

## News @ a glance

**Med school review:** The Association of Faculties of Medicine of Canada has launched a 2-year exercise to review all facets of medical education, including whether laxer entry requirements, shortened training periods and lower tuition fees would help to resolve the nation's projected shortage of physicians. Among options to be analyzed include allowing students to enter medical school without having obtained an undergraduate degree and shaving a year off basic medical training, which would allow students to graduate in 3 years, as opposed to 4. The latter was among measures recently urged by *CMAJ*'s editorial team (*CMAJ* 2008; 178(1):11).

**Rx for change:** The Canadian Agency for Drugs and Technologies in Health and the Cochrane Effective Practice and Organisation of Care group have launched a publicly accessible electronic database on the relative merits of evidence-based interventions like academic detailing, therapeutics letters and e-detailing. It's aimed at providing health care policy-makers, health professionals and consumers with information about the effectiveness of strategies or programs to promote optimal drug prescribing. The database is available at [www.cadth.ca](http://www.cadth.ca).

**Child-size:** The World Health Organization has unveiled a "make medicines child size" campaign aimed at the development of antibiotics, pain medications and other drugs in dosage forms that are tailored to children's bodies and metabolic needs. The agency also released a list of 206 medicines that they deem safe for children's use. The WHO projects that roughly 6 million children under the age of 5 die annually from treatable conditions and could be saved with "readily available, safe, effective and affordable" medicines.

**Triple B:** The development of a strategic framework for health research is among 10 "calls to action" identified as national priorities in a report from the Association of Canadian Academic Healthcare Organizations entitled *From Bench to Bedside to Business*. Others include development of a "sustainable, multi-year

federal fiscal framework for public investments in health research" and new mechanisms for commercializing research findings. The report, which also surveys current metrics for ascertaining the return-on-investment in health research, is available at [www.acao.org](http://www.acao.org).

**Bite-size:** It's \$10 in Los Angeles and \$2 in Toronto. That's Starbucks or Tim Horton's. Taking a lead from a California medical centre that offers doctors \$10 Starbucks certificates if they wash their hands, Toronto's University Health Network will handout \$2 Timmy's certificates to doctors, nurses and other staff at its Princess Margaret, Toronto General and Toronto Western hospitals who are spotted complying with basic Network hand-hygiene policy aimed at reducing nosocomial methicillin-resistant *Staphylococcus aureus* infection rates.



**Laurels:** University of Toronto and McLaughlin-Rotman Centre for Global Health senior scientist and bioethicist Peter Singer has been awarded the Michael Smith Prize from the Canadian Institutes of Health Research. The prize, complete with \$500 000 contribution toward his research program, is awarded annually to Canada's "Health Researcher of the Year." Singer proposes to use the money in furtherance of efforts to help African researchers develop and commercialize products that address health problems on their continent.

**Hiring spree:** Canada's 92 universities and university colleges will have to hire as many as 35 600 new faculty by 2016 to address retirements and enrolment growth, which is projected to rise nationally by between 70 000 and 150 000 full-time students over the next decade, according to a new study by the Association of Universities and Colleges of

Canada. Further details are available at: [www.aucc.ca](http://www.aucc.ca).

**Give a day:** Upwards of \$400 000 "and counting" was donated during the 2007 Give a Day to World AIDS campaign, which challenged doctors, other professionals and all Canadians to contribute income earned on World AIDS Day (Dec. 1) to organizations that have programs aimed at fighting the pandemic in Africa. Launched in 2004 by Markham Stouffville Hospital physician Jane Philpott, the campaign raised over \$500 000 in 2006. Details are available at [www.giveaday.ca](http://www.giveaday.ca). — Wayne Kondro, *CMAJ*

DOI:10.1503/cmaj.071796

## PULSE

### The joys of quality indicators

As a general rule of thumb, if you'd like better odds of surviving a visit to a Canadian hospital, hope that you are hospitalized in New Brunswick, Saskatchewan, Alberta or British Columbia.

Hope also that it's the Moncton, Calgary Foothills, Saint John Regional, Calgary Peter Lougheed or Regina General hospitals, or in a pinch, the Saskatoon Royal University, Hamilton McMaster or Vancouver General (Box 1).

Conversely, hope your hospital isn't in Newfoundland and Labrador, Manitoba or Ontario, and, in particular, that it isn't the Kitchener Grand River, St. Catharines Niagara or pretty much any hospital in Scarborough.

However fair or valid, such are the conclusions that will inevitably be drawn by Canadians accessing the newly minted hospital standardized mortality ratio report from the Canadian Institute for Health Information (CIHI).

The quality indicator is essentially a measure of the number of "observed" to "expected" deaths within a hospital or health region for diseases or conditions that account for 80% of in-patient mortality in Canada, after adjusting for such factors as age, sex, diagnoses,

length of stay, admission status, comorbidities and whether a patient was transferred from another institution.

