

## WEEKEND EXTRA



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Zoe Hodgson (right) gets check-in information at Women's Hospital reception area. Changes in waiting times and safety have been implemented in a few of the biggest health care facilities in Vancouver.

# Patients to need less patience

Shorter waiting times and improved safety are goals of plan patterned after Toyota system

BY AMY O'BRIAN  
VANCOUVER SUN

**O**ver the course of five days in January, a series of small changes — which promise to have big implications for patient waiting times and patient safety — were quietly made in a few of Vancouver's biggest health care facilities.

The changes were not trumpeted by politicians or bragged about in press releases. They were not the results of multimillion-dollar cash infusions or a new wave of medical graduates.

Instead of throwing money at their problems, executives at the Provincial Health Services Authority are throwing people at them. And they're doing it in a way modelled on the success of Japanese car manufacturing giant Toyota.

No, they're not approaching patients like they're cars on an assembly line. But they are using a Japanese-speaking *sensei* or teacher — who has ties to the Toyota family — to help them eliminate inefficiencies and streamline their operations.

"Nurses for years have told us that there is a lot of waste in the system," said Lynda Cranston, president and CEO of the health authority. "So we've been asking, 'Are we actually being as efficient and effective as we can? And are we providing you with an environment that is efficient and effective, so you can do your job?'"

#### Carmaker-inspired model

Bureaucracies are, by nature, slow and sluggish beasts. While there is plenty of fast-paced action on the front lines of hospitals and other health care agencies, the upper echelons of the medical system are undeniably bureaucratic. Suggest a change in the system and it could take months or more to make it happen.

With the Toyota-inspired model, though, it took less than five days to implement seemingly small changes that will mean shorter waiting times for potentially life-saving procedures, more pleasant — and efficient — hospital visits for patients, and safer procedures.

"It's not about some bigger agenda. It has nothing to do with anything other than what it should be about — the patient," said Piper Shalley, a nurse who works in the pediatric intensive care unit.

At B.C. Women's Hospital, a Toyota-based five-day workshop was able to reduce by 90 per cent the time from when a new mother is ready to be discharged from the hospital to when she exits the building and heads home. Before the program, the discharge process took an average of 10 hours. Now, it takes about one hour.

Court-ordered psychiatric patients used to have to wait 10 days to be admitted to a bed. Since the workshop, it's down to an average of 3 1/2 days.

At the BC Cancer Agency, staff were able to reduce by 83 per cent the time from when a doctor made a referral to when the patient got in to see a specialist. Before the workshop, the average wait was 42 days. Now, it's seven.

The changes cost the system next to nothing.

**Changing small processes**

So far, the Provincial Health Services Authority — which includes B.C. Women's and Children's hospitals, the BC Cancer Agency and the BC Centre for Disease Control — has completed 45 Toyota-inspired projects.

All levels of staff have been included, from front-desk clerks to doctors to vice-presidents to the CEO. Groups of eight or 10 people are thrown into a room together, presented with the details of the problem, instructed on how to map it out, and then they brainstorm solutions, implementing one of them by week's end.

"It's not a matter of changing the world. We're just changing small processes," said Dr. Kevin Elwood, a tuberculosis specialist at the BC Centre for Disease Control. "It's not magic."

During the two workshops that have been done at Elwood's clinic, the focus was on "improving workflow processes," he said. Basically, that meant cutting out unnecessary physical and procedural steps, cleaning up the filing systems, and altering the appointment system.

The results have been shorter waiting times for people needing to get a skin test for tuberculosis and for test results. "Now, you walk through and it looks like nuns have come through and cleaned up the place for us," he said.

But there were no nuns — and no magic — involved. Just a variety of staff plucked from different levels of the chain, and an outsider who could ask all the naive, basic questions that those

entrenched in the system likely wouldn't see.

Jan Christilaw, acting president of B.C. Women's Hospital, said the efficiency-finding missions — known as imPROVE within the health authority — have been effective, particularly for an organization that has been primarily occupied with delivering babies and caring for women.

"One of the things we started to notice in health care is that you get set in your ways. You get set in your ways of doing things," Christilaw said.

"And it's sometimes difficult for one individual, who works in any part of health care, to step back and say, 'There are four steps in this process that we really don't need to be doing.'"

