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2020-05-13 DAILY UNM GLOBAL HEALTH COVID-19 BRIEFING

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DAILY UNM GLOBAL HEALTH COVID-19 BRIEFING

May 13, 2020

Executive Summary

APS virtual graduation. NM Governor update. Free testing for all. NM 2020 census challenges. BCBS \$1M COVID-19 donation. NM case count. Most tribes infected. Increased NM Medicaid enrollment. UNM revenue losses. UNM limited operations continue. No dine-in eating yet. Clothing store reopening measures. Aid package. Consumer prices tumble. Public guidance adherence survey. Healthcare resource prediction. Food insecurity. Supply system comparison. Pentagon PPE award. Ensemble mortality model. 4.4% French infections. Asymptomatic spread. Traffic infection correlation. Comorbid COPD/smoking mortality. Airplane transmission contained. CDC COVID-19 statistics. WHO: endemic virus risk. Iceland tracking app impact. WHO: prison management. Quality of life. Containment amongst HCWs. Emotional regulation. Literature overload coping. Exercise and well-being. Information sources. Distress among healthcare students. Expanding pharmacy role. Recommendations on sedation in mechanical ventilation. Long-acting antipsychotics usage. Comorbidities and mortality. Continuing clinical trials. Short interval re-testing. Pharynx gargle samples. BCG vaccination not protective. Plasmapheresis case series. Convalescent plasma safety. Neutralizing antibodies. 40 new trials. Acute kidney injury. Multiorgan and renal tropism. Intestinal cell infections. Cardiovascular disease risk link. Cutaneous manifestations. Underpowered studies.

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

- [APS celebrates Class of 2020 with virtual special events tonight at 7:00 pm](#)
Albuquerque Public Schools will host a virtual celebration Wednesday night for the Class of 2020, featuring various celebrities including actor Neil Patrick Harris. Each high school will be having their own virtual graduation, with dates to be determined. Wednesday's celebration can be watched on YouTube.
- [Governor to speak about the stay-at-home order today \(5/13\) at 4 pm](#)
Governor to speak about the stay-at-home order at 4 pm, which can be watched [here](#).
- [All New Mexicans can now get a free COVID-19 testing](#)
The New Mexico Department of Health expanded COVID-19 testing to all state residents at no charge beginning on Tuesday. Currently, the state can administer around 5,000 tests each day, with a goal of exceeding 7,000 tests a day. Free, in-person testing is available by appointment at sites across the state, as well as at certain drive-through locations. Lovelace Medical Center began accepting anyone seeking a test on Tuesday from 9 a.m. to 3 p.m. at its Downtown Albuquerque location.
- [New Mexico facing hurdles in getting 2020 census count because of coronavirus pandemic](#)
Geographic spread, the need for forms and representatives in multiple languages, and lower internet connectivity in parts of the state are some of the hurdles faced by New Mexico. Because of COVID-19, the Census Bureau has temporarily halted deliveries, leaving a big percentage of the NM population uncouncted. About 165,000 NM households have not received their

census form yet. As of this week, about 46-percent of New Mexicans have responded to the census. The Census Bureau has requested Congress to approve a deadline extension from mid-August to Oct. 31 because of delays caused by the coronavirus.

- [Blue Cross and Blue Shield of NM contributes \\$1 million to aid state's Covid-19 response](#)

Through the BCBSNM COVID-19 Community Collaborative Grant Fund, Blue Cross and Blue Shield will be donating \$1 million to be split between three groups impacted by the pandemic—United Way of Central New Mexico(\$250,000), the All Together NM Fund (\$500,000), and Roadrunner Food Bank (\$250,000).

