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2020-04-23 DAILY UNM GLOBAL HEALTH COVID-19 BRIEFING

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DAILY UNM GLOBAL HEALTH COVID-19 BRIEFING

April 23, 2020

Executive Summary

NM health order extension. NM and Navajo nation numbers. Pueblo relief. NM curve flattens. Economic recovery council. Businesses push to reopen. Police enforcement tough. Out-of-network healthcare billing. 3700 NM medical volunteers. Rising US deaths. Meat processor shortages. WHO malaria deaths warning. Europe: ½ of deaths nursing homes. British household testing. EU rescue package. Cybercrime 5X. NM PPE spending. PPE waste. Nylon + cloth masks. H₂O₂ PPE sterilization. NY 13.9% antibodies. NY risk factors. Children clinical features. Italian town infection “census”. Monitoring excess deaths. COVID-NET summary. Exit strategies. Outpatient screening. Hospital stress management. Practice guidance on: home anaphylaxis management, burns management, lymphocyte malignancies, venous thromboembolism, intubation, psychiatric infection management, community case management, neonatal ICU, geriatric care, and homeless shelters. Lockdown cessation models. RT-LAMP detection. ELISA microfluidics. Nasopharyngeal vs. Oropharyngeal. Pollution. Healthcare worker screening app. Test kit generosity. UK test key workers. Remdesivir results disputed. Glucocorticoid impact. Alpha-lipoic acid mortality. Computational drug design. Dapagliflozin RCT starts. Myocardial pathogenesis. Smell and taste. Severe case autoimmunity. Interferon severe cases. Coagulopathy. Eosinopenia. Pollution fatality correlation. GI – lung inverse correlation. Fecal review. Mental health and quarantine.

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 will extend emergency public health order through May 15](#)
Gov. Michelle Lujan Grisham announced on Wednesday that the state will not yet lift the stay-at-home order or restrictions on non-essential business, in response to evidence that the virus is spreading among asymptomatic people. There will be no exceptions for counties without any confirmed cases.
- [New Mexico reports 7 more COVID-19 deaths and 169 new cases](#)
The total positive cases and total deaths in the state are 2,379 and 78, respectively. As of today, the state has performed 46,563 tests, there are 123 individuals currently hospitalized for COVID-19, and 573 COVID-19 cases have recovered. [New NMDOH portal featuring epidemiologic breakdown of cases](#).
- [Navajo Nation reports 63 new cases and 3 additional deaths](#)
As of April 21, there are 1,206 total cases and 48 known deaths, not including border towns. The total cases include 569 men and 637 women with an average age of 48 and the average age among deaths at 65. Dispersion of cases across counties is shown.
- [Two coronavirus funds set up to assist New Mexico tribes and pueblos](#)
The Pueblo Relief Fund assists the state’s 19 pueblos with buying masks, food, and cleaning supplies in bulk. The Native American Relief Fund provides emergency grants for tribal nonprofits and governments to purchase food, water, masks, and

cleaning supplies for Pueblo, Apache and Navajo communities. The fund was supported by Blue Cross Blue Shield of New Mexico, New Mexico Gas, New Mexico Community Foundation, and the Albuquerque Community Foundation.

- [Robust NM model suggests flattened curve](#)

Doubling time has changed from 1.9 to 5.2 days. Variables the model accounts for include county demographics and disease burdens, social determinants of health, and supply of healthcare resources. This model assumes the standard of 4 additional cases for every 1 reported, although recent Californian studies suggest this ratio may be closer to 50:1.

- [New Mexico governor appoints economic recovery council for reopening New Mexico businesses](#)

A group of 15 geographically and industry-diverse business leaders from across the state were appointed as members of the economic recovery council. They will advise Governor Michelle Lujan Grisham on strategies for gradually reopening New Mexico businesses in a smart, safe and effective manner and for helping New Mexico's economy emerge from the current public health emergency.

- [Eddy, Lea, and Otero counties will vote to push Gov. to reopen non-essential businesses](#)

Concerns for survivorship of small businesses if not allowed to reopen. Support for small business reopening from local commissioners. Small counties believe restrictions in rural areas should be different than larger cities.

- [NM state police face tough job of business closure enforcement](#)

KRQE Roswell reports that NM state police are reporting citizen complaints regarding both essential and non-essential businesses. Roswell beef jerky store owner claimed that the police visits still made him nervous despite his establishment being essential. "We're trying to work with them, the last thing we want to do, we all grew up in these communities, is to go and effect their livelihood. I know it's a tough time and our officers tasked with a tough, tough job of doing this" said Captain Bateman.

