, and this requires an effective national public health agency. The CDC needs a director who can provide leadership without the threat of being silenced and who has the technical capacity to lead today's complicated effort."

International Highlights

- [UK in talks to buy Roche antibody test for widespread testing](#)
Swiss company Roche Holding AG has developed a highly accurate antibody test. UK is in talks to buy millions of tests and implementing widespread testing, especially to healthcare workers. The hope is to use tests to reopen the economy.
- [Excess mortality from COVID19 in Sweden](#)
The Swedish registry was queried for total weekly deaths, total population at risk, and estimate age- and sex-specific weekly death rates for the 2015-2020 period. Beginning with the first week of April 2020, death rates for age above 60 are higher than those in the previous 5 years in Sweden. "Persons above age 80 are disproportionately more affected. Men suffer higher levels of excess mortality compared to women at all ages with 75% higher death rates for males and 50% higher for females. Current excess mortality corresponds to a decline in remaining life expectancy of 3 years for men and 2 years for women." A live link for all COVID19 disease cases and deaths in Sweden is available [here](#).
- [Slovenia first EU nation to declare end of epidemic](#)
The European Nations state's government said that the virus was still present in the country, but the spread was under control. The country is to begin reopening next week. Public gatherings remain banned while social distancing rules and mask-wearing remain mandatory in public spaces. It also announced sport competitions could resume on May 23.

Economics, Workforce, Supply Chain, PPE Highlights

- [U.S. to invest in and stockpile COVID-19 vaccines by end of 2020](#)
On 5/15, the U.S. president announced the government was working with other countries to develop a coronavirus vaccine at an accelerated pace while preparing to distribute a vaccine once ready. The U.S. government expects to invest in the top vaccine candidates, of which there are currently 14 possibilities in development. [Article here](#). The U.S. government set a goal to stockpile 300 million vaccine ready-to-deploy doses by the end of 2020 despite experts warning that it would likely take 12-18 months or more to get a vaccine ready for the public.
- [Decontamination and reuse processes for N95 respirators](#)
A UNM study describes the safe collection, storage, and decontamination of N95 respirators using hydrogen peroxide vapor (HPV). Lessons learned include developing an adequate reserve of PPE for efficiently implementing the reprocessing workflow and locating a suitable environment for the HPV decontamination procedure with pre-existing conditions required for conducting the HPV decontamination process.
- [Fire Marshal helping businesses determine occupancy load](#)
To help businesses make sure they are in compliance with the public health order, Deputy Chief Fire Marshall Gene Gallegos and his 14 inspectors have been giving notices to businesses, informing them about their occupancy load.

Epidemiology Highlights

- [More than 10 years of life lost due to COVID-19](#)
Most people dying from COVID-19 are older with underlying long-term conditions. Numbers of deaths do not reflect the burden of years of life lost in the population when someone dies earlier than expected. YLL can be expressed per-capita as the average number of years an individual would have been expected to live had they not died of a given cause. The burden of COVID-19 deaths in terms of years of life lost is almost a decade even after adjusting for long-term conditions. Years of life lost analyses can inform policy and intervention development.
- [CDC tracks 12 different forecasting models of possible COVID19 deaths in the US](#)
Twelve different forecasting models are described. Forecasts are important to provide estimates of the effects of interventions. As of May 11, all models forecast an increase in deaths in the coming weeks and a cumulative total exceeding 100,000 by June 1.

- [Infection fatality rate is around 0.8% based off of early data from France](#)

Number of screening tests and sampling for the tests do not allow for an accurate measure of the actual number of infections and infection fatality rate in France. A mechanistic-statistical model estimated the number of reported and unreported infections in France from late February and early March. The model adjusted for the number of deaths in nursing homes since older patients tend to sicker and symptomatic. The infection fatality rate was estimated to be 0.8% which is in line with calculated case fatality rates based on several antibody studies published after the observation period.

Healthcare Policy Recommendations

- [Sustaining medical education through coordinated responses of academic medical centers](#)

Undergraduate education, residency training, continuous professional development and research in academic medical centers need not to come to a standstill each time there is a pandemic, rather measures should be put in place to ensure safety through establishment of medical response teams to make time-sensitive decisions while managing pandemic threats.

