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Revamping Inpatient Care for Patients Without COVID-19



Craig E. Daniels, MD; Michael J. Brown, MD; Elie F. Barbari, MD; John (Jack) C. O'Horo, MD, MPH; Franklin K. Ackerman, MHA; Michael L. Kendrick, MD; and Robert R. Cima, MD

Mayo Clinic Hospital in Rochester, Minnesota, encompasses 1271 beds over a 2-campus system located in a city with a population of 100,000. The hospital serves as an integrated community/regional referral center for the Mayo Clinic Health System in the Midwest, accepting local and regional patients in need of advanced care from Minnesota, Iowa, and Wisconsin. In addition, Mayo Clinic Hospital is a quaternary referral center for complex and destination patient care, receiving national and international patients in need of subspecialty care. The average daily census is approximately 1000 inpatients in addition to a large same day surgical and procedural practice. In most areas, 24-hour visitation is allowed because we believe that families and friends are an integral part of the care team and can help speed patient healing.

At the beginning of the coronavirus disease 2019 (COVID-19) pandemic, hospital leadership focused on ensuring adequate capacity for an anticipated surge of COVID-19 patients and on creating a safe environment for our patients and staff. Initially, all scheduled surgery and other procedures were canceled except for those classified as emergent or urgent, and all the canceled procedures were rapidly reviewed to ensure that a delay would not be harmful to patients. As a result, emergency department visits and elective medical admissions declined sharply. Work units were directed to identify practitioners and team members who could work from home. The hospital census, which can exceed 85% to 90% of capacity during a

busy week, decreased to 35%. During the peak of the crisis, our COVID-19 patient care never exceeded 20 patients with active infection hospitalized in the intensive care and general care units. Therefore, the hospital practice leadership pivoted to developing plans for reactivating the inpatient practice, which were focused on creating and maintaining a safe hospital environment and developing processes to allow efficient workflows so that non-COVID-19 care could occur in a COVID-19 environment with excellent patient and family experiences.

SAFETY

Deferring health care is not an option for those in need, and shelter-in-place and work-from-home requirements did not apply to essential workers in the hospital. Our leadership team has always prioritized a culture of safety for our patients, who must receive care, and our staff, who must deliver care, and this has been especially important during the pandemic, as we quickly reacted to put additional safety measures in place.

We defined safety as infection prevention and control of COVID-19, without compromise of our ability to deliver the highest-quality care. Individually, safety strategies around COVID-19 screening and testing as well as optimal use of personal protective equipment (PPE) all fell short of a 100% protection goal. Therefore, we used layered combinations of strategies to ensure the lowest possible risk environment for our patients and staff. Recognizing that physical distancing cannot occur in every setting, especially in

From the Division of Pulmonary and Critical Care Medicine (C.E.D.), Division of Colon and Rectal Surgery (R.R.C.), Department of Anesthesiology and Perioperative Medicine (M.J.B.), Division of Infectious Diseases (E.F.B., J.C.O.), Hospital Operations (F.K.A.), and Division of Gastroenterology and Hepatology (M.L.K.), Mayo Clinic, Rochester, MN.

team-based inpatient care, we implemented alternative strategies in areas in which distancing could not be achieved. All inpatient practitioners are required to wear masks and eyewear, take their temperatures twice daily, stay at home when symptomatic, and physically distance in workrooms, cafeterias, and common areas. All patients admitted to the hospital are screened for COVID-19 symptoms and exposure, and tested. We also screen asymptomatic patients with planned admissions who are at risk of complications of COVID-19, for example, those having major surgery or those anticipated to need chemotherapy or immunosuppression. All patients who do not pass initial screening, patients with pending severe acute respiratory syndrome coronavirus 2 testing, and patients under investigation for potential COVID-19 are placed in rooms under modified droplet precautions.

The Department of Infection Prevention and Control has created policies and procedures for a multitude of patient care environments and needs. At Mayo Clinic, local PPE champions and dedicated PPE experts helped practices needing a better understanding of how to use PPE. In partnership with occupational health, we implemented a sophisticated system of contact tracing to identify potentially exposed patients and health care workers by risk category. Because home quarantine is a recommended outcome of high-risk exposures, we have asked all practices to develop redundant backup systems for workers in essential areas of care. This system of screening, COVID-19 testing, new safety measures, PPE mentoring, and continually incorporating new knowledge has led to an even safer inpatient environment.

HOSPITAL OPERATIONS

Operating our hospital during the COVID-19 pandemic has required us to develop novel workflows for care needed for patients without COVID-19, while also caring for patients who have tested positive for COVID-19. To succeed, we needed to expand 2 key components of our hospital operations: (1) patient flow and geographical containment for COVID-19 care within the hospital

and (2) integration of COVID-19 models of infection with models of overall resource consumption to ensure that a margin of safety is always present for intensive care beds, ventilators, PPE, and other limited resources. This required establishing a new hospital leadership structure, which filled a gap between the Hospital/Health Care Incident Command System and our usual hospital operations team. The new COVID-19 Hospital Command Center connects the Hospital/Health Care Incident Command System activities of managing limited resources during the crisis with the hospital operations team, which plans and executes all hospital care delivery. Having a command center specific to COVID-19 was a key step toward providing the most efficient, highest quality care delivery as we transitioned to reactivating our practice.

PATIENT/FAMILY EXPERIENCES

Excellent care experiences result from excellent outcomes delivered in an environment in which patients feel safe and supported. To create the safest possible environment, we responded with a no-visitor policy, with limited exceptions. This improved physical distancing and protected our staff and patients from community exposure to COVID-19, but at a cost of removing the main support system from patients requiring inpatient care. The balance between safety and family support will continue to evolve and change as a consequence of risk posed by the pandemic. Visitation for inpatients is an essential component of great care and great experiences for patients and families. As the pandemic has evolved, we have revisited our policy and now combine several strategies to ensure safety: limited visitation, including visit duration and visitation hours, and timing of visits have been combined with secure access and visitor screening (temperature and symptom screening) to provide the safest possible environment.

The tools for delivering telemedicine are rapidly evolving and have been instrumental to inpatient care during the pandemic. Innovative virtual communication and care models were introduced into the practice to lessen

the need for in-person care when possible, for example, using tablets to communicate with patients with COVID-19 for virtual inpatient visits. Our patients quickly accepted and embraced this new form of care.

CONCLUSION

As we continue to learn from the COVID-19 crisis, Mayo Clinic leadership has adopted a number of strategies to allow for the safe and compassionate delivery of care. Early in the crisis, Mayo Clinic halted nonemergent admissions and surgical procedures to create a safe environment and to protect resources in anticipation of a rapid rise of COVID-19 cases. During this time, new workflows, infection prevention and control strategies, occupational health tracing capabilities, and visitor policies were implemented. These new safety measures allowed our hospital practice to

reactivate and to continue providing care to those in need.

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Correspondence: Address to Elie F. Berbari, MD, Division of Infectious Diseases, Mayo Clinic, 200 First St SW, Rochester, MN 55905 (Berbari.Elise@mayo.edu; Twitter: @DOCElie).

ORCID

John (Jack) C. O'Horo:  <https://orcid.org/0000-0002-0880-4498>