- [NM reports 12 more COVID-19 deaths and 155 additional cases on May 13](#)

As of today (5/13), the total positive cases and total deaths in the state are 5,364 and 231, respectively. The state has performed 115,011 tests, there are 200 individuals currently hospitalized for COVID-19, and 1,515 COVID-19 cases have recovered. [New NMDOH portal featuring epidemiologic breakdown of cases.](#)

- [COVID-19 has spread to most NM tribes, state health officials say](#)

The reported cases among tribal communities make up almost 60% of New Mexico cases. As of 5/11, 50% of New Mexico's COVID-19 related deaths were Native American. The 23 tribes compose just 11% of the state population. The largest outbreaks in Pueblo tribes continue to be in Zia, San Felipe, Zuni and Kewa (Santo Domingo). An additional nine Pueblos plus the Jicarilla Apache tribe each have a handful of cases.

- [NM Medicaid enrollment on rise during COVID-19 pandemic](#)

There were roughly 844,000 New Mexico adults and children enrolled in the joint state-federal health care program as of this week, up from 825,370 enrolled in February, according to the state Human Services Department. State received \$130 million under a federal relief package that helped cover the cost of the enrollment growth for now, but the Medicaid spending is set to increase to nearly \$1.1 billion for the budget year that starts in July. Along with increasing Medicaid enrollment, New Mexicans participating in the federal Supplemental Nutrition Assistance Program (SNAP) has also surged during this pandemic.

- [UNM expecting major revenue loss due to COVID-19](#)

The University of New Mexico announced on Tuesday that it could lose up to \$9.2 million due to the pandemic. The money would be coming from housing, foodservice, and event and other services revenues. UNM has not said how it will address the budget shortfall.

- [UNM extends limited operations through June 1](#)

The university of New Mexico is evaluating a phased-in return plan. Currently, only about 1,000 essential workers and critical researchers are working on the campuses. The first summer session of courses have been almost entirely moved to remote instruction. UNM has not made any official announcements about fall semester changes but expects it will look different for the students. For fall, a lot more to be figured out about budgets, operations and enrollment and how those factors will play into the University's plans, UNM President Garnett Stokes said.

- [No reopening dates given for restaurant dine-in](#)

The New Mexico Restaurant Association did not get an exact date from the governor for reopening for sit-down dining. The governor held a Zoom meeting on Tuesday with the association where about 500 people in the industry tuned in and said she would consider their feedback while figuring out a timeline for reopening.

- [Clothing stores in NM adopt measures to safely reopen](#)

Clothing stores are set to reopen in NM barring the continuation of the stay at home order on May 15th. Clothing stores are planning to put up screens at registers, have employees wear masks, and clean the store daily. Some stores are planning to close dressing rooms, others are planning to remove items that have been briefly worn for a period of up to three days before putting them back on the sale floor.

US Highlights

- [Democrats reveal \\$3 trillion aid package](#)

The Heroes Act would provide nearly \$1 trillion for states, cities and tribal governments to avert layoffs and another \$20bn in hazard pay for essential workers. It will offer \$1,200 direct cash aid to individuals, up to \$6,000 per household. \$75bn would be allocated for more for virus testing. A vote is expected Friday.

- [US consumer prices tumble as people spend less due to coronavirus lockdown](#)

As per the Bureau of Labor Statistics report, US consumer prices dropped by 0.8% on a seasonally adjusted basis in April, marking the largest drop since December 2008. Falling gasoline and energy prices contributed to this decline. But excluding volatile food and energy, prices still fell by 0.4%. That's the largest monthly decline since the BLS began tracking the data in 1957. Economists agree that deflation would be very bad news and lower prices could exacerbate the damage.

International Highlights

- [Israeli survey finds guideline adherence linked with how the public perceives the crisis](#)

JMR preprint: The Israeli public was surveyed in an online survey (n=1,056) using nonprobability sampling. Significant correlations were found between overall risk perceptions, attitudes towards crisis management, economic threat, and compliance to behavioral guidelines. The perception of severity of the crisis also depended upon the news source participants felt was the most credible. The authors suggest that crisis management and dissemination of information should be tailored to the local contexts.

