



2019-nCoV Literature Situation Report (Lit Rep)

October 5, 2020

The scientific literature on COVID-19 is rapidly evolving and these articles were selected for review based on their relevance to Washington State decision making around COVID-19 response efforts. Included in these Lit Reps are some manuscripts that have been made available online as pre-prints but have not yet undergone peer review. Please be aware of this when reviewing articles included in the Lit Reps.

Key Takeaways

- **Approximately three-quarters of people who required hospitalization for COVID-19 reported at least one lingering symptom or effect 3 months after their symptoms began. The most frequently reported effects were reduced quality of life (51%) and shortness of breath (50%).** [More](#)
- **A multinational study reported that young people aged 18-30 years were more sensitive to negative effects of COVID-19 lockdowns and reported higher levels of anxiety, depression and uncertainty than older adults.** [More](#)
- **The acceptance of flu vaccination in the 2020-21 season has increased in UK. An online survey showed that among people who previously had not routinely received influenza vaccination, 57% intended to get the influenza vaccine in the coming season.** [More](#)
- **An ad hoc committee of the National Academies of Sciences, Engineering, and Medicine developed a framework for equitable allocation of COVID-19 vaccine. The framework includes four allocation phases of prioritizing COVID-19 vaccine to the public based on risk-based criteria.** [More](#)

Transmission

- Survival time of SARS-CoV-2 on human skin was significantly longer than that of influenza A virus (9.0 hours vs. 1.8 hours). Exposure of both viruses to 80% ethanol while on the skin surface, in the context of droplets from a cough or sneeze, inactivated both viruses within 15 seconds of exposure, indicating appropriate hand hygiene using ethanol-based disinfectants may lead to the quick viral inactivation and may reduce the high risk of contact infections.

Hirose et al. (Oct 3, 2020). Survival of SARS-CoV-2 and Influenza Virus on the Human Skin: Importance of Hand Hygiene in COVID-19. Clinical Infectious Diseases.

<https://doi.org/10.1093/cid/ciaa1517>

Testing and Treatment

- *[Preprint, not peer-reviewed]* A nanoparticle-enabled blood test could detect a statistically significant differences in immune response between samples collected from COVID-19 patients with no or mild symptoms (n=38) and those with moderate/severe symptoms (n=115), with results available in <1 minute. The authors conclude this new rapid test may be used as a point-of-care clinical tool for COVID-19 patient risk stratification and management.



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Deb et al. (Oct 2, 2020). A One-Minute Blood Test to Monitor Immune Responses in COVID-19 Patients and Predict Clinical Risks of Developing Moderate to Severe Symptoms. Preprint downloaded Oct 5 from <https://doi.org/10.1101/2020.09.30.20203844>

- A review of 16 clinical trials of hydroxychloroquine and chloroquine to treat COVID-19, of which 14 were randomized, reported concerns about the ability to derive meaningful results from the trials due to the assessed risk of bias in the studies. None of the trials met the CONSORT criteria in full for reporting harms data. None of the trials had an overall 'low' risk of bias, while four of the trials had 'high', 'critical', and 'serious' risk of bias assessed by the Cochrane risk-of-bias tools.
Mazhar et al. (Sept 24, 2020). Use of Hydroxychloroquine and Chloroquine in COVID-19: How Good Is the Quality of Randomized Controlled Trials? International Journal of Infectious Diseases. <https://doi.org/10.1016/j.ijid.2020.09.1470>
- A systematic review with 1 randomized trial and 19 cohort studies (16,977 hospitalized COVID-19 patients) reported that corticosteroid therapy was not associated with a reduction in short-term mortality (RR=0.9, 95%CI 0.7-1.2) but possibly with a delay in viral clearance (RR=1.5, 95%CI 1.1-1.9). The authors call for caution in interpretation due to discordant results observed between the RCT and observational studies, as well as the heterogeneity observed across observational studies.
Tlayjeh et al. (Sept 29, 2020). Association of Corticosteroids Use and Outcomes in COVID-19 Patients: A Systematic Review and Meta-Analysis. Journal of Infection and Public Health. <https://doi.org/10.1016/j.jiph.2020.09.008>

