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2020-04-14 DAILY UNM GLOBAL HEALTH COVID-19 BRIEFING

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DAILY UNM GLOBAL HEALTH COVID-19 BRIEFING

April 14, 2020

Executive Summary

NMDOH county demographics online. NM emergency business loans. ABQ businesses violations. NM 5 new deaths 62 more cases. May 1 reopening too optimistic. MA contract tracing. Federal Ventilator Reserve. GM mass ventilator production. Ventilator-sharing device. \$400M N-95 mask sterilization 60 sites. UNM PPE reprocessing online. Drug quality vulnerable. Managing urgent airway calls. Social distancing until 2022. SARS-Cov-2 blood supply. Contact tracing national blueprint. Mental health endangered. Successful surgical rapid response. Contact tracing medical ethics. Animal coronaviruses: human lessons. IDSA management guidelines. Ophthalmic practice. Pain management. Obstetrics management. Oncology practice. Forward triage. Scoring time-sensitive procedures. Outpatient structural heart disease. Thoracic surgery outcomes. Chest CT screening: epidemics. Sarcoma management. Endocrine diseases. Clinical pharmacists' strategies. Non-invasive ventilation benefits. Essential laboratory testing. Psychiatric service. Hydroxychloroquine negative RCT. JAMA pharmacologic Tx review. Convalescent plasma. Promising antivirals. 55 clinical trials today. NYC hospitalization risk factors. Children milder disease. Blood morphology anomalies. No antimalarial consensus.

NM Highlights

- [New NMDOH portal featuring epidemiologic breakdown of cases](#)
New online NMDOH portal breaks down NM case data by county, age, gender, race/ethnicity, and testing status.
- [New Mexico launches emergency loan fund for medium-sized businesses](#)
Under the New Mexico Recovery Fund program, companies with 40 or more employees can now apply for loans starting at \$500,000 with interest rates between 3 percent and 10 percent, the state Economic Development Department said Monday. In a two-step process, businesses must first fill out a questionnaire at [Summit Mountain Capital](#). If they meet qualifications, they'll be asked to fill out a formal submission.
- [More Albuquerque businesses cited for violating public health order](#)
The City of Albuquerque has now nailed four businesses for violating the public health order. They are Carefree Hot Tubs on Menaul and Louisiana, Malik's Gift and Thrift Shops on Zuni near Wyoming, Rags 2 Riches, and the Pit Stop Food Mart on Bridge near Goff.
- [5 additional deaths, 62 new COVID-19 cases reported in New Mexico](#)
The total positive cases and total deaths in the state are 1,407 and 36 respectively. As of today, the state has done 32,850 tests, there are 82 individuals hospitalized for COVID-19, and 340 COVID-19 cases have recovered.

US Highlights

- [May 1 target for reopening the economy too optimistic for US, Fauci says](#)
President Donald Trump's May 1 target for restarting the economy is "overly optimistic," his top infectious disease adviser said on Tuesday, after Trump and state governors clashed over who has the power to lift restrictions aimed at curbing the coronavirus pandemic.
- [Massachusetts begins massive contact tracing effort](#)
Massachusetts has committed to spending \$44 million to hire 1000 public health workers to do contact tracing through local community health centers. This is a bold strategy which they believe will allow them to go on the offensive against COVID

virus. Harvard Chan School of Public Health, the non-profit Partners in Health, labs, 36 community health centers and Massachusetts Dept of Health will all work together. Ramping up testing is deemed critical for the success of the campaign. Other states are considering similar efforts.

