# Canada: budget cuts have contributed to spread of super-bug

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Reports published in succeeding issues of the *Canadian Medical Association Journal* (CMAJ) assert that government cost-cutting has led to a deterioration in hygiene at Canada's hospitals and that this in turn has contributed to an alarming rise in *Clostridium Difficile* bacteria infections and fatalities

In early August, the *CMAJ* published a report by Dr. Jacques Pepin, an infectious disease specialist at Sherbrooke University Hospital (CHUS), which said *C. difficile* had been tied to the deaths of more than 100 hundred persons at the Quebec hospital in the previous 18 months.

In the journal's July issue a team of specialists in infectious diseases reported that at least 79 persons hospitalized in Montreal and 4 in Calgary had died over roughly the same period after becoming infected with *C. difficile*.

*C. difficile* is a bacterium that flourishes in the intestinal tract, causing violent diarrhea and, in severe cases, ablation of the intestine and death. Those whom it attacks are generally elderly hospital patients who are being treated with antibiotics for another infection such as pneumonia. The antibiotics weaken the intestine's beneficial bacterial flora, allowing *C. difficile*, which is resistant to most antibiotics, to take root and proliferate.

Pepin's report shows that there has been a sharp rise in *C. difficile* infections. Whereas in 1991-92 the two hospitals that now comprise the CHUS reported 169 cases, a decade later the annual total was 244. By 2003 the number of infections had risen to 390 and in just the first six months of this year there were 325.

Data from hospitals elsewhere in Canada indicate this is part of a larger trend. In 2003, the six Montreal hospitals for which there is information reported more than 1,400 cases of *C. difficile* and Calgary's hospitals reported 1,100 cases in 2000-01.

According to Dr. Pepin, this is "the worst epidemic of hospital-acquired infections that we've had."

"It seems likely," warns Dr. Pepin, "that before the end of 2004, more than 1000 patients will have died within 30 days of a diagnosis of CDAD [*C. difficile* associated diarrhea] in the province of Quebec." If this proves true, almost half of these deaths would have occurred in the last two years.

The Quebec government has effectively dismissed Dr. Pepin's report as scare-mongering. Liberal Health Minister Paul Couillard told Canadian Press, "One hundred people died while having the bacteria in them. It doesn't mean that their deaths were due to the bacteria."

Dr. Pepin has never suggested all the deaths were attributable to the "superbug" *C. difficile*. Many of those who became infected were already gravely ill. But he is outraged at the official indifference to his report. "I myself saw some of these patients. It is clear that a large majority of these deaths were directly caused by *C. difficile*."

Significantly, Dr. Pepin's report shows that as *C. difficile* has become more prevalent, it has also become more virulent. Whereas in 1991 just 5 percent of patients died within 30 days of being identified as having *C. difficile*, in 2001 the morality rate was 14 percent.

One reason the government has been so quick to downplay the significance of *C. difficile* is that researchers have drawn a direct link between its spread and the massive cuts that the federal Liberal and provincial Liberal, Parti Québécois, Conservative and NDP governments have made to Canada's health care system. Hygiene has been compromised as hospitals skimp on supplies, push patients into overcrowded wards, and reduce their staffs.

According to the report "*C. difficile*: A formidable foe" published in the July *CMAJ*, "In many institutions, housekeeping staff has been reduced while nursing workloads have increased. *C. difficile* is particularly

difficult to eradicate from surfaces and equipment. Compliance with hand hygiene has been shown to decrease as workloads increase. Decreased compliance with isolation protocols along with the increased environmental spore burden could have a synergistic effect in promoting *C. difficile* cross-infection."

"The current facilities in many hospitals are antiquated and contain few single or isolation rooms. Wards and emergency departments have become more crowded, and bed turnover is rapid. This makes containment of *C. difficile* exceedingly difficult, especially among patients with fecal incontinence. Sharing of toilet facilities between patients in multi-bed rooms is still occurring."

According to Dr. Pepin "there are departments here at CHUS where you can have forty patients sharing one or two beds. ... The result is that in some of these old buildings, the sanitary conditions are intolerable. I mean, it's indecent."

Nor are these problems limited to Quebec. "Listening to stories from Montreal is, frankly, scary," says Dr. Allison McGeer, an infectious disease specialist at Toronto's Mount Sinai Hospital. "It could happen in Toronto—tomorrow."

There are important parallels between the spread of *C. difficile* and the 2003 SARS crisis that caused more deaths in Toronto than any other city, region or country outside East Asia. Most of those who died had contracted SARS while in hospital either as patients or health care workers.

An Ontario government-appointed inquiry, while whitewashing the role played by the federal Liberal and Ontario Conservative governments in slashing Ontario's health budgets, conceded that the spread of SARS was facilitated by the weakness of the province's public health units, hospital overcrowding, aged infrastructure, lack of time and facilities for proper staff hygiene, and the refusal to hire nurses full-time. (Nurses, who to make ends meet were forced to work part-time at several hospitals, inadvertently spread SARS from one Toronto hospital to another.)