



2019-nCoV Literature Situation Report (Lit Rep)

October 8, 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

- **The most common motivations for social distancing among survey respondents in North America and Europe were wanting to protect others, self-protection, and feeling a sense of responsibility to protect the community.** [More](#)
- **82% of SARS-CoV-2 isolates from patients in Los Angeles show similarity to European isolates, suggesting the main source of viral introduction in the city originated from Europe.** [More](#)
- **An analysis of a large multi-hospital database found that 0.043% patients tested positive for COVID-19 within 14 days after discharge from hospitalization for a non-COVID-19 related illness, suggesting a low risk of SARS-CoV-2 infection from an inpatient hospital admission.** [More](#)
- **In a randomized, placebo-controlled trial of the antiviral drug remdesivir, patients hospitalized with COVID-19 in the remdesivir group had a faster recovery time (median 10 vs. 15 days) and a non-significantly lower risk of death at 29 days (HR=0.73, 95% CI 0.52-1.03) than patients in the placebo group.** [More](#)

Non-Pharmaceutical Interventions

- A cross-sectional survey conducted among a convenience sample of 2013 North American and European adults between March and April 2020 found that the most common motivations for practicing social distancing included wanting to protect others (86%), self-protection (84%), and feeling a sense of responsibility to protect the community (86%). The most common barriers to social distancing included having many people walking in the area (31%), having friends or family members for whom the participant completed errands (25%), not trusting government messages about the pandemic, (13%), and feeling stressed when alone or in isolation (13%). Men and youth (18–24 years) reported lower adherence to social distancing than women and older individuals.
Coroiu et al. (Oct 7, 2020). Barriers and Facilitators of Adherence to Social Distancing Recommendations during COVID-19 among a Large International Sample of Adults. PLOS ONE.
<https://doi.org/10.1371/journal.pone.0239795>
- Adults in the U.S. who responded to an internet survey in June 2020 were more likely to remember to wash their hands after experiencing respiratory symptoms (coughing, sneezing, or blowing their nose), before eating in a restaurant, and before eating at home than survey respondents from before the pandemic in October 2019. Fewer than 75% of 2020 respondents reported remembering to wash their hands in these situations. Men, young adults, and white participants were less likely to practice handwashing.

Haston et al. (Oct 9, 2020). Characteristics Associated with Adults Remembering to Wash Hands in Multiple Situations Before and During the COVID-19 Pandemic — United States, October 2019 and June 2020. *MMWR. Morbidity and Mortality Weekly Report*.

<https://doi.org/10.15585/mmwr.mm6940a2>

- Prompt and stringent containment measures in Hong Kong led to some of the lowest SARS-CoV-2 incidences and mortalities in the world (135.5 and 0.5/1,000,000 population, respectively) by April 2020. Aggressive border control measures reduced R_t from 1.35 to 0.57 and 0.92 to 0.18 in the first and second waves, respectively. Implementation of COVID-19 tests for travelers returning from overseas correlated with an upsurge in asymptomatic cases and shortened containment delay from 6.8 to 3.7 days between the first and second waves. First wave cluster events were mostly family gatherings, while the second wave clusters were often leisure activities among young people.

Wong et al. (Oct 7, 2020). Stringent Containment Measures without Complete City Lockdown to Achieve Low Incidence and Mortality across Two Waves of COVID-19 in Hong Kong. *BMJ Global Health*. <https://doi.org/10.1136/bmjgh-2020-003573>

Geographic Spread

- In a case series of 192 patients from Los Angeles, a genomic analysis found that 82% of SARS-CoV-2 isolates were most similar to isolates from Europe, while 15% were most similar to isolates from Asia. Genetic characterization of isolates identified community transmission in 13 patients, including 10 related to skilled nursing facilities, while person-to-person transmission was detected in a cluster of 5 patients. These findings highlight the utility of genomic analyses to detect transmission chains and determine the origin of viral introductions.

Zhang et al. (Oct 7, 2020). Analysis of Genomic Characteristics and Transmission Routes of Patients With Confirmed SARS-CoV-2 in Southern California During the Early Stage of the US COVID-19 Pandemic. *JAMA Network Open*.

<https://doi.org/10.1001/jamanetworkopen.2020.24191>

Testing and Treatment

- Infusion of the antiviral drug remdesivir led to faster recovery time (median 10 vs. 15 days) and a non-significantly lower risk of death at 29 days (HR=0.73, 95% CI 0.52-1.03) in a randomized, placebo-controlled trial among patients hospitalized with COVID-19. Serious adverse events were reported in 131 of 532 (24.6%) patients in the remdesivir group and in 163 of 516 (31.6%) patients in the placebo group. [EDITORIAL NOTE: A preliminary version of this manuscript was summarized in the Lit Rep on May 26, 2020.]

