

Squeezing Water from a Stone

An Executive Briefing

How to Get More From
Existing Capacity and
Add More to Your Bottom Line



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Squeezing Water From a Stone: How to Get More From Existing Capacity and Add More to Your Bottom Line

By Lisa Romano, RN, MSN, Sr. Vice President & Chief Nursing Officer, TeleTracking Technologies, Inc.

As the health reform law now stands, American hospitals must trim \$155 billion in waste over the next decade.

But how will that happen? Job freezes and layoffs are no longer viable solutions. Asking staff to do more with less cannot continue indefinitely. Mistakes cost lives and money. Throw in a projected nursing shortage, an aging population and health coverage for millions more Americans, and you have the ingredients for calamity.

The law will require hospitals to deliver the highest level of patient care or be penalized by extensive losses in reimbursement. According to Moody's analysts, hospitals that can't generate enough efficiency to stay abreast of all the upcoming changes will be forced to make spending cuts and face mergers after 2014.

A PricewaterhouseCoopers report projects that a 300-bed hospital with poor quality metrics could lose more than \$1.3 million a year, starting in 2015, and because the results will be published online, losses could snowball with damage to the hospital's reputation.

Hospital executives need a solution that will address overcrowding and produce revenue immediately. Could it be as simple as keeping better track of patients, employees and medical devices?

After decades of cutting staff and services, and implementing industrial efficiency concepts like Six Sigma and Lean Production, hospital executives might do well to consider the roots of those concepts. They were an acknowledgement by corporate leadership that industrial automation alone was not enough. People and technology have to hum along at the same pitch to optimize the overall manufacturing process.

Now a sizable number of forward-thinking hospitals are acknowledging the reverse. After years of focusing on people-oriented efficiency programs, they've realized that people alone can't achieve optimal operational performance. So they have turned to technology.

By incorporating various workflow technologies into their operations, redesigning current operations and involving employees in the changes, these hospitals are speeding processes, eliminating redundancy, getting valuable business intelligence and assigning accountability to help produce incremental but steady performance improvement.

Automating patient flow

One example of this trend is the growing use of logistic control technology in patient flow. Addressing overcrowding exclusively as an ED problem was treating the symptom and not the disease. Without available beds for ED admissions, emergency personnel must split their time between emergent cases and patients who should be moved to the units. Automated patient flow squeezes wasted time out of the bed turnover process, converting that time into space — as much as 20 percent more space without adding a single new bed. By speeding bed turns and transports, patient flow automation can make many more beds available.

Optimizing flow is perhaps the most immediate way to improve operating margin and control increased demand for access. In 2007, The Advisory Board Company quantified the cost of poor patient flow. It said a hospital with poorly managed flow will use its staffed beds about 48.5 times per year. In contrast, hospitals managing their patient flow efficiently will use their staffed beds approximately 62 times per year. For an average-sized hospital of 300 beds with an average contribution margin of \$3,000 per discharge, that amounts to a \$10 million swing.

With the help of TeleTracking's Avanti consulting division and TransferCenter™ software, Methodist Healthcare System in San Antonio was able to double its transfer volume within one year. The six-hospital system, which provides tertiary services to a large population surrounding San Antonio, accomplished this by automating its existing transfer center and centralizing all enterprise-wide patient flow logistics around it to ensure that all bed capacity within the system was being used effectively.

With federal cuts for hospital-acquired infection-related hospital stays beginning next year, this capability could help hospitals save more than \$7 billion in the next decade.

Because systems like TeleTracking automatically trigger communications and alerts to all personnel involved in flow, they can substantially impact the fight against HAI, which is sure to be a key issue under reform. Currently, manual infection control processes can unintentionally create gaps in communication, leaving housekeepers and transporters unknowingly vulnerable to infection by entering an isolation room without warning. Because they are the most travelled employees in a hospital, they can potentially endanger the entire patient population.

However, the real-time nature of patient flow automation permits instantaneous alerts for all appropriate personnel, who can then take measures to greatly reduce the chance of exposure. With federal reimbursement cuts for HAI-related hospital stays beginning next year, this capability could help hospitals save more than \$7 billion in the next decade, the total amount the Congressional Budget Office projects the federal government will be withholding.

RTLS and reform

A related technology known as RTLS (Real Time Location Systems) is helping hospitals dramatically reduce search time for medical equipment and decrease capital expenses. TeleTracking's asset tracking sensor network enables staff to locate tagged items on a floor plan computer view of the entire hospital or individual patient care areas. The network also yields information on equipment downtime and utilization for better decision-making about the need for purchasing additional equipment.

Southeastern Regional Medical Center in Lumberton, N.C., saved nearly \$750,000 in one year by using the network to track mobile medical equipment, such as IV pumps and cardiac telemetry devices. Memorial University Medical Center in Savannah, Ga., has slashed costs nearly 40 percent since the system went live in May, 2010. The hospital saved more than \$300,000 in a year-over-year comparison of asset management costs through August 2010.

Complete ROI in a year

RTLS systems can typically pay for themselves in less than a year. So why wouldn't hospitals rush to adopt a low-cost tool that can save hundreds of thousands of dollars and improve patient care?