Economics, Workforce, Supply Chain, PPE Highlights

- [Computational model to predict the estimated GP healthcare resource](#)

Urban, %Working and age>60 were the strongest determinants of case incidence in the UK. The top 33% of GP practices supporting 45% of the patient population would require 68% of COVID-19 healthcare resources. This model provides a way of predicting relative local levels of disease burden based on defined criteria, thereby providing a method for targeting limited care resources to optimize national/regional/local responses to the COVID-19 outbreak.

- [Food insecurity during COVID-19](#)

Preprint: Single state study (VT) measured food insecurity pre and post pandemic. Among 3,219 respondents, there was a 33% increase in household food insecurity since COVID-19, with 35.6% of food insecure households classified as newly food insecure. Low rates of seeking assistance, especially among newly food insecure households, may be partly related to the stigma associated with assistance programs. Strategies to address physical or economic food access challenges can help address this public health crisis.

- [Comparison of medical supply reserve and supply systems: China, US, Australia, and Canada](#)

Based on the comparison of systems and practical experience, countries around the world should further improve the reserve and supply system of emergency medical supplies by adjusting the list of requirements to meet the specific needs of the emergency, improve the storage of necessary supplies, establish a unified dispatch system for emergency supplies, and improve the coordination and cooperation mechanisms for emergency supplies during international public health emergencies.

- [Pentagon awards \\$134 million for medical supplies for over 15,000 U.S. nursing homes](#)

The contract with the Federal Resources Supply Company will buy PPE for nursing home medical personnel. The delivery locations for the 1.2 million goggles, 64.4 million pairs of gloves 12.8 million gowns and 1.8 million masks will be designated by FEMA. Delivery has already begun and will be completed by the end of June.

Epidemiology Highlights

- [One model to rule them all](#)

Several high-profile models of expected COVID-19 deaths used by government officials provide different mortality projections for the next several months. Researchers at the University of Massachusetts Amherst evaluated these models and merged them into a single ensemble model based on a technique typically used for annual seasonal influenza models.

The ensemble model projects approximately 110,000 cumulative COVID-19 deaths in the United States by June 6, but this total will unquestionably rise much higher after that point.

- [Estimated 4.4% cumulative infections in France as lockdown restrictions ease: control must continue](#)
Models applied to hospital and death data estimated the impact of the lockdown and current population immunity. The models predicted the lockdown resulted in a 77% reduction in transmission and that 4.4% of the population would be infected by May 11, 2020, the date when interventions scheduled to be eased. The results suggest that without a vaccine herd immunity will be insufficient to prevent a second wave at the end of the intervention.
- [Asymptomatic carriers cause nosocomial spread and highlight need for widespread testing](#)
A study at a teaching hospital in the UK revealed that 3% of asymptomatic healthcare workers tested positive for SARS-Cov-2. This result suggests that untested asymptomatic healthcare workers may increase risk to patients and hospital personnel. Notably, nosocomial infection may be associated with greater severity and mortality than community-acquired COVID-19.
- [Increased traffic in and out of a neighborhood is associated with increased infection rates](#)
Nature: This is a cross-sectional study of 1700 women screened for COVID in NYC in March and April. Zip code and Facebook data estimated traffic into and out of neighborhoods where positive cases were identified. Cases were more likely in neighborhoods with a high morning and evening commutes into and out of the neighborhood.
- [Prevalence, severity, and mortality associated with COPD and smoking in COVID-19 patients](#)
A rapid systematic review and meta-analysis of 15 studies assessed the prognosis of COVID-19 infection in patients with COPD or smokers and former smokers. The pooled prevalence of COPD patients in COVID-19 cases was 2%. Despite this low prevalence, COPD patients were at a higher risk of more severe disease and higher mortality than patients without COPD. The pooled prevalence of smokers in COVID-19 cases was 9%. Current smokers had a higher mortality rate and were 1.45 times more likely to have severe complications when compared to former or never smokers.
- [There was no viral transmission during a fifteen-hour flight](#)
There were no secondary cases after prolonged exposure on an international flight. This finding supports the fact that the virus may be transmitted through infectious droplets rather than being airborne.
- [Deaths, incidence, and proportion of positive tests decreased for the week ending May 2nd](#)
CDC: For the week ending May 2, levels of Influenza Like Illness and COVID 19 were dropping. The proportion of positive COVID-19 tests was decreasing. Mortality due to COVID has decreased compared to last week but may increase as more death certificates are counted.
- [WHO highlights possibility of the virus becoming endemic](#)
The WHO says that there is a possibility that the virus will become endemic. There is a substantial risk that the virus will continue to circulate in communities and may continue to do so even after a vaccine is developed. WHO says a substantial, concerted effort is needed to reduce global, regional, and national risk.
- [Nearly 40% of Icelanders are using a COVID-19 app—and it hasn't helped much](#)
Icelanders have a high-tech tool, a government-backed tracing app using GPS data, at their disposal. However, despite this early deployment and widespread use, the real impact has been small compared with manual tracing techniques like phone calls.