Beigel et al. (October 8, 2020). Remdesivir for the Treatment of Covid-19 - Final Report. *The New England Journal of Medicine*. <https://doi.org/10.1056/NEJMoa2007764>

- [Pre-print, not peer reviewed] Single cell sorting of 4277 SARS-CoV-2 spike protein specific memory B cells from 14 COVID-19 survivors identified 220 neutralizing antibodies that expressed as IgG. Among these, 3 monoclonal antibodies were potent enough to neutralize the wild type and DG14G mutant viruses in vitro at a concentration of <10 ng/mL, indicating they may be good candidates for further development as therapeutic tools.

Andreano et al. (Oct 7, 2020). Extremely Potent Human Monoclonal Antibodies from Convalescent Covid-19 Patients. Pre-print downloaded Oct 8 from

<https://doi.org/10.1101/2020.10.07.328302>

Clinical Characteristics and Health Care Setting

- Nalleballe et al. report on 101,533 patients hospitalized for a non-COVID-19 related illness included in a global clinical research database representing 45 health care organizations. Only 44 (0.043%) tested positive for SARS-CoV-2 within 14 days of discharge between January and June 2020. These results suggest that risk of contracting SARS-CoV-2 during a hospital admission is low.

Nalleballe et al. (Oct 8, 2020). Risk of COVID-19 from Hospital Admission during the Pandemic. Infection Control & Hospital Epidemiology. <https://doi.org/10.1017/ice.2020.1249>

- A rapid systematic review found limited evidence of protective efficacy when surgical masks and N95 respirators are either reused or had extended use in frontline healthcare settings. Despite limited evidence, the review highlighted vaporized hydrogen peroxide and ultraviolet irradiation as the most promising reprocessing methods. The level of detail and consistency varied across the 6 guidance documents identified from WHO, European CDC, the U.S. CDC, and Public Health England websites.

Toomey et al. (Oct 8, 2020). Extended Use or Re-Use of Single-Use Surgical Masks and Filtering Facepiece Respirators during COVID-19: A Rapid Systematic Review. Infection Control & Hospital Epidemiology. <https://doi.org/10.1017/ice.2020.1243>

Mental Health and Personal Impact

- In an online survey of 1451 women who were pregnant or delivered during the pandemic in the UK, perceived barriers to seeking healthcare included "not wanting to bother anyone", "lack of wider support from allied healthcare workers" and the influence of the media. Other concerns that arose from thematic analysis of open-ended responses included acceptability of telehealth and communication of rapidly-evolving services. The authors note that the influence of media had a significant impact on how hospital care, and its safety, were perceived.

Karavadra et al. (Oct 7, 2020). Women's Perceptions of COVID-19 and Their Healthcare Experiences: A Qualitative Thematic Analysis of a National Survey of Pregnant Women in the United Kingdom. BMC Pregnancy and Childbirth. <https://doi.org/10.1186/s12884-020-03283-2>

- An analysis of a nation-wide electronic health record database in the US with patient data up to July 2020 shows that patients with a recent diagnosis of a mental health disorder had a significantly higher risk of being diagnosed with COVID-19. The effect was strongest among those diagnosed with depression and schizophrenia. Among those diagnosed with a mental health disorder, African American people and women were disproportionately affected. Among those diagnosed with COVID-19, death rates were 8.5% and 4.7%, and hospitalization rates were 27.4% and 18.6%, among patients with and without a diagnosed mental disorder, respectively.

Wang et al. (Oct 7, 2020). Increased Risk of COVID -19 Infection and Mortality in People with Mental Disorders: Analysis from Electronic Health Records in the United States. World Psychiatry. <https://doi.org/10.1002/wps.20806>

- Among adults in a prospective cohort study in Changsha, China, the mean daily steps taken dropped and the prevalence of low daily steps increased from 3% to 18.5% in the 30 days following the first local COVID-19 diagnosis. These changes were especially pronounced for women and older adults. The authors suggest that while these data could point to successful physical distancing practices to contain the epidemic, they also raise concerns about unintended effects on physical activity.

