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Return to Normalcy? Principles on Resuming Surgical Services in the COVID-19 Era

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Abstract

The rapidly changing health care climate related to coronavirus disease 2019 (COVID-19) has resulted in numerous changes to health care systems and in practices that protect both the public and the workers who serve in hospitals around the country. As a result, these past few months have seen a drastic reduction in outpatient visits and surgical volumes. With phased reopening and appropriate guidance, health care systems are attempting to return to normal. Our institution has had the unique opportunity to already return operations back to full capacity. The experiences and lessons learned are described, and we provide guiding principles to allow for a safe and effective return to patient care.

Keywords

COVID-19, quality improvement, communication, safety checklist

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The rapidly changing health care climate related to coronavirus disease 2019 (COVID-19) has resulted in numerous changes to health care systems and in practices that protect both the public and the workers who serve in hospitals around the country. In the past few months, elective cases have been postponed; ambulatory clinics have been scaled down to urgent visits; and performing in-office procedures has required modification to typical workflows. Health care practices of the past have evolved into new methods to practice medicine. Many clinicians have provided insight to their experiences during the COVID-19 outbreak, including managing the nuances of outpatient oncologic visits,[1] performing safe tracheostomy,[2] and best practices in managing academic practices.[3] A big question remains though: How do we return to the ''normal'' practice of medicine in the face of COVID-19?

Many states are beginning to reopen in a phased plan. Illinois has created a 5-phase plan[4] (**Table 1**) to safely reopen businesses during this pandemic. As of May 1, 2020, Illinois had entered phase 2. This phase maintained the stay-at-home order and required face coverings/masks where social distancing was not possible. Phase 2 provided criteria on resuming elective outpatient and inpatient surgical procedures. Guidance included ensuring enough ventilatory units in the hospital and critical care bed availability. These criteria were not required when managing pediatric cases, due to the low rates of children significantly affected by the virus.

Ann & Robert H. Lurie Children's Hospital of Chicago is a 360-bed, free-standing children's hospital in the heart of downtown Chicago. As a result of the phased opening guidance, the institution has had the unique opportunity to return operations back to full capacity. Our experiences and lessons learned are described, and they provide guiding principles to allow for a safe and effective return to patient care.

Case Screening

As a result of the 6-week hiatus in elective surgical care, our department had >800 cases that were postponed. To facilitate the transition, surgeons were tasked with screening their patients and determining their appropriate time frame for intervention. These time frames were as follows: <2 weeks, 2 to 4 weeks, >4 weeks. This allowed for the surgeons to collaborate, pool their most critical patients, and complete in a timely fashion.

Operating Room Utilization

To maximize operating room (OR) availability, surgical leadership removed all prior block assignments for each

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Table 1. Illinois Phases of Reopening During COVID-19 Pandemic.[4]

Phase	Guidelines	To advance
1	Broad stay-at-home order, with only grocery stores, pharmacies, and other essential businesses open. Bars and restaurants are open only for pickup and delivery orders. Only essential manufacturers can operate.	The growth of new cases must slow, and surge capacity of hospital beds and ventilators must be available. Testing must be available for any health care worker or first responder with symptoms and 10,000 tests done daily statewide.
2	Stay-at-home order continues, but more retail stores can open to fill online and pickup orders, similar to restaurants. Face coverings are required where social distancing is not possible, and some outdoor activities, such as boating, fishing, and golfing, are allowed.	A region must keep the share of new positive tests at $\leq$20% for 2 weeks, with no major spikes. Hospital admissions for COVID-19 have to be stable for 28 days, and the region has to have 14% of hospital beds and equipment available to respond to a surge in new cases of COVID-19. Testing availability must expand to anyone with underlying conditions, as well as residents and staff as nursing homes, jails, and other congregate settings.
3	Offices, salons, and barber shops can open, with capacity limits and other safety precautions. Face coverings are still required. Any gatherings of $\leq$10 are allowed.	The positivity rate and hospital admission criteria are the same as moving from phase 2 to phase 3. Testing must be available for anyone, regardless of symptoms.
4	Child care centers and schools, as well as bars and restaurants, can reopen, all with safety guidelines from the Illinois Department of Public Health. Any gatherings of $\leq$50 people are allowed. Travel resumes.	A vaccine or effective treatment must be widely available. Alternatively, a region has reached herd immunity, and there are no new cases over a sustained period.
5	Conventions, large events, and festivals are permitted. All businesses, schools, and recreation can resume with safety guidance.	Not applicable

surgeon and provided OR blocks to each surgical division. Given the size of the division and case volume, otolaryngology was assigned 3 ORs to fill each weekday and 1 OR each on Saturday and Sunday. To ensure room utilization, if 1 surgeon was unable to fill an OR with one's case backlog a week prior to the assigned blocks, the remaining time was opened to others in the group.

Physician Contact

Rescheduling cases was a challenge. Due to rapidly evolving information about disease growth and social distancing fears, many families were reluctant to venture outside, particularly to a hospital. To help mitigate these fears, each surgeon spoke personally with the families being rescheduled. This provided an avenue for families to ask questions and the surgeons to provide reassurance. Families were grateful to speak with their physicians to get a sense of the hospital environment during the COVID-19 outbreak. There were families who still decided to delay procedures, but this personal contact provided relief of anxiety to many.

Care Team Model

Rescheduling >800 cases as a division was a difficult challenge. Care team models based on subspecialty lines of care were created: airway, head and neck, otology, and general/sinus. These care teams included nurses, nurse practitioners, physician assistants, surgical schedulers, and administrative staff. This allowed for a cohesive delegation of tasks related to these efforts, with the goal of maximizing efforts to the upper scope of each individual's practice. For example, many patients had difficulty visiting their primary care provider, due to office closures, to obtain a preoperative history and physical examination. To ease this burden, the physician assistants reviewed the medical records and completed the history and physical on the day of surgery. The practice adapted and continued to provide quality care.

Safety First

These are unparalleled times, and safety is paramount for the patient, the family, the physician, and the care team. Each patient was required to obtain COVID-19 reverse transcriptase polymerase chain reaction testing within 72 hours of the surgical procedure and then self-quarantine, as suggested by the Illinois Department of Public Health.[5] Our institution offered 3 testing sites, staffed 7 days a week, to complete this requirement. The physician care team managed speaking with families and discussing this requirement. If a patient was found to be positive, the case was rescheduled unless deemed urgent.

On the day of surgery, patient and families were rescreened for symptoms. Social distancing guidelines were in place. The waiting room was closed, and families waited in the same preoperative room before and after their child's surgery. Additionally, every child admitted to the hospital undergoes COVID-19 testing. This knowledge provides an

additional layer of security for the families undergoing surgery who require an inpatient stay.

Conclusion

COVID-19 has changed the face of health care forever. Thoughtful guiding principles to continue to manage our practices in this crisis are essential to maintain the health and safety of our patients, families, and providers. As we learn to adjust to the ''new normal,'' health care providers will need to remain resilient in our efforts to continue to provide quality care to our patients.

Author Contributions

Taher S. Valika, concept, design, interpretation, drafting, revising; **Kathleen R. Billings**, design, interpretation, drafting, revising.

Disclosures

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