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

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## DAILY UNM GLOBAL HEALTH COVID-19 BRIEFING

May 5, 2020

### Executive Summary

NM cases. Navajo cases. NM remdesivir inaccessible. Infected prison staff. No early prison releases. Unemployment beats working. NM \$97M food benefits. UNM \$50M revenue loss. Meat packer testing. Fall school reopening planning. Gym/salon reopening plans. 91k absentee ballots. Santa Fe closes polling stations. NM oil/gas pollution oversight. Prisons vulnerable. WH rejects FEMA report. Schools plan reopening. Italian mafia concerns. UK overtakes Italy. Symptom tracker early warning. Ethanol for FFP2 masks. Counterfeit masks. Mask skin damage. Mutant coronavirus more contagious. Hospital contamination zones. Disease prevalence estimation. Successful control measures. Average contagious period. Genetic epidemiology. Managing healthcare resources. Exercise and fitness. Italian disease management Q&A. Practice guidelines on: bronchoscopy, sarcoidosis management, glycemic control, key laboratory tests, ACE/ARB Tx, neurosurgery, cardiac surgery. WHO: test old pneumonia samples. SW NM free testing. Diagnostic assays compared. Corticosteroid benefits. Beekeepers COVID-free? European vaccine US trials. Cytokine storm interventions. Lopinavir-ritonavir second chance. Melatonin potential Tx. 48 clinical trials. Placental infection. Cytokine severity markers. Male lungs worse. Sleep problems. IBD physician survey. Researcher career impact.

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

- [New Mexico reports 6 more COVID-19 deaths and 107 additional cases](#)

As of May 5, the total positive cases and total deaths in the state are 4,138 and 162, respectively. The state has performed 83,251 tests, there are 178 individuals currently hospitalized for COVID-19, and 964 COVID-19 cases have recovered. New NMDOH portal featuring epidemiologic breakdown of cases.

- [Navajo Nation reported total 2,474 cases and 73 deaths as of Monday, May 4](#)

With 101 new cases on Monday (5/4), there are a total of 2,474 cases of COVID-19 with 73 confirmed deaths on the Navajo Nation.

- [UNM Hospital has trouble getting Remdesivir to treat COVID-19 patients](#)

UNM Hospital has not been successful in getting more anti-viral medication Remdesivir for either clinical trials or to use it on more patients. So, now they are working with New Mexico's congressional delegation to help get the drug.

- [Three more NM prison staffers test positive for coronavirus](#)

Three more state prison workers tested positive for coronavirus, bringing the total to four. Two work at Northwest New Mexico Correction Center and one at Western New Mexico Correctional Facility. In total, 41 prison workers and 11 inmates have been tested for the virus.

