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2020-06-8/9 DAILY UNM GLOBAL HEALTH COVID-19 BRIEFING

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Recommended Citation

Lambert, Christophe G.; Shawn Stoicu; Ingrid Hendrix; Lori D. Sloane; Mari Anixter; Anastasiya Nestsiarovich; Praveen Kumar; Nicolas Lauve; Karen Armitage; Jenny Situ; Morgan Edwards-Fligner; Clinton Onyango; Perez Olewe; Cristian Bologa; Kristine Tollestrup; and Douglas J. Perkins. "2020-06-8/9 DAILY UNM GLOBAL HEALTH COVID-19 BRIEFING." (2020). https://digitalrepository.unm.edu/hsc_covid19_briefings/49

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DAILY UNM GLOBAL HEALTH COVID-19 BRIEFING

June 8-9, 2020

Executive Summary

NM Highlights: Governor's interview. NM case count. Longer furlough for Santa Fe city employees. ABQ playgrounds reopening. Mask madness tournament. COVID-19 spending receipts. Zagster closes operations in ABQ.

US Highlights: Shutdowns prevented deaths. Foster care delays.

International Highlights: Scientist strike for anti-racism. New Zealand lifts lockdowns.

Economics, Workforce, Supply Chain, PPE: WHO updates mask guidance. Software to manage PPE distribution. Centrifugation testing of masks. Sustain and preserve early career investigators.

Epidemiology Highlights: WHO walks back statement on asymptomatic spread. Non-pharmaceutical interventions successful. Increased risk to intellectually and developmentally disabled. Epidemiologist risk tolerance surveyed.

Healthcare Policy Recommendations: Public health doctors work in medically underserved areas instead of mandatory military service in Korea.

Practice Guidelines: Indian guidelines on endoscopy. European recommendations on management of rheumatic and musculoskeletal diseases. Meta-analysis of cardiovascular complications of COVID-19. Early CPAP and proning shows improved outcomes.

Testing: Antibody testing risks and benefits.

Drugs, Vaccines, Therapies, Clinical Trials: Efficacy and safety of Lianhuaqingwen. Niclosamide effective in animal tests. Gilead's remdesivir early treatment in macaques. 62 new COVID-19 trials.

Other Science: Body temperatures predict mortality. Prone positioning outcomes.

All of our past briefings are maintained in a UNM library repository [here](#).

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

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

You may submit content for future briefings [here](#).

NM Highlights

- [NM Governor's COVID-19 response covered in Rolling Stone](#)
Governor Michelle Lujan Grisham speaks about her focus on testing, with discussion about the challenges of the Navajo nation.

- [NM reports 4 more COVID-19 deaths and 47 additional cases on June 9](#)

As of today (6/9), the total positive cases and total deaths in the state are 9,105 and 404, respectively. The state has performed 241,657 tests, there are 193 individuals currently hospitalized for COVID-19, and 3,699 COVID-19 cases have recovered. [NMDOH portal featuring epidemiologic breakdown of cases.](#)

- [Furloughs for Santa Fe city employees could run through at least Sept. 4](#)

To help address a looming budget deficit of \$100 million, a vast majority of city employees would be furloughed for four hours per week while most of the top officials at City Hall would be furloughed for six hours per week between July 11 and Sept. 4.

- [Playgrounds to reopen on June 15 in the City of Albuquerque](#)

Mayor Tim Keller announced the reopening of playgrounds during Tuesday's telephone town hall. City crews have been sanitizing playgrounds during the closure. Social distancing and masks will be mandatory.

- [Mask madness tournament voting begins](#)

A March-madness style tournament pits masks against each other for the public vote for the favorite mask in New Mexico. The top 32 vote-getters among over 500 masks were seeded into brackets and you can now vote for your favorite mask in each matchup, with each subsequent round cutting the field in half.

- [Receipts posted for state COVID-19 spending](#)

Albuquerque Journal: The New Mexico Sunshine Portal website posts details of state spending on COVID-19 response. The dollar amounts for procurements posted range from \$225 to \$2.3 million.

- [Zagster, the only e-scooter firm in Albuquerque ceases operations in the city](#)

The Boston-based company had suspended Albuquerque service in March due to the coronavirus pandemic, during which its one-year pilot program with the city had ended. Zagster told the city that it did not plan to stay in the market as ridership sharply declined.