Economics, Workforce, Supply Chain, PPE Highlights

- [Federal Dynamic Ventilator Reserve plan to make them available where needed](#)
Public-private partnership announced today in which major healthcare systems will supply unused ventilators to make sure there is a steady supply of the machines in virus hot spots. Initiative supported by FEMA and DHHS.
- [GM begins mass production of ventilators for U.S. government](#)
General Motors Co said on Tuesday (4/14) it has started mass production of ventilators and would deliver the first batch of the medical equipment to the US government this month.
- [New ventilator-sharing device eases treatment for two COVID-19 patients at once](#)
A hospital in Connecticut has successfully employed a new 3D-printed device that makes it possible to modify one ventilator for use in two critically ill patients with COVID-19 who have different respiratory needs. The device was tested in patients at the Yale-New Haven Hospital.
- [Pentagon awards \\$400M contract for N-95 mask sterilization at 60 sites](#)
Battelle's mask sterilization system is based on exposing the masks to vapor hydrogen peroxide for 2.5 hours. The system is provided free of charge and is currently deployed in 3 states. Inquiry page here: <https://www.battelle.org/inb/battelle-ccds-for-covid19-satellite-locations>.
- [UNM decontamination and reuse processes for N95 respirators](#)
Preprint release of UNM N95 mask decontamination publication. Multi-disciplinary team developed and deployed process to adapt operating room to use hydrogen peroxide vapor decontamination procedure.
- [Drug quality is vulnerable to fear, desperation, and disinformation](#)
Lancet Commentary says that as WHO and global coalitions accelerate COVID-19 research, access to affordable quality medical products, particularly in low-resource settings, should be mitigated to ensure it does not become another casualty.
- [Managing urgent airway calls with appropriate PPE through pre-made airways kits](#)
Disposable COVID airway bags have been assembled which are single use and include: airway equipment, PEEP valve, High viral filtering efficiency HMEF or HEPA, endotracheal tubes with stylet, in-line suction catheter, syringe for cuff, oral airways, essential PPE (PAPR, N95 mask, and face shield) and essential induction medications and rescue medications. The advantage of this system is that it is readily available so when teams are called to perform an intubation, they are ready to do so with minimal delay and maximum safety. Decision support tools include a content checklist for respiratory therapists, and educational videos demonstrating correct assembly of the airway circuit and donning/doffing of PPE.

Epidemiology Highlights

- [Social distancing might be needed up to 2022](#)
A key metric for the success of social distancing is whether critical care capacities are exceeded. To avoid this, prolonged or intermittent social distancing may be necessary into 2022. Additional interventions, including expanded critical care capacity and an effective therapeutic, would improve the success of intermittent distancing and hasten the acquisition of herd immunity. Longitudinal serological studies are urgently needed to determine the extent and duration of immunity to SARS-CoV-2. Even in the event of apparent elimination, SARS-CoV-2 surveillance should be maintained since a resurgence in contagion could be possible as late as 2024.
- [SARS-Cov-2 RNA Detected in blood donations](#)
Due to concerns about the safety of their blood supply, retrospective and real time donations collected at the Wuhan Blood Center on January 25, 2020 were screened and plasma samples were positive for viral RNA from 4 asymptomatic donors.

- [Blueprint for national contact tracing campaign](#)

Johns Hopkins Center for Health and Security identified 3 components for contact tracing campaign: ready access to diagnostic tests, widespread serological testing, and the ability to trace all contacts of reported cases. They estimate the public health workforce will need to add 100,000 contact tracers to do the work. The effort would need to be strategically deployed to areas of greatest need and managed through state and local health departments. They estimate a \$3.6B cost.

Healthcare Policy Recommendations

- [Mental health endangered during COVID-19 Pandemic](#)

The COVID-19 pandemic has implications for emotional and social functioning. In addition to providing medical care, already stretched healthcare providers have an important role in monitoring psychosocial needs and delivering psychosocial support to their patients, health care providers, and the public. These activities should be integrated into the general health care.

- [A successful rapid response by an academic surgical department to COVID-19](#)

The successful strategy of a single academic health system is outlined: (1) develop a cohesive leadership team and system for frequent communication throughout the department; (2) ensure adequate hospital capacity to care for an anticipated influx of COVID-19 patients; (3) safeguard supplies of blood products and personal protective equipment to protect patients and providers; and (4) prepare for an unstable workforce due to illness and competing personal priorities such as childcare.