- [NM Supreme Court denies petition for release of prison inmates due to COVID-19 outbreak](#)  
The NM Supreme Court on Monday unanimously denied the ACLU's petition to release at least 500 elderly/low-risk inmates from incarceration. The Department of Corrections is screening symptomatic inmates, but the ACLU and New Mexico Law Office of Public Defenders argue that these measures are not enough.
- [Unemployment benefits pay more than jobs for some workers](#)  
Businesses started reopening in New Mexico, but some of their employees are not willing to join soon because they're making a lot more on unemployment. Currently, those who make up to \$11.50 an hour are getting their full pay on unemployment, plus \$600 a week in supplemental money from the federal government. Employers can contact the state at [uitax.support@state.nm.us](mailto:uitax.support@state.nm.us) if employees refuse to come back to work.
- [New Mexican families will receive over \\$97 million in food benefits amid COVID-19 Pandemic](#)  
EBT assistance will be deposited directly to existing EBT cards for families already receiving Supplemental Nutrition Assistance Program (SNAP) or Temporary Assistance for Needy Families (TANF) benefits. Pandemic-EBT benefits will continue to be issued through June 19. Families that did not previously qualify for free or reduced-price meals may now qualify due to changes in their household's circumstances as a result of the COVID-19.
- [Several factors contribute to \\$50M revenue loss at UNM and UNMHSC](#)  
UNM has lost nearly \$50M in revenue since the onset of the pandemic, primarily attributed to losses from UNM Hospital and the Health Sciences Center. Student housing and meal plan refunds added almost another \$10M loss. A sharp decrease in state tax revenues from an oil pricing collapse also impacts bottom line. Current plans to offset these losses include lobbying for more federal relief through the CARES Act as well as instituting a hiring freeze.
- [NM education officials in talks on how to safely reopen schools in the fall](#)  
This may include alternating days or classrooms, a combination of distance and in-person learning, or reduced class size.
- [Gyms and salons make safety plans for potential May 15 opening](#)  
Pending possible reopening, gyms are making plans to ensure consumer safety including limiting capacity to 50% and allowing extra time between classes to sanitize. Some salons plan to allow a limited number of clients in the salon at once, requiring masks be worn by staff and clients and putting plastic barriers in place where applicable, such as for nail tables.
- [More than 91,000 New Mexico voters turn to absentee ballots](#)  
Through Monday afternoon, more than 91,000 voters requested their county clerks to vote absentee. Due to the coronavirus outbreak, NM election officials are also pushing absentee voting this year as a way to protect voters and poll workers. Only Democrats, Libertarians and Republicans may cast votes in the primary election and Tuesday (5/5) is also the last day for voters to change their party affiliation.
- [Santa Fe County closes 11 polling stations for June 2 primary election](#)  
Due to the COVID-19 outbreak, the Santa Fe County Commission voted to close 11 mostly tribal and rural polling stations, leaving 19 open around the county. The closed polling sites are Benny J. Chavez Community Center, San Ildefonso Pueblo Visitor Center, El Rancho Senior Center, Nambé Pueblo Tribal Administrative Building, Tesuque Pueblo Intergenerational Center, Atalaya Elementary, Chaparral Elementary School, St. Joseph's Parish Hall, Hondo Fire Station #2, Stanley Cyclone Center and Amy Biehl Community School.
- [NM oil and gas regulators criticized for stopping pollution oversight amid COVID-19 pandemic](#)  
WildEarth Guardians, an environmentalist group, criticized the state's decision to rely on oil and gas companies to monitor air pollution, rather than state inspectors. The state recently stopped routine in-person air quality inspections due to the pandemic, and asked oil and gas operators to monitor and self-report possible violations. (paid subscription)

## US Highlights

- [Overcrowded prisons globally are not equipped for COVID-19](#)  
There are 378 cases of COVID-19 in NYC's jails not including those who have the virus and have since been released or

transferred. The estimated prison population is 11 million globally with 124 prisons exceeding their max capacities. This opinion highlights some facilities worldwide and note factors that may increase viral transmission.

- [White House rejects FEMA report projecting rise in coronavirus cases and death toll](#)

The Trump administration on Monday rejected an internal government report that predicts the number of deaths per day from COVID-19 will reach about 3,000 by June 1. The projections, based on government modeling pulled together by the Federal Emergency Management Agency (FEMA), forecast about 200,000 new cases each day by the end of the month, up from about 25,000 cases a day currently.

## International Highlights

- [Handful of countries slated to reopen elementary schools but pediatric transmission still unknown](#)

Acknowledging the benefits for children's education and mental health, authors draw concern for possible premature reopening of elementary schools as data is limited regarding the transmission and infectivity in children. As schools reopen, new studies will aim to better quantify the risk of transmission between young people as their web of contacts exceeds the average adult, especially in a school setting.

- [Concerns for rise in Italian mafia activity amidst pandemic](#)

There are worries regarding Italy's organized criminal activity given the pandemic, increase in unemployment, and food shortages. Without current regulation, there are concerns for future retribution as well as concern for the mafia becoming an "alternative to government."

- [UK overtakes Italy with Europe's highest official coronavirus death toll](#)

As of May 5, 2020, the UK has reported the highest official death toll from Covid-19 in Europe with a toll of 32,313 deaths. According to Reuters calculations, the pandemic has resulted in at least 12,700 deaths in British care homes. The UK is also projected to be one of the hardest-hit countries with excess mortality.