Several other B.C. health authorities, including Vancouver Coastal and Providence, have also been using Toyota-based methods to tighten up workflow and eliminate waste. The philosophy is commonly referred to as "lean management," and was first applied in earnest to the health care system at the beginning of the decade.

Virginia Mason Medical Center in Seattle is considered one of the leaders in applying the lean philosophy to health care. The hospital began implementing lean strategies in 2002 and within three years, it had saved more than \$8 million US in capital expenses.

By increasing efficiencies, the hospital was able to scrap plans for several expensive expansions, including new surgery suites, a new hyperbaric chamber and new endoscopy suites.

It was able to reduce the number of full-time equivalent staff positions by 36 per cent, through attrition and reassigning some staff to other positions. There were no layoffs.

The Seattle hospital saved 53 per cent on inventory, reduced set-up time for surgeries and bed moves by 82 per cent, and reduced the distance that staff travelled during their shifts by 44 per cent.

The reasons for implementing "lean" strategies in B.C. hospitals are compelling. Our aging population, combined with doctor and nurse shortages, means that more has to be done with less.

"We believe there's higher clinical efficacy and outcomes by virtue of the fact that we're more efficient. We're able to do things more efficiently," said Larry Gold, president of BC Children's Hospital and the Sunny Hill Health

Centre.

"And from a taxpayer standpoint, we're using our resources in an efficient and effective way as we possibly can."

#### Improving safety, care

But lean strategies are also aimed at improving patient safety and care. A 2004 study published in the *Canadian Medical Association Journal* found that an average of 7.5 out of every 100 hospital admissions results in an adverse event — such as an infection — but close to 70,000 of those each year are potentially preventable. One in every six incidents of adverse events results in the patient's death.

A key objective of the lean philosophy is to reduce such occurrences.

It can be hard to understand the reasons for the overlaps, redundancies and inefficiencies in the health care system. But not when you consider that the system has grown from a point of necessity, rather than profit. Additionally, it has had more layers added with new medical advancements, new funding and more patients. It is natural that there would be areas for improvement.

Dr. Paul Bach, an anesthesiologist at St. Paul's Hospital's heart centre, had something of an epiphany in his thinking about the medical system upon walking into the waiting room one day.

"There was one day where a number of things conspired against me and I came out to see a waiting room full of people and I had to organize them to come back later in the day. And it was at that point I realized that the system that we had just wasn't efficient," he said.

"In fact, as I thought more about it what I realized was our medical systems were never designed. They grew. And they've sort of become cobbled together in bits and pieces."

Bach was involved in an imPROVE project that aimed to reduce the waiting time for patients to be assessed before heart surgery. Before the project, patients were waiting an average of 71 minutes to see the proper doctor. After the project, that time was reduced to 15 minutes.

"We increased the number of cardiac patients we see by about 25 per cent, from 600 to more than 800, in one year, without increasing our staffing level or appointments — all because we just got more efficient," he said.

"There have been lots of benefits, not just patient wait times. It's translated into seeing more patients, seeing them more efficiently and making their surgical journey a much safer one in the long run."

(St. Paul's Hospital is not part of the Provincial Health Services Authority, but the heart centre was involved in an imPROVE project because the health authority administers and funds all cardiac services for the province, regardless of where they're delivered.)

Executives within the health authority talk eagerly about how imPROVE is part of a larger "culture shift" within the organization.

#### Some skepticism

The hope is that by placing the reins of change in the hands of front-line workers, they will feel empowered. By helping staff feel more empowered, the hope is that they will take increased ownership of their jobs.

"There's a much higher level of satisfaction with staff," Gold said. "Effectively, we're getting the right care to the right child with the right set of resources, at the right time."

Naturally, there was some skepticism and hesitancy about imPROVE when it was first rolled out in late 2007.

But for those front-line workers who have been immersed in one of the workshops, it's clear that these are not top-down initiatives.

"I would just say that I was very impressed," said Shalley, the pediatric ICU nurse. "It was focussed on the patient and focussed on the people who are required to care for the patient."

There is no end-date for the imPROVE process. The idea is to continually re-evaluate and redesign processes in all areas of the health authority, with improved efficiency and safety as the key objectives.

Eventually, what we would hope is that five years from now, we'll be able to say, "We made fewer medical errors and it's because of this process," Christilaw said.

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