



How Virtual Care Can Help in the Battle Against COVID-19

Three months after the first identified case of the “coronavirus disease of 2019”, the World Health Organization (WHO) announced the COVID-19 outbreak as a global pandemic. The current outbreak situation includes over 230,000 confirmed cases and well over 9,800 confirmed deaths¹ - a death toll that has far surpassed that of the severe acute respiratory syndrome (SARS) epidemic that occurred in 2002 and 2003. The United States has declared a national emergency, while all 50 states have reported cases of COVID-19 to the CDC with numbers increasing daily. While immediate risk for COVID-19 is still considered to be ‘low’ for most Americans, the CDC anticipates widespread transmission of COVID-19 will occur and most people in the U.S. will be exposed to the virus in the coming months.⁶

Social distancing and proper hand washing can slow the spread of the virus, but with a significant wave of COVID-19 infections still to come, hospitals across the country are trying to prepare for a flood of ill patients who will strain their capacities like nothing they have seen in at least a generation. Even with some time to prepare, administrators fear they will not be ready. Early intervention and patient monitoring tools are needed now more than ever to help clinicians triage patients that require transfer to an ICU, allocate limited resources such as ventilators, and provide surveillance of ICU patients.



In the United States, there are less than 925,000 staffed hospital beds², which poses a significant problem when roughly 12% of coronavirus cases require hospitalization³. The U.S. health system suffers from staffing shortages that could hinder care if doctors and nurses become infected. In addition, there may not be enough ventilators or bed space for a rush of critically ill patients. Nationwide, there are only about 160,000 ventilators² to accommodate the roughly 2.8% of COVID-19 patients who may require transfer to the ICU.³

Proper triage management will help hospitals handle the influx of coronavirus cases that Emergency Departments could experience. Patients initially presented with milder symptoms may decompensate and require intervention may require hospitalization. The Mural Solution can digitize hospital defined early warning scores, such as National Early Warning Scores (NEWS), to help prioritize clinicians' attention to the critical cases.*

In the ICU, clinicians are managing an increasing level of critically ill patients, many with severe forms of acute respiratory infection that require them to be on a ventilator. One of the care teams' many priorities is weaning patients off mechanical ventilators once their condition improves, while preventing further complications. This requires constant access and analysis of quickly changing patient data, which is often tedious and time-consuming in such a fast-paced setting. The Mural Solution, GE Healthcare's virtual care platform, can help solve this issue by giving trended views of patient data, including vital signs, ventilation and hospital defined key ratio calculations.*

Knowledge about COVID-19 continues to develop. In an early study from China, researchers identified older age, high SOFA score and d-dimer greater than 1pg/mL at an early stage as potential risk factors for poor prognosis such as critical illness or death.⁴ Another study showed that on admission, lymphocytopenia was present in 83.2% of the patients, thrombocytopenia in 36.2%, and leukopenia in 33.7%.⁵ Mural is a flexible solution that hospitals can customize to apply their own protocols, based on hospitals' experience managing COVID-19 patients.*

We can all help to do our part as a community in preventing the spread of COVID-19. Our priority is arming clinicians with the tools to care for their patients throughout the entire coronavirus journey.

References

1 <https://www.who.int/emergencies/diseases/novel-coronavirus-2019>

2 American Hospital Association (AHA). *Annual Survey of Hospitals. Hospital Statistics, 2018 edition.* Chicago, IL.

3 *Severe Outcomes Among Patients with Coronavirus Disease 2019 (COVID-19) — United States, February 12–March 16, 2020.* MMWR Morb Mortal Wkly Rep. ePub: 18 March 2020. DOI: <http://dx.doi.org/10.15585/mmwr.mm6912e2>

4 [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(20\)30566-3/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)30566-3/fulltext)

5 <https://www.nejm.org/doi/full/10.1056/NEJMoa2002032>

6 <https://www.cdc.gov/coronavirus/2019-ncov/cases-updates/summary.html>

*Enabled by DECISION Insight® - a standalone medical device, based on hospital defined protocols.



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