Healthcare Policy Recommendations

- [WHO joint recommendations for COVID-19 management for prisons and closed settings](#)
In a joint statement from the United Nations Office on Drugs and Crime, the World Health Organization, the Joint United Nations Program on HIV and AIDS, and the Office of the High Commissioner for Human Rights, the organizations make recommendations on how to reduce overcrowding; ensure health, safety, and dignity; ensure access to health services; respect human rights; and adhere to the United Nations rules and guidance in the context of the pandemic.

- [Providing quality end of life care to the elderly during the pandemic: Perspectives from five countries](#)

The authors provide 10 discrete suggestions on how clinicians could provide care to our older patients during this pandemic. They address flattening the curve, telemedicine, mental health, work practices, treatment protocols, staff and facilities, communication between care teams, social connectedness, advance care planning, and psychosocial/spiritual support.
- [Containment of COVID-19 cases amongst healthcare workers](#)

Singapore General Hospital adopted a three-pronged strategy to contain COVID-19 amongst the hospital workforce: strengthening centralized reporting of HCWs with acute respiratory illness, conducting ongoing surveillance to obtain early warning of potential clusters, and performing epidemiology investigation and outbreak management when cases of COVID-19 were detected amongst HCWs.
- [Emotion regulation benefits self and family members during the COVID-19 pandemic](#)

Proactive, approach-oriented emotion regulation strategies are effective in helping individuals manage their negative emotions than avoidance-based strategies. Some such strategies include a) seeking and reaching out to others to make them feel good; b) keeping oneself busy/working on other things; c) engaging in enjoyable activities to improve one's mood; and d) attempting to solve a problem.
- [Coping with overwhelming amount of COVID-19 literature: data-mining and search tools](#)

COVID-19 literature published since January has reached more than 23,000 papers and is doubling every 20 days—among the biggest explosions of scientific literature ever. White House Office of Science and Technology Policy, which worked with publishers and tech firms to launch the COVID-19 data set, considered the largest single collection to date, holds more than 59,000 published articles and preprints, including studies of coronaviruses dating back to the 1950s (link is here: <https://www.semanticscholar.org/covid19>). The article also describes the 2019 Novel Coronavirus Research Compendium, which is comprised of 40 scientists from Johns Hopkins University who combed through the literature and selected more than 80 papers on eight topics, including vaccines and pharmaceutical interventions, that they thought were above the bar. They then wrote short summaries of each. [Here](#) are 10 high-priority, pandemic-related research questions identified by the U.S. National Academy of Sciences and the World Health Organization. Among the early fruits of the data mining work is also an “AI-powered literature review.” Using algorithms, researchers harvested data points of interest from a subset of 783 papers in COVID-19 grouped in 17 categories, then created a web page for each topic that displays the results. Data scientists at the University of Washington have developed a user-focused tool called SciSight to mine the COVID-19 data set. Unveiled last week, it automatically provides suggestions of papers containing related themes to help refine search results. It also displays connections between papers as browsable maps.
- [Psychiatric symptoms are higher in clinicians treating COVID patients, lower in those who exercise](#)