- [Daily self-reported symptoms in 2.5 million UK people predicts geographic hotspots](#)

*Science*: Symptom Tracker, a mobile app launched in March 2020, could help predict geographical hotspots up to a week in advance of official public health reports. This app offers data on risk factors, herald symptoms, clinical outcomes, and geographical hotspots.

## Economics, Workforce, Supply Chain, PPE Highlights

- [Ethanol effective in cleaning FFP2 masks](#)

Repeated cleaning of FFP2 masks with ethanol showed no degradation of filter permeability after 6 cleaning cycles. Further studies will be needed to determine if ethanol is effective for N95 masks.

- [Counterfeit masks may pose additional risk to healthcare workers during the pandemic](#)

To date, the risk of infection from use of counterfeit PPE masks has not been ascertained. There is a need to differentiate the counterfeits from the certified masks through government and institutional measures in order to protect health care workers. Several hallmarks of counterfeit masks are listed.

- [Chinese survey finds PPE masks associated with skin conditions](#)

484 healthcare professionals in China participated in the online questionnaire survey. Medical staff wearing biosafety level 2 and 3 protection were more likely to experience itching. The development of facial skin lesions and erythema were associated with more advanced PPE, higher working frequency, and longer wearing times of protective suits. The primary concern is that disruption of the skin barrier could potentially increase the likelihood of being infected with COVID-19.

## Epidemiology Highlights

- [A mutant coronavirus strain emerges that is, even more contagious than the original](#)

In a recent [manuscript](#) posted on *bioRxiv*, Los Alamos National Lab scientists have identified a new strain of the coronavirus

that has become dominant worldwide and appears to be more contagious than the versions that spread in the early days of the COVID-19 pandemic. In addition to spreading faster, it may make people vulnerable to a second infection after a first bout with the disease.

- [Analysis of swabs identifies contamination in hospital zones, PPE and other objects](#)

Hospitals play a significant role in the transmission of COVID-19. Surface swabs were taken in 13 function zones, PPE's and major objects. The most contaminated areas included ICU for COVID-19 pneumonia (31.9%), obstetrics ward for infected women (28.1%), and the isolation ward (19.6%). The top contaminated objects were self-service printers (20.0%), desktop/keyboards (16.8%), and doorknobs (16.0%). Hand sanitizer dispensers (20.3%) and gloves (15.4%) were the most contaminated PPE. Authors recommend more adequate sanitation and training to prevent infection.

- [Disease prevalence estimation model studies trends in Spain, Italy and France](#)

A simple analytical model was used to study disease trends in three European countries that can be applicable in predicting outcomes of disease. These models can inform mitigation measures to be put in place prior to occurrence of disease in a population and inform policy.

- [Successful control measures reported in five Asian countries](#)

The authors report efforts of China, Singapore, Taiwan, South Korea, and Japan in response to the pandemic. China enacted aggressive lockdown measures, Singapore focused mainly on border control and extensive contact tracing, Taiwan used data from its immigration and custom databases for contact tracing and strict home quarantine, South Korea executed widespread testing and contact tracing, and Japan focused efforts on promoting social distancing measures.

- [The average contagious period of SARS-CoV-2 patients was 20 days: retrospective study](#)

A retrospective study of 301 COVID-19 Chinese inpatients analyzed demographics and upper respiratory specimen data. The median time between symptoms presence and positive RT-PCR results was 16 days. The median time between symptoms presence and an effective negative RT-PCR result was 20 days. Infected patients 65 years and older stayed contagious longer (22 days vs 19 days,  $p=0.015$ ). Specimens from nasal swabs to run the RT-PCR test showed a higher positive rate than specimens from throat swabs. Thus, the average contagious period of SARS-CoV-2 infected patients was 20 days. Longer observation periods and more than 2 series of negative viral test are necessary for patients 65 years and older.