In Canada, some 65 diagnosis groups cause 80% of in-hospital deaths, led by acute myocardial infarction, heart failure, pneumonia, chronic obstructive pulmonary disease, septicemia, malignant neoplasm of bronchus or lung, stroke, cerebral infarction, respiratory failure and hip fracture. In that context, hospital standardized mortality ratios are thus unique to a nation, in large measure because they reflect local diagnosis groups. Gun shot wounds, for example, do not make the cut in Canada but are a leading cause of death in the United States.

In turn, the findings generate an “odds ratio” of dying in hospital, or an estimated increase in risk for various predictors. Each additional year of age, for example, adds a 5% risk of dying. An emergency, rather than a planned, admission, increases the odds by 160%. Men have a 9% higher chance of dying. Patients transferred from another acute care facility: 35%. Patients with 2 comorbidities on the Charlson index: 95%. With 3: 244%. As for length of stay, relative to a 3–9-day stay, someone hospitalized 1 day has a 270% increased risk of dying. It’s 80% for 2 days, 1% for 10–15, 17% for 16–21 and 53% for more than 21.

CIHI reported hospital mortality ratios only for health regions that had at least 2500 qualifying deaths between April 2004 and March 2007. Essentially, that threshold precluded the inclusion of Prince Edward Island or any territories. Quebec was not included because of “historical differences in the diagnosis and intervention classification systems,” says Institute Vice-President, Re-

search and Analysis, Jennifer Zellmer.

As well, because of variations in how hospitals report and handle palliative care patients, mortality ratios were generated in 2 categories: excluding and including palliative care patients.

The mortality measure was developed in Great Britain as a predictor for variations in mortality rates among hospitals and it was concluded the biggest factors were emergency admissions, number of doctors per bed and number of general practitioners per capita in the hospital’s locality. When used in the United States, factors accounting for variations included the payer (e.g., Medicare), hospital admission rates and the number of discharges to nursing homes or other health care facilities.

In Canada, though, CIHI and health care administrators say the ratio should be viewed as a “driver” of change or progress through time, rather than as a measure of hospital performance.

“The key here is to focus on your trend over time, not compare yourself to others,” Zellmer says, adding that such comparisons aren’t valid because of such factors as differences in the way hospitals chart and code deaths or things like under- or over-coding of comorbidities.

The Canadian version has been under development for over 3 years and the process has already had a beneficial effect, as the national ratio dropped 5.6% from 2004/05 to 2006/07, said Institute President Glenda Yates at a press conference at which the ratios were unveiled.

Canadian Patient Safety Institute Chief Executive Officer Phil Hassen argues that there is still considerable room for improvement, given than an estimated 9000–23 000 deaths annually

in Canada are a function of adverse events and a significant portion of those are occurring in hospitals. “It’s hard to attribute anything to anything, but it’s such a macro number, I assume that within those deaths are many that are the product of adverse events.”

Hassen had earlier told reporters that the ratios were strictly a measure of preventable deaths, with 100 being “the average number of people dying from adverse events.” But Zellmer says they should not be directly viewed as a measure of preventable death as the links between mortality and process or quality of care have not been conclusively established. “The notion of preventable is not black and white.”

The report indicates that in the first year of calculations, there were 37 acute care hospitals across the country with ratios under 100. By 2006/07, that had grown to 48. In 2004/05, there was a hospital (Grand River) with a staggering 158 ratio. That has since declined to 136.

From that perspective, a high hospital standardized mortality ratio should be viewed as “kind of red flag or an indicator” that a hospital needs to move with programs or measures to improve patient safety, says Sharon Sholzberg-Grey, president of the Canadian Healthcare Association (formerly known as the Canadian Hospital Association).

Ontario Hospital Association President Hilary Short concurs, arguing that the ratios are a “tool for performance improvement,” not a verdict on individual hospitals or health regions. “It’s not the whole story and it should not be.”

The mortality indicator is now being used in the United Kingdom, United States, Netherlands and Sweden and “the experience has shown that there are ways to use this tool as a constructive measure,” Short adds.

Among measures that hospitals have used to reduce ratios are ones like the introduction of rapid response teams, medication reconciliation, infection control, standardization of wound and skin care, chart audits or the use of an intervention called a “VAP bundle” to prevent ventilator-assisted pneumonia. — Wayne Kondro, *CMAJ*

**Box 1: The Top Ten acute care hospitals in Canada, by lowest hospital standardized mortality ratio, excluding palliative care, 2007**

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|---|----|
| 1. The Moncton (NB)                                   | 56 |
| 2. Foothills Medical Centre (Calgary, Alta.)          | 63 |
| 3. Saint John Regional (NB)                           | 65 |
| 4. Peter Lougheed Centre (Calgary, Alta.)             | 67 |
| 5. Regina General (Sask.)                             | 68 |
| 6. Royal University (Saskatoon, Sask.)                | 71 |
| 7. Hamilton Health Sciences McMaster Division (Ont.)  | 77 |
| 8. Vancouver General (BC)                             | 77 |
| 9. Thunder Bay Regional Health Sciences Centre (Ont.) | 78 |
| 10. Hamilton Health Sciences Hamilton Division (Ont.) | 79 |

Source: Canadian Institute for Health Information.

DOI:10.1503/cmaj.071784