The authors surveyed 60 clinical staff from a hospital treating COVID patients and 60 clinical staff at a hospital not treating COVID patients, and mental status and sleep status were assessed. The clinical staff at the hospital treating COVID patients had higher rates of psychological distress and had more symptoms of depression, anxiety, PTSD, and insomnia. Medical staff who more closely followed an exercise routine reported lower rates of psychological distress.
- [Receiving COVID information from expert sources associated with higher psychological well-being](#)

Online survey of 1904 members of the public and health care professionals in Taiwan found that the majority of people were receiving their information from the internet, but that this was associated with poorer psychological well-being. For the general public, receiving information from physicians was associated with better well-being and for physicians receiving information from formal COVID specific training was associated with better well-being.
- [Psychological distress among health professional students during the outbreak](#)

A prospective cohort study of 1,442 health professional students at Sichuan University, China showed that 384 participants (26.63%) demonstrated clinically significant psychological distress and 160 (11.10%) met criteria for probable acute stress reaction (ASR) in response to the outbreak. Participants who experienced childhood adversity or stressful life events during the last year were at increased risk, as were those with internet addiction, whereas participants with good family function were at decreased risk for both distress and ASR.

- [A framework for expanding pharmacy professionals' roles in emergency preparedness](#)

A new Pharmacy Emergency Preparedness and Response (PEPR) Framework is proposed, with 5 key focus areas: emergency preparedness and response, operations management, patient care and population health interventions, public health pharmacy education and continuing professional education, evaluation, research, and dissemination for impact and outcomes. Pharmacy professionals should further integrate with interdisciplinary public health teams. The proposed framework can be utilized to strengthen existing efforts and to establish new initiatives in emergency preparedness and response (EP&R).

Practice Guidelines

- [Sedation of mechanically ventilated COVID-19 patients: recommendations](#)

Management of sedation in ICU patients with COVID-19 is discussed. The emphasis is on taking into account drug's individual properties and side effects, unique COVID-19-related patient characteristics (prolonged intubation, virus shedding), and health care system limitations (large numbers of patients, ICU patients in ER and operating rooms, drug shortages).

- [Long acting injectable antipsychotic medications continued under modified clinic workflow](#)

University of Pittsburg psychiatric ambulatory clinic sought to maintain long acting injectable antipsychotic medications for their patients with serious mental illness. The clinic's modified workflow, experienced staff, and rapport with patients allowed for continuation of scheduled injection appointments with minimal dropout or change to oral medications.

- [Comorbidities as predictors of mortality: systematic review and meta-analysis](#)

The literature review (N=42 studies) showed that the most common pre-existing morbidities in COVID-19 patients were hypertension (36.5%), cardiovascular disease (11.9%), and diabetes (22.0%). The higher likelihood of deaths was found among COVID-19 patients who had pre-existing cardiovascular system diseases (OR: 3.32, 95% CI: 2.79-3.95), immune and metabolic disorders (OR: 2.39, 95% CI: 2.00-2.85), respiratory diseases (OR: 2.02, 95% CI: 1.80-2.26), cerebrovascular system diseases (OR: 4.12, 95% CI: 3.04-5.58), any types of cancers (OR: 2.22, 95% CI: 1.63-3.03), renal (OR: 3.02, 95% CI: 2.60-3.52), and liver system diseases (OR: 1.44, 95% CI: 1.21-1.71). This evidence can be used by healthcare providers to stratify patient risks and prioritize the treatment.

- [COVID-19 -unrelated clinical trials continue despite the pandemic](#)

Researcher from the University of North Carolina shares his experience of continuing HIV clinical trials despite COVID-19 pandemic: study teams have bought and shipped protective equipment to personnel at clinical trial sites, secured special permits where necessary for trial participants to leave their homes for medical visits, and arranged their private transportation to avoid public buses. Many institutions have stratified their ongoing clinical studies and halted only those in which patients didn't stand to benefit directly.

