



MEDICINE IS TRYING to improve its practices by learning how other high-risk sectors, from aviation to Formula One, manage risk

NOW, WHERE WERE WE?

Medical errors are killing Canadians. How to stop the bungling.

BY DANYLO HAWALESHKA • Doctors have a reputation for bristling when being told what to do. “Lowly” nurses find their objections ignored, perhaps no more tragically than in 1994, when 12 babies died after heart surgery at a Winnipeg hospital. Years later, an inquiry concluded several of those deaths could have been avoided if warnings by the nursing staff had been heeded. More recently, studies have shed light on just how often medical errors occur—one suggested they kill up to 24,000 hospitalized Canadians annually. Little wonder then that a new Pollara poll indicates a remarkable lack of confidence among Canadians, with 60 per cent of respondents saying they think it “likely” someone treated in a hospital will suffer a “serious medical error.” The medical establishment is feeling it too, and is turning to a seemingly unlikely ally—the airline industry.

Dr. Richard Karl is both surgeon and pilot, and divides his time between operating on cancer patients, flying his twin-engine turbo-prop Piper Cheyenne, and consulting for the Surgical Safety Institute in Tampa, Fla., which he founded. Karl is an example of how medicine is increasingly trying to improve its practices by learning how other high-risk sectors—aviation, nuclear energy, even For-

mula One racing—manage and reduce risk. Karl instructs health care professionals on “crew resource management,” an operational style borrowed from the U.S. Federal Aviation Administration. CRM emphasizes open communication at the expense of deference to institutionalized hierarchy. In the United States, Karl notes, physicians leave behind

WHEN DOCTORS APPLIED FORMULA ONE-STYLE TACTICS, TECHNICAL ERRORS DROPPED BY 42 PER CENT



PRE-FLIGHT checklists before surgery?

1,500 surgical instruments in their stitched-up patients every year. The airlines, by contrast, “never land with the wheels up. They have a way of doing things right.”

Improving safety can be as simple as requiring a mandatory checklist be completed prior to a surgical intervention, a sort of pre-flight briefing for the O.R. It is often assumed everyone is on the same page in the operating theatre, and because those involved

are trained, highly motivated professionals, the vast majority of surgeries go smoothly, says Dr. Sam Sheps, a professor in the department of health care and epidemiology at the University of British Columbia. But without a formalized process, a simple, honest mistake can easily go unnoticed. “Pilots brief each other before the flight, they talk about the weather, what they might encounter in terms of traffic—they’re looking at all sorts of information,” Sheps says. “Well, the same thing should be happening in I.C.U.’s, O.R.’s, emergency rooms even.”

Edmonton’s regional health authority, Capital Health, is one of the early Canadian adopters. For the past year, every surgical team has had to run through a checklist, says Dr. David Mador, a urologist who performs bladder and prostate cancer surgeries. Mador’s operations often involve as many as seven team members, so it is critical nothing is assumed in order to avoid errors, such as operating on the right-side kidney instead of the left. “A mandatory process, where you have to review the information before you actually start doing anything, helps us avoid what sometimes can be disasters,” Mador says.

Karl has seen what can happen when a rigorous routine isn’t followed. He recalls once getting ready to operate on a cancer patient, when he noticed the results of critical blood work were missing from the files. Regardless, the anesthesiologist had gone ahead and inserted an epidural catheter in the man’s back. When the lab results finally arrived, Karl noted the patient’s blood thinner had not been stopped in time. “Well, even the valet parking guys know you shouldn’t operate on somebody’s liver if the blood won’t clot,” Karl says. “I cancelled his surgery, and now we were in the uncomfortable position of having to explain to the patient why it was un-

PHONING IN A PERIODIC REMINDER

What will you be doing eight months from today? If you have a telephone from Japan’s NTT DoCoMo, you’d know if you’ll be having your period. The FOMA D702iF cellphone, sold to females, has a programmable menstrual-cycle function to remind them when their periods will be. Says a spokesperson, “Women normally carry around sanitary products just before their periods start. We developed this function in case they forget.”



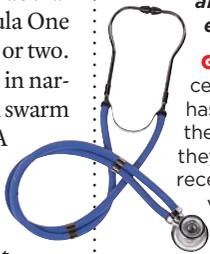
safe to take the catheter *out* because his blood was thin—of course, it was unsafe to put it *in*, but they hadn't checked."

In one of the odder crossover collaborations, the glamorous world of Formula One racing is also teaching doctors a thing or two. F1 drivers regularly screech to a stop in narrow pit stalls so 24 crew members can swarm the vehicle for servicing in seconds. A British physician, who also happened to be a race fan, wondered how two-dozen crew members keep from tripping all over each other, and what lessons could be learned by the children's hospital he worked in. He showed Ferrari's technical director a video of a patient being transferred from the O.R. to the intensive care unit. Ferrari's man was struck by how several conversations were going on at once, while equipment was disconnected or reconnected, but not necessarily in any particular order, and with no single person in obvious charge. In the Ferrari pit, each person has a designated task, done in sequence, and most often without discussion. When the doctors applied some of the F1 tactics, technical errors during patient transfers dropped 42 per cent.