- [Medical ethicists ask if contact tracing methods being used will protect communities](#)

Decisions to breach confidentiality must be tempered by a principle of restraint in public health ethics. Publicly naming infected individuals could breach confidentiality without diminishing viral spread, and even detract from that goal. Public naming might deter infected individuals who test positive at their physicians' offices from reporting results to their employers. Fear of public embarrassment for those who self-report, might lead to lost opportunities for contact tracing.

- [Animal coronaviruses: lessons for humans](#)

Animal coronaviruses spilled over into humans on three different occasions in the span of two decades. Therefore, a more reverent management of the environment is fundamental to prevent the future emergence of CoV pandemics. Under these circumstances, veterinary medicine should support policy makers to adopt and promote sound and sustainable measures for management of the environment and of animals and advance the global 'One Health' movement.

Practice Guidelines

- [Infectious Diseases Society of America guidelines on management of patients with COVID-19](#)

Recommendations on inpatients with COVID-19: 1) HCQ/chloroquine in the context of a clinical trial; 2) HCQ/chloroquine +azithromycin only in the context of a clinical trial; 3) combination of lopinavir/ritonavir only in the context of a clinical trial. 4) corticosteroids in pneumonia cases (conditional recommendation, very low certainty of evidence); 5) with ARDS the use of corticosteroids in the context of a clinical trial; 6) tocilizumab only in the context of a clinical trial; 7) COVID-19 convalescent plasma in the context of a clinical trial. The narrative summaries are made of treatments undergoing evaluation.

- [Precautions in ophthalmic practice in a hospital: experience from China](#)

Personal protection measures for ophthalmologists and patients are described, as well as measures for operations and for disinfection of inspection equipment.

- [Pain management in multispecialty organizations: experts guidelines](#)

A pain management expert panel was created from the military, veterans' health administration and academia, in order to address the issue of the management of chronic pain during the COVID-19 pandemic and public health crises. A set of guidelines was created that provides a framework for pain specialists and institutions.

- [Universal screening for SARS-CoV-2 is beneficial for obstetrics management: NY hospital experience](#)

Most patients positive for SARS-CoV-2 at delivery were asymptomatic, and more than 1 in 8 asymptomatic patients who were admitted to the labor and delivery unit were positive for SARS-CoV-2. The potential benefits of a universal testing approach

include the ability to use Covid-19 status to determine hospital isolation practices and bed assignments, inform neonatal care, and guide the use of personal protective equipment.

- [Oncology practice during the COVID-19 pandemic](#)

Early reports suggest a substantially increased risk of death associated with COVID-19 infection among patients with cancer. The authors describe approaches to manage 4 urgency categories of oncology care.

- [Long Island hospital's rapid innovation: "forward triage"](#)

The hospital opened an incident command center. They created a 16-bed "forward triage" and treatment unit for ED patients in an ambulatory care center off site to expedite the care of persons under investigation with less acute illness. Physicians and nurses were rapidly retrained and reassigned according to need. A hospital-wide registry of persons under investigation for COVID-19 was established. 70% of patients seen in the ED were sent home. Of the 30% admitted, ~10% required immediate intensive care or mechanical ventilation, and 15% required these resources within 2 days after admission.

- [A scoring system suggested for "Medically-necessary, time-sensitive" \(MeNTS \) procedures](#)

MeNTS is discussed as an alternative to an "election" procedure term. A scoring system is described systematically integrating multiple factors to facilitate decision-making and triage for MeNTS procedures and appropriately weighs individual patient risks with the ethical necessity of optimizing public health concerns.

- [Adaptations in outpatient management of structural heart disease](#)

A roadmap for transitioning to telemedicine, and to cancelling and re-prioritizing structural heart procedures is provided.

- [Thoracic Surgery Outcomes Research Network Guidance for triage of thoracic malignancies operations](#)

Guidance for Triage of Operations for Thoracic Malignancies.

- [Use of chest CT as the main screening method in epidemic areas is recommended](#)

Clinicians should be cautious that CT findings in afebrile/asymptomatic patients are not less alarming than the findings in symptomatic patients. These patients should also be quarantined.

