



**DESPERATE TO CUT COSTS,
HOSPITAL CFOs ARE TURNING TO
AN UNLIKELY SOURCE:
THE “LEAN MANAGEMENT” PRINCIPLES
CHAMPIONED BY MANUFACTURERS.**

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KEEN TO BE LEAN BY JOSH HYATT

▶▶ EVEN AS THEY WAIT TO SEE WHAT IMPACT HEALTH-care reform may have on their businesses, CFOs at the nation’s hospitals and health-care groups are working hard to streamline their operations and drive costs down as profits slide.

To do that, they are open to any sources of inspiration. When ThedaCare, a four-hospital chain based in Appleton, Wisconsin, cast about for practices that it might emulate, it looked to a nearby company—Ariens, a manufacturer of snowblowers.

Ariens had embraced so-called lean techniques as it sought to fend off competition from Asian rivals, a business challenge that would seem to have nothing in common with that faced by hospitals. But ThedaCare found that what worked for Ariens could also work for its business; in fact, Ariens’s CEO ultimately assumed a seat on a ThedaCare spin-off devoted to advising health-care systems about operational efficiency.

Reform efforts aside, health-care providers have been under pressure for years. Medicare has been steadily tightening up its reimbursement policies—eliminating payments for some hospital-acquired infections, for example, and inspiring private insurers to do the same. At most, Medicare reimburses hospitals for 80% of their costs—at a time when hospital costs are rising, partly because high unemployment is churning out fresh supplies of uninsured arrivals.

In July, as part of an agreement with the Administration to help pay for reform, hospitals agreed to forgo \$155 billion in government reimbursements over the next decade. That translates into \$2.7 million of annual cuts for each of the country’s 5,700 hospitals.

“Hospitals need to eliminate anything that does not add value to the customer,” says Mike Chamberlain, president of consulting firm Simpler North America and general manager of its health-care division. “They can’t generate that amount of savings through easy measures. They need to undertake a cultural transformation.”

The move to lean management is just such a transformation, and it certainly doesn’t come easily. “People sometimes have a bad reaction to change,” says Kevin Higdon, CFO of Elkhart General, a \$600 million (in gross revenues) hospital near South Bend, Indiana. Elkhart has implemented lean techniques for the past two years.

As part of that process, it conducts numerous brainstorming sessions, which can acquire the feel of a corporate reality TV show: put a bunch of people in a room and see if they can come up with a useful idea before anyone storms out in frustration. “We’ve had people walk out,” confirms Higdon. “But they come back. They stick with it.”

The lean-manufacturing approach—which evolved from the Toyota Production System that W. Edwards Deming influenced—progresses in a never-ending series of

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kaizen (Japanese for “incremental improvements”) intended to identify process failures. This involves methodically mapping out “value streams” (the most ROI-intensive processes), analyzing the root causes of any problems that come to light, and testing and documenting the effectiveness of potential solutions.

Elkhart General stages “Rapid Improvement Events” one week a month, assigning a different team of employees to figure out how to improve a process or eliminate waste. All told, the hospital has saved about \$6.5 million.

LEAN, NOT MEAN

THE NOTION OF APPLYING A MANUFACTURING MINDSET to a medical facility will strike many as not only improbable but potentially dangerous (it may not help that Toyota just announced its largest recall in history). Are doctors and nurses to be thought of as assembly-line workers focused on efficiency and speed at the expense of care and compassion?

“A lot of the anxiety about lean comes from the fear that all of the methods from Toyota will be copied,” says Mark Graban, a former industrial engineer who has worked in manufacturing as well as health care and who is now a senior fellow at the nonprofit Lean Enterprise Institute. “But hospitals are implementing lean methods to help them support what they are trying to do, not to make them into any less of a caring environment.”

Lean has also made inroads into financial services, higher education, state governments, and retail. Starbucks has put together “lean teams” to improve its repeatable activities—rearranging store layouts to improve barista productivity, for example.

“Lean management focuses on improving processes, so its principles and practices are applicable to any business,” says Bob Emiliani, a lean educator who works with senior managers. “There’s a potential role for it any time there’s a need to reduce costs, although to think of it solely as a cost-cutting method is a misinterpretation.” (For lean’s principles, see “Healthy Regimen,” page 46.)