In 2004, Sheps co-authored the Canadian Adverse Events Study, a landmark investigation that estimated that preventable adverse events caused the deaths of between 9,250 and almost 24,000 patients in acute care hospitals in 2000. Today, hospitalized patients face a one in nine chance of getting an infection, and another one in nine chance of suffering an error with their medication, says Philip Hassen, chief executive officer of the Canadian Patient Safety Institute. To bring the risks down, the institute is pursuing several initiatives. These include training programs in root-cause analysis, the issuing of national safety alerts, looking at new ways to certify and re-certify nurses and physicians, and coordinating the country's 16 independent medical simulation centres. "We bury problems in the health care industry," Hassen says. "It's partly because no one wants to feel that they've done anything wrong."

Hassen would like to see an anonymous reporting system for errors and near misses, similar to how air crews today can report concerns anonymously to NASA, which then informs the FAA. Hassen notes the name of the Air France pilot who crashed in Toronto last year has never been released. "We all make human errors, but the problem is we want to 'get' the person, and that by 'getting' a person that will somehow solve the problem—it never does," Hassen says. "The airline industry learned that, and they learned you have to talk about safety, and you have to begin to actually understand the causes."

Pollara's 2006 Health Care in Canada Survey highlights some startling contradictions, gender differences, and an increasing concern for the environment.



GOOD, BAD OR UGLY: 51 per cent of respondents said Canada has the best health care system in the world, and yet 37 per cent said they do not think Canadians are receiving quality health care services—and 55 per cent say our system needs either a complete rebuild or major repairs.

GENDER GAP: 61 per cent of men said Canadians get quality health care. Only 50 per cent of women agreed.

HURRY UP AND WAIT: 78 per cent of nurses think wait times for elective surgeries rose in the past two years.



DISTINCT SOCIETY: Quebecers were the least willing to cut back on air conditioning or turn down the heat—only 37 per cent would. With 62 per cent, Ontario led.

FLU SEASON: 41 per cent of Canadians said they had a flu shot in the last year.

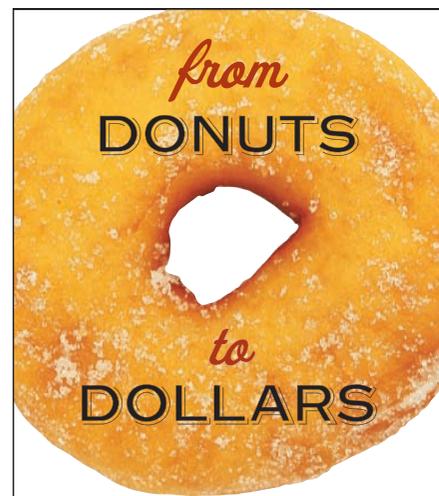
THAT'S PRIVATE: 59 per cent said private insurance for health services already covered by medicare would improve services for everyone. Sixty-three per cent said private insurance would create a two-tier system where those who could afford to pay would get better treatment.

MONEY GAP: The more money people made, the more likely they were to think Canadians are getting good care: only 45 per cent of those who made less than \$25,000 a year said people are getting quality care, while 66 per cent of those making more than \$100,000 thought so.



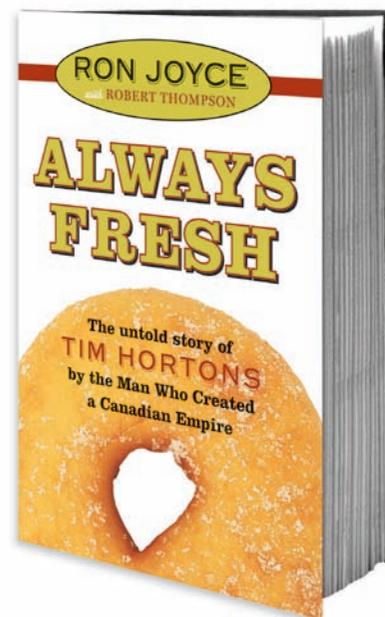
GREEN DAYS: 10 per cent said the environment and pollution are the most important issues facing Canada, a figure on the rise, while 19 per cent said it was health care, a big drop from the 40-per-cent range two years ago. Large majorities expect the health impact of air pollution (72 per cent), greenhouse gases (65 per cent) and urban growth (63 per cent) to grow more severe.

There are no quick fixes. Student physicians have to be trained, Karl says, and the old guard has to accept the new collaborative culture. "Thirty years ago, the captain on the airplane was the captain—he told the co-pilot how much sugar he wanted in his coffee and that was about it," Karl says. "But they kept flying airplanes into the ground, and finally decided that was a bad idea." M



"Canadians will finally get a glimpse of the complicated and messy personal story behind one of the most successful businesses ever created in this country." —*Maclean's*

NATIONAL BESTSELLER



HARPERCOLLINS.CA
AUTHORTRACKER.CA

Available Wherever Books Are Sold

This book is the author's personal story, and is not published, authorized or endorsed by Tim Hortons Inc. or any affiliates.