

University of New Mexico

UNM Digital Repository

HSC Covid 19 Briefings

HSC Institutional and Academic Materials

6-23-2020

2020-06-22/23 DAILY UNM GLOBAL HEALTH COVID-19 BRIEFING

Christophe G. Lambert

Shawn Stoicu

Ingrid Hendrix

Lori Sloane

Mari Anixter

See next page for additional authors

Follow this and additional works at: https://digitalrepository.unm.edu/hsc_covid19_briefings

Recommended Citation

Lambert, Christophe G.; Shawn Stoicu; Ingrid Hendrix; Lori Sloane; Mari Anixter; Anastasiya Nestsiarovich; Praveen Kumar; Nicolas Lauve; Randy Ko; Jenny Situ; Alexendra Yingling; Tudor I. Oprea; Kristine Tollestrup; Orrin Myers; and Douglas J. Perkins. "2020-06-22/23 DAILY UNM GLOBAL HEALTH COVID-19 BRIEFING." (2020). https://digitalrepository.unm.edu/hsc_covid19_briefings/55

This Brief is brought to you for free and open access by the HSC Institutional and Academic Materials at UNM Digital Repository. It has been accepted for inclusion in HSC Covid 19 Briefings by an authorized administrator of UNM Digital Repository. For more information, please contact amywinter@unm.edu, lsloane@salud.unm.edu, sarahrk@unm.edu.

Authors

Christophe G. Lambert, Shawn Stoicu, Ingrid Hendrix, Lori Sloane, Mari Anixter, Anastasiya Nestsiarovich, Praveen Kumar, Nicolas Lauve, Randy Ko, Jenny Situ, Alexandra Yingling, Tudor I. Oprea, Kristine Tollestrup, Orrin Myers, and Douglas J. Perkins

UNM GLOBAL HEALTH COVID-19 BRIEFING

June 22-23, 2020

Executive Summary

NM Highlights: Balloon Fiesta postponed. Robot to sanitize ABQ International Sunport. NMSU plan for fall 2020. NM public schools reopening plan. Fewer hospitalizations for COVID-19. NM case update.

US Highlights: Visa restrictions.

International Highlights: Second wave in South Korea.

Epidemiology: Lockdown can suppress COVID-19. Case fatality rate associated with incidence. Predictors of ICU care and ventilators. Anxiety and depression from COVID-19. Asymptomatic patients as source of infection. Heterogeneous populations affect herd immunity.

Healthcare Policy Recommendations: New FDA guidance on clinical trials conduct.

Practice Guidelines: The guidelines are provided on COVID-19 diagnostics (Infectious Diseases Society of America), respiratory support for COVID-19 patients and optimizing mental care delivery during COVID-19 pandemic.

Drugs, Vaccines, Therapies, Clinical Trials: Antithrombotic therapy systematic review. Drug repurposing. 58 new trials.

Other Science: Safety of antihypertensives (ACEs and ARBs). Low testosterone linked to escalation of care. Neurological findings and hypercoagulability.

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

- [ABQ Balloon Fiesta rescheduled for next year](#)

The 49th Albuquerque International Balloon Fiesta has been rescheduled to October 2-10, 2021. Reservations, tickets and RV spaces will be unchanged and can be used for the 2021 event. Those who are unable to attend in 2021, and those seeking more information, are urged to visit the [website](#).

- [Albuquerque-based company deploys robot to sanitize Albuquerque International Sunport](#)

The Breezy One robot can sanitize 100,000 square feet in 1.5 hours, eliminating 99.9999% of viruses and bacteria, with people able to return within 30 minutes after cleaning. More information, including a video showing the robot in action is [here](#). Breezy One's disinfectant was originally developed by Sandia National Laboratories for mitigation and decontamination of chemical and biological agents and is one of the strongest and most vetted disinfection agents commercially available. The EPA-registered disinfectant has been tested by nine government agencies and over 10 independent laboratories, is effective

against viruses (including the novel coronavirus), bacteria and spores, and meets nationwide hospital requirements for pathogen disinfection.

- [New Mexico State University releases plan for fall return](#)

The 16-page plan covers when to come back to campus, facility readiness, instructional readiness, student life, COVID-19 precautions, reporting COVID-19 and readiness for community interaction.

- [New Mexico's Public Education Department takes phased approach for school reopening](#)

The state's goal is to move all schools into a full school schedule as soon as safely possible. The schools are required to reopen at 50% capacity and masks will be required. Lessons will be taught both in the classroom and online. Some schools may remain closed depending on regional data.