Clinical Characteristics and Health Care Setting

- One third (162/509) of patients hospitalized with COVID-19 in the Chicago area experienced some type of altered mental function, ranging from confusion to delirium to unresponsiveness. These patients stayed three times as long in the hospital as patients without altered mental function, indicating patients with encephalopathy may have poorer outcomes and need closer post-discharge monitoring or rehabilitation.
Liotta et al. (Oct 5, 2020). Frequent Neurologic Manifestations and Encephalopathy-Associated Morbidity in Covid-19 Patients. Annals of Clinical and Translational Neurology. <https://doi.org/10.1002/acn3.51210>
- [Preprint, not peer-reviewed] Health and social care workers in a National Health Service facility in the UK (n=2,062) were three times more likely to test positive for anti-SARS-CoV-2 antibodies, compared to a group of controls (n=231) matched for age and sex to the general population of their community (OR=3.4, 95%CI 1.9-6.2). Dentists (26%), healthcare assistants (23%) and porters (22%) were the job roles most likely to test positive. Participants working in front-line roles with COVID-19 patients were more likely to test positive than those working with patients without COVID-19 (17% vs 13%, p=0.02).
Abo-Leyah et al. (Oct 2, 2020). Seroprevalence of SARS-COV-2 Antibodies in Scottish Healthcare Workers. Preprint downloaded Oct 5 from <https://doi.org/10.1101/2020.10.02.20205641>
- An urban level 1 trauma center in Minnesota experienced a 35% decline in emergency department visits in 28 days following the state emergency declaration of COVID-19 on March 13, 2020, as compared with a similar period in 2019. Disproportionate declines were seen in visits by pediatric and older patients, women, and Medicare recipients, as well as for presentations of syncope (fainting or passing out), cerebrovascular accidents (strokes and transient ischemic attacks), kidney

stones, and abdominal and back pain. Significant proportional increases were seen in emergency department visits for upper respiratory infections, shortness of breath, and chest pain.

Westgard et al. (June 11, 2020). An Analysis of Changes in Emergency Department Visits After a State Declaration During the Time of COVID-19. Annals of Emergency Medicine.

<https://doi.org/10.1016/j.annemergmed.2020.06.019>

- Among 78 patients who were hospitalized with COVID-19 from March to June 2020 in Vancouver, Canada, 76% reported having at least one lingering health effect 3 months after symptom onset and 56% reported at least 2 health effects. The most frequently reported complaints were lower quality of life (51%) and shortness of breath (50%).

Wong et al. (Oct 2, 2020). Patient-Reported Outcome Measures after COVID-19: A Prospective Cohort Study. European Respiratory Journal. <https://doi.org/10.1183/13993003.03276-2020>

Mental Health and Personal Impact

- A meta-analysis with 31 studies calculated the pooled prevalence of depression (45%), anxiety (47%) and sleeping disturbances (34%) among patients with COVID-19 (n=5,153). The prevalence estimates did not differ by gender. The depression and anxiety prevalence estimates varied between different screening tools.

Deng et al. (Oct 2, 2020). The Prevalence of Depression, Anxiety, and Sleep Disturbances in COVID-19 Patients: A Meta-Analysis. Annals of the New York Academy of Sciences.

<https://doi.org/10.1111/nyas.14506>

- Young adults were more sensitive to lockdown conditions and psychological distress compared to older adults in a multinational study. An online survey conducted from April 17 to May 1, 2020 among 2,871 participants in Belgium, France and Canada found that during confinement, young participants aged 18–30 years reported having less living space and lower occupational activity, social contact, and alcohol use, but higher anxiety, depression and uncertainty than older participants aged 30-50 years and >50 years. The authors suggest considering different age groups when developing strategies for deconfinement as well as the importance of targeting 18–30-year-olds, who have been especially vulnerable.

