



2019-nCoV Literature Situation Report (Lit Rep) March 16, 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

- 📄 **More studies emphasize the importance of self-imposed prevention measures and social distancing to curb the spread of COVID-19.**
- 📄 **An environmental investigation at a hospital in Wuhan highlights the need to ensure adequate environmental cleaning and improve infection prevention precautions among HCWs during the COVID-19 outbreak.**
- 📄 **While warranting additional studies, two case reports mention that a combination of Western and Chinese treatments improved COVID-19 related symptoms.**
- 📄 **A study compares differences in the epidemiological, clinical and radiological characteristics among adults and pediatric patients with COVID-19.**

Non-Pharmaceutical Interventions

- Containment and social distancing measures, and changes in population behavior have successfully prevented the spread of COVID-19 in Hong Kong. These measures are less drastic than those used to contain transmission in Wuhan, making them potentially more feasible for other countries.
Cowling et al. (Mar 12, 2020). Impact assessment of non-pharmaceutical interventions against COVID-19 and influenza in Hong Kong: an observational study. Pre-print downloaded Mar 16 from <https://doi.org/10.1101/2020.03.12.20034660>.
- The authors emphasize the importance of handwashing, mask-wearing and social distancing as strategies to mitigate and delay the COVID-19 epidemic. Wide spread awareness on these self-imposed prevention measures and government-imposed social distancing can buy time for healthcare systems to prepare for an increasing COVID-19 burden.
Teslya et al. (Mar 12, 2020). Impact of self-imposed prevention measures and short-term government intervention on mitigating and delaying a COVID-19 epidemic. Pre-print downloaded Mar 16 from <https://doi.org/10.1101/2020.03.12.20034827>

Transmission

- In this investigation of 626 surface samples in hospital in Wuhan, the authors describe the most contaminated zones, objects and personal protection equipment: ICU for novel coronavirus pneumonia (NCP), 31.9%; Obstetric Isolation Ward for pregnant women with NCP, 28.1%; Isolation Ward for NCP, 19.6%; self-service printers, 20%; hand sanitizer dispenser, 20.3%; and gloves, 15.4%.

- The findings emphasize the urgent need to ensure adequate environmental cleaning, strengthen infection prevention training, and improve precautions among HCWs during the COVID-19 outbreak.
Ye et al. (Mar 11, 2020). Environmental contamination of the SARS-CoV-2 in healthcare premises: An urgent call for protection for healthcare workers. Pre-print downloaded Mar 16 from <https://doi.org/10.1101/2020.03.11.20034546>.
- Fan et al identify the clinical and epidemiologic characteristics that differed significantly during the first and second waves of illness in Gansu Province, which could be helpful in developing more effective local infection control policies and recommendations.
Fan et al. (Mar 16, 2020). Epidemiology of 2019 Novel Coronavirus Disease-19 in Gansu Province, China, 2020. Emerg Infect Dis. <https://doi.org/10.3201/eid2606.200251>

Testing and Treatment

- The authors measure the sensitivity and specificity of throat and lingual swabs for the detection of COVID-19 based on a cohort study of two groups of suspected patients at 2 COVID-19 fixed-point hospitals in Wuhan. The positive rate of throat swabs was higher than lingual swabs; however due to the small sample size the findings should be used with caution.
Ye et al. (Mar 6, 2020). Experience of different upper respiratory tract sampling strategies for detection of COVID-19. Journal of Hospital Infection. <https://doi.org/10.1016/j.jhin.2020.03.012>
- In this case report, the authors describe the clinical course and management of 3 cases from a family in Wuhan and suggest expected therapeutic effects of a Chinese traditional patent medicine, Shuanghuanglian oral liquid on COVID-19, and warrant further clinical trials.
- In another study of 2 mild and 2 severe COVID-19 pneumonia patients who were given combined Chinese and Western medicine treatment, 3 of them showed significant improvements in pneumonia associated symptoms. Efficacy of the traditional Chinese medicine (SFJDC -Shufeng Jiedu Capsule) needs further verification.
Ni et al. (Mar 13, 2020). Combination of western medicine and Chinese traditional patent medicine in treating a family case of COVID-19 in Wuhan. Front. Med. <https://doi.org/10.1007/s11684-020-0757-x>
Wang et al. (Feb 9, 2020). Clinical characteristics and therapeutic procedure for four cases with 2019 novel coronavirus pneumonia receiving combined Chinese and Western medicine treatment. BioScience Trends. <https://doi.org/10.5582/bst.2020.01030>
- De Luca lists several pathogenetic mechanisms to manage neonates with respiratory failure due to COVID-19.
De Luca (Mar 6, 2020). Managing neonates with respiratory failure due to SARS-CoV-2. The Lancet Child & Adol Health. [https://doi.org/10.1016/S2352-4642\(20\)30073-0](https://doi.org/10.1016/S2352-4642(20)30073-0)

