



2019-nCoV Literature Situation Report (Lit Rep) March 17, 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

- 📄 **Similar to prior studies, a new study found no evidence of vertical transmission of SARS-CoV-2.**
- 📄 **The benefits, policy implications and limitations of using self-service diagnostic tests for COVID-19 as a new delivery model on a large scale setting in the US are described in one study.**
- 📄 **A case study of a 55-day old infant with COVID-10 reported that the infant had multiple organ damage and rapid disease change.**
- 📄 **A study illustrates that HCWs who work in high-risk departments (departments with medical or surgical procedures that generate respiratory aerosols), long duty hours, and suboptimal hand hygiene after contact with patients may be at a higher risk for COVID-19.**
- 📄 **The authors of a recent study report that asymptomatic carriers of SARS-CoV-2 were mostly middle aged people who had close contact with infected family members.**

Non-Pharmaceutical Interventions

- Lau et al review the positive impacts (significant decrease in the growth rate and increase in the doubling time of COVID-19 cases) that could be attributed to rigorous Chinese lockdown measures, and suggest stringent containment measures should be considered for heavily affected areas to buy time and enable medical facilities to cope with increasing intensive care cases.
Lau et al. (Mar 17, 2020). The positive impact of lockdown in Wuhan on containing the COVID-19 outbreak in China. <https://doi.org/10.1093/jtm/taaa037>

Transmission

- Schwartz studied 38 pregnant women with COVID-19 in China to understand the effects of COVID-19 on pregnancy outcomes and found that there were no maternal deaths, no confirmed cases of intrauterine transmission of SARS-CoV-2 from mothers to their fetuses, and all neonatal specimens tested negative for SARS-CoV-2.
Schwartz (Mar 17, 2020). An Analysis of 38 Pregnant Women with 2 COVID-19, Their Newborn Infants, and Maternal-Fetal Transmission of SARS-CoV-2: Maternal Coronavirus Infections and Pregnancy Outcomes. Archives of Patho & Lab Med. <https://doi.org/10.5858/arpa.2020-0901-SA>
- This MMWR article underscores the need for swift epidemiologic investigation as soon as a COVID-19 case is detected in an area or group where a large number of persons gather in a closed or crowded setting (e.g., a cruise ship, music venue, health care setting, sports arena, etc).

- Close contacts of confirmed COVID-19 cases should self-quarantine and monitor their symptoms; persons who develop COVID-19 symptoms while on board a ship should be isolated to limit transmission to other passengers and crew.

Kakimoto et al. (Mar 17, 2020). Initial Investigation of Transmission of COVID-19 Among Crew Members During Quarantine of a Cruise Ship — Yokohama, Japan, February 2020. MMWR. <http://dx.doi.org/10.15585/mmwr.mm6911e2>

- Pung et al describe the measures used to identify and investigate the first 3 clusters of COVID-19 in Singapore and emphasize the importance for other countries to conduct active case-finding among close contacts of cases to prevent clusters from spreading.

Pung et al. (Mar 16, 2020). Investigation of three clusters of COVID-19 in Singapore: implications for surveillance and response measures. Lancet. [https://doi.org/10.1016/S0140-6736\(20\)30528-6](https://doi.org/10.1016/S0140-6736(20)30528-6)

Testing and Treatment

- Ianiro et al propose several additions to the current donor screening measures to prevent SARS-CoV-2 transmission.

Ianiro et al. (Mar 16, 2020). Screening of faecal microbiota transplant donors during the COVID-19 outbreak: suggestions for urgent updates from an international expert panel. Lancet Gastro Hepato Jour. [https://doi.org/10.1016/S2468-1253\(20\)30082-0](https://doi.org/10.1016/S2468-1253(20)30082-0)

- This articles discusses the benefits, policy implications and limitations of using self-service diagnostic tests for COVID-19 as a new delivery model on a large scale setting in the US.

Nundy & Patel (Mar 16, 2020). Self-Service Diagnosis of COVID19-Ready for Prime Time? JAMA. <https://jamanetwork.com/channels/health-forum/fullarticle/2763264>

Clinical Characteristics and Health Care Setting

- This case study based on a 55-day old infant with COVID-19 in China reported that the infant had multiple organ damage and rapid disease changes. Identification, diagnosis, clinical course and disease progression, and treatment of this patient are described in detail.

Cui et al. (Mar 17, 2020). A 55-Day-Old Female Infant infected with COVID 19: presenting with pneumonia, liver, and heart damage. Jour of Infect Dis. <https://doi.org/10.1093/infdis/jiaa113>

- This retrospective cohort study of 72 HCWs who developed acute respiratory symptoms while providing medical treatment at a tertiary hospital in Wuhan suggests that HCWs who worked in high-risk departments (departments with medical or surgical procedures that generate respiratory aerosols), long duty hours, and suboptimal hand hygiene after contact with patients had a higher risk for COVID-19.