US Highlights

- [Shutdowns prevented 60 million coronavirus infections in the U.S.](#)

Nature: Researchers from UC Berkeley estimate that the shutdown orders prevented about 60 million novel coronavirus infections in the United States and 285 million in China. The research study examined how stay-at-home orders and other restrictions limited the spread of the contagion. A [separate study](#) from epidemiologists at Imperial College London estimated the shutdowns saved about 3.1 million lives in 11 European countries, including 500,000 in the United Kingdom, and dropped infection rates by an average of 82 percent, sufficient to drive the contagion well below epidemic levels. The two reports, published simultaneously Monday in *Nature*, used completely different methods to reach similar conclusions. They suggest that the aggressive and unprecedented shutdowns, which caused massive economic disruptions and job losses, were effective at halting the exponential spread of the novel coronavirus.

- [Visitation bans threaten parents' bond with children in foster care](#)

The Denver Post: 23 states have enforced no-visitation rules in foster care since beginning of pandemic. Author comments on potential harm with decreased bonding and missed opportunities to show caseworkers and judges that the parent is able to regain custody. There are also time constraints to regain custody, and delays will increase difficulty to regain custody. Various nonessential businesses have reopened while in-person foster visits are still banned.

International Highlights

- [Thousands of scientists worldwide to go on strike for Black lives](#)

Nature: Thousands of academics and major scientific organizations worldwide will stop work on 10 June as part of a global stand against anti-Black racism in science. Although the movement began in the United States, it quickly spread around the globe. Organizations joining the strike include the physical-sciences preprint server arXiv, which is discouraging authors from

submitting manuscripts on Wednesday. Instead, it has asked its users to spend the time researching and discussing racism and planning how to tackle it in their own communities.

- [New Zealand lifts lockdown as last coronavirus patient recovers](#)

Al Jazeera: Experts say several factors have helped the nation wipe out the disease, including its isolated location, along with leadership shown by the prime minister, who imposed a strict lockdown early on during the outbreak. Borders will remain closed for non-residents.

Economics, Workforce, Supply Chain, PPE Highlights

- [WHO updates mask guidance](#)

World Health Organization: The WHO released updated guidance on mask usage, including information on who should use a mask and when masks should be worn, as well as the materials or type of mask that should be used. The new recommendations deviate from previous guidance in a few key areas, particularly for areas experiencing widespread SARS-CoV-2 transmission. The WHO now recommends that masks be worn by all health personnel seeing patients in areas of widespread transmission, not just clinicians treating COVID-19 patients. The general public should wear masks in crowded areas. In terms of materials, the WHO now recommends that cloth masks be made out of at least 3 layers of different materials, ideally an inner layer of absorbent material (e.g., cotton), a middle layer of non-woven material (e.g., polypropylene), and an outer layer of non-absorbent material (e.g., polyester). WHO emphasized that mask use alone does not protect against SARS-CoV-2 infection and that masks should be used as part of a “comprehensive strategy” of protective measures.

- [Big data platform allowed Taiwan to manage PPE distribution based on changing needs in real time](#)

International Journal of Surgery: Following the 2003 SARS epidemic, Taiwan CDC moved infectious disease reporting and PPE stockpile management to an established cloud-based monitoring system hosted by the universal healthcare system. Application of data analytics to this system allowed for rapid and appropriate distribution of masks and other PPE once the first cases of COVID-19 were identified.

- [A New method for testing filtration efficiency of mask materials under sneeze-like pressure](#)

In Vivo: Efficiency of surgical masks, gauze masks, gauze, cotton, silk, linen and tissue paper on blocking micro-droplet sized starch particles (average 8.2 μm) and latex microspheres (0.75 μm) with a velocity of 44.4 m/s created by centrifugation was qualitatively analyzed by using imaging-based analysis. The 4 layers of silk could block 93.8% of microspheres and 88.9% of starch particles, followed by the gauze mask (78.5% of microspheres and 90.4% of starch particles) and the 2 layers of cotton (74.6% of microspheres and 87.5-89.0% of particles). Other materials also blocked 53.2-66.5% of microspheres and 76.4%-87.9% of particles except the 8 layers of gauze which only blocked 36.7% of particles. The filtration efficiency was improved by the increased layers of materials. Thus, centrifugation-based filtration efficiency test not only compensates shortcomings of current tests for masks, but also offers a simple way to explore new mask materials during pandemics.