- [International Human Rights Law and COVID-19 pandemic](#)

This article cites the International Human Rights Law and concluded that special measures that restrict human rights are allowed. In the context of serious threats to public health and public emergencies that place life at risk, restrictions on some rights may be justified only when they meet the following requirements: based on legal grounds, strictly necessary, based on scientific evidence, not arbitrary nor discriminatory, of limited duration, respectful of human dignity, subject to revision, and proportionate to achieve their objectives.

Practice Guidelines

- [The U.S. Department of Labor issues first COVID-19 workplace guidance for nursing homes](#)

Reuters: The U.S. Department of Labor issued its first workplace guidance to nursing homes on Thursday. It recommended that they keep residents, staff, and visitors 6 feet apart, screen residents and staff for symptoms, and find alternatives to group activities. It did not give recommendations for testing of residents or workers by nursing homes.

- [Australia and New Zealand guidelines on managing hematology and oncology patients](#)

In patients with cancer with fever and/or respiratory symptoms, consider causes in addition to COVID-19, including other infections and therapy-related pneumonitis. For suspected or confirmed COVID-19, discuss temporary cessation of cancer therapy with a relevant specialist. Provide information on COVID-19 for patients and caregivers. Adopt measures within cancer centers to reduce risk of nosocomial SARS-CoV-2 acquisition; support population-wide social distancing; reduce demand on acute services; ensure adequate staffing; and provide culturally safe care. Consider the risks and benefits of modifying cancer therapies due to COVID-19. Communicate treatment modifications, and review once health service capacity allows. Consider potential impacts of COVID-19 on the blood supply and availability of stem cell donors. Discuss and document goals of care and involve palliative care services in contingency planning.

Testing

- [FDA: possible accuracy concerns with Abbott ID NOW Point-of-Care test](#)

The FDA stated that the test may return false negative results, as it has received 15 adverse event reports. The agency is investigating whether accuracy issues could be due to swab type or the viral transport media type. The FDA suggested that the negative results may need to be confirmed with a high-sensitivity molecular test. Abbott will conduct studies that will include at least 150 positive patients in a variety of clinical settings.

- [Specimen pooling can reduce laboratory costs by 80%](#)

Specimen pooling is a method of screening large number of patients for an infection, and typically involves combining multiple patient specimens into a single test sample, then testing multiple such samples. In this laboratory experiment 10 previously PCR tested nasopharyngeal and throat swab specimens were pooled for testing, containing either one or two known positive specimens of varying viral concentrations. The sensitivity of the test was unchanged from the standard single

sample tests and the accuracy was maintained. This technique can reduce the use of laboratory equipment and time, for example if 1% of the population is infected, pooling 10 specimens can reduce the cost of laboratory operation by about 80%. Pooling samples is especially useful in areas with low prevalence rates, or when conducting proactive surveillance in areas of low infection rate.

- [Self-collection of nasal and throat swab sample effective in small study](#)

Study evaluated the effectiveness of having patients perform their own nasal and throat swabs to collect samples to test for viral infection. Self-swabbing could save a significant amount of PPE. They found that self-collection was a reliable alternative to HCW collection for the diagnosis of SARS-CoV-2 and other respiratory viruses.

- ['Test, re-test, re-test': inaccurate tests to increase the accuracy of COVID-19 testing](#)

Nature Medicine Letter to the Editor. Creative use of currently available cheap and quick tests is described. Authors claim that even if individual tests are inaccurate and unreproducible, they can go a long way to reaching adequate levels of accuracy and precision, at least until the gold-standard tests can be developed.

Drugs, Vaccines, Therapies, Clinical Trials

- [NIH begins clinical trial of hydroxychloroquine and azithromycin to treat COVID-19](#)

NIH will start a Phase 2b placebo-controlled trial enrolling 2,000 symptomatic adults with confirmed COVID-19 in US to assess whether hydroxychloroquine and azithromycin can prevent hospitalization and death and to assess its safety and tolerability. Those over 60 with co-morbidities, pregnant/breastfeeding women, and people living with HIV are eligible to participate.