- [Hospitalization for COVID-19 dipped in New Mexico](#)

Despite some small fluctuations, the number of patients hospitalized for COVID-19 has shown a downward trend, falling to 134 on Sunday (Jun 21) from 211 on May 17. Hospitalizations decreased even during a jump in reported cases in a 10-day period after the state allowed more businesses to partially reopen June 1.

- [NM reports 7 more COVID-19 deaths and 147 additional cases on June 23](#)

As of today (6/23), the total positive cases and total deaths in the state are 10,838 and 476, respectively. The state has performed 302,083 tests, there are 141 individuals currently hospitalized for COVID-19, and 4,874 COVID-19 cases have recovered. [NMDOH portal featuring epidemiologic breakdown of cases.](#)

US Highlights

- [Trump announces new visa restrictions on immigrant workers](#)

Los Angeles Times: President Trump on Monday expanded a measure restricting visas to the United States to target many more temporary foreign workers, limiting immigrants from coming to the country for employment in industries including technology, academia, hotels and construction. The order primarily affects H-1B visas, broadly set out for high-skilled workers; H-2B visas, for seasonal employees; L-1 visas, for corporate executives; and J-1 visas, for scholars and exchange programs, restricting new authorizations through Dec. 31. The new measure takes effect Wednesday. In the order, Trump wrote that admitting workers to the country within the targeted visa categories "poses a risk of displacing and disadvantaging United States workers during the current recovery" and "would be detrimental to the interests of the United States."

International Highlights

- [South Korea confirms second wave](#)

BBC news: The health officials from the Korea Centers for Disease Control announced that the pandemic is expected to continue for months. The initial wave concluded in April. A holiday weekend in early May marked the beginning of the second wave, primarily in the greater Seoul area. Government officials may reinstate stricter social distancing measures.

Epidemiology Highlights

- [Confirming that the lockdown can suppress COVID-19 pandemic](#)

Annals Medicine & Surgery: COVID-19 cases and lockdown days data were collected for 49 countries that implemented the lockdown between certain dates without interruption. Lockdown days were significantly correlated with the COVID-19 pandemic. The lockdown, one of the social isolation restrictions, has been observed to prevent the COVID-19 pandemic, and showed that the spread of the virus can be significantly reduced by this preventive restriction. This study offers initial evidence that the COVID-19 pandemic can be suppressed by a lockdown.

- [COVID-19 fatality rate associated with incidence](#)

Biology: Previous studies have found large variations in the COVID-19 infection fatality rate (IFR). The association between epidemic intensity and IFR was examined using serological results from a recent large SARS-CoV-2 serosurvey (N = 60,983) in

19 Spanish regions. The infection fatality rate for Spain as a whole was 1.15% and varied between 0.13% and 3.25% in the regions (median 1.07%). The IFR by region was positively associated with SARS-CoV-2 seroprevalence, cases/100,000, hospitalizations/100,000, mortality/100,000 and case fatality rate. These results suggest that the SARS-CoV-2 IFR is not fixed. The Spanish regions with more rapid and extensive spread of SARS-CoV-2 had higher IFRs. These findings are compatible with the theory that slowing the spread of COVID-19 down reduces the IFR and case fatality rate via preventing hospitals from being overrun, and thus allowing better and lifesaving care.

- [Predictors of ICU care and ventilation in a New York hospital](#)

Annals of Emergency Medicine: A retrospective cohort study examined 4,404 persons under investigation for COVID-19 and presenting to a large academic medical center emergency department (ED) in New York State with symptoms suggestive of COVID-19. 68% of patients studied were discharged home, 29% were admitted to a regular floor, and 3% to an ICU. 1651 of 3,369 patients tested had SARS-CoV-2-positive results to date. Of patients with regular floor admissions, 13% were subsequently upgraded to the ICU after a median of 62 hours. 50 patients required invasive mechanical ventilation in the ED, 4 required out-of-hospital invasive mechanical ventilation, and another 167 subsequently required invasive mechanical ventilation in a median of 60 hours (interquartile range 26 to 99) hours after admission. Testing positive for SARS-CoV-2 and lower oxygen saturations were associated with need for ICU and invasive mechanical ventilation, and with death. High respiratory rates were associated with the need for ICU care.