- [COVID-19 impact on early career investigators: a call for action](#)

Nature: Clinical trainees, with in-demand skillsets, are necessarily being pulled from protected research time to provide clinical care to patients with COVID-19. Job opportunities are diminishing during the pandemic. Academic institutions are facing unprecedented financial challenges. There are barriers for those who require a visa and/or international travel to continue their careers. The resulting ‘back-up’ will cause ECIs to stay longer in current positions than intended or end up in limbo between assignments and may prematurely depart to pursue opportunities in industry or other arenas. Recommendations include increasing connectivity, enhancing opportunities in meetings, broadening mentoring opportunities, increasing research flexibility, maintaining transparency in hiring process, using collective voice.

Epidemiology Highlights

- [WHO walks back June 8 statement: "Asymptomatic spread of COVID-19 is rare"](#)

STAT: At a virtual press conference on June 8, WHO lead for the COVID-19 pandemic Dr. Maria Van Kerkhove made a statement suggesting that true asymptomatic transmission was minimal based on unpublished and published contact tracing

reports from various countries. She suggested that tracing and containment efforts should be focused on following symptomatic cases. These comments generated strong pushback from outside public health experts, and on June 9 Dr. Van Kerkhove clarified that the actual rates of asymptomatic transmission are still unknown. She also drew a distinction between transmission by a case who never develops symptoms, and transmission by cases who are mildly symptomatic, or transmit before developing symptoms. Following this clarification and according to the opinion of other public health groups and agencies, the consensus remains that individuals without symptoms can and do spread COVID-19. Transcript for the virtual press conference on 6/8 may be accessed [here](#).

- [Non-pharmaceutical interventions in Europe were successful in epidemic control](#)

Nature: A computational modeling approach estimates that there have been many more infections than are currently reported. This high level of under-ascertainment is likely due to the focus on testing in hospital settings which misses milder or asymptomatic cases in the community. Despite this, only a relatively small minority of individuals in each country have been infected. The populations in Europe are not close to herd immunity (~70% if R_0 is 3.814). With R_t values below 1 in all countries, the rate of acquisition of herd immunity will slow down rapidly. The estimates for attack rates during the study period are in line with those reported from national serological studies. Overall, current interventions have been sufficient to drive the reproduction number R_t below 1 (probability $R_t < 1.0$ is 99.9%) across all countries studied and achieve epidemic control. Lockdown has an identifiable large impact on transmission reduction (81% [75% - 87%]).

- [COVID-19 presents greater risk to people with intellectual and developmental disabilities](#)

Disability and Health Journal: Trends in comorbidities, number of cases, number of deaths, and case-fatality rate were compared among patients with and without intellectual and developmental disabilities (IDD) who had a positive diagnosis for COVID-19 through May 14, 2020. People with IDD had higher prevalence of specific comorbidities associated with poorer COVID-19 outcomes. Younger population with IDD had a higher fatality rate.

- [When epidemiologists expect to do everyday activities](#)

NY Times: Many epidemiologists are already comfortable going to the doctor, socializing with small groups outside or bringing in mail, despite the coronavirus. Unless there's an effective vaccine or treatment first, it will be more than a year before many say they will be willing to go to concerts, sporting events or religious services. Some may never greet people with hugs or handshakes again.

Healthcare Policy Recommendations

- [Public Health Doctors: COVID-19 management in Korea](#)

Public Health Doctors (PHDs) are a Korea-specific group of young (20s-30s) male doctors who work in medically underserved areas, including rural public health centers, airport quarantines, and correctional facilities for 3 years as a substitute for their mandatory military service. They proved valuable human resource to mitigate public health problems and to prepare better for future epidemics. PHDs have remarkable potential, both individually and systematically thus should be properly trained public health experts and leaders to prepare them for public health crises.

Practice Guidelines

- [Indian Association of Gastrointestinal Endo Surgeons COVID-19 endoscopy recommendations](#)

Journal of Minimal Access Surgery: Recommendations from the Indian Association of Gastrointestinal Endo Surgeons for safe performance of diagnostic and therapeutic endoscopy during the COVID-19 pandemic are published. Stop all elective endoscopy (perform only in urgent and emergency cases). Stop seeing and reviewing non-urgent cases. Strict use of PPE and social distancing. Perform RT-PCR prior to endoscopy. Fill out a comprehensive informed consent form. Use high-level tools disinfection. Follow up all patients who underwent endoscopy for 2 weeks.

