Hospital-Acquired Infections Stop Preventable Deaths

The Ontario Council of Hospital Unions / CUPE

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ONTARIO COUNCIL OF HOSPITAL UNIONS

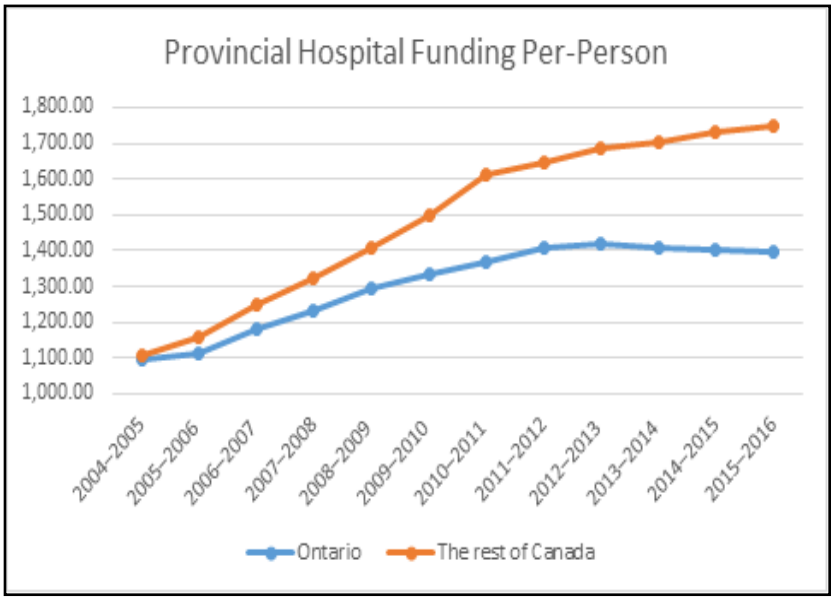
The Public Health Agency of Canada reports that more than 200,000 patients get infections every year while receiving healthcare in Canada and that more than 8,000 of these patients die as a result. The Agency adds "although definitive numbers are not available, it appears that these numbers are rising." The risk of infection is magnified in hospitals and long-term care facilities because patients are already ill and at particular risk of infection due to medical interventions.

About 8% of children and 10% of adults in Canadian hospitals have a hospital acquired infection (HAI) at any given time. For a number of key HAIs, infection can easily spread from patient to patient through personal touch or by touching contaminated shared surfaces. Bacteria can exist on many objects in the patient environment (e.g. bedrails, telephones, call buttons, taps, door handles, mattresses, chairs). Some of those bacteria can survive for weeks and even months. But the use of best practices can reduce the risk of infection sharply, in some cases down to zero. Washing hands, cleaning environments and sterilizing instruments are the best ways to prevent hospital acquired infections.[1]

The potential dangers are worsening for a number of reasons. Scientists and doctors have raised concerns about the increasing severity of hospital acquired infections and the growing resistance to antibiotic treatment of hospital acquired infections. The risks are growing.[2]

Increasing severity and resistance to antibiotics is very troubling. But CUPE hospital environmental service members believe that government and hospital policies are making this growing threat even worse. This is demonstrated in three ways.

1. **Cuts are making existing problems with hospital cleaning and infection control worse.**



A 2014 study surveyed managers most responsible for environmental services (EVS) from 103 Canadian hospitals. Less than half (46.9%) reported that EVS had enough personnel to satisfactorily clean their hospital. Only 5.2% strongly agreed there were sufficient EVS personnel.
The study concluded "there appears to be the need for more cleaning staff in the majority of Canadian hospitals. EVS staffing deficits mean that the cleaning necessary to prevent and

[1] Public Health Agency of Canada "The Chief Public Health Officer's Report on the State of Public Health in Canada, 2013 Infectious Disease—The Never-ending Threat," http://www.phac-aspc.gc.ca/cphorsphc-respcacsp/2013/infections-eng.php. Also note, Zoutman et al, "The state of infection surveillance and control at Canadian acute care hospitals," *American Journal of Infection Control*, 2003:31, 266-275. See Appendices A and especially B for more on specific hospital superbug infections.
[2] See Appendix A for more on the growing problems with antimicrobial resistance.

control nosocomial infections will not be accomplished with the requisite frequency and thoroughness." [3]

Another 2014 national study revealed that nearly 40 per cent of Canadian hospital infection-control experts believe their hospitals are not clean enough to prevent the spread of hospital acquired infections.[4] The study noted:

> "Based on the survey responses, the cleanliness of Canadian hospitals can be characterized as less than optimal. Nearly 40% of the IPAC respondents did not judge their hospital to be sufficiently clean for infection prevention and control purposes. This study identifies the need for Canadian hospitals to improve hospital cleanliness, and the evidence indicates that if this was accomplished, then ARO (antibiotic-resistant organisms) rates would decline."