“Lean hasn’t been widely accepted in health care, because you’ve got thousands of professionals who think, ‘I know how to do that,’” says Olson.

← **TIM OLSON,**
CFO OF THEDACARE



Health-care facilities have any number of activities that consist of repeatable steps, such as registering, diagnosing, and testing patients. If there are inefficiencies that can be corrected, not only should costs go down but quality should go up. If nurses are spending just 30% of their time with patients, for example, a hospital may study what they are doing the rest of the time. They can then make it possible for those nurses to spend more time bedside, rather than hunting for equipment or tracking down doctors.

Physicians, of course, may be less amenable to being told how to do their jobs. "Lean hasn't been widely accepted, because in health care you've got thousands of professionals who think, 'I know how to do that,'" says Tim Olson, CFO of ThedaCare. "That creates process defects, errors, waste, and quality issues." At least 44,000 people die each year because of medical errors, according to the Institute of Medicine.

Lean provides a lens through which companies can study different processes across various departments with the goal of reducing costs and improving quality. (That

applies to accounting as well; see "Accounting for Lean," facing page.) Guided by spreadsheets and benchmarks, a conventional cost-cutting exercise will simply look for expenses that can be eliminated, such as employees. But that approach can still leave waste in the system—hampering the productivity of a smaller workforce that must, if anything, become more productive.

A lean hospital would take a more holistic view, hoping to boost revenue *and* improve service by, for example, developing standardized methods that allow operating rooms to be changed over more quickly. A hospital that can disinfect and restock in half the time can increase the number of procedures it performs and reduce wait times.

THINK BIG, START SMALL

LEAN IS UNDENIABLY A BIG-PICTURE APPROACH, BUT success depends on starting small. One key is to assemble cross-functional teams composed not only of those who know a process intimately, but also those who are only tan-

HEALTHY REGIMEN

Lean management's techniques are elegantly simple—to understand. But putting them into practice takes perseverance.

Diagram work processes.

Teams of employees map every value stream to identify and erase any steps that aren't of value to the patient. In hospitals, the ultimate goal is to move patients through a visit or a stay quickly, seamlessly, and without errors.

Dig for root causes. Identifying a bottleneck isn't the same as understanding it. A hospital can effectively lower its infection rate, for instance, only by tracing such incidents to their source, which could be operating rooms, surgical suites, or food service.

Develop standardized procedures. Once a team has figured out the most efficient method of han-

dling a process, it must create tools—checklists, say—so that employees follow the same steps every time. One hospital that developed a process for catching unpaid emergency-room bills brought in an extra \$3 million a year.

Keep taking small steps.

Employees at lean companies practice continuous improvement, cutting waste wherever it appears. "You get better solutions by having employees involved," says Mark Graban of the Lean Enterprise Institute. "They know where the waste is." Peg Burnette, CFO of Denver Health, says her assistant CFO saved the hospital \$40,000 a year by eliminating paper paychecks. —J.H.

LEAN MAKES IT HARDER TO "FOCUS ON SOMEONE'S JOB AND SAY, 'WHAT YOU'RE DOING ISN'T NEEDED ANYMORE.'"

—PEG BURNETTE, CFO, DENVER HEALTH

entially involved or perhaps wholly untouched by it.

The team analyzes the existing process and then looks for opportunities to remake the physical layout, standardize the steps inherent in that process, or shift responsibilities. If there are too many patients waiting on beds in the hallway, for example, maybe the answer is to build a bigger ER. But wait: Is the ER really maxing out its capacity? If not, then the answer may lurk further down the value chain. Maybe patients can't get into rooms because an inefficient discharge process creates a bottleneck. That's exactly what happened at one hospital, which mulled an \$80 million expansion to its maternity ward but then found that once a nurse was dedicated to the discharge process, the existing facility could keep up with demand.

At Denver Health, which owns a 477-bed hospital and eight outpatient clinics, and which also has oversight of the public-health department, 911 medical-response services, and the poison-control hotline, the embrace of lean now entails as many as 10 weeklong "kaizen events" a year. CFO Peg Burnette says the success of those meetings hinges on one factor: preparation.