- [EULAR recommendations for the management of rheumatic and musculoskeletal diseases](#)

BMJ: European League Against Rheumatism recommendations. Patients with rheumatic and musculoskeletal diseases (RMD) who do not have suspected or confirmed COVID-19 should be advised to continue their treatment unchanged, namely NSAIDs, glucocorticoids, sDMARDs, bDMARDs, osteoporosis medications and analgesics. If the RMD and its drug treatment

are stable, and signs or symptoms of drug toxicity are absent, regular blood monitoring and face-to-face rheumatology consultations can be postponed temporarily. Consultation can take place remotely. If the RMD is active, if drug therapy has recently been started or needs adjustment, or if signs or symptoms of drug toxicity emerge, patient and rheumatologist should liaise, weigh the risks of a visit to the clinic against the limitations of remote advice and decide together. If a patient with RMD is offered an outpatient, day care or other type of hospital appointment, patients and members of the rheumatology team should follow local guidance for infection prevention and control, including the use of PPE if indicated. Patients with RMD without COVID-19 symptoms who have been in contact with a SARS-CoV-2-positive person should be tested for SARS-CoV-2. If a patient with RMD and symptoms of COVID-19 is chronically treated with glucocorticoids, this treatment should be continued. If patients with RMD experience mild symptoms of COVID-19, potential treatment changes in DMARDs should be discussed on a case-by-case basis. Patients with RMD and initially mild symptoms who experience worsening of COVID-19 symptoms should immediately seek further healthcare advice of an expert in treating COVID-19, such as a pulmonologist, an internist or a specialist in infectious diseases. Inpatients with RMD who are admitted due to significant, COVID-19 should follow local treatment recommendations for COVID-19 as applied by the treating expert. Patients with RMD without symptoms of COVID-19 should be advised to update their vaccination status in accordance with the EULAR recommendations for the vaccination of patients with RMD, with a focus on pneumococci and influenza. In patients with RMD treated with cyclophosphamide or glucocorticoids, *Pneumocystis jirovecii* pneumonia prophylaxis should be considered.

- [Cardiovascular complications in COVID-19: a systematic review and meta-analysis](#)

Journal of Infection: The most frequent cardiovascular complications among patients hospitalized with COVID-19 are heart failure, myocardial injury, cardiac arrhythmias and acute coronary syndrome. The following pathogenetic pathways are proposed: (i) direct cardiotoxicity; (ii) systemic inflammation; (iii) myocardial demand-supply mismatch; (iv) plaque rupture and coronary thrombosis; (v) adverse effects of therapies during hospitalization; (vi) sepsis leading to DIC; (vii) increased systemic thrombogenesis; and (viii) electrolyte imbalances. Myocardial injury is reported to mainly result from direct viral involvement of cardiomyocytes and the effects of systemic inflammation. Though venous thromboembolism incidences were based on a single report, patients with COVID-19 are at increased risk of hypercoagulable states due to prolonged immobilization, systemic inflammation and risk for DIC.

- [Early CPAP and proning show improved patient outcomes](#)

MedRxiv: In this retrospective observational study at Bradford patients admitted with a positive COVID-19 PCR were included. Negative patients were also included where clinical suspicion remained high (a total N=559). 9.5% received continuous positive airway pressure (CPAP), 7.2% were admitted to ICU and 4.8% were ventilated. Hospital mortality was 33.3%, ICU mortality was 54.5%. Following CPAP, 64% of patients with moderate or severe ARDS at presentation, who were candidates for escalation, avoided intubation during their stay. Bradford had a markedly lower ICU admission and intubation rate than the ISARIC (International Severe Acute Respiratory and Emerging Infection Consortium) cohort ($p < 0.0001$), with comparable hospital mortality overall and for ICU patients.

Testing

- [The cost of waiting for certainty on COVID-19 antibody test](#)

NEJM Perspective: Although the WHO suggests that until we “guarantee” the accuracy of the immunity-certification process, failing to take action is itself an action that carries profound costs and health consequences. The risks of reopening workplaces and the economy to individuals and communities are real; steps in that direction should be taken cautiously. However, the costs of delaying any reopening until we are certain that no one returning to work will transmit Covid-19 are also real. There is no such thing as a 100% safe bet thus an unattainable ideal should not be the enemy of a very good option that we currently have.