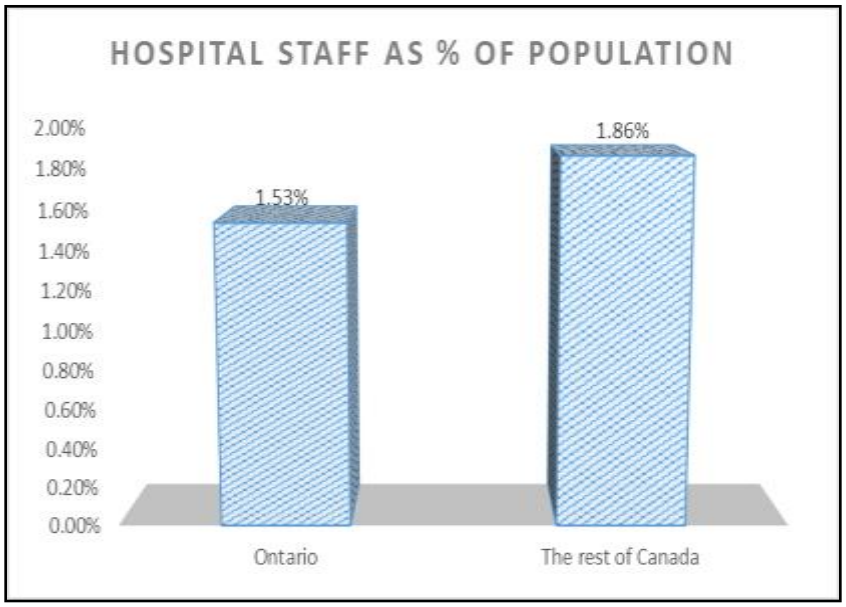
Clearly, cleaning needs to improve in hospitals.[5]

But after many years of a freeze in base hospital funding, there is intense pressure on hospitals to cut costs. After years of real funding cuts in Ontario, all other provinces now fund hospitals 25% more than Ontario on average.

Staffing costs are a high percentage of total operating costs in hospitals. Consequently, the underfunding on Ontario hospitals results in under-staffing of Ontario hospitals.

Hospital employees in Ontario form a much smaller part of the population than in the rest of Canada — in 2015 about 0.33% less of the population than in the rest of Canada. If Ontario had the same percentage of the population as the rest of Canada working in hospitals, there would be an additional **45,500** hospital employees in Ontario.

This means that on average every town with 100,000 people in Ontario, will have 330 fewer hospital workers in Ontario. [6]



[3] Dick E. Zoutman et. Al., 2014, "Environmental cleaning resources and activities in Canadian acutecare hospitals," American Journal of Infection Control, 42 (2014) 490-4. The authors note, "A limit of the present study was that the examination of EVS resources and activities relied on managers most responsible for EVS. Although these managers know best the state of EVS in their hospital, their responses may have a positive bias." Also notable, there was a low response from provinces where EVS is contracted out.

[4] Dick E. Zoutman et. al., "Working relationships of infection prevention and control programs and environmental services and associations with antibiotic-resistant organisms in Canadian acute care hospitals," American Journal of Infection Control 42 (2014) 349-52.

[5] For more background on hospital cleaning and its role in infection control see "Appendix C, Hospital Environmental Services."

[6] See the OCHU/CUPE "Fewer Hands, Less Hospital Care" (2016) studies released in cities across the province (Example: http://www.ochu.on.ca/resources/2016-Resources/Fewer-Hands/SUDBURY-Fewer-Hands---OCHU-13July16f.pdf)

With the real funding cuts in recent years, the understaffing however appears to be getting worse with hospital environmental services staff, with reports of layoffs and cuts occurring regularly.