- [French Sarcoma Group proposals for management of sarcoma patients](#)

In patients with confirmed/suspected COVID-19, any treatment must be postponed at least 15 days after the start of the symptoms and when the patient has recovered. Multidisciplinary tumor boards (MDT) with virtual discussion remain the best option when complex cases have to be discussed. For sarcoma in localized phase, the ESMO Clinical Practice Recommendations for sarcomas apply without modification for patients without COVID-19 symptoms. It is not recommended to delay surgery for operable patients without COVID symptoms, in particular, for Grade 2-3 soft tissue sarcoma, bone sarcoma, GIST and visceral sarcoma. More of the detailed recommendations are provided.

- [COVID-19 and endocrine diseases: statement of the European Society of Endocrinology](#)

Recommendations: 1) Adequately protect yourself and ask for COVID-19 testing if exposed; 2) Avoid unnecessary routine appointments in person; 3) Put in place online/email/phone consultation services; 4) Closely monitor glycemic control in patients with diabetes; 5) Recommend to persons with diabetes a strict adherence to general preventive measures; 6) Counsel persons with diabetes about specific measures related to their disease management in case of infection; 7) Counsel persons with diabetes particularly if aged over 65 and obese about referrals for management in case of suspected infection; 8) Avoid undernourishment with dietary or adjunctive measures if clinically indicated; 9) Closely monitor clinical condition of patients with adrenal insufficiency; 10) Adapt increased replacement treatment in patients with adrenal insufficiency.

- [The role of clinical pharmacists in fighting COVID-19 and the innovative strategies for them](#)

The Chinese and English databases, self-media network, website of professional society or medical institution, and clinical trial center platforms were searched, and clinical pharmacists involved in the work against COVID-19 were surveyed and interviewed. Clinical pharmacists can give full play to their professional expertise, analyze the current situation rationally, formulate telehealth strategies swiftly, and work in a united and efficient manner to provide innovative pharmacy services to ensure medication safety and rational use of medicine.

- [Respiratory support outside the intensive care unit: non-invasive ventilation benefits](#)
Non-invasive ventilation (NIV) is a well-established therapy. As many as 50% of COVID-19 patients admitted to ICU stay on NIV and do not subsequently require invasive mechanical ventilation (IMV). Evidence from China suggests that a large minority of patients with severe respiratory failure due to SARS-CoV-2 can avoid IMV via NIV. Careful monitoring required.
- [Essential laboratory testing in patients with COVID-19](#)
An essential minimal (provisional) list of laboratory tests is provided, which may be recommended for patients with COVID-19, and to potentially assist in prognostic monitoring of such patients.
- [Opportunities and challenges for psychiatric service during COVID-19](#)
Recommendations are given on patient care, advocacy, supporting the colleagues and the system, as well as on scholarship. Challenges to providing consultation-liaison psychiatric care in the COVID-19 settings are described.

