

## CASE STUDY: SURGE MANAGEMENT

# LOUISIANA ED RAPIDLY IMPLEMENTS NEW SPLIT-FLOW MODEL TO REDUCE LWBS RATES AND IMPROVE PATIENT EXPERIENCE DURING DELTA SURGE

## SUMMARY

During summer 2021, the Delta variant of COVID-19 caused patient volumes to surge by more than 30% at St. Francis Medical Center in Monroe, La. The surge—lasting from July 2021 to September 2021—required innovative collaboration between Core and the hospital's onsite leadership and clinical teams. Together, we implemented innovative rapid cycle improvement processes that addressed surging volume, ensured patient safety and care quality, and mitigated spiking left without being seen (LWBS) rates.

## THE SITUATION

Core began partnering with St. Francis Medical Center's emergency department (ED) in May 2021. The staffing model in place accounted for 110 ED patients/day. Over time, volume fluctuated to about 150 ED patients/day, and Core re-adjusted, hiring advanced practice providers (APPs) and two new board-certified emergency medicine physicians to serve the Monroe community. In July 2021, these adjustments were challenged by the Delta variant of COVID-19. Among Monroe's community of just under 50,000, only 36% of the residents were vaccinated. As a result, many community members impacted by the Delta variant required medical attention at the hospital. This demand had a direct impact on emergency department operations.

The first impact was record-setting ED volume that strained staff and existing processes. The surge sent patient volumes climbing from 150 to 250—and on the busiest day in August 2021—to 264 patients in one day. This rapid surge caused LWBS rates to spike one day in mid-July. Fortunately, Core had a surge management process prepared that nearly immediately improved LWBS percentages, positively impacted patient experience, and earned St. Francis a reputation in the community for outstanding COVID-19 care.

## RESULTS

By working hand-in-hand with the hospital to implement a rapid cycle improvement process to address the surge in patient volume due to the Delta variant. Core and the hospital teams designed, implemented, and refined clinical processes to meet patient needs. These efforts helped alleviate provider burnout and burden and ensured patient care remained high quality and efficient, despite the challenge of the surge.

- ✔ **90th percentile+ patient satisfaction** scores in height of surge
- ✔ **100% Sepsis bundle compliance** during the surge
- ✔ **Maintained 0.5% LWBS rate** after rapid cycle improvements
- ✔ **5,000+ doses** monoclonal antibody infusion treatments administered

## STRATEGIES TO MANAGE THE SURGE

Core's Vice President of Clinical Operations Mark Canada MHA, MSN, RN immediately recognized a challenge of this magnitude would require his team's onsite presence. Addressing the jump in LWBS scores could not be ignored or handled over a phone call or monthly department meeting. The Core team spent the next month regularly traveling to Monroe and working in close partnership with the local hospital leadership and Core's onsite team at St. Francis to implement strategies that resulted in:

### Rapid-Cycle Improvement to Improve ED Flow

Typical Lean methodology could take as long as 8-12 months. That timeline would not work to address the urgent implications of this surge. Rapid-cycle improvements (flow improvements made in 3 months or less) were required. Rapid-cycle improvements call for a four-step approach: plan, do, study, act. In the case of St. Francis, we implemented this approach in a hyper-accelerated manner, within a matter of days and weeks.

### Optimizing Front-End Processes with a Split-Flow Model

The primary pain point causing LWBS rates to climb and patient experience to suffer was the front-end process. Core's team collaborated with St. Francis' nursing leader to address the bottleneck with a split-flow model. Within two days, they developed and implemented the process. Any patient who arrived at the ED with a COVID-related request (a COVID test, a desire to receive a monoclonal antibody, or had COVID-related symptoms) received a Medical Screening Exam (MSE) from a triage nurse, a registration clerk, and an APP. All other patients were directed to a separate registration and triage area, also staffed by a triage nurse, registration clerk, and an APP.

### Continually Collaborating to Refine Processes

After implementing the split flow model, Core's team remained on-site to observe its effectiveness with an outsider's eye. Each day, they debriefed with nursing leaders to discuss how the new process was going. Based on these discussions, the process was continually refined. In one revision, seating was re-purposed for visitor overflow. In another iteration, the transfer process from the ED to the infusion area was clarified by adding a color-coded visual queue to alert the nurses in the clinic when a patient had received their MSE and was ready to go upstairs.

### Innovating to Repurpose Space

Once the front-end process bottleneck was resolved, the volume surge grew and another choke point revealed itself: the infusion area where patients received monoclonal antibodies on an IV drip was not large enough to accommodate demand. It was a priority at St. Francis Medical Center to make sure patients who needed this potentially life-saving treatment could walk in and get it fast, rather than scheduling an appointment. The hospital identified a large conference room on the hospital campus to convert into an ER clinic area during the surge to address the space challenge.

Core was once again onsite to help set the space up as a dedicated infusion area that could see 30 patients at a time. The infusion area had an elevated command center to keep tabs on patient status. The NPs, PAs, and nurses staffing the area calmed patient nerves by educating patients and their families on expectations about this treatment, which is a relatively new therapy. The split-flow registration process was modified again to transport patients safely to the new clinic. This new, larger treatment area lifted a huge burden from the existing ED and hospital staff and had a significant, positive impact on patient experience and community perception.



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