In November 2016, CUPE surveyed local leaders on cuts to hospital housekeeping. **Almost 40% of locals reported that hospital environmental service hours had been cut in the last year alone**.

Instead of responding to the need for more and better cleaning, Ontario real funding cuts have driven even more cuts to hospital cleaning, making a bad situation worse.

2. There are growing concerns among CUPE environmental service workers.

In the fall of 2016, CUPE completed a survey of 421 hospital housekeeping staff from over 60 hospitals right across Ontario.

After years of hospital cuts, the survey revealed a disturbing pattern of speed up, working short, high levels of stress and injury at work. Over half believe the situation is unsafe.

The survey confirms housekeeping in hospitals is female dominated, much of the work is part-time, and the workforce is mature and has many years' experience working at the hospital:

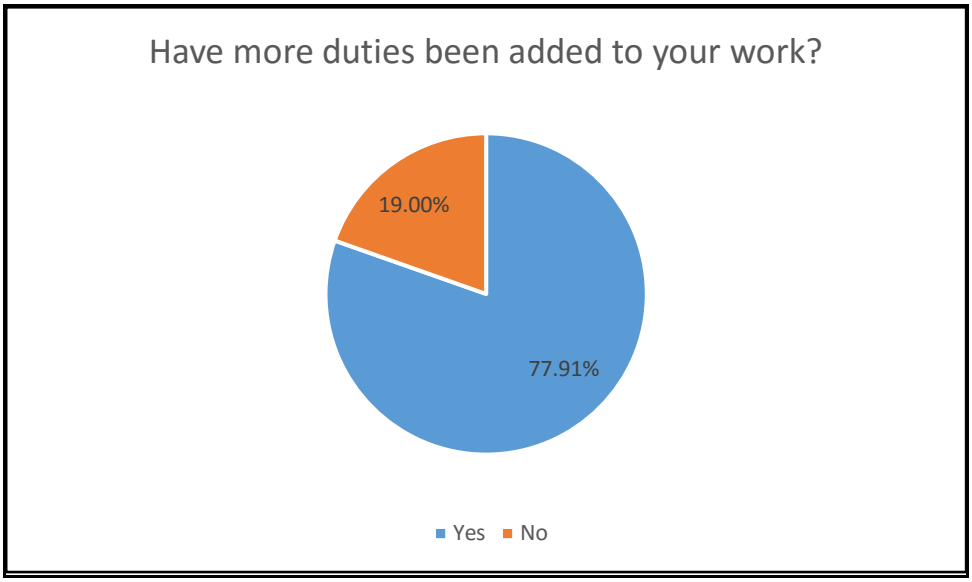
- 68% of all respondents are female
- 54% are between the ages of 45 and 59
- 40% work part-time or casual hours[7]
- 78% of part-timers want to work full-time
- 57% have ten or more years' experience working at the hospital

Hospital housekeeping work frequently involves irregular or unsocial hours that impact on family life:

- 68% work weekends
- 60% work evenings

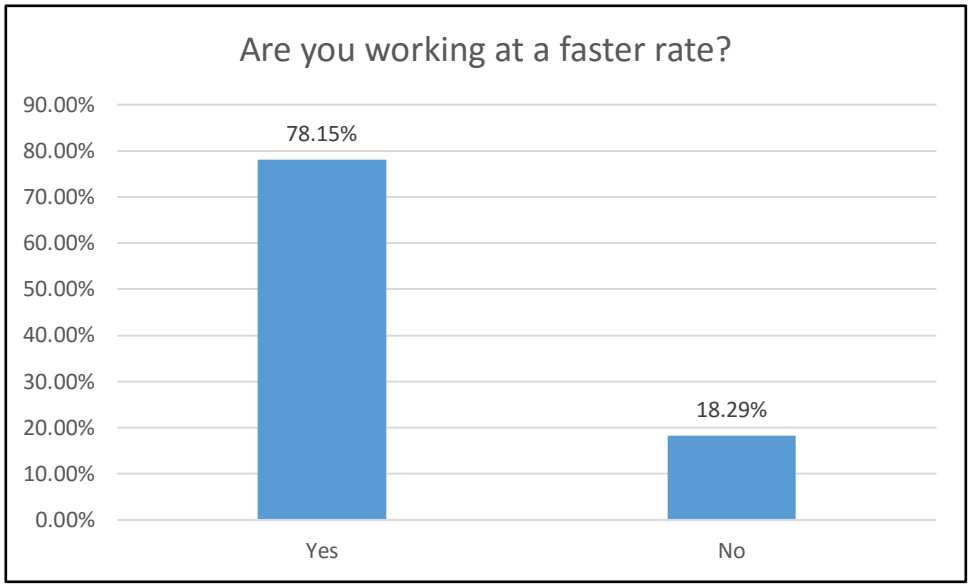
A large majority — 78% — of housekeeping staff report that **more duties have been added to their work**.