- [NM prohibits surprise billing for COVID-19 care received out-of-network](#)

Carriers must cover expenses for out-of-network care received as a result of COVID-19. Insurance carriers shall reimburse out-of-network providers using the surprise billing rate. Providers may be fined if they knowingly surprise bill a patient for out-of-network care.

- [More than 3,700 people sign up to volunteer with the NM Medical Reserve Corps](#)

More than 3,700 doctors, nurses, physician assistants, counselors, emergency medical technicians, medical assistants, and medical students have volunteered with the New Mexico Medical Reserve Corps.

US Highlights

- [Infectious disease experts predict COVID-19 deaths will rise substantially in the US in coming weeks](#)

In last week's survey, the specialists predicted that total U.S. deaths from COVID-19 will rise substantially in coming weeks; they estimated that in the most likely scenario, the number of deaths will reach 45,157 on 1 May and 74,631 on 1 June.

- [Over 5,000 U.S. meat, food-processing workers exposed – potential shortages](#)

The largest meatpacking union of the US said that more than 5,000 meat and food-processing workers had been infected with or exposed to the new coronavirus, and 13 had died. Major meat processors like JBS USA and Tyson Foods Inc have indefinitely shuttered beef and pork plants due to outbreaks among workers, reducing supply as demand increases.

International Highlights

- [WHO warns malaria deaths in sub-Saharan Africa could double this year due to pandemic](#)

A new modelling analysis by WHO says nearly 760,000 people in the region could die from malaria in 2020, if there is severe disruption to access to the medicine and insecticide-treated nets that help prevent malaria. The organization is urging countries to increase the distribution of malaria prevention and treatment commodities.

- [WHO reports up to half of all deaths in Europe are in nursing homes](#)

Dr. Hans Henri P. Kluge, WHO Regional Director for Europe: "According to estimates from countries in the European Region,

up to half of those who have died from COVID-19 were resident in long-term care facilities."

- [Approximately 45% of Ireland deaths are nursing home residents](#)
191 virus clusters were associated with nursing homes. Testing has been ordered for all nursing home staff and residents.
- [Britain plans to test 20,000 households in coming weeks](#)
To determine the spread of the disease across Britain, the British government is planning to test a sample of 20,000 households in the coming weeks. UK to test prevalence of COVID-19 in general population
- [EU leaders agree huge rescue package for Europe's struggling economies](#)
EU leaders confirmed that €540bn (£470bn) of financial support would be released through existing mechanisms, to ease the economic pain caused by coronavirus, from 1 June. European Commission chief Ursula von der Leyen said the future recovery fund would mobilize €1 trillion of investment.
- [WHO reports five-fold increase in cyber-attacks, urges vigilance during the COVID-19 crisis](#)
The World Health Organization has witnessed a dramatic increase in the number of cyber-attacks directed at its staff and email scams targeting the public at large. The number of cyber-attacks is now more than five times the number directed at the Organization in the same period last year. WHO asks the public to remain vigilant against fraudulent emails and recommends the use of reliable sources to obtain factual information about COVID-19 and other health issues.

Economics, Workforce, Supply Chain, PPE Highlights

- [NM PPE aid on the rise - NM has spent \\$10.4 million on PPE for COVID-19](#)
Recent shipments have been sent out to the Pojoaque, Zuni and Santa Clara pueblos as well as retirement homes in Bernalillo, Sandoval and Socorro counties.
- [NM Hospitals threw away near-expired PPE before COVID for fear of audits](#)
A generally accepted practice of removing expired PPE, which may have no correlation to efficacy of the PPE, was in retrospect not beneficial. Hospital workers wish they had been told by government not to throw out PPE.
- [Adding nylon layer to fabric masks increases particle filtration efficiency](#)
Using a modified method of mask fit testing, researchers compared the particle filtration efficiency of 10 community-produced fabric mask designs to commercially produced surgical masks. A nylon stocking overlayer improved particle filtration efficiency for all masks, and brought the efficiency for 5 of the 10 fabric mask designs above the 3M surgical mask baseline. The use of this testing method on a wider range of mask material/designs could help optimize PPE given the available resources.
- [Analysis of SteraMist ionized H2O2 technology for sterilizing N95 respirators and other PPE](#)
The data demonstrated that N95 masks sterilized using SteraMist ionized hydrogen peroxide technology retain function up to five cycles, the maximum number tested.