Testing

- [Short interval re-testing for diagnosis of COVID-19 in hospitalized patients is low yield: Research Brief](#)

Out of the thirty-eight inpatients admitted to a tertiary medical center with high pre-test probability for COVID-19, 19 tested positive and 19 tested negative. The 19 "high probability" but negative RT-PCR patients were then re-tested within 24 hours and all remained negative. Data suggests that short interval re-testing is not useful, assuming that specimen collection is appropriate.

- [Pharynx gargle samples save personal protective equipment and swabs](#)

Letter to the Editor: Authors describe that from March to April, the University of Witten/Herdecke in Germany tested 924 healthcare workers for COVID-19 using pharynx gargle samples. 26 workers (2.8%) tested positive. Of the 924, 5 paired specimens were performed (throat swab and gargle sample taken within 24 hours), and there was 1 discrepant result (throat swab negative and gargle sample positive). The use of the gargle test saved 225 PPE sets, as it is less invasive and does not require close contact. However, more comparative studies are needed to assess efficacy during different disease stages.

Drugs, Vaccines, Therapies, Clinical Trials

- [Childhood BCG vaccination does not protect against COVID-19 in adulthood](#)

In a retrospective observational study published in JAMA, researchers from Tel Aviv University, Israel, compared the COVID-19 positivity rate in 3064 likely BCG vaccinated people born between 1979 and 1981, and 2869 likely unvaccinated people born between 1983 and 1985. No significant difference in positivity rate was observed between the two groups, suggesting that BCG vaccination in childhood might not have a protective effect against COVID-19 in adulthood as suggested in another opinion paper.

- [Case Series of Plasmapheresis treatment in Covid-19 related autoimmune meningoencephalitis](#)

Brain, Behavior, and Immunity: The authors report the results of plasmapheresis use in six ICU-admitted patients with Covid-19 presenting with autoimmune meningoencephalitis. Four patients regained consciousness and could be extubated after receiving one or several cycles of plasmapheresis, 1 patient continued therapy due to reactivation of a CMV infection, and 1 patient worsened after one cycle of therapy and died. Following therapy, improvements in serum ferritin levels were observed as well as reversible MRI findings of meningoencephalitis.

- [Convalescent plasma safe in small study](#)

Study aimed to evaluate the safety and potential benefit of convalescent plasma use in severely ill hospitalized patients. There were no adverse events for the 25 patients receiving transfusion; 9/25 improved in seven days, and 19/25 improved in 14 days, assessed by ≥ 1 point improvement in a modified clinical scale. Note that transfusion patients were also taking antivirals and anti-inflammatory agents.

- [A noncompeting pair of human neutralizing antibodies block Covid-19 virus binding to its receptor ACE2](#)

Science: The authors report isolation of four human-origin monoclonal antibodies—B5, B38, H2, and H4—against the Covid-19 receptor binding domain (RBD) and cellular receptor ACE2 from a convalescent patient. All four antibodies exhibited neutralizing activities against the virus with B38 and H4 showing additive inhibition effect. Furthermore, B38 and H4 showed complete competition with ACE2 for binding to the RBD while B5 and H2 showed partial or no competition, respectively. The authors conducted a therapeutic study in a mouse model with results revealing that these antibodies can reduce virus titers in infected lungs.

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

New treatment trials registered today: [Neonatal complications, Alpha-1 antitrypsin inhalation, 25-hydroxyvitamin D3, Artesunate for mild symptoms, Dendritic cell vaccine, Sarilumab, Emotional disclosure-based intervention, Vitamin D, Ocular sequelae in hospitalized patients, Immunomodulatory agent N-803, IV Oxytocin, Astegolimab, Long-term functional outcomes, Kidney injury, Pregnancy outcomes, Photobiomodulation therapy, Compassionate hyperbaric oxygen therapy, IBD, ECMO, VPM1002 RCT, Aerosol box vs Intubation box, High flow nasal cannula, Cognitive outcomes, Meditation and Kundalini yoga, Airway opening pressure, Late fetal loss, Lopinavir/Ritonavir Bioequivalence study]. At time of writing, a total of 1384 were active, 75 completed, and 3 posted results.