Glowacz and Schmits. (Sep 25, 2020). Psychological Distress during the COVID-19 Lockdown: The Young Adults Most at Risk. Psychiatry Research.

<https://doi.org/10.1016/j.psychres.2020.113486>

Modeling and Prediction

- Sun et al. developed a probability model to estimate the county-level community exposure risk during the COVID-19 pandemic in the US. The model had three inputs: the real-time number of active and asymptomatic cases, the population in local communities, and the customer counts in public places.
- They reported that between April 1 and July 15, 2020, the model successfully predicted outbreaks in COVID-19 hotspots like the Navajo Nation, New York, Georgia and Louisiana. The model's estimated probability score was significantly associated with new cases in next two weeks. They conclude that the model could inform business and municipal COVID-19 policy to accelerate recovery with more precise risk estimates.

Sun et al. (Sept 29, 2020). Community Venue Exposure Risk Estimator for the COVID-19 Pandemic. Health & Place. <https://doi.org/10.1016/j.healthplace.2020.102450>

Public Health Policy and Practice

- [Preprint, not peer-reviewed] An online survey in the UK among people eligible for the National Health Service free vaccination program reported that COVID-19 has increased acceptance of flu vaccination in the 2020-21 season. Among those who previously had not routinely received influenza vaccination, 57% reported that they intended to get the influenza vaccine in the 2020-21 season, boosting coverage from 80% to 91% in the overall cohort.
Bachtiger et al. (Oct 4, 2020). The Impact of the Covid-19 Pandemic on Uptake of Influenza Vaccine A UK-Wide Observational Study. Preprint downloaded Oct 5 from <https://doi.org/10.1101/2020.10.01.20205385>
- An ad hoc committee of the National Academies of Sciences, Engineering, and Medicine developed an overarching framework to assist policymakers in the domestic and global health communities to plan for equitable allocation of vaccines against SARS-CoV-2. The framework includes four allocation phases of COVID-19 vaccine to the public based on risk-based criteria. Phase 1 includes high-risk health care workers, emergency responders, people with comorbidities that put them at significantly higher risk of severe outcomes or death from COVID-19, and older adults living in congregate settings. Detailed discussions of each population group included in the phases can be found in the full report through the link.
The National Academy of Medicine. (Oct 5, 2020). A Framework for Equitable Allocation of Vaccine for the Novel Coronavirus. <https://www.nationalacademies.org/covidvaccineframework>

Other Resources and Commentaries

- [Decarceration and Community Re-Entry in the COVID-19 Era](#). – The Lancet. Infectious Diseases (Sept 29)
- [Pride and Prejudice during the COVID-19 Pandemic: The Misfortune of Inappropriate Clinical Trial Design](#). – Journal of Epidemiology and Global Health (Aug 7)
- [COVID-19 Pandemic: Current Knowledge about the Role of Pets and Other Animals in Disease Transmission](#) – Virology Journal (Oct 2)
- [COVID-19 Self-Reported Symptom Tracking Programs in the United States: A Framework Synthesis \(Preprint\)](#) – Journal of Medical Internet Research (Oct 2)
- [Understanding the Effects of COVID-19 on Health Care and Systems](#). – The Lancet. Public Health (Oct 1)
- [Low Risk of SARS-CoV-2 Transmission by Fomites in Real-Life Conditions](#) – The Lancet Infectious Diseases (Sept 29)
- [Unemployment and Child Health during COVID-19 in the USA](#) – The Lancet Public Health (Oct 1)
- [Access to Healthcare and Harm Reduction Services During the COVID-19 Pandemic for People Who Use Drugs](#) – Journal of Addiction Medicine (Sept 30)
- [Asian-Americans and Pacific Islanders in COVID-19: Emerging Disparities Amid Discrimination](#) – Journal of General Internal Medicine (Oct 2)
- [A Database Resource and Online Analysis Tools for Coronaviruses on a Historical and Global Scale](#). – Database (Oct 3)

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