



## 2019-nCoV Literature Situation Report (Lit Rep) February 14, 2020

### Key Takeaways

- 📄 **Clinicians and researchers continue to share recommendations for COVID-19 patient screening and care based on current experience and lessons learned from prior coronavirus outbreaks.**
- 📄 **There remains no evidence to indicate vertical transmission of 2019-nCoV during pregnancy but special considerations have been suggested for maternal, fetal, and infant outcomes.**
- ☐ **While not definitive, literature summarized below on the mental health effects of quarantine during prior outbreaks points toward increased symptoms of psychological distress, potentially with more severe symptoms associated with longer quarantine duration.**

### Clinical Characteristics and Health Care Setting

- CT chest imaging for 21 patients with confirmed COVID-19 pneumonia were reviewed, with findings suggesting that lung abnormalities appear most severe approximately 10 days after symptom onset in patients without severe respiratory distress.  
*Pan et al. (Feb 13, 2020). Time Course of Lung Changes On Chest CT During Recovery From 2019 Novel Coronavirus (COVID-19) Pneumonia. Radiology.*  
<https://doi.org/10.1148/radiol.2020200370>
- This systematic review provides recommendations on treatment protocols for COVID-19 patients, including assessing nutritional status, providing nutritional and immuno-enhancing interventions, coronavirus-specific treatments, antiviral medications, and specific considerations for pediatric patients and health care workers.  
*Zhang and Liu (Feb 13, 2020). Potential Interventions for Novel Coronavirus in China: A Systemic Review. J of Med Virol. <https://doi.org/10.1002/jmv.25707>*
- Authors reviewed published data on the epidemiologic and clinical effects of SARS, MERS, and other coronaviruses on pregnant women, to evaluate the likelihood of poor maternal, fetal, and neonatal morbidity associated with COVID-19.
- There is low risk of vertical transmission of coronavirus from mother to fetus, with no documented cases associated with SARS or MERS. However, the authors emphasize that pregnant women should be treated as high risk for developing severe infection.  
*Schwartz and Graham (Feb 10, 2020). Potential Maternal and Infant Outcomes from Coronavirus 2019-nCoV (SARS-CoV-2) Infecting Pregnant Women: Lessons from SARS, MERS, and Other Human Coronavirus Infections. Viruses. <https://doi.org/10.3390/v12020194>*
- Wax and Christian summarize key considerations for patient screening, environmental controls, personal protective equipment, resuscitation methods, and critical care unit operations planning, drawing on lessons learned from SARS response activities.

Wax and Christian (Feb 12, 2020). Practical recommendations for critical care and anesthesiology teams caring for novel coronavirus (2019-nCoV) patients. *Can J Anesth*. <https://doi.org/10.1007/s12630-020-01591-x>

## Public Health Policy and Practice

- Researchers discuss isolation, quarantine, and social distancing as successful tools used during the SARS outbreak and raise key questions that must be answered to determine if these measures would be effective in halting the current COVID-19 outbreak.  
*Wilder-smith and Freedman (Feb 13, 2020). Isolation, quarantine, social distancing and community containment: pivotal role for old-style public health measures in the novel coronavirus (2019-nCoV) outbreak. J Travel Med. <https://doi.org/10.1093/jtm/taaa020>*
- This commentary outlines strengths of the U.S. public health system in responding to the COVID-19 outbreak.  
*Smith and Fraser (Feb 13, 2020). Straining the System: Novel Coronavirus (COVID-19) and Preparedness for Concomitant Disasters. AJPH. <https://doi.org/10.2105/AJPH.2020.305618>*
- SARS, MERS, and COVID-19 outbreaks and related clinical and public health response activities are compared and contrasted in this brief commentary.  
*Guarner (Feb 13, 2020). Three Emerging Coronaviruses in Two Decades: The Story of SARS, MERS, and Now COVID-19. Am J Clin Pathol. <https://doi.org/10.1093/ajcp/aqaa029>*

## Mental Health and Personal Impact

*Review of the following articles was provided by Jonathan Rowe, graduate student in the Master of Arts in Psychology Program at Seattle University, and by undergraduate students Claire Herr and Karina Cole of the Department of Psychology.*

- During the 2015 MERS outbreak in South Korea, the province of Gyeonggi was fully quarantined. Among 6,157 citizens surveyed, 19.6% demonstrated emotional difficulties (e.g., depression), 71.3% received one counseling service, and 28.7% sought ongoing counseling services. Of those requiring ongoing counseling, only about 10% were contacted by the national service providers, suggesting that despite increased need, traditional hospital systems and medical facilities were not equipped to respond. The authors called for improved psychological care referral programs and preparedness, recommendations with international relevance.  
*Yoon et al. (2016). System effectiveness of detection, brief intervention and refer to treatment for the people with post-traumatic emotional distress by MERS: a case report of community-based proactive intervention in South Korea. Int J Ment Health Syst, 10(51).*
- This study examined the relationship between quarantine and immediate negative psychological impacts at a Chinese university during the 2009 H1N1 outbreak.
- Researchers concluded that there was no significant difference in symptoms of PTSD and general mental health between the groups who were and were not quarantined, though those who were dissatisfied with the control measures or who perceived hazard to their health demonstrated worse psychological symptoms than those who did not.
- Findings were inconsistent with some prior literature; however, long-term psychological effects on quarantine groups were not evaluated nor were data broadly representative of the general population.

- The authors advise against concluding that quarantine has no connection to negative psychosocial effects, emphasizing that specific circumstances  
*Wang et al. (2011). Is quarantine related to immediate negative psychological consequences during the 2009 H1N1 epidemic? General Hospital Psychiatry, 33(2011).*
- A survey was administered to 129 people (including health care workers) who were quarantined in Toronto during the SARS outbreak. Psychological distress, such as feelings of anxiety and isolation, PTSD, and depressive symptoms were common, although no formal diagnosis was made in this study. PTSD symptoms were associated with longer quarantine duration, lower income, and knowing someone who was infected with SARS.
- The authors suggest that a lack of knowledge, inadequate reinforcement by an overwhelmed public health system, and incomplete understanding of the rationale for quarantine may contribute to mental health distress among quarantine persons. Around 50% of respondents felt they had not received sufficient information about at least one aspect of their quarantine instructions.  
*Hawryluck et al. (2004). SARS control and psychological effects of quarantine, Toronto, Canada. Emerging Infectious Diseases, 10(7).*
- Hull critiques Hawryluck et al. (above), stating that "...although isolation and quarantine are stressful, that is an insufficient reason to hesitate when these measures are indicated." The authors' response emphasizes that while psychological effects of quarantine were noted, they do not give sufficient reason to refrain from using quarantine if necessary.  
*Hull (2005). SARS control and psychological effects of quarantine, Toronto, Canada. Emerging Infectious Diseases, 11(2).*

#### *Need to catch up? Try:*

- This detailed editorial outlining the COVID-19 outbreak and related research thus far.  
*Velavan and Meyer (Feb 12, 2020). The COVID-19 epidemic. Tropical Medicine and International Health. <https://doi.org/10.1111/tmi.13383>*
- A commentary from the WHO Scientific and Technical Advisory Group for Infections Hazards (STAG-IH) on the trajectory of the global public health response to the COVID-19 outbreak.  
*Heymann and Shindo (Feb 12, 2020). COVID-19: what is next for public health? The Lancet. [https://doi.org/10.1016/S0140-6736\(20\)30374-3](https://doi.org/10.1016/S0140-6736(20)30374-3)*