[7] Other reports suggest this figure may be low. Given their greater involvement with the hospital, full time housekeepers may have been more likely to respond compared to part-time and casual housekeepers.



(Response: 328 yes, 80 no, 13 no answer).

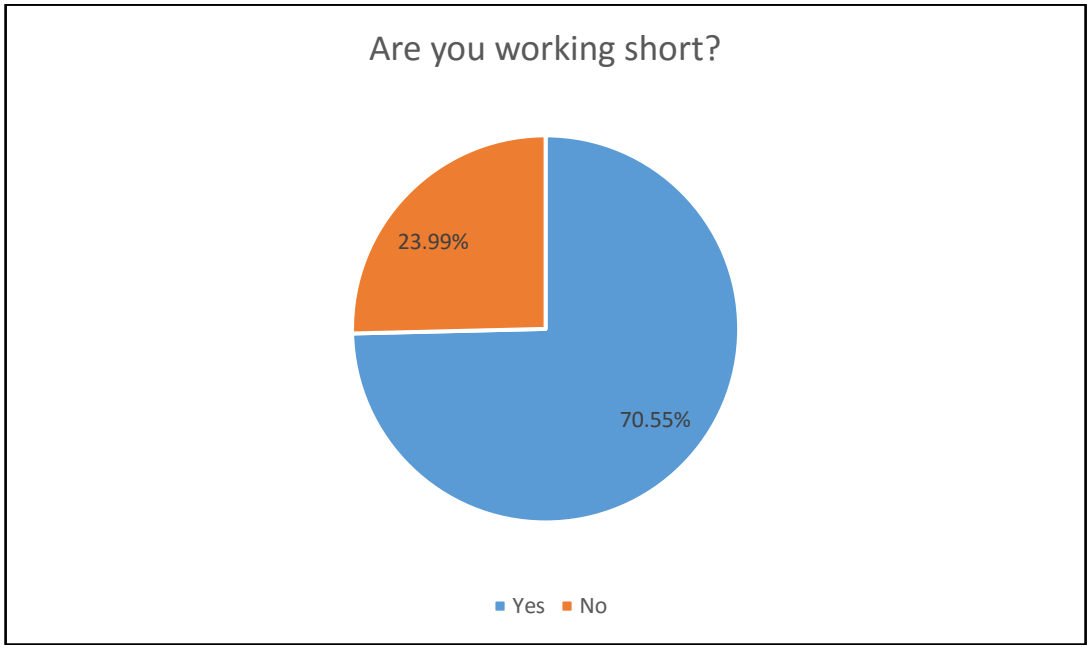
Accordingly, a large majority report working at a faster rate.



(Response: 329 yes, 77 no, and 15 no answer.)

This is a classic example of “speed up” something that often occurs at times of cutbacks.