Wang et al. (Oct 2, 2020). *Physical Distancing Measures and Walking Activity in Middle-Aged and Older Residents in Changsha, China During the COVID-19 Epidemic Period: Longitudinal Observational Study (Preprint)*. *Journal of Medical Internet Research*.
<https://doi.org/10.2196/21632>

Modeling and Prediction

- Simulations of SARS-CoV-2 spread in the UK using the CovidSim code, with data available in March 2020, show that prompt interventions like school closures and isolation of younger people would reduce peak demand for ICU beds, but result in a greater number of deaths in second and subsequent waves of infections. The authors note this may be due to the much greater risk of COVID-19 related mortality among older age groups, and results suggest that no mitigation strategy apart from an effective vaccination program can reduce the total number of deaths under 200,000 in the UK. The University of Edinburgh-based authors describe that this analysis was an effort to replicate and validate the model developed by the Imperial College London.

Rice et al. (Oct 7, 2020). *Effect of School Closures on Mortality from Coronavirus Disease 2019: Old and New Predictions*. *BMJ*. <https://doi.org/10.1136/bmj.m3588>

Public Health Policy and Practice

- Overall, 42% of 847 gay and bisexual men participating in an online cohort study of men in Australia reported discontinuing HIV pre-exposure prophylaxis (PrEP) due to COVID-19 restrictions, which coincided with a reduction in sexual activity. PrEP use in this cohort increased from 4.9% in 2015 to 47.2% in 2020. PrEP discontinuation was associated with lower likelihood of recent testing for HIV and lower likelihood of reporting sex with casual partners.

Hammoud et al. (Oct 7, 2020). *Substantial Decline in Use of HIV Pre-Exposure Prophylaxis (PrEP) Following Introduction of COVID-19 Physical Distancing Restrictions in Australia*. *JAIDS Journal of Acquired Immune Deficiency Syndromes*. <https://doi.org/10.1097/QAI.0000000000002514>

- An online survey experiment among workers contacted through the Amazon MTurk platform (n=393) found that science communication using technical jargon was more difficult for participants to process in low urgency situations, but that jargon did not substantially reduce processing in high urgency situations like COVID-19. The authors suggest that high motivation to process information may moderate the effect of jargon in crisis situations.

Shulman and Bullock. (Oct 7, 2020). *Don't Dumb It down: The Effects of Jargon in COVID-19 Crisis Communication*. *PLOS ONE*. <https://doi.org/10.1371/journal.pone.0239524>

Other Resources and Commentaries

- [Long COVID: Let Patients Help Define Long-Lasting COVID Symptoms](#) – Nature (Oct 8)
- [The Unequal Impact of the Coronavirus Pandemic: Evidence from Seventeen Developing Countries](#) – PLOS ONE (Oct 7)
- [Business Shutdowns and COVID-19 Mortality](#) – MedRxiv (Oct 7)
- [Integrating Philosophy, Policy and Practice to Create a Just and Fair Health Service](#) – Journal of Medical Ethics (Oct 7)
- [How COVID-19 Is Placing Vulnerable Children at Risk and Why We Need a Different Approach to Child Welfare](#) – Child Maltreatment (Oct 7)

- [COVID-19 Trial Enrollment for Those Who Cannot Consent: Ethical Challenges Posed by a Pandemic](#) – Pediatrics (Oct 7)
- [Difficulties of Online Physical Education Classes in Middle and High School and an Efficient Operation Plan to Address Them](#) – International Journal of Environmental Research and Public Health (Oct 5)
- [The First Case of Documented Covid-19 Reinfection in Israel](#) – IDCases (Oct 1)
- [Lessons We've Learned — Covid-19 and the Undocumented Latinx Community](#) – New England Journal of Medicine (Oct 7)
- [The COVID-19 Pandemic as a Catalyst for More Integrated Maternity Care.](#) – American Journal of Public Health (Nov 1)
- [Duration of Severe Acute Respiratory Syndrome Coronavirus 2 \(SARS-CoV-2\) Infectivity: When Is It Safe to Discontinue Isolation?](#) – Clinical Infectious Diseases (Aug 25)
- [The Stress of Bayesian Medicine — Uncomfortable Uncertainty in the Face of Covid-19](#) – New England Journal of Medicine (Oct 7)
- [Audio Interview: Covid-19 and the President](#) – New England Journal of Medicine (Oct 8)
- [Removing Barriers and Disparities in Health: Lessons from the COVID-19 Pandemic](#) – Nature Reviews Rheumatology (Oct 7)
- [Debate: Student Mental Health Matters – the Heightened Need for School-based Mental Health in the Era of COVID-19](#) – Child and Adolescent Mental Health (Oct 7)

Report prepared by the UW Alliance for Pandemic Preparedness and Global Health Security and the START Center in collaboration with and on behalf of WA DOH COVID-19 Incident Management Team