Other Science

- [Acute kidney injury in hospitalized patients: meta-analysis](#)

The authors used 9 studies evaluate the pooled incidence rate of acute kidney injury (AKI) and renal replacement therapy (RRT) used in hospitalized patients. They found the incidence rate of AKI to be 3% with an increase to 19% in ICU admitted patients. The pooled incidence rate of renal replacement therapy use was 2% with an increase to 13% with ICU admission. Data is limited by location of cases, which were primarily in China, and significant variability in effect sizes of the studies.

- [Renal tropism may explain commonly reported clinical signs of kidney injury in COVID-19 patients](#)

NEJM: Data from an autopsy series (n=27) showed that SARS-CoV-2 can be detected in multiple organs, including the lungs, pharynx, heart, liver, brain, and kidneys. A greater number of coexisting conditions was associated with SARS-CoV-2 tropism for the kidneys. The highest levels of SARS-CoV-2 copies per cell were detected in the respiratory tract. *In silico* analysis revealed that RNA for ACE2, TMPRSS2, and CTSL (RNA of genes considered to facilitate the viral infection) were enriched in

multiple kidney-cell types, which may facilitate the COVID-19 associated kidney injury.

- [Intestine as potential site for SARS-CoV-2 replication](#)

The authors report productive infection of SARS-CoV-2 in ACE2+ mature enterocytes in human small intestinal enteroids. Expression of two mucosa-specific serine proteases, TMPRSS2 and TMPRSS4, facilitated SARS-CoV-2 spike fusogenic activity and promoted virus entry into host cells. It was demonstrated that viruses released into the intestinal lumen were inactivated by simulated human colonic fluid, and infectious virus was not recovered from the stool specimens.

- [COVID-19 severity linked to preexisting cardiovascular disease risk, but not smoking: meta-analysis](#)

The analysis included 13 observational studies with 49,076 cases. It showed that proportion of diabetes mellitus, hypertension, coronary artery disease, heart failure, and cardiovascular disease events were statistically significant higher in patients with severe COVID-19 compared to non-severe cases. The proportion smoking was not correlated with disease severity, but study was limited by lack of data on duration and frequency of smoking.

- [Cutaneous manifestations may help early diagnosis, triage, and risk assessment](#)

Various global reporting of cutaneous symptoms sparked creation of an online COVID-19 dermatology registry available at www.aad.org/covidregistry. Urticaria with pyrexia is an early symptom of SARS-CoV-2 infection. Chilblain-like acral eruptions, purpuric and erythema multiforme-like lesions associated with young patients with asymptomatic/mild disease. Acro-ischemic lesion and maculopapular rash was seen among adult severe patients.

- [COVID-19-related clinical studies are often underpowered](#)

JAMA: After analyzing 374 articles on COVID-19 (4 of which described trials), researchers concluded that the quality of sample size calculation was not acceptable. The authors strongly suggest that all research teams should include a statistician or invite a statistician to evaluate the appropriateness of the sample size calculation.

Contributing team members: Christophe G. Lambert, Shawn Stoicu, Ingrid Hendrix, Lori Sloane, Anastasiya Nestsiarovich, Praveen Kumar, Nicolas Lauve, Emma Wolinsky, Fiona Nguyen, Ryen Ormesher, Melissa Cossé, Allison Price, Timothy Campbell, Avanika Mahajan, Alexandra Yingling, Perez Olewe, Cristian Bologa, Tudor Oprea, Kristine Tollestrup, Orrin Myers, Douglas J. Perkins.