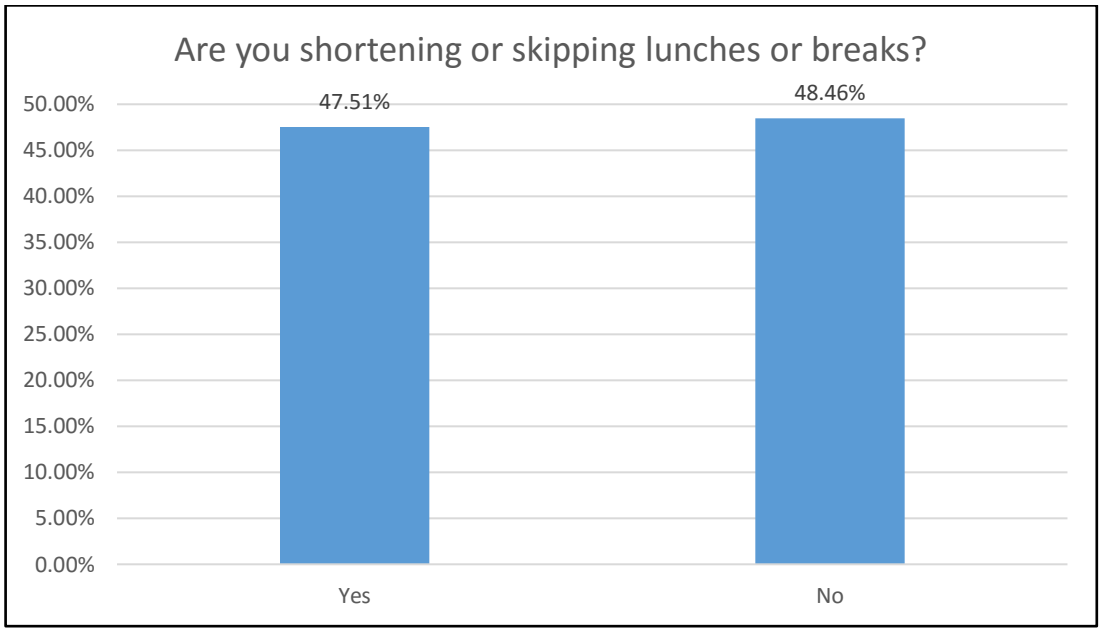
A large majority of housekeeping staff also report working short (this occurs when staff who are off of work for vacation, sick leave, training, or other reasons are not replaced).



(Response: 297 yes, 101 no, 23 no answer.)

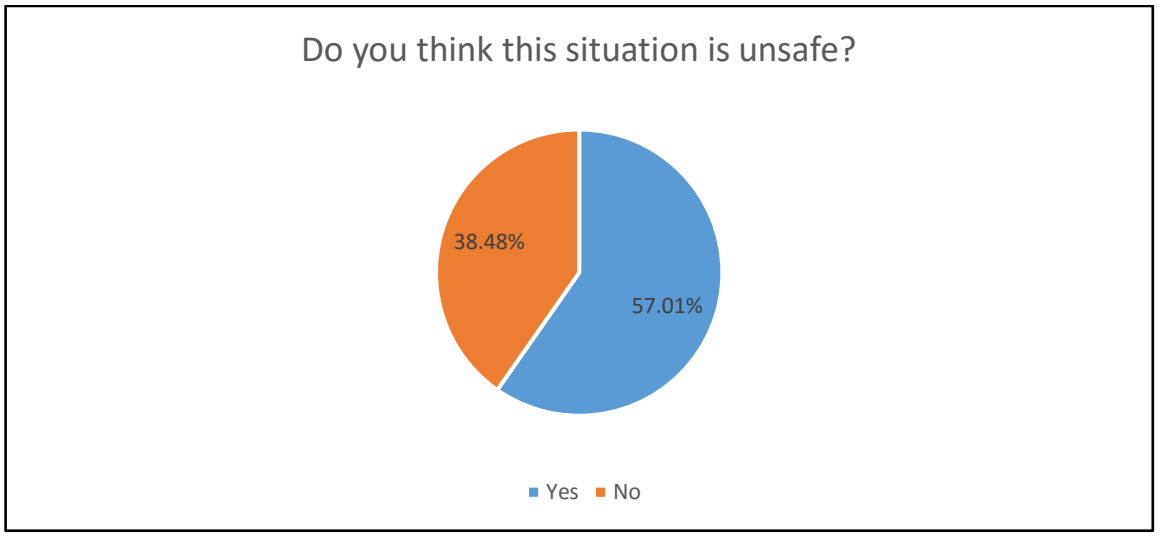
Again, this often occurs when cutbacks are implemented.

So it is not surprising that many staff are shortening or skipping breaks:



(Response 200 yes, 204 no, 17 no answer.)