- [Genomic epidemiology of SARS-CoV-2 in Guangdong Province, China](#)

Chinese researchers generated 53 genomes from infected individuals using a combination of metagenomic sequencing and tiling amplicon approaches. Combined epidemiological and phylogenetic analyses indicate multiple independent introductions to Guangdong, although phylogenetic clustering is uncertain because of low virus genetic variation early in the pandemic. Local transmission chains were constrained by national travel restrictions and by intensive surveillance and interventions. Despite these successes, COVID-19 surveillance in Guangdong is still required since the number of cases imported from other countries has increased.

## Healthcare Policy Recommendations

- [Recommendations for managing health care resources to mitigate anticipated healthcare system issues](#)

Authors make recommendations to mitigate anticipated problems in the healthcare system post-COVID-19 era. Most of the anticipated problems relate to non-COVID19 patient care. Their main recommendations are: enhanced real-time patient outcomes tracking, increased decentralization of care, enhance patient education efforts, increase patient-centered hospital policies, increased prioritization for potential life-threatening elective surgery cases, rapid guidelines development from professional societies, and maintenance of trainee wellness and safety.

- [Exercise and Fitness during social distancing](#)

The US. Physical Activity Guidelines recommend that all adults, even those with chronic medical conditions, should engage in at least 150 to 300 minutes a week of moderate-intensity exercise, if they are able. New data are emerging that exercise may reduce the risk of acute respiratory distress syndrome, a major cause of death in patients with the COVID-19. Recommendations are given on how to stay physically active during social distancing, including home fitness apps.

- [COVID-19 management: questions and answers from Italian experts](#)

A panel of 17 experts from the Italian Society of Anti-infective Therapy (SITA) and the Italian Society of Pneumology (SIP) were selected and developed a list of 8 practical therapeutic questions to be addressed. The members of the panel (that included infectious diseases specialists and pneumonologists) summarized the available literature and their frontline-based opinion in brief (500 words maximum) narrative answers, plus a conclusive statement for each answer.

## Practice Guidelines

- [Bronchoscopy during the COVID-19 pandemic: review of guidelines](#)

An expert panel report published in Chest identifies 6 statements including 1 evidence-based graded recommendation and 5 ungraded consensus-based statements. Bronchoscopy should be used sparingly in the evaluation and management of patients with suspected or confirmed COVID-19. In an area where community transmission of COVID-19 is present, bronchoscopy should be deferred for non-urgent indications. Health care workers should wear PPE while performing the procedure even on asymptomatic patients.

- [Guidance to adjust sarcoidosis management](#)

CHEST Journal: Immunosuppressive therapy for two types of sarcoidosis is discussed. In patients who are in stable remission, it is recommended to reduce the dose or prolong the dose interval of their immunosuppressive medication. In a patient with continued, active disease or organ dysfunction, it is recommended to continue treatment at lowest possible dose or current dose due to the risk of severe unfavorable outcomes.

- [Glycemic control in diabetic patients during COVID-19 outbreak](#)

In this short narrative, Indian authors highlight the biochemical properties of common anti-diabetic drugs related to SARS-CoV-2. They emphasize that good glycemic control is optimal for boosting innate immune system. They also note that hydroxychloroquine (HCQ) is approved by the Drug Controller General of India as a third-line add-on anti-diabetic drug and may be a good adjunctive treatment during this outbreak for patients with poor glucose control. Check diabetic retinopathy and cardiomyopathy prior to recommending HCQ. In response to this paper [here](#) the other authors convey additional information and concerns regarding COVID-related anti-diabetic drugs. In particular, they note that Metformin increases lactate production, which is already increased in COVID-19, thus, it may not be safe. Authors endorse insulin plus dapagliflozin combination as the best treatment option for patients with COVID-19 infection.