- [Tocilizumab had no effect on 7-day mortality or ICU admission in retrospective study](#)

This a retrospective cohort analysis of 112 Italian patients of whom 42 were included in a propensity score match. matched based on propensity scores. After multivariate logistic regression there was no observed statistically significant effect on 7-day mortality or ICU admission.

- [Aerosolized hydroxychloroquine to treat COVID-19](#)

The authors propose the use of aerosolized HCQ (2-4 mg per inhalation) in order to reach therapeutic levels at alveolar epithelial cells. Data on self-medication for one week by two of the authors is presented.

- [42 New COVID-19 Trials registered today at clinicaltrials.gov](#)

Treatment trials: Amotosalen-Ultraviolet A, Ivermectin Navarra-IsGlobal, Dociparstat, Interferon Gamma Induced Protein 10, isotretinoin and Tamoxifen, desferal, TOFAcitinib, Lucinactant, mesenchymal Stem Cells, Intravenous Wharton's Jelly, LB1148, Antibody Serology, PLX PAD. At time of writing, a total of 1447 were active, 79 completed, and 3 posted results.

Other Science

- [Smoking is associated with COVID-19 progression: a meta-analysis](#)

The study looked at 19 peer-reviewed papers totaling 11,590 COVID-19 positive patients. 2,133 patients (18.4%) had severe disease and 731 (6.3%) with a history of smoking. A total of 218 patients with a history of smoking (29.8%) experienced a more severe disease course, compared with 17.6% of non-smoking patients. The meta-analysis showed a significant association between smoking and progression of COVID-19 (OR 1.91, 95% CI, p = 0.001).

- [Pre-existing cardiovascular disease associated with worse outcomes in COVID-19 cases: meta-analysis](#)

The meta-analysis of 18 studies (n=4858 patients) found pre-existing cardiovascular disease was associated with around a 3-fold increase in odds of severe COVID-19 infection and an 11-fold increase in overall risk for all-cause mortality. However, this study did not find a significant association between underlying cardiovascular disease and mortality in severe COVID-19 cases.

- [Improvement in respiratory status of 15 patients receiving NIV in prone position](#)

JAMA research letter: The authors describe 15 patients in an Italian hospital who received non-invasive ventilation in the prone position outside the ICU. They found that respiratory rate was lower and oxygenation was higher during and after

pronation than at baseline. Prevention and delay of intubation wasn't assessed. Limitations of the study include a lack of a control group.

- [Prone positioning in non-intubated patients With COVID-19 and ARDS](#)

JAMA research letter: This prospective, single-center, before-after study was conducted among awake, non-intubated, spontaneously breathing patients (n=24) and hypoxemic acute respiratory failure requiring oxygen supplementation. 63% tolerated prone positioning (PP) for more than 3 hours. 25% of patients were responsive to PP, representing 40% of those who sustained PP for ≥ 3 hours. In patients who sustained PP for 3 hours or more, Pao₂ significantly increased (mean (SD), before PP: 73.6 (15.9) mm Hg; during PP: 94.9 (28.3) mm Hg). 4 patients did not sustain PP for >1 hour and required intubation within 72 hours.

- [Increased alcohol withdrawal symptoms as a result of lockdowns](#)

Time series analysis of alcohol withdrawal syndrome (AWS) cases from Bangalore, India, showed initial increase in AWS cases during the early phase of the lockdown followed by a period with below normal AWS cases. The authors theorize the changes in the volume of cases is linked to lockdowns due to difficulty to obtain care and the non-availability of alcohol. The authors suggest planning for an increase in severe AWS is critical to ensure addiction treatment services are not disrupted.

- [25-Hydroxyvitamin D concentrations lower in patients with positive PCR tests](#)

This retrospective study (n=107) showed significantly lower vitamin D levels ($p = 0.004$) were found in PCR-positive for SARS-CoV-2 (median value 11.1 ng/mL) patients compared with negative patients (24.6 ng/mL). The authors suggest vitamin D supplementation as a useful measure to reduce the risk of infection.

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