- [A systematic review and meta-analysis of the psychological impact of COVID-19](#)

Psychiatry Research: Two studies with 162,639 participants from 17 countries were included in the review. The pooled prevalence of anxiety and depression was 33% and 28%, respectively. The prevalence of anxiety and depression was the highest among patients with pre-existing conditions and COVID-19 infection (56% and 55%), and it was similar between healthcare workers and the general public. Studies from China, Italy, Turkey, Spain and Iran reported higher-than-pooled prevalence among healthcare workers and the general public. Common risk factors included being a woman, being nurses, having lower socioeconomic status, having high risks of contracting COVID-19, and social isolation. Protective factors included having sufficient medical resources, up-to-date and accurate information, and taking precautionary measures. In conclusion, psychological interventions targeting high-risk populations with heavy psychological distress are in urgent need. Healthcare Policy Recommendations

- [Systemic review and meta-analysis of asymptomatic patients and COVID-19](#)

Intl J Infectious Diseases: Meta-analysis of 34 studies of asymptomatic patients found that patients with normal radiology were younger than those with abnormal radiology. Despite being asymptomatic, CT investigations revealed abnormalities in 62.2% of the cases and ground glass opacities were most frequently observed (43.09% by meta-analysis). Most studies reported normal laboratory findings. Asymptomatic patients may be contagious and thus a potential source of transmission of COVID-19.

- [Population heterogeneity impacts disease-induced immunity: a mathematical model](#)

Science: The authors show that population heterogeneity can significantly impact disease-induced immunity as the proportion infected in groups with the highest contact rates is greater than in groups with low contact rates. They estimate that if $R_0 = 2.5$ in an age-structured community with mixing rates fitted to social activity then the disease-induced herd immunity level can be around 43%, which is substantially less than the classical herd immunity level of 60% obtained through homogeneous immunization of the population. The estimates should be interpreted as an illustration of how population heterogeneity affects herd immunity, rather than an exact value or even a best estimate

Healthcare Policy Recommendations

- [New FDA guidance on clinical trial conduct in the era of COVID-19](#)

Therapeutic Innovation & Regulatory Science: Key take-home messages for investigators and sponsors include: (1) keep study participants informed of all changes to a trial's conduct, including continuation of recruitment, use of the investigational product for participants already in the trial, warranted changes in monitoring, and even potential discontinuation of participation in the trial; (2) thoroughly document all changes and their effects, including but not limited to how restrictions related to COVID-19 led to changes in study conduct and their duration, and what protocol-specified

information may be missing in the overall dataset; and (3) engage with IRBs/IECs as early as possible when urgent or emergent changes to the protocol are anticipated.

Practice Guidelines

- [Infectious Diseases Society of America guidelines on the diagnosis of COVID-19](#)

Clinical Infectious Diseases: Grading of Recommendations Assessment, Development and Evaluation (GRADE) methodology was used to assess the certainty of evidence and make testing recommendations. The panel agreed on an algorithm for SARS-CoV-2 Nucleic Acid Testing and on 15 diagnostic recommendations.

- [German position statement on respiratory support in patients with COVID-19](#)

Respiration: German Respiratory Society present key position statements including observations about the pathophysiology of acute respiratory failure (ARF). Pulmonary damage in advanced COVID-19 often differs from the known changes in ARDS. Two types (type L and type H) are differentiated, corresponding to early- and late-stage lung damage. The assessment of the extent of ARF should be based on arterial or capillary blood gas analysis under room air conditions, and it needs to include the calculation of oxygen supply. Aerosols can cause transmission of infectious, virus-laden particles. Open systems or vented systems can increase the release of respirable particles. Procedures in which the invasive ventilation system must be opened and endotracheal intubation carried out are associated with an increased risk of infection. PPE should have top priority because fear of contagion should not be a primary reason for intubation. Inhalation therapy, nasal high-flow therapy (NHF), continuous positive airway pressure (CPAP), or noninvasive ventilation (NIV) can be performed without an increased risk of infection to staff if PPE is provided. A significant proportion of patients with ARF present with relevant hypoxemia, which often cannot be fully corrected, even with a high inspired oxygen fraction (FiO₂) under NHF. In this situation, the oxygen therapy can be escalated to CPAP or NIV when the criteria for endotracheal intubation are not met. In ARF, NIV should be carried out in ICU or a comparable setting by experienced staff. Under CPAP/NIV, a patient can deteriorate rapidly. For this reason, continuous monitoring and readiness for intubation are to be ensured at all times. If the ARF progresses under CPAP/NIV, intubation should be implemented without delay in patients who do not have a "do not intubate" order.

- [Guidelines to improve care for people with mental illnesses during COVID-19](#)

Community Mental Health Journal: US authors suggest different methods of service delivery for people with mental illnesses. This includes community outreach, digital intervention, clinic-based care, telemedicine, as well as connecting patients to resources and support lines. These methods can be used to assess safety, address urges to use substances, manage medical needs, as well as being a source of information. Marginalized members of the community are already at risk of not receiving equal care. Authors believe these techniques can bridge the gap and provide aid to those in need.