Epidemiology Highlights

- [NY state survey shows 13.9% test positive for antibodies and aims to ramp up testing](#)
A preliminary NY state survey (n=3000) determined antibody positive test rate to be 13.9% with an implied fatality rate of 0.5%. The positive test rate was greater than the 4.1% found by a [Los Angeles study](#) earlier this week. The NY study targeted those who were out shopping, but not working, which has caused criticism for skewed data. Death rates were calculated using reported numbers from hospitals and nursing homes.
- [High mortality in patients with pre-existing conditions and lab abnormalities](#)
A descriptive study of 2,199 patients admitted to 5 large NY hospitals found a mortality rate of 29% in the 1,078 who had completed their hospital stay at the end of the study. Pre-existing conditions were present in 65% of those who died and 46% of those discharged. The admission median lymphocyte percentage, D-dimer, C-reactive protein, and procalcitonin levels were higher for patients who died than those who were discharged.

- [Clinical features of children with SARS-CoV-2](#)

The retrospective analysis of 115 children in Wuhan (73 boys and 42 girls). Most (91.3%) had a history of close contact with an individual with SARS-CoV-2-infection, 9.6% had an elevated ALT, and 29.5% had elevated CK-MB. For clinical symptoms, 25.2% had fever, 40.9% had respiratory symptoms, and 53.0% were asymptomatic. No pulmonary imaging changes were observed in 23.5%, while the remainder had abnormal CT findings.

- [Intensive testing finds a small Italian town's many silent infections](#)

A medRxiv preprint reports that researchers at the Imperial College London tested almost every resident of Vo, Italy at the beginning and end of the lockdown. About 43% of the people infected were asymptomatic. The infection rate decreased from 2.6% to 1.2%. Potential infectiousness was not affected by whether the patients were symptomatic or not. Contact tracing revealed that most new infections were due to community spread or from asymptomatic infections within the homes.

- [Need for real-time monitoring of weekly excess deaths](#)

In a *Lancet* commentary, researchers from London School of Hygiene & Tropical Medicine argue that weekly excess deaths could provide the most objective and comparable way of assessing the scale of the pandemic and formulating lessons to be learned. This measure can be constructed by comparing the observed weekly all-causes deaths throughout 2020 to values expected from the experience of previous non-pandemic years.

- [New COVID-NET data covering more than 100 counties reported more than 6,400 hospitalizations](#)

Demographics of 6,485 hospitalizations collected by COVID-NET covering the 10 Emerging Infections Program states (CA, CO, CT, GA, MD, MN, NM, NY, OR, TN) and four Hospitalization Surveillance Project states (IA, MI, OH, UT). In adults, the main underlying medical conditions were cardiovascular disease, hypertension, metabolic disease and obesity. In children, the main underlying medical conditions were asthma, cardiovascular disease, metabolic disease and neurologic disease.

Healthcare Policy Recommendations

- [Exit strategies: optimizing feasible surveillance for detection, elimination and prevention](#)

Authors provide guidance on implementing a surveillance system, which entails screening all syndromic fever and cough primary care presentations in combination with exhaustive case and contact identification and management. If testing capacity is limited, the authors recommend interventions such as pooling allow increased case detection.

- [Effective screening and management process in the outpatient clinic](#)

In a letter to the editor, the Chinese authors discuss their experience and provide a flowchart for patient screening protocols to minimize the incidence of nosocomial infections and to prevent hospitals from becoming epidemic foci in the long run.

- [Recommendations for hospital leaders to manage the stress of COVID-19](#)

The authors list the steps that leaders can take to support their workforce and sustain patient care.

Practice Guidelines

- [Acute home anaphylaxis management: expert guidelines](#)

Authors recommend patients to activate their emergency medical services if symptoms don't improve or worsen after epinephrine administration. Patients are encouraged to have 2 auto-injections at home and replenish as needed. Those with underlying asthma should maintain asthma control. Telemedicine is a recommended tool for assessment and follow up to decrease hospital burden and limit COVID-19 exposure.

- [Chinese recommendations on burns management during COVID-19 pandemics](#)

The recommendations suggest outpatient treatment of burned patients over inpatient, as well as the use of telemedicine. Non-urgent surgery should be suspended. Try to accomplish wound surgery as briskly as possible.