About six weeks beforehand, support staff for whichever group is meeting (each of the company's 14 value streams has a steering committee and an executive sponsor) begin pulling data that will enable the group to map a process from start to finish. Burnette, who serves as execu-



ACCOUNTING FOR LEAN

When companies try to expand lean management across functions and departments, they often find that traditional financial accounting poses a hurdle. Some augment it with “lean” or “management” accounting, which does not provide the essential controls that drive transparency, regulatory reporting, and shareholder accountability, but which does enhance internal decision-making and planning. Some key differences:

FINANCIAL ACCOUNTING	MANAGEMENT ACCOUNTING
Records and examines past activities.	Focuses on future decisions and activities.
Emphasizes data accuracy and categorization.	Emphasizes relevance and extrapolation of information.
Focuses on statutory reporting.	Focuses on current business performance and future improvements.
Budget and expense tracking are core concerns.	Management reporting and analysis are core concerns.
Follows GAAP and other regulations.	Uses lean, throughput, and other principles of management accounting.

Source: MPI Group/Infor

well—from 6.2 days to 4.8 days, a 25% reduction.

Lean techniques have helped Denver Health’s doctors see more patients—mainly by eliminating paperwork and rearranging offices so that the physicians don’t have to do as much walking. In just one clinic, such moves have generated an extra \$520,000 in revenue since 2007.

As part of fixing the revenue cycle, Burnette’s team zeroed in on patients whose care is partly paid for through grants. The hospital often recouped the grant-funded portion of the patient’s bill while neglecting to bill insurance for the rest, potentially missing out on as much as \$18,000. The team came up with a reliable communications system between the grant oversight office and the patient-billing department, boosting revenue by \$2.3 million.

Cumulatively, Burnette calculates that lean has saved Denver Health, which has a \$750 million budget, a total of \$28.6 million, at a time when admissions have increased about 7% and costs have risen 3%. “We’ve treated that many more patients without a decrease in quality,” she says. “And we’ve done it without laying off any of our people.”



tive sponsor for two value streams—information technology and the revenue cycle—says that the team members spend the first day imagining an ideal goal. On the second day they mull over what is realistic. By the third day, they are running experiments to see what can work. On the fourth day they finalize the solution and create “standard work”—defining and documenting the most efficient manner for performing each key step in the new process, down to the production sequence and the quality checks. On the last day, the group reports out to the executive staff and leadership. Team members meet quarterly to track the outcomes of their efforts and then annually to make sure they stay on target.

They measure success based on metrics, but not necessarily financial ones. Some are quality measurements, such as the reduction of certain kinds of infections. Others are based on improving time performance, a big issue in health care. ThedaCare, for instance, wanted to reduce the time from “door-to-balloon”—the minutes between a patient’s arrival at the ER with chest pains and catheterization. “The faster the blockage gets cleared, the less damage gets done to the heart,” says Graban of the Lean Enterprise Institute. Or, as the hospital likes to put it: “Time is muscle.”

Reengineering the process has brought it down from 91 minutes to just 37 minutes. Not coincidentally, the average post-cardiac-surgery length of stay has dropped as

In fact, that’s one of the paradoxes of the lean approach: in order for it to work, employees have to be committed to it, but “if it leads to layoffs, then people will quit participating,” says Graban. At Denver Health, management announced a no-layoffs philosophy at the same time it instituted lean. But Burnette admits that she’s uncertain about what might happen if, at some point, Denver Health should have no choice but to eliminate jobs. Lean makes it that much harder to, as Burnette says, “focus on someone’s job and say, ‘What you are doing isn’t needed anymore. It’s wasteful.’” The handful of times that has happened, the employee has been reassigned. But, says Burnette, “I don’t think [the employment] aspect has been looked at as much as it could be.”

Perhaps that’s because lean implicitly strengthens the loyalty between a company and its workers. An employer who shows a strong commitment to solving problems based on employees’ ideas and their willingness to change doesn’t need to have a formal no-layoffs policy; workers naturally feel involved. As much as lean is about breaking systems into their component parts, it also reinforces bonds. And it gives CFOs a chance to look beyond the numbers and focus on quality. “Looking at lean now,” says Olson, “that may be one of its healthy outcomes.” **cfo**

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