Ran et al. (Mar 17, 2020). Risk Factors of Healthcare Workers with Corona Virus Disease 2019: A Retrospective Cohort Study in a Designated Hospital of Wuhan in China. Clin Infect Dis. <https://doi.org/10.1093/cid/ciaa287>

- The study presents epidemiological and clinical characteristics of 55 asymptomatic carriers of SARS-CoV-2 in China. The authors found that asymptomatic infection was more common in middle aged people who had close contact with infected family members, and that a majority of cases developed mild or moderate symptoms.

Wang et al. (Mar 17, 2020). *Clinical outcome of 55 asymptomatic cases at the time of hospital admission infected with SARS-Coronavirus-2 in Shenzhen, China. Jour of Infect Dis.*

<https://doi.org/10.1093/infdis/jiaa119>

- In this report, the Radiology Editorial Board share policies developed by several healthcare systems describing their top priorities for COVID-19 preparedness in their environment.

Mossa-Basha et al. (Mar 16, 2020). Radiology Department Preparedness for COVID-19:

Radiology Scientific Expert Panel. Radiology. <https://doi.org/10.1148/radiol.2020200988>

- This report published by several public health and healthcare agencies in Korea summarizes the epidemiologic features of the 4,212 confirmed COVID-19 cases and provides snapshots of the COVID-19 outbreak in the Republic of Korea from Jan 19 through Mar 2, 2020.

Korean Society of Infectious Diseases, Korean Society of Pediatric Infectious Diseases, et al. (Mar 16, 2020). Report on the Epidemiological Features of Coronavirus Disease 2019 (COVID-19)

Outbreak in the Republic of Korea from January 19 to March 2, 2020. Jour Korean Med Sci.

<https://doi.org/10.3346/jkms.2020.35.e112>

- Chen et al retrospectively reviewed 17 pregnant women with COVID-19 and found that both epidural and general anesthesia were safe and effective for pregnant women and newborns. The authors emphasize the need for proper patient transfer, medical staff access procedures, and effective biosafety precautions to protect medical staff from COVID-19.

Chen et al. (Mar 10, 2020). Safety and efficacy of different anesthetic regimens for parturients with COVID-19 undergoing Cesarean delivery: a case series of 17 patients. Can J Anesth.

<https://doi.org/10.1007/s12630-020-01630-7>

- The authors summarize key findings from a few studies that looked at COVID-19 in pediatric cases – 13% of confirmed cases were asymptomatic; 5% of symptomatic children had dyspnea or hypoxemia, and 0.6% progressed to acute respiratory distress syndrome or multi-organ system dysfunction; preschool-aged children and infants were more likely to have severe clinical manifestations than older children.
- Since many infectious diseases affect children differently than adults, it is important to understand these difference to learn about the pathogenesis, disease management and development of therapeutics for COVID-19.

Cruz & Zeichner. (Mar 16, 2020). COVID-19 in Children: Initial Characterization of the Pediatric

Disease. Pediatrics. <https://doi.org/10.1542/peds.2020-0834>

- This study describes the ocular implications of human coronaviruses based on current evidence of animal coronaviruses and their associated ocular infections.
- While the authors emphasize the need for more research to confirm SARS-CoV-2's ability to infect ocular tissue and its pathogenic mechanisms, ophthalmologists and other HCWs should continue to use proper PPE to prevent possible transmission through ocular tissue.

Seah & Agrawal. (Mar 2, 2020). Can the Coronavirus Disease 2019 (COVID-19) Affect the Eyes? A Review of Coronaviruses and Ocular Implications in Humans and Animals. Ocular Immun And

Inflamm. <https://doi.org/10.1080/09273948.2020.1738501>

Other Resources and Commentaries

- [Editorial Concern – Possible Reporting of the Same Patients With COVID-19 in Different Reports](#) – JAMA (Mar 16)
 - Bauchner et al urge all authors to clearly identify if any patients in submitted manuscripts have been reported in previous submissions or publications to maintain accuracy in the scientific record.
- [COVID-19 and the Risk to Health Care Workers: A Case Report](#) – Annals of Internal Med (Mar 16)
 - In this case report, the authors emphasizes the need for all HCWs to wear an N95 mask or equivalent equipment while performing any aerosol generating procedure to protect themselves while providing care for COVID-19 patients.
- [Treatment of COVID-19: old tricks for new challenges](#) – BMC (Mar 16)
 - In absence of definitive management protocols, potential treatment options that are currently being for COVID-19 are mentioned in this editorial.