- [Management of lymphocyte malignancies in COVID-19 patients: Brazilian recommendations](#)

Practical recommendations are provided on management of lymphoid malignancies during the COVID-19 pandemic, focusing on minimizing the risk for patients.

- [Management of venous thromboembolism during COVID-19: an expert consensus before guidelines](#)
Practical recommendations are suggested, including on how to choose thromboprophylactic measures for patients with diverse severity of disease and bleeding risk, and which kind of anticoagulant should be prescribed.
- [Intubation in COVID-19 patients: expert recommendations based on case series analysis](#)
By analyzing two retrospective observational case series from Wuhan a panel of international airway management experts discussed the results and formulated consensus recommendations for the management of tracheal intubation in COVID-19 patients. Strategy and methods for tracheal intubation is recommended.
- [Infection in psychiatric hospitals during COVID-19: mistakes and recommendations](#)
It is suspected that once the nosocomial infections started to occur, neither Chinese nor Korean psychiatric wards were able to respond rapidly. The authors compare the mistakes occurred in both clinical settings and give the appropriate recommendations to prevent them.
- [Managing COVID-19 \(including at the end of life\) in the community: NICE guidelines](#)
The National Institute for Health and Care Excellence (NICE) in collaboration with NHS England and NHS Improvement provide guidelines: 1) Put treatment escalation plans in place for patients with COVID-19 because they may deteriorate rapidly and need urgent hospital admission. 2) Encourage patients with cough to avoid lying on their back and, for those with a cough that is distressing, to consider short term use of codeine linctus, codeine phosphate tablets, or morphine sulfate oral solution. 3) Use controlled breathing techniques such as positioning, pursed-lip breathing, breathing exercises, and coordinated breathing training.
- [Managing neonatal ICU during COVID-19: Italy experience](#)
The authors share their experience of dealing with COVID-19 outbreak in Padua, where the epidemic is ongoing and rapidly evolving, to promote debate on the preventive measures to adopt in NICUs. The approach is discussed to patient triage, nasopharyngeal swabs, preventive measures and maternity issues.
- [Healthcare for the elderly: lessons from the COVID-19 outbreak in Italy](#)
The authors' data suggest that Italian national health care system was not suited and prepared to respond to crisis. Geriatric care teams must be integrated along with infectious disease specialists, pneumologists, and anesthesiologists into the management of SARS-CoV-2. The GeroCovid Initiative of the Italian Society of Gerontology and Geriatrics aims at expanding the knowledge of the disease and its impact on health status and needs of care as well as at promoting health care strategies. Any Geriatric Society or working group can voluntarily join the GeroCovid group at www.sigg.it
- [CDC guidelines for US homeless shelters](#)
COVID-19 testing was conducted in 19 homeless shelters, both residents and staff, in several major US cities. Of 1,192 residents and 313 staff, positive tests found in 17% of residents; 17% of staff in Seattle; 36%; 30% in Boston, and 66%; 16% in San Francisco. CDC recommends infection control, social distancing (beds 6ft apart), and face covering at shelters. If available, regular testing.

Testing

- [Diagnostic uncertainty in mass testing limits contribution to lock down relaxation](#)
In a medRxiv preprint, three models for lockdown cessation (immediate end, immunity passports, and incremental) were explored using an SIR model to assess the effect on disease spread. The authors from University of Liverpool concluded that the best measure to resume social activity is slow incremental relaxation combined with well targeted testing strategy.
- [One-pot detection with RT-LAMP assay and visual RT-LAMP assay shown to be effective](#)
In a bioRxiv preprint the author from Xuchang University, China claims that one-pot reverse transcription loop-mediated isothermal amplification (RT-LAMP) assays can detect COVID-19 with a limit of ≥ 6 copies per μl^{-1} of pUC57 containing N gene sequence. The assays seem to be rapid, reliable, and sensitive.
- [Rapid and quantitative biomarker detection via microfluidic ELISA technology](#)

Researchers from University of Michigan and Beijing, China, present in a bioRxiv preprint the development of a microfluidic ELISA platform for rapid and accurate COVID-19 antibody testing. Various humanized monoclonal IgG were characterized and a calibration standard of anti-SARS-CoV-2 S1 IgG in serological analysis is proposed.

- [Nasopharyngeal swabs may be more effective than oropharyngeal swabs in disease detection](#)

In a peer reviewed article in International Journal of Infectious Diseases, researchers from Wuhan, China report higher positive rate (positive tests/total tests) in nasopharyngeal swabs than in oropharyngeal swabs for SARS-CoV-2 detection in 353 patients.