- [Six key laboratory tests for patients with COVID-19](#)

The authors highlight six major test types useful for COVID-19 monitoring: 1) Complete blood count (CBC) with differential, 2) acute phase response and inflammatory biomarkers (c-reactive protein [CRP], ferritin, cytokines such as Interleukin-6), 3) kidney, liver and cardiac injury tests (creatinine, ALT), 4) tests which may indicate improvement (CRP, IL-6 and procalcitonin), 5) prognostic biomarkers (D-dimer and high-sensitivity cardiac troponin), 6) Clinical Scores (SOFA (sequential organ failure assessment) score for sepsis assessment, and the CURB-65 (confusion, urea, respiratory rate, blood pressure, and age  $\geq 65$ ) for the assessment of severity in patients with community acquired pneumonia).

- [Systemic review: continue use ACEs and ARBs in COVID-19 patients](#)

There are concerns about angiotensin converting enzyme inhibitors (ACEI) and angiotensin receptor blockers (ARB) can upregulate ACE2 receptor, an entry site for SARS-CoV-2. In a systematic review (unreviewed manuscript in medRxiv), the authors discuss the results of 8 clinical studies and recommend that ACEIs and ARBs should be continued in patients with COVID-19. However, larger clinical trials are needed to confirm the safety of these drugs. Individual patient factors such as ACE2 polymorphism need to be evaluated further.

- [Management of neurosurgical patients during pandemic, Italy](#)

The authors conducted a literature review and share their experience of neurosurgery department's management during COVID-19. The approaches suggested include: a) surgical treatment only of urgent cases, b) implementation of "no-visitor policy", c) patient classification in 4 risk groups, and d) strict management of operating rooms with use of high-protective PPEs and the limited number of experienced staff available.

- [Canadian Society of Cardiac Surgeons guide on increasing the number of elective cardiac surgeries](#)

The Canadian Society of Cardiac Surgeons provides a template whereby cardiac surgical programs may begin to ramp up the delivery of cardiac surgery in a deliberate and graded fashion. The safe increase in the number of elective cardiac surgeries is based on 3 principles: recommendations from public health authorities, proactive management of pre-op patients, and steadily increasing case volumes to balance clinical needs of patients against overall requirements of the healthcare system.

## Testing

- [WHO recommends countries test old pneumonia samples](#)

A hospital in France retesting old pneumonia samples found a positive COVID-19 result for a patient on 12/27/19, one month earlier than what was thought to be the first case in France. The WHO is now recommending that other countries test old samples from pneumonias of unclear origin in order to better understand the circulation of the virus. The organization notes that the virus is still thought to be of animal origin from Wuhan, China.

- [NMDOH announces FREE COVID-19 testing by appointment in southwest counties](#)

NMDOH announces FREE COVID-19 testing for certain residents in the southwest counties, with appointment. Some qualified risks include asymptomatic but in close contact to someone who has tested positive, residents in nursing homes, shelters, or group homes, symptomatic people (cough, fever, shortness of breath, loss of taste/smell, etc.). A list of locations and hours are provided. Test-and-go options are also available. Patients are asked to bring their insurance cards, if applicable, to support the testing efforts. Locations, dates, and phone numbers for appointment included.

- [Comparing the analytical performance of three molecular diagnostic assays](#)

Three molecular assays—the RealStar SARS-CoV-2 RT-PCR, ePlex SARS-COV-2, and CDC COVID-19 RT-PCT—were compared for accuracy of detection for the virus. Nasopharyngeal swabs (NP) or bronchoalveolar lavage (BAL) from patients suspected of COVID-19 and SARS-CoV-2 negative NP and BAL specimens were used in determining lower limit of detection (LOD). LOD for the RealStar assay for NP and BAL was at 1200cp/mL and 12000cp/mL. The CDC test had a LOD of 1200cp/mL for both NP and BAL specimens. The ePlex assay had reported a LOD of 600cp/mL for NP, no studies were conducted on BAL on this assay. Comparison analysis showed 100% agreement and comparable sensitivity across all assays. Similar Ct value (viral load) trends were reported for positive specimens. Clinical sensitivity of PCR in diagnosis is still an area of investigation.