Drugs, Vaccines, Therapies, Clinical Trials

- [Efficacy and safety of Lianhuaqingwen \(LH\) Capsules, a repurposed Chinese herb](#)

Phytomedicine: A prospective multicenter open-label randomized controlled trial on LH capsules was performed on

confirmed COVID-19 cases. Patients were randomized to receive usual treatment alone or in combination with LH capsules (4 capsules, thrice daily) for 14 days. The primary endpoint was the rate of symptom (fever, fatigue, coughing). The study included 284 patients (142 each in treatment and control group) in the full-analysis set. The recovery rate was significantly higher in treatment group as compared with control group (91.5% vs. 82.4%, $p = 0.022$). The median time to symptom recovery was markedly shorter in treatment group (median: 7 vs. 10 days, $p < 0.001$). Time to recovery of fever (2 vs. 3 days), fatigue (3 vs. 6 days) and coughing (7 vs. 10 days) was also significantly shorter in the treatment group (all $p < 0.001$). The rate of improvement in chest computed tomographic manifestations (83.8% vs. 64.1%, $p < 0.001$) and clinical cure (78.9% vs. 66.2%, $p = 0.017$) was also higher in treatment group. However, both groups did not differ in the rate of conversion to severe cases or viral assay findings (both $p > 0.05$). No serious adverse events were reported.

- [Niclosamide anti-parasitic drug effective against coronavirus in animal tests](#)

Reuters: South Korea's Daewoong Pharmaceutical said its anti-parasitic drug niclosamide, used to treat tapeworms, eliminated the novel coronavirus from ferrets' lung tissues and inhibited inflammation. The company plans to start human clinical trials in July. Three other companies around the world are testing niclosamide as a coronavirus treatment, but Daewoong is the only one that offers the drug in a form that is not given orally, the company official told Reuters.

- [Gilead's remdesivir shows promise in COVID-19 study on monkeys](#)

Nature: Therapeutic remdesivir treatment initiated early during infection had a clinical benefit in SARS-CoV-2-infected rhesus macaques. The data support early remdesivir treatment initiation in COVID-19 patients to prevent progression to pneumonia. This article was reported on in our April 20, 2020 briefing when it was a [preprint](#).

- [62 New COVID-19 Trials registered June 8-9 at clinicaltrials.gov](#)

Treatment trials: Nitric Oxide, QuadraMune™, Cytokine Adsorption, Imatinib, Lactoferrin, Chloroquine or Hydroxychloroquine, Bemiparin, Bromhexine & Spironolactone, Baricitinib, Lanadelumab, Nitazoxanide, Anakinra & Tocilizumab, Prostacyclin (Iloprost), Prophylactic Ivermectin. At time of writing, a total of [1907](#) were active, [133](#) completed, and [4](#) posted results.

Other Science

- [Both high and low body temperatures predictive of COVID-19 mortality](#)

Critical Care: Body temperature elevation is common, and high maximum temperature during the course of infection was a significant harbinger of poor outcomes. The authors analyzed body temperature data from 7614 patients with COVID-19 at Mount Sinai and its affiliated hospitals in the New York area as of May 3, 2020. One in three patients reaching a maximum body temperature above 39.5°C died. This was approximately a 5-fold increase in mortality rate as compared to patients whose temperature never broke 37°C. Almost half of the patients initially presenting with low body temperature (<35.5°C) died. These results suggest that poor body temperature control during the COVID 19 disease course is a marker of poor prognosis and body temperature can be used as an easily obtained prognostic indicator.

- [The outcomes of prone positioning in 24 COVID-19 inpatients: a prospective study](#)

JAMA: This prospective, single-center, before-after study was conducted among awake, non-intubated, spontaneously breathing patients with COVID-19 and hypoxemic acute respiratory failure requiring oxygen supplementation. Patients were followed up for 10 days. Of 24 participants 4 (17%) did not tolerate PP for more than 1 hour, 5 (21%) tolerated it for 1 to 3 hours, and 15 (63%) tolerated it for more than 3 hours. 6 patients were responders to PP, representing 25% of the 24 patients included and representing 40% of the patients who sustained PP for 3 hours or more. Three patients were persistent responders. Among patients who sustained PP for 3 hours or more, PaO₂ increased from a mean of 73.6 mmHg before PP to 94.9 mmHg during PP (difference, 21.3. No significant difference was found between PaO₂ before PP and PaO₂ after resupination ($P = .53$). None of the included patients experienced major complications. Back pain was reported by 10 patients (42%) during PP. At the end of a 10-day follow-up period, 5 patients required invasive mechanical ventilation. Four of them did not sustain PP for 1 hour or more and required intubation within 72 hours.

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