- [Mobile app screens healthcare workers for symptoms in Massachusetts](#)

Over 500 symptomatic employees were identified that otherwise would have possibly come to work, potentially putting others at risk. Source code is available for other institutions who may want to implement similar solutions.

[Biochemical supplier gives Canadian government formula for test kit production](#)

Many chemicals, including reagents needed for RNA extraction, are in high demand around the world. France's Biomérieux, a key supplier, has given its proprietary formula to the Canadian government for free. There are no reports on whether the agreement was government mandated.

- [UK to expand testing to cover all key workers](#)

Britain's health minister Matt Hancock promised on Thursday to expand coronavirus testing to all those considered key workers after the government faced criticism for failing to roll out mass checks. Previously only healthcare employees and those working in nursing homes have been able to get tests. Teachers, government employees, and delivery drivers will now have access to testing.

Drugs, Vaccines, Therapies, Clinical Trials

- [Remdesivir trial in China shows poor outcomes – Gilead, manufacturer, disagrees](#)

WHO was given early access to Chinese remdesivir RCT results ([NCT04252664](#)) for mild to moderate cases and posted online. Before its removal, results showed 237 patients underwent randomization: 158 remdesivir and 79 control. No significant difference in time to clinical improvement (hazard ratio 1.23, 95% CI 0.87-1.75), mortality at 28 days (13.9% vs 12.8%) or time to viral negativity. Treatment stopped early in 11.6% of treated vs. 5.1% of controls due to adverse events. A Gilead spokesperson said, "the post included inappropriate characterization of the study." Gilead later said in a broader statement that the study ended early due to low enrollment and, as a result, could not provide "statistically meaningful" conclusions. Even as the results are inconclusive, "trends in the data suggest a potential benefit for remdesivir, particularly among patients treated early in disease," Gilead said.

- [Glucocorticoids reduce fever, but not lung inflammation or mortality in COVID-19](#)

A meta-analysis of 23 studies was conducted looking at children and adults with COVID-19, Middle East Respiratory Syndrome Coronavirus (MERS-CoV) and Severe Acute Respiratory Syndrome coronavirus (SARS-CoV). In adults with COVID-19, the use of systemic glucocorticoid did not reduce mortality (RR=2.00, 95% CI: 0.69 to 5.75) or the duration of lung inflammation (weighted mean differences, WMD=-1 days, 95% CI: -2.91 to 0.91), while a significant reduction was found in the duration of fever (WMD=-3.23 days, 95% CI: -3.56 to -2.90). In patients with SARS, glucocorticoids also did not reduce the mortality (RR=1.52, 95% CI: 0.89 to 2.60, I²=84.6%), duration of fever (WMD=0.82 days, 95% CI: -2.88 to 4.52) or duration of lung inflammation absorption (WMD=0.95 days, 95% CI: -7.57 to 9.48). Due to high rates of side effects, glucocorticoids are not recommended by the authors for routine use in COVID-19 treatment.

- [Alpha-lipoic acid may reduce short-term mortality rates](#)

In a randomized, single-blind, group sequential, active-controlled study, alpha-lipoic acid use was associated with lower SOFA score increase compared to the control. Although the 30-day mortality rate was two-folds higher in placebo group, only borderline statistical difference was evidenced due to the limited patient number (n=17).

- [Computational drug design targeting the SARSCov-2 main protease reveals promising results](#)

Detailed 3D-structures of key virus proteins using computer-aided drug design techniques can be applied to quickly identify

promising drug repurposing candidates. Virtual docking screening revealed that several approved drugs (Carfilzomib, Eravacycline, Valrubicin, Lopinavir and Elbasvir) are potential inhibitors of SARS-Cov-2 protease.

- [AstraZeneca tests dapagliflozin \(Farxiga\) as possible COVID-19 treatment](#)

AstraZeneca and Saint Luke's Mid American Heart Institute have started a randomized, global Phase III clinical trial to assess dapagliflozin (an SGLT2 inhibitor used for Type II Diabetes) as a way to reduce disease progression, clinical complications, and death in hospitalized COVID-19 patients with cardiovascular, metabolic, or kidney risk factors. Dapagliflozin has previously been shown to have cardio and renal protective benefits.