## Drugs, Vaccines, Therapies, Clinical Trials

- [Early short course of corticosteroids reduces symptom escalation in moderate, severe patients](#)

The study (n=213) used methylprednisolone to treat moderate and severe patients. The composite endpoint of escalation of care and mortality occurred at a significantly lower rate in post-corticosteroid group (n=132) compared to pre-corticosteroid group (n=81) (34.9% vs. 54.3%, p=0.005). The post-corticosteroid group showed a significant reduction in median time spent in the hospital (8 vs. 5 days, p < 0.001). Multivariate regression analysis demonstrated an independent reduction in the composite endpoint at 14-days controlling for other factors (aOR: 0.45; 95% CI [0.25 – 0.81]).

- [Bee venom and potential tolerance to SARS-CoV-2](#)

Survey of beekeepers (n = 5115) in Wuhan found none of them had COVID-19 symptoms. They then surveyed apitherapy patients (n = 121), including those exposed to known COVID-19 cases without protective measures, and found none of them had symptoms. Authors suggest all subjects have been stung by bees and could be the key in their apparent immunity. The authors suggest animal trials to determine the significance of this relationship.

- [European vaccine expanding to US – possible 20 million doses by the end of 2020](#)

BioNTech initiated a clinical trial for a vaccine in Europe last month, with Pfizer now bringing the trial to the United States. It will begin with four vaccine candidates being tested on 360 healthy individuals, split into two groups based on age (young and old). The vaccine uses synthetic mRNA technology, allowing for faster development. The companies plan to expand the trial to 8,000 individuals in the U.S. given the first phase proves safe and claim they will have the capacity to administer up to 20 million doses by the end of 2020 if FDA approved.



- [Cytokine storm interventions may reduce disease progression to ARDS and death](#)

Retrospective study (n = 41) discusses potential intervention against cytokine storm causing pneumonia and multi-organ failure. They considered treatment with neutralizing antibodies, IFN, inhibition of oxidized phospholipids, sphingosine-1-P receptor 1 agonist, inhibition of monocyte activation, and continuous renal replacement therapy. Authors believe controlling inflammatory factors can help decrease progression to ARDS and mortality.

- [Early lopinavir-ritonavir failed trial had limitations - editorials suggest further study](#)

*NEJM*: In this series of letters, authors discuss how late the interventions were performed and some positive trends in the data that suggest the drug should not be abandoned yet.

- [Melatonin as a potential adjuvant treatment for COVID-19](#)

Authors postulate melatonin, through its indirect anti-viral actions, may play a role of adjuvant medication in the regulation of immune system, inflammation and oxidation stress, and provide support for COVID-19 patients with ALI/ARDS and related complications. <https://doi.org/10.1016/j.lfs.2020.117583> In support of the original paper's proposal regarding melatonin use in COVID-19 cases, these authors discuss the direct impact of melatonin on the pulmonary vasculature, citing animal studies in which melatonin had positive vasodilatory effects in cases of pulmonary arterial hypertension in newborns. Based on the similarities of COVID-19 with hypoxic pulmonary hypertension and edema, melatonin may be a possible addition to therapy as it may promote pulmonary vascular protection.

