

How'd They Do That?

Overlook's unique ACOMS system helps manage volume, minute-by-minute

It wasn't so long ago that Overlook's Emergency Department, like many busy hospital Emergency Departments, often found itself on "divert" status. A spike in volume could quickly overwhelm the hospital's resources. To ensure the prompt delivery of patient care, emergency patients would be directed to other area hospitals. At first glance, this appeared to be an ED-related issue. But, upon further investigation, it became apparent that the bottlenecks in the ED were actually a result of circumstances that originated in the inpatient areas and support services of the hospital, such as delayed discharges, too few wheelchairs in the areas where they're needed, or too few IV pumps available on some floors. It became clear that this issue required a large-scale solution.

In response the Chief Nursing Officer, and a core team of managers at Overlook Hospital devised an Excel-based demand capacity management system that helped staff in all areas of the hospital pinpoint the stress points on the system and take steps to fix them before things reached crisis level. This home-grown solution worked remarkably well. But as this was a paper-based system, it became clear that something along the same lines, but more formalized and high-tech was in order. And with that, the ACOMS system was born.

ACOMS is the answer

ACOMS – which stands for Acute Care Operations Management System – is the only system of its kind in use at any hospital anywhere. Inspired by Overlook's original system, ACOMS was developed by a company called Vistaar Technologies whose software developers worked closely with the Overlook team over a six-month time period to create a program that would meet Atlantic Health System's specific needs.

How it works

"ACOMS is a comprehensive system that can be used by all the departments in the hospital," explains Vikas Phatak, Director of Development for VISTAAR Technologies. "But for all its complexity, it's really quite intuitive to use." ACOMS is accessible from the AHS Intranet, and features a "dashboard" screen that allows users to see the status of every area in the hospital at a glance. For each area of the hospital, ACOMS rates the status of four critical categories – Census, Acuity, Other and Staff – which is indicated by a series of color-coded lights. A green light indicates normal operations, yellow is an early indicator of stress on that particular aspect of the system, orange indicates an escalated stress level, and red means it's time to initiate the disaster recovery plan. Based on which areas are experiencing the greatest demand at any given moment, the system will automatically generate a list of "interventions" that can be performed to help mitigate the problems.

For example, if a floor has no IV pumps it will show up in real-time on the ACOMS system as a red light in the "Other" column for that floor, and an intervention will be generated such as, "Biomed to check for available IV pumps." So not only has the system alerted the floor staff about the need for IV pumps, but staff on other floors – who might just have extra pumps available – are now aware of the need, as well. This kind of up to the minute information – customized to each department – is available to every employee in the hospital thanks to the ACOMS system.

ACOMS improves communication throughout the facility and allows all the departments in the hospital to work synergistically instead of in "silos", which is significantly more efficient. But one of the most important features of ACOMS is how it allows managers and staff in one department to see when another department might be struggling – and lend a hand before things get out of control, something that the Chief Nursing Officer feels strongly about. "I believe that all staff have the responsibility to work together, across disciplines, to help achieve the hospital's goals and to support each other," she explains. "ACOMS clearly shows where the system is stressed at any given moment, which allows any employee anywhere in the hospital to take a few simple steps to nip potential problems in the bud." The best practices embodied in ACOMS prompt employees with consistent interventions, thereby creating institutional memory.

The ACOMS system is meant to be used by employees of all levels and all departments, and has been designed to be easy for everyone to learn and use. "The system was set up so that managers can easily train their employees on the system and get a new employee up and running in just minutes," says Phatak.

ACOMS at work

Since going live at Overlook in February, ACOMS has continued to produce startling improvement in the hospital's ability to manage demand – for example, Overlook's ED now goes on divert once every hundred days or so. The few remaining kinks are being worked out of the system now, and plans call for ACOMS to be implemented at all three AHS hospitals in the next few months. This partnership is a good example of the hospital and industry working together to improve patient care.