Promising Drugs, Vaccines, Therapies, Clinical Trials

- [Chinese multi-center hydroxychloroquine RCT shows no efficacy in reduction of viral load](#)
Awaiting peer-review. This 150-patient 16-center open-label, randomized, controlled trial fails to show significance for its primary endpoint of 28-day negative conversion rate of SARS-CoV-2, as well as secondary endpoints at days 4, 7, 10, 14, or 21. Treatments were HCQ with/without standard of care (SOC). HCQ dosing: 1,200 mg/day for Days 1-3, followed by 800 mg/day for the remaining days (14 for moderate, 21 for severe patients). A significant efficacy of HCQ on alleviating symptoms was observed when the confounding effects of anti-viral agents were removed in the post-hoc analysis (Hazard ratio, 8.83, 95%CI, 1.09 to 71.3). This was further supported by a significantly greater reduction of CRP (6.986 in SOC plus HCQ versus 2.723 in SOC, milligram/liter, P=0.045) conferred by the addition of HCQ, which also led to more rapid recovery of lymphopenia, albeit no statistical significance. Adverse events (AEs) were found in 8.8% of SOC and 30% of HCQ recipients with two serious adverse events. The most common AE in the HCQ recipients was diarrhea (10%). Mean day from disease onset to randomization was 16.6 and 89% of the patients had concomitant medication before randomization.
- [JAMA Review of Pharmacologic Treatments for COVID-19](#)
No therapies have been shown effective to date. The most promising one seems to be remdesivir, which has potent in vitro activity against SARS-CoV-2, but is not FDA approved (currently being tested in ongoing randomized trials). Oseltamivir has not been shown to have efficacy. Corticosteroids are currently not recommended. Current clinical evidence does not support stopping angiotensin-converting enzyme inhibitors or angiotensin receptor blockers in patients with COVID-19.
- [Experimental treatment with convalescent plasma keeps running around the country](#)
Doctors in Texas and around the country are experimenting with a new treatment based on an old technique — but they aren't sure if it will be effective.
- [HIV protease inhibitors and RNA-dependent RNA polymerase inhibitors showed promising features](#)
Along with these, Methisazone, an antiviral inhibitor of protein synthesis; CGP42112A, an angiotensin AT₂ receptor peptide agonist; and Paritaprevir, an approved antiviral against Hepatitis C that blocks the NS3-4A (HCV) serine protease are some of the novel treatment option against COVID-19 proposed.
- [55 new COVID-19 Trials registered today at clinicaltrials.gov](#)
Treatment trials: Chloroquine Phosphate, Pyridostigmine, Peginterferon Lambda-1a, Hyperbaric Oxygen Therapy, Efficacy and Safety of Tocilizumab Versus Corticosteroids, Convalescent Plasma, CovidDB, Efficacy and Safety of Ganovo (Danoprevir), Efficacy and Safety of Oral Hydroxychloroquine, Indomethacin and Zithromax, Hydroxychloroquine as Chemoprevention, Effect of CytoSorb Adsorber on Hemodynamic and Immunological Parameters, IL-6 Inhibitor Clazakizumab, Efficacy and Safety of Anticoagulation, Efficacy and Safety of Bevacizumab, Dexamethasone, Pegylated Interferon Lambda, Vitamin C for Treatment, Microbial Etiology of Ventilator Associated Pneumonia, Study of CM4620-Injectable Emulsion, Angiotensin Converting Enzyme Inhibitors. At time of writing, a total of 517 were active, 26 completed, and 3 posted results.

Other Science

- [Factors associated with hospitalization and critical illness among 4,103 patients in New York City](#)
The authors performed a cross-sectional analysis of all patients with laboratory-confirmed Covid-19 treated at a single academic health system in New York City. In the decision tree for admission, the most important features were age >65 and obesity; for critical illness, the most important was SpO₂<88, followed by procalcitonin >0.5, troponin <0.1 (protective), age >64 and CRP>200.
- [Children have milder disease with better prognosis says the systematic review](#)
A systematic review showed that children accounted for 1-5% of COVID-19 cases, they often have milder disease and deaths were extremely rare. Diagnostic findings were similar to that of adults, but fewer children had severe pneumonia. Elevated inflammatory markers were less common in children and lymphocytopenia seemed rare. Newborn infants developed symptomatic COVID-19, but evidence of vertical intrauterine transmission was scarce. Suggested treatment included providing oxygen, inhalations, nutritional support and maintaining fluids and electrolyte balances. The guidelines for managing COVID-19 in children with comorbidities are urgently needed.
- [Fewer children with infection develop diarrhea and vomiting](#)
Children with inflammatory bowel disease and post liver transplant patients do not have an increased risk of disease and should remain on current medications. Children with chronic liver disease should continue their medications as usual.
- [Morphological anomalies of circulating blood cells subside one week after treatment](#)
One week after the start of treatment, anomalies of circulating blood cells subside, and an increasing proportion of reactive lymphocytes dominates.
- [No consensus on the use of antimalarials for COVID-19 treatment](#)
Regulators split on antimalarials for COVID-19.

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