For one thing, early generation tracking systems were fraught with technical problems which interfered with clinical technologies, but newer technologies have removed the interference issues.

For another, while hospitals generally are quick to adopt treatment technology, they are slow to accept workflow improvement technology because they don't perceive themselves as an "industry."

To overcome those obstacles, it may be necessary to incentivize hospitals so they'll invest the time to become familiar with the many benefits of workflow technology. Federally-budgeted incentives could speed the industry-wide adop-

tion period from several years to several months. Given the examples above, that could be the difference between saving and squandering billions of dollars over the 10-year period stipulated by the White House.

Most importantly, in the context of healthcare reform, these technologies can help ensure that patients have timely access to the kind of care they need at the quality level they deserve. ■

5 Strategies to Improve Patient Flow in a Busy Hospital

By Rachel Fields

By improving patient flow, a hospital can save money on staffing, decrease wait times and boost patient and provider satisfaction. Melinda Noonan, DNP, RN, NEA-BC, director of nursing operations at Rush University Medical Center in Chicago, discusses how her hospital used TeleTracking patient flow software to collect and analyze historical data, improve throughput and plan for the busiest days of the year.

1. Ask every department to participate in promoting efficiency.

Patient flow can be disrupted when separate departments and providers do not talk about the hold-ups in each area, Dr. Noonan says. "You really have to be able to have a frank conversation," she says. "Aside from the monthly meetings, environmental services, patient transport and patient placement, get together on a bi-weekly basis and talk about issues." She says the weekly meetings might include discussions on whether nurses are taking reports as quickly as possible. Meeting regularly is essential to breaking down barriers between different departments; otherwise, one department might be blaming another for a throughput problem without understanding the actual cause. "Each person and area only wants to look at their book of business, so you have to have a way of getting everybody to look at their piece in it," she says.

For example, she says Rush is currently working to improve scheduling coordination between different departments. If three separate patients are sent to the same unit from the emergency room, the post-anesthesia recovery department and an outside hospital, the unit may suddenly be bombarded with patients because scheduling times have not been coordinated between departments. While Rush has not yet found a solution to this particular problem, Dr. Noonan says communication between departments is the first step to removing blame and fixing the issue.

2. Use data to predict patterns. Dr. Noonan says Rush uses TeleTracking software to collect and analyze data, which then improves the hospital's ability to predict staffing needs, patient volume and other trends. "People like to say that emergency admissions are random," she says. "They are and they aren't. There is some predictability. Mondays are called 'ER Mondays' all over the country. We actually took historical data and put it through simulation software so we can see that 80 percent of the time, this is what our census is going to be on a given day and shift." She says the ability to simulate patient flow and throughput is essential when mistakes are not an option. "You've got to get matching of staffing and census right

now. You can't afford to have mistakes on it anymore," she says. The ability to predict staffing levels on a particular day saves the hospital money by reducing staffing waste and decreases patient wait time by assigning the correct number of providers to the predicted volume.

3. Pay attention to rapidly growing specialties. Because clinical groups do not always grow at the same speed, your hospital may have to adjust beds and staffing over time to keep up with the demands of a certain specialty. "For example, hematology and oncology grew very fast, and we need to designate beds in another area to them," Dr. Noonan says. "Yet you couldn't take the floor away because you still used it for medicine. So we used historical data and fed [timing metrics from TeleTracking] into our simulation modeling software and tested various alternatives." By using simulation software to determine where beds and providers could be expanded, the hospital came up with a plan to use a portion of the medical/surgical unit and train those nurses in caring for non-chemotherapy oncology patients. Certain admission diagnoses were then targeted for the medical unit rather than the oncology unit, where they would have traditionally been placed.

4. Set internal benchmarks based on 'painful' months. In order to create a productivity benchmark, look at the historical productivity in your busiest months and work from there. Dr. Noonan took data from TeleTracking to find out how many patient placements each employee did in a particular month. She looked at June and July 2009, what she calls "the most painful months in the time I've been there." She used those months as a productivity target for busy days and created an internal benchmark for an appropriate staffing level.

5. Examine the biggest portals of entry to your hospital. Like many hospitals, Rush accepts the vast majority of its admissions from the emergency department, surgery, direct admissions from physician offices and outside hospital transfers. "If you're a tertiary center, you're taking in a good number of outside hospital transfers," Dr. Noonan says. To be able to balance patient placement from all four admission sources, Dr. Noonan and her colleagues looked at data on the speed of patient placement from each source. "If outside hospital transfers are placing people really fast, then the ED might be losing some ground," she says. "We look at that on a monthly basis to decide whether we need to slow the outside hospital transfers down." ■

For over two decades, TeleTracking Technologies has applied innovative, industry-leading logistics principles to hospitals and health systems to enhance patient flow, improve patient care, increase financial performance and gain competitive advantage. Along with its Avanti Patient Flow and Business Analytics divisions, TeleTracking designs and delivers an enterprise-wide platform that reduces overcrowding, cuts costs, generates revenue, fights the spread of infection, manages assets, accelerates patient transfers and provides business analytics for continual operational improvement and business development. The result is an end-to-end system that connects patient flow to patient care for better outcomes.



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