Other Science

- [Myocardial injury as a pathogenesis mechanism in critically ill patients](#)

Increased cardiac troponin levels have been reported in many COVID-19 patients, implicating myocardial injury as a possible pathogenic mechanism contributing to severe illness and mortality. Consequently, elevated troponin levels are associated with increased mortality among COVID-19 patients.

- [Prevalence, intensity, and timing of altered smell and taste in SARS- CoV-2 infections](#)

202 infected patients with mild symptoms were interviewed for altered senses of smell or taste. Median age was 59 years. 64.4% of patients reported alterations to smell or taste. 13.9% reported mild-light alterations and 50.5% reported moderate- "bad as can be" symptoms. 11.9% reported the onset prior to other symptoms; 46 (22.8%) concomitant with other symptoms; 54 (26.7%) after other symptoms. These findings were statistically significant ($p < 0.05$).

- [Clinical and autoimmune characteristics of severe and critical cases with COVID-19](#)

A Chinese study ($n=12$) investigated severe/critical patients and found the most common characteristics on chest CT were ground-glass opacity (100%) and bilateral patchy shadowing (76.2%). Most common lab findings were lymphocytopenia (85.7%), elevated C-reactive protein (94.7%), and Interleukin-6 (89.5%). Anti-52 kDa SSA/Ro antibody, anti-60 kDa SSA/Ro antibody and antinuclear antibody were revealed in 20%, 25% and 50% cases, respectively.

- [Type-I IFN deficiency in the blood is suggested as a hallmark for severe cases](#)

In critical and severe patients, an impaired interferon (IFN) type-1 response was associated with a persistent blood virus load and an exacerbated inflammatory response that was partially driven by the transcriptional factor NF κ B. It was also characterized by increased tumor necrosis factor alpha and interleukin-6 production and signaling.

- [Patients with acute respiratory failure present a severe rather than consumptive coagulopathy](#)

Researchers from Padua University, Italy, present in Coagulation and Fibrinolysis 22 cases that showed significantly higher fibrinogen and D-dimer plasma levels versus healthy controls ($n=44$) ($p < 0.0001$, all). Markedly hypercoagulable thromboelastometry profiles were observed, as reflected by shorter clot formation time in INTEM ($p=0.0002$) and EXTEM ($p=0.01$) and higher maximum clot firmness in INTEM, EXTEM and FIBTEM ($p < 0.001$, all).

- [Eosinopenia may not be associated with poor outcomes in COVID-19 patients](#)

The results of the systematic literature review and pooled analysis suggest that despite the data are still limited on eosinophil count in patients with COVID-19, low eosinophil counts may not be associated with unfavorable progression of COVID-19.

- [2 new studies found correlation between pollution levels and COVID-19 fatalities](#)

A European study concluded that 83% of fatalities occurred in regions of maximum NO $_2$ concentrations, suggesting chronic exposure may contribute to fatality. A complementary [Harvard study](#) claims a small increase in chronic particulate matter (PM) exposure leads to large increase in COVID-19 death rates.

- [Inverse correlation of GI symptoms with lung involvement observed](#)

An Italian study ($n=411$) showed that patients with GI symptoms reported less frequently cough ($p=0.004$) as compared to those presenting with respiratory symptoms, whereas the frequency of fever was similar ($p= 0.7$). GI symptom did not correlate with fever, syncope, use of ACE inhibitors, comorbidities or use of multiple drugs. GI involvement might have an inverse correlation with lung involvement

- [Implications of viral presence in fecal samples of COVID positive patients: a review](#)

This review compiled 26 studies to determine the implications of fecal viral load in COVID-19-positive patients. 53.9% of patients were positive for fecal RNA and fecal viral shedding persisted after the nasopharyngeal swab was negative. The authors suggest that fecal viral presence may influence transmission, symptomatology, duration of isolation, and use of PPE.

- [Mental health impact of COVID-19 is not associated with quarantine](#)

A Chinese survey via “SoJump” app (1,443 with quarantine, and 836 without quarantine) showed no significant difference for the screening-positive rate of Self-Report Questionnaire (SRQ-20), 7-item Generalized Anxiety Disorder Scale (GAD-7), and 9-item Patient Health Questionnaire (PHQ-9) between those with and without quarantine. The screening-positive rate of SRQ-20 (OR = 3.593, 95%CI = 3.020–4.28), GAD-7 (OR = 4.686, 95% CI = 3.937–5.58), and PHQ-9 (OR = 4.313, 95% CI = 3.640–5.11) were significantly associated with COVID-19 impacts on daily life, but not with the quarantine variable.

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