Clinical Characteristics and Health Care Setting

- Findings from 534 COVID-19 patients from 2 hospitals in Wuhan suggest that conjunctivitis congestion was one of the COVID-19 related ocular symptoms, which may have clinical diagnostic significance.
Chen et al. (Mar 12, 2020). Ocular manifestations and clinical characteristics of 534 cases of COVID-19 in China: A cross-sectional study. Pre-print downloaded Mar 16 from <https://doi.org/10.1101/2020.03.12.20034678>

- By comparing blood group distribution in 2,200 COVID-19 cases from Wuhan hospitals and 3,700 controls from corresponding regions, Zhao et al found that ABO blood groups display different association risks for infection with SARS-CoV-2. Consistent with risk patterns of ABO blood groups for other coronavirus infections, group A was associated with an increased risk whereas group O was associated with a decreased risk.

Zhao et al. (Mar 11, 2020). Relationship between the ABO Blood Group and the COVID-19 Susceptibility. Pre-print downloaded Mar 16 from <https://doi.org/10.1101/2020.03.11.20031096>

- This retrospective, observational study of 34 children from 4 hospitals in China provides valuable insight into early diagnosis of COVID-19 in children and epidemic control policy making.
- Compared to adults, initial symptoms in pediatric cases included higher incidences of fever, vomiting and diarrhea. The key radiological difference between children and adults was the near absence of ground-glass opacity observed in children.

Zhang, et al. (Mar 12, 2020). Clinical Characteristics of 34 Children with Coronavirus Disease-2019 in the West of China: a Multiple-center Case Series. Pre-print downloaded Mar 12 from <https://doi.org/10.1101/2020.03.12.20034686>

Modelling and Prediction

- In this study, Wilson et al estimate the case-fatality risk for COVID-19 cases in China (3.5%); China, excluding Hubei Province (0.8%); 82 countries, territories, and areas (4.2%); and on a cruise ship (0.6%).

Wilson et al. (Mar 16, 2020). Case-Fatality Risk Estimates for COVID-19 Calculated by Using a Lag Time for Fatality. Emerg Infect Dis. <https://doi.org/10.3201/eid2606.200320>

- In order to assess the severity of COVID-19 in China, the authors estimated the risk for death in Wuhan to be as high as 12% and about 1% in other more mildly affected areas. This study indicates that public health interventions, including social distancing and movement restrictions, should be implemented to bring the COVID-19 epidemic under control.

Mizumoto & Chowell (Mar 16, 2020). Estimating Risk for Death from 2019 Novel Coronavirus Disease, China, January–February 2020. Emerg Infect Dis. <https://doi.org/10.3201/eid2606.200233>

Public Health Policy and Practice

- Cities with large homeless populations might face unique challenges while trying to contain COVID-19.

Tsai & Wilson (Mar 11, 2020). COVID-19: a potential public health problem for homeless populations. Lancet. [https://doi.org/10.1016/S2468-2667\(20\)30053-0](https://doi.org/10.1016/S2468-2667(20)30053-0)

Other Resources and Commentaries

- [Impact of international travel and border control measures on the global spread of the novel 2019 coronavirus outbreak](#) – PNAS (Mar 13)
- What Does the Coronavirus Disease 2019 (COVID-19) Mean for Families? – JAMA Pediatrics (Mar 13). [Available here](#)
- [COVID-19: towards controlling of a pandemic](#) – Lancet (Mar 16)