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

Treatment trials: Oral Ibrutinib capsules to assess respiratory failure; Quality of life/physical performance after COVID infection; Efficacy/safety of COVID-19 convalescent plasma in admitted patients; Testing for dysautonomia in admitted patients; COVID among healthcare workers in Belgium; Ivermectin and endocrine therapy to aid in recovery from COVID infection; Early transfusion of convalescent plasma in elderly patients; Effect of COVID on pediatric cancer care; Community pharmacists behavior during COVID; Pilot study of colchicine; Monocyte and NK cell activity in COVID; Hydroxychloroquine use before and during exposure of healthcare workers; RAAS inhibitor use in COVID; Angiotensin peptide as COVID treatment; Hydroxychloroquine with azithromycin vs. sirolimus as treatment; N-acetylcysteine in COVID; Inhalable sodium bicarbonate as adjunct therapy; Phase II RCT for convalescent plasma for complication prevention; Recombinant bacterial ACE2 receptors to prevent lung injury; Outcomes of patients with femoral neck fractures during COVID; RCT of plasma exchange for intubated COVID patients; Immunomodulatory therapy for COVID patients; Moxibustion plus cupping for COVID patients; Convalescent plasma for patients with pneumonia; Impact of pandemic on psychological life; Prevalence of SARS-CoV-2 in conjunctival swabs; Novel treatments for high-risk COVID patients; Plasma exchange alone or in combination with ruxolitinib; Consequences of intensified handwashing in children; Proportion of COVID-positive patients with myocardial infarction; Anosmia rehabilitation post COVID infection; Risk of venous thromboembolism in critically ill COVID patients; Trauma symptoms in healthcare workers; COVID convalescent plasma expanded access protocol; COVID serology screening in endoscopy unit; Early short corticosteroids in COVID positive patients; Correlation between oxidative stress status and COVID infection severity; Less frequency of hemodialysis and COVID; Psychological impact of confinement for patients with mood disorders; Verification of DIY PPE equipment; Radiological pulmonary involvement in acute respiratory failure]. At time of writing, a total of 1163 were active, 57 completed, and 3 posted results.

## Other Science

- [First report of placental infection](#)

*MedRxiv* preprint: This case study investigated a symptomatic second trimester pregnant woman presenting with severe hypertension, coagulopathy and preeclampsia. SARS-CoV-2 localized predominantly to syncytiotrophoblast cells at the maternal-fetal interface of the placenta. Histological examination of the placenta revealed a dense macrophage infiltrate, but no evidence for vasculopathy typically associated with preeclampsia.

- [Plasma IP-10 and MCP-3 cytokine levels are highly associated with disease severity and progression](#)

The study (n=50) investigated biomarkers in moderate, severe and critical cases. 14 cytokines were found to be significantly elevated in positive patients. IP-10, MCP-3, HGF, MIG, and MIP-1 $\alpha$  levels were markedly elevated in critically ill patients. IP-10

and MCP-3 were additionally found to be excellent predictors for disease progression when evaluated together.

- [Males with COVID-19 shown to have more extensive lung involvement than females](#)

A semi-quantitative evaluation (n=216) of chest CTs from a Belgium hospital showed that male patients (n=103) had more severe lung involvement and were more likely to have bilateral lung involvement than female patients (n=113), despite similar ages and time from symptom onset. The differences were most pronounced during progressive and peak stages of disease.

- [Survey finds high prevalence of sleep problems in medically isolated patients](#)

In a Chinese survey (n=14,505) conducted in February, medically isolated patients reported difficulty falling asleep (76.7%) and rate of early wake-up (79.5%) at least once per week. Self-reported and non-reported isolation groups reported significantly lower difficulty falling asleep at 51.0% and 42.3%, respectively. Among the medically isolated population, front-line workers were more likely to have difficulty falling asleep (OR: 1.81) and reported early wake-up (OR: 3.13). The prevalence of sleep problems decreased after the first 2 weeks of medical isolation.

- [Inflammatory bowel disease and COVID-19: physicians' survey on knowledge, fears and management](#)

A web-survey was conducted with support of the European Crohn's and Colitis Organization (ECCO), March 20-30, 2020 (N=614 analyzed). 57.7% of respondents were afraid of being infected and 81.8% were afraid of infecting patients. 15% were optimistic about a rapid resolution of the pandemic. 13% believed they did not know how to manage COVID-19 patients. 47% did not recommend the use of PPE to their IBD patients, and 48.2% did not suggest quarantine. Discontinued drugs were thiopurines (72.7%), steroids (43.6%), anti-TNFs (30.9%), methotrexate (20%), ustekinumab and tofacitinib (20% each), vedolizumab (3.6 %).

- [Covid-19 could put a generation of researchers at risk](#)

The article discusses potential long-term impacts on scientific research and the careers of researchers, particularly early-career scientists, whose research has been interrupted by the pandemic. The interruptions delay the completion of studies and publication of findings, which could have far-reaching and long-term effects on careers and scientific progress well after the pandemic subsides.

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