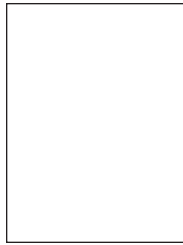


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## Improving Patient Flow

Physician involvement drives success at Georgia hospital.

Not long ago, WellStar Kennestone Hospital, Marietta, Ga., was dealing with significant patient flow bottlenecks that caused long wait times for our patients and unreliable scheduling for our nurses and physicians.

Today, many of the major issues surrounding patient flow have been addressed, and the bottlenecks have virtually disappeared. Wait times for urgent/emergent surgical patients have dropped 21 percent, and patients and surgeons are getting into the OR three hours sooner on average. The reason: detailed analysis and plan development conducted in partnership with our physicians.

The bottlenecks occurred because we had been merely reacting to unpredictable surges in surgical volume during the week rather than actively managing patient flow. As a result, there were days when the available beds could not meet patient demand.

Assuming that the problem originated in our very busy emergency department (ED), we spent a great deal of time and energy fruitlessly working on patient flow processes in the ED. At one point, we considered limiting our elective surgeries to accommodate ED demand.

We know now that the bottlenecks were actually rooted in our management of elective surgery scheduling in the OR, cardiac catheterization labs and outpatient procedure areas and not in the large but erratic flow of cases from the ED.

### Phase I—Separating elective and urgent/emergent volumes

Phase one of our effort consisted of a major, rigorous data pull to capture a detailed view of surgical scheduling in each of our specialty areas. The emphasis immediately shifted from an unproductive focus on anecdotal reports of yesterday's problems in the OR to an objective look at broader realities and trends over time. Gathering this information took the emotion out of the equation and allowed us to see the facts.

A team of physician and hospital leaders worked with patient flow experts from PatientFlow Technology Inc., Boston, to achieve common goals of improved quality and efficiency. The team continues to meet at least monthly to address the issues in "real time." Physicians are data driven, so the collection and presentation of hard numbers on such variables as turnaround times, wait times and composites of time spent in the OR by each surgeon motivated our

doctors to take ownership of the scheduling process and to become the catalysts for improvement.

Armed with the right data, our surgical services staff worked with our doctors to develop a scheduling process based on clinical criteria for each specialty. The development of these criteria enabled us to move from a "first in, first out" scheduling process, plagued by constant disruptions from the ED, to a process that determined the elective schedule and the priority for urgent/emergent cases based on straightforward clinical classifications that the doctors themselves defined and agreed upon. The physicians also developed policies and time intervals to handle urgent/emergent cases and mapped these policies to the individual clinical services. We designated add-on rooms for urgent/emergent cases, and we achieved consensus among the physicians regarding how these rooms would be used. Our doctors were willing to support some new rules and a fresh approach to scheduling if

it meant greater efficiency and predictability for them in the OR.

The greatest reductions in wait times have occurred with patients who need to be operated on within four hours. These patients now get into the OR in approximately two hours. Cases that should be performed within eight hours now typically get into the OR in about four and a half hours. And cases that need immediate attention continue to get into the OR as needed, without bumping previously scheduled cases.

### Phase II—Smoothing the elective schedule

In phase two of this project, we are focusing on the block schedule. We have begun to redistribute block time more efficiently using data on each surgeon compiled in phase one, and to accommodate the needs of some of our newer physicians. We are scheduling surgeries based on the amount of time a surgeon actually needs to complete a case rather than on the surgeon's assumptions.

Support for the new system has been widespread because the doctors have been involved every step of the way, and they understand that the process is designed to benefit them and to ensure the quality of patient care.

The block schedule also was revised to increase the number of patients who reach the appropriate destination unit, where they receive care from the proper specialty nurses. We have identified those destination units for each specialty and used simulation modeling to build the new schedule based on surgeon utilization. This reduces or eliminates the daily peaks and valleys of the inpatient census,

and we expect to improve our patient placement from 84 percent to above 91 percent as a result.

Our project in the cardiac cath lab, one of the most complex areas of the hospital, also has yielded excellent results. Wait times for urgent cardiac catheterization cases have dropped by more than 50 percent. Emergency cases continue to get into the cath lab in less than 90 minutes.

### Phase III—Rightsizing the hospital

In the final phase, we will begin to tie all of the new systems together and form a multidisciplinary patient flow group composed of physicians, nurse leaders, data/finance staff, environmental services leaders, care coordination and discharge planning leaders, and representatives from key areas, including cardiology. This phase also will ensure that we have the right number of beds for each service to accommodate our volume and strategic plan.

As the result of this effort, we have achieved a balanced, predictable relationship between our elective surgeries and urgent/emergent

cases. Patients who need immediate surgery are getting into the OR on time; we are better able to work within our capacity. This contributes significantly to overall patient safety and satisfaction and aligns with our commitment to offering world-class service.

If we learned anything from this process, it is that it takes time and patience. It is crucial to have credible data, which takes a while to collect. It is also imperative to win the surgeons' support. We need them, and they need to be the drivers of change. The challenge is convincing them to make the shift from an individualized approach to an approach based on the needs of the entire organization. What worked for us was taking the time to understand the physicians' interests and the impact on these practitioners. ▲

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### Patient Flow Improvement Keys to Success

1. Engage a collaborative team of physicians and hospital leaders with a foundation of trust and shared goals/vision.
2. Hold meetings frequently during the project so data and decisions are dealt with in "real time."
3. Ensure that all decisions are data driven.
4. Implement a robust information system, as well as an understanding of queuing theory and simulation modeling, as the tools for sustainability.
5. Eliminate artificial variability or that which is externally driven by factors other than nature such as the elective surgery schedule.