



2019-nCoV Literature Situation Report (Lit Rep)

March 4, 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

- ② **Another study of the potential for sexual transmission of COVID-19 has found no evidence of vaginal transmission, though more research is needed to confirm.**
- ② **The role of social media in the current COVID-19 response has continued to draw the attention of social scientists and public health leaders seeking to understand how to leverage social media to support response efforts and how to prevent the spread of false information and rumors.**
- ② **Research on seasonal variability of COVID-19 spread is ongoing, with a new study suggesting that there may be some combined effect of seasonal shift with infection control efforts, but that on its own, seasonality will likely not determine the trajectory of the current outbreak.**

Transmission

- Researchers tested vaginal and anal swabs from the 35 female patients with COVID-19 and only one anal swab sample from one patient was positive for SARS-CoV-2. Findings suggest no risk of transmission through vaginal sex, though additional research is still needed.
Cui et al. (Mar 3, 2020). Clinical features and sexual transmission potential of SARS-CoV-2 infected female patients: a descriptive study in Wuhan, China. Pre-print downloaded Mar 4 from <https://doi.org/10.1101/2020.02.26.20028225>
- Seasonal variation among the four endemic coronaviruses was used to model seasonality of SARS-CoV-2 across a range of scenarios, regions, and populations. The combined effects of seasonal changes and infection control efforts may be partially responsible for reductions in incidence globally and should be taken into account when monitoring global COVID-19 transmission.
Neher et al. (Mar 3, 2020). Potential impact of seasonal forcing on a SARS-CoV-2 pandemic. Pre-print downloaded Mar 4 from <https://doi.org/10.1101/2020.02.13.20022806>

Clinical Characteristics and Health Care Setting

- Adalja et al discuss priorities for the US health care community in preparing for COVID-19. Priorities include reviewing and updating preparedness plans developed for prior epidemics, hospital and clinic readiness, rapid expansion of diagnostic testing capacity, and public health interventions to slow spread.

Adalja et al. (Mar 4, 2020). *Priorities for the US Health Community Responding to COVID-19*. JAMA. <https://jamanetwork.com/journals/jama/fullarticle/2762690>

- Xu et al discuss the potential clinical use of niclosamide, an FDA-approved anthelmintic, in treating COVID-19.

Xu et al. (Mar 3, 2020). Broad Spectrum Antiviral Agent Niclosamide and Its Therapeutic Potential. ACS Infect Dis. <https://doi.org/10.1021/acscinfecdis.0c00052>

- In a study of 150 COVID-19 patients in Wuhan, case fatality was associated with older age, underlying comorbidities, presence of secondary infection, and inflammatory indicators in the blood. Death may also be related to virus-activated “cytokine storm syndrome” or fulminant myocarditis.

Ruan et al. (Mar 3, 2020). Clinical predictors of mortality due to COVID-19 based on an analysis of data of 150 patients from Wuhan, China. Intensive Care Med. <https://doi.org/10.1007/s00134-020-05991-x>

- An online survey was distributed to 17 pediatric nephropathy diagnosis and treatment centers in China to gather information on patients, parents, and changes to medical treatment processes since the start of the COVID-19 outbreak. Greatest needs reported by patients and families included online consultation, medication delivery, and psychological counselling, especially for low income children in remote areas.

Zhang et al. (Mar 3, 2020). The Impact of the COVID-19 Outbreak on the Medical Treatment of Chinese Children with Chronic Kidney Disease (CKD): A Multicenter Cross-section Study in the Context of a Public Health Emergency of International Concern. Pre-print downloaded Mar 4 from <https://doi.org/10.1101/2020.02.28.20029199>

- Arabi et al discuss implications and recommendations for intensive and critical care settings, including surge capacity, infection prevention and control, and staff protection.

Arabi et al. (Mar 3, 2020). COVID-19: a novel coronavirus and a novel challenge for critical care. Intensive Care Medicine. <https://doi.org/10.1007/s00134-020-05955-1>

- This report discusses the infection control measures implemented in an ophthalmology clinic in Hong Kong, based on a detailed risk assessment. A three-level process was adopted to protect the health and safety of both patients and staff.

Lai et al. (Mar 3, 2020). Stepping up infection control measures in ophthalmology during the novel coronavirus outbreak: an experience from Hong Kong. Graefes Arch Clin Exp Ophthalmol. <https://doi.org/10.1007/s00417-020-04641-8>

Modelling and Prediction

- As COVID-19 cases continue to appear in new countries around the world, researchers have begun trying to map the spread of the disease outside of China. In this modelling study, researchers estimate that there were 34 unobserved “founder” patients that likely seeded spread outside China.

Li et al (March 3, 2020). COVID-19 Epidemic Outside China: 34 Founders and Exponential Growth. Pre-print downloaded Mar 4 <https://doi.org/10.1101/2020.03.01.20029819>

Commentaries

- This commentary reviews the potential effects of public health and media communications on the realm of social media. Authors call out proliferation of misinformation and rumors on social media platforms and discuss the benefits of leveraging social media technologies to address these issues and other challenges of public health response.

Depoux et al. (Mar 3, 2020). The pandemic of social media panic travels faster than the COVID-19 outbreak. J Trav Med. <https://doi.org/10.1093/jtm/taaa031>

- Despite the unprecedented resource allocation and response in China to the COVID-19 outbreak, criticism of China from the international community has been high. Racism, discrimination, fearmongering, rumors, conspiracy theories, and violence against Chinese and East Asian individuals have emerged around the globe. Lin emphasizes the role of media in perpetuating these problems and also calls for solidarity with China, making recommendations on communication, evaluating current efforts, and preparing for new and emerging threats.

Lin (Mar 3, 2020). Solidarity with China as it holds the global front line during COVID-19 outbreak. J Trav Med. <https://doi.org/10.1093/jtm/taaa027>

- This commentary offers insight into the COVID-19 response in Taiwan, highlighting public health measures and challenges related to the evolving situation.

Wang et al. (Mar 3, 2020). Response to COVID-19 in Taiwan: Big Data Analytics, New Technology, and Proactive Testing. JAMA.

<https://jamanetwork.com/journals/jama/fullarticle/2762689>

Other Resources and Commentaries

- If you need to catch up, try reviewing this [Guide to Understanding the 2019 Novel Coronavirus](#) from the Mayo Clinic.
- [The BMJ](#) publishes several commentaries and editorials on COVID-19 and response efforts around the world. Check back daily for updates.