Drugs, Vaccines, Therapies, Clinical Trials

- [Antithrombotic therapies in COVID-19 disease: a systematic review](#)

Journal of General Internal Medicine: Incidence of thromboembolism among hospitalized patients with COVID-19 ranged from 25 to 53% in 4 retrospective series. Authors state review was limited by poor quality of source studies including unclear patient selection protocols, lack of reporting or adjustment for patient baseline characteristics, inadequate duration of follow-up, and partial reporting of outcomes.

- [Repurposing old drugs as antiviral agents for coronaviruses: 15 candidates identified](#)

MedRxiv preprint: The authors screened approximately 250 existing drugs or pharmacologically active compounds for their inhibitory activities against feline infectious peritonitis coronavirus (FIPV) and human coronavirus OC43 (HCoV-OC43), a human coronavirus in the same genus (Betacoronavirus) as SARS-CoV-2. 15 out of the 252 drugs or pharmacologically active compounds screened were found to be active against both FIPV and HCoV-OC43, with EC₅₀ values ranging from 11 nM to 75 μM. They are all old drugs as follows, anisomycin, antimycin A, atovaquone, chloroquine, conivaptan, emetine, gemcitabine, homoharringtonine, niclosamide, nitazoxanide, oligomycin, salinomycin, tilorone, valinomycin, and vismodegib.

- [58 New COVID-19 Trials registered June 22-23 at clinicaltrials.gov](#)

Treatment trials: Maraviroc, Mesenchymal stem cells, Chloroquine phosphate, Hydroxychloroquine, Sofosbuvir, daclatasvir,

Anakinra, Nitazoxanide, CYT107, Hydroxychloroquine & Azithromycin, Therapeutic anticoagulation, Nitric Oxide-Releasing Drug. At time of writing, a total of [2103](#) were active, [171](#) completed, and [4](#) posted results.

Other Science

- [Low testosterone associated with worse COVID-19 outcomes -- screening recommended](#)

Critical Care: Recent data from China, Germany, and Italy have highlighted consistent and strong associations between low serum testosterone levels and the need for escalation of care of patients. One such report includes a cohort of 31 Italian male hospital patients show a probability of being transferred to the ICU below and above a total testosterone level of 5 nmol/L being 14.18% vs 0.60% respectively. In addition, the probability of dying below and above a total testosterone level of 5 nmol/L was 12.40% vs 0.39%. The authors call for wider screening of testosterone levels in men admitted to the hospital with symptoms of COVID-19.

- [Another study showing safety of antihypertensives \(ACEs and ARBs\) in patients with COVID-19](#)

JAMA: With COVID-19 Diagnosis and Mortality In a retrospective cohort study of 4480 patients diagnosed as having COVID-19, prior angiotensin-converting enzyme inhibitor (ACEI) or Angiotensin Receptor Blocker (ARB) use, compared with no use, was not significantly associated with mortality (adjusted hazard ratio, 0.83). In a nested case-control study of a cohort of 494 170 patients with hypertension, use of ACEI/ARB, compared with use of other antihypertensive medications, was not significantly associated with COVID-19 diagnosis (adjusted hazard ratio, 1.05). Prior use of ACEI/ARB was not significantly associated with COVID-19 diagnosis or with mortality among patients diagnosed as having COVID-19.

- [Systemic review: A pool of COVID-19 cases involving neurological symptoms was analyzed](#)

Journal of Neurology: n=82 cases with mean age of 62.3 years. 48.8% of the patients (n=40) had cerebrovascular insults, 28% (n=23) had neuromuscular disorders, and 23% of the patients (n=19) had encephalitis or encephalopathy. Authors concluded that large vessel strokes, GSB, and meningoencephalitis are not rare and that these symptoms and manifestations should be taken into account. There is a suggested relation between the neurological findings and hypercoagulability in COVID-19 [here](#). Neurological involvement of coronavirus disease 2019: a systematic review.

Contributing team members: Christophe G. Lambert, Shawn Stoicu, Ingrid Hendrix, Lori Sloane, Mari Anixter, Anastasiya Nestsiarovich, Praveen Kumar, Nicolas Lauve, Randy Ko, Jenny Situ, Alexandra Yingling, Tudor Oprea, Kristine Tollestrup, Orrin Myers, Douglas J. Perkins.

Disclaimer: The UNM Global Health COVID-19 Briefing is provided as a public service. Sources include not only peer-reviewed literature, but also preliminary research manuscripts that have not been peer reviewed along with lay news media reports. The peer-review process often results in manuscript improvement, with corrections made for errors and unsubstantiated conclusions being corrected. Furthermore, many headlines and summaries in the briefing are written by student volunteers and others who may lack subject matter expertise in this rapidly evolving field. As such, the headlines and summaries should not be regarded as conclusive. Instead, readers are encouraged to use the briefing to identify areas of interest and then use the embedded links to read and critically evaluate the primary sources.