

Gaining 20–20 visibility into key hospital operations

You can't manage what you can't see. In a hospital setting, visibility into key operations and processes is vital to its core mission, namely providing the highest quality patient care delivered with maximum efficiency.

And so it is at Cook Children's Healthcare System in Fort Worth, Texas, where efforts to connect data to care have taken the form of an innovative dashboard solution that seamlessly integrates data from various sources and functions. Hospital workers across all departments are able to leverage real-time information to deliver patient services precisely when and where they are needed.

"In an environment where you are taking care of patients, you want visibility as a whole, not just for one particular patient," said Mark Pittman, Cook Children's enterprise data integration manager. "We were looking for a way that the executives and clinicians on the floor, along with other hospital staff, could actually look at a status board and get pertinent information that told them exactly what was going on, and when."

Out with manual, in with automated

"We had no big-picture visibility into key hospital operations," Pittman recalled.

Cook Children's sought a solution that would fundamentally transform the way the not-for-profit healthcare organization could meet pressing interoperability and operational challenges, and ultimately improve the quality of patient care. As a Lyniate Corepoint customer since 2009, Pittman knew all the organization's clinical data was flowing through Corepoint, and therefore interoperable and accessible to his team. With that knowledge in mind, the Cook Children's team developed its "Patient Location and Status Board" initiative. In it, the team took its various core applications, which are all integrated through Corepoint, to create a comprehensive feed for its McKesson Patient Visibility (MPV) system, yielding invaluable insights into various hospital operations, all in real time.

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Designed with ease of use for any hospital worker, the dashboard proved to be "an instant hit," according to Pittman. "Interacting with it is basically touching the screen and then doing what you need to do depending upon your role," he explained.

Prior to bringing the dashboard project online, hospital staff used various manual procedures and hard-copy reports to determine patient room availability, room status, patients in need of transport around the hospital, patient pharmacy requirements, equipment availability and a plethora of other vital information needs.

Today, hospital executives begin each morning in a conference room to receive updates on the previous evening's activities and a look at the day ahead. Front and center in the conference room are several screens featuring the dashboard. Simple commands bring up images of floors, rooms, treatment areas, nurses stations – literally any area of operations.

The main order of business at this daily meeting is a comprehensive safety check. Any area in need of remedial work due to incidents occurring overnight are displayed and assigned a status showing what needs to be done to resolve potential safety issues. Various colored icons and symbols correspond to the status of patient rooms – whether they are vacant or occupied, or in need of cleaning or about to receive a new patient. Coming soon, the dashboard will note any special medical

equipment the incoming patient might require. So the location of a wheelchair, for example, can be pinpointed and then tagged for delivery to where it is needed, when it is needed.

Payback: a holistic view of hospital operations

"The dashboard gives our executives a transparent, real-time, 360-degree view of the whole system, and a holistic perspective that greatly improves and speeds up overall decision-making," Pittman said. "It all comes together in the dashboard, and in a highly visual way that is so easy for anyone to understand and comprehend."

Beyond the boardroom and the main dashboard, a system of view-only screens are distributed throughout the hospital floors, accessible via PIN by doctors, nurses, environmental staff and other workers. What workers see on the screen depends upon their individual role.

For example, a worker looking to see which rooms need to be cleaned has no access to individual patients' prescriptions. The system gives the cleaning staff an at-a-glance view of which rooms are a cleaning priority, based on room assignments made by bed management or the house supervisor. A patient in the post-surgical recovery room can be assured of a seamless transition without any delays to a clean room with all the necessary medical equipment in place.

As Pittman puts it, “There are no more internal phone conversations like, ‘I got this patient, where do I take him now? What floor is available?’ Instead, a look at the status dashboard shows precisely which room on which floor is available and that’s that.” This functionality, according to Pittman, is also beneficial to properly load-balancing the floors.

A boon to end users, and to patients

Gina Hernandez, supervisor/staffing coordinator at Cook Children’s, noted that the dashboard is “easy to learn,” with staff workers becoming comfortable with the system within a few months of use.

“The patient care alerts, such as new, regular and stat orders, pharmacy orders, critical lab results and radiology results can help the nurse to see instant updates and have a more efficient workflow rather than stopping to check for new orders,” she pointed out. “This can benefit the patient by receiving interventions of care faster, leading to better patient outcomes. Critical lab results can be communicated to clinicians in a more timely manner, and new orders can be received faster.”

Hernandez reported that the dashboard results in patient room assignments being made more quickly, and that the number of phone calls back and forth has “dramatically decreased.”

Plans are underway to do away with the traditional practice of having patient transport staff assigned to each floor, replacing that with a more efficient central transport team that leverages the dashboard to know “exactly when a patient will be ready for transport to another department, to their room or to another test area.”

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Cook Children’s Healthcare System
Fort Worth, Texas



The Executive Dashboard at Cook Children’s enable executives to have a comprehensive view of the entire healthcare system.

Fewer errors

Some patients arrive at the hospital with their own supplies of drugs, which are turned over to hospital staff while the patient is hospitalized. Notifications entered into the dashboard alert the nurses to return the drugs to the patient when he or she is discharged. The automated process can also send alerts and pharmacy orders to the patient's pharmacy, and also to the pharmacist's mobile phone, pager, email or whatever way the pharmacist requests.

Other at-a-glance notifications and alerts available to the staff include special care instructions for individual patients; special safety information if, for instance, a potentially dangerous patient is admitted; information on patients that may need a full-time attendant such as those on suicide watch; and identification of patients in need of a translator. Every task is checked off as completed, which sharply reduces duplications of efforts and errors. For example, when a piece of special medical equipment is located and delivered, its new location is noted by the system and the primary task is marked as completed.

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Business value on top of clinical value

The dashboard also helps the hospital achieve its own service-level agreements. For example, data is available on how fast rooms are cleaned and prepared, or how quickly patients are discharged and sent home – but only after following all the correct discharge protocols specified within the dashboard.

Being in a highly regulated environment with various compliance requirements, the hospital gets a boost from the dashboard when it comes to tracking regulatory items such as readmission rates and speed of patient discharge. In an environment in which the industry is transitioning to value-based care, these key performance metrics are critical for hospitals and health systems.

Improved workflow. Fewer errors. Less duplication of effort. Improved compliance. Improved patient care. Better distribution of patient workloads. Within this system, powered by Corepoint, Cook Children's Healthcare System and its patients are reaping multiple benefits.