A clear majority believe the situation is unsafe:

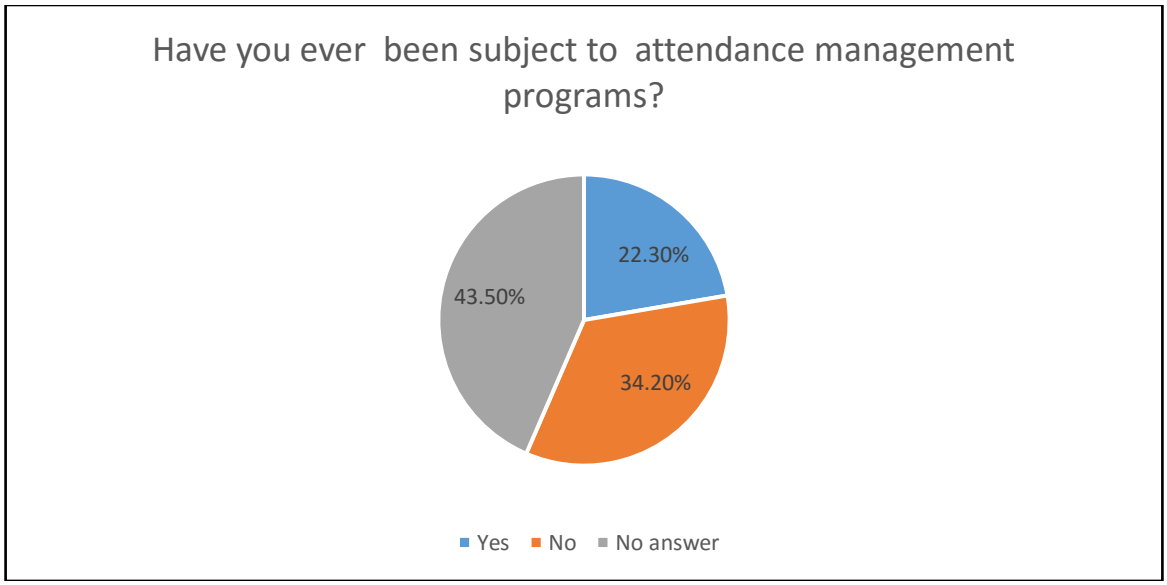


(Response: 240 yes, 162 no, 19 no answer.)

The work is stressful:

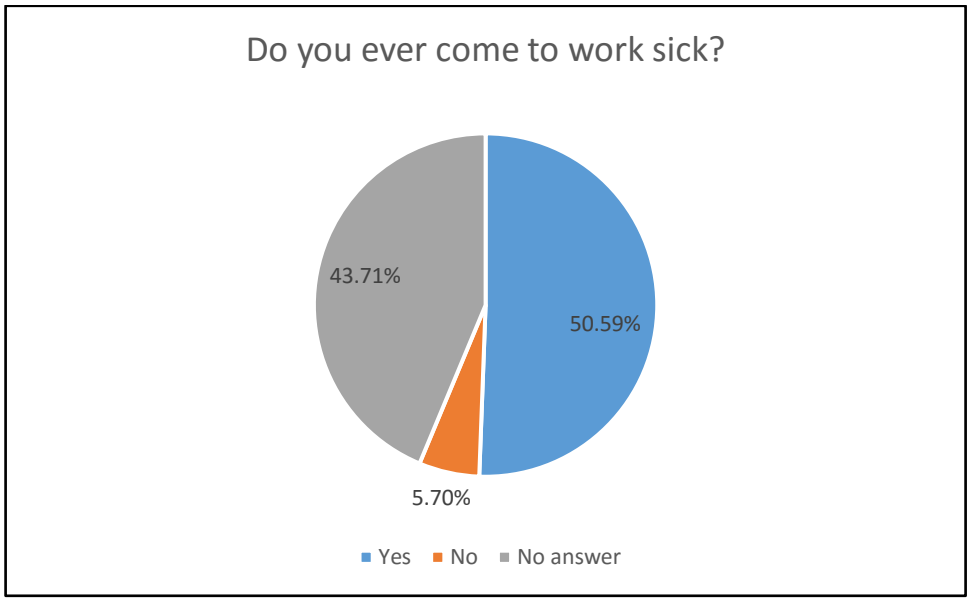
- 38% arrive early or leave late;
- 39% take sick leave due to stress;
- 38% feel depression due to workplace stress;
- 46% report headaches due to workplace stress;
- 32% have experienced verbal violence;
- 6% have experienced physical violence.

Hospitals have been putting in place stricter and stricter attendance management systems. A significant portion of respondents' report being subject to attendance management programs.



(Response: 94 yes, 144 no, 183 no answer. Of the respondents who answered this question, 39.5% said they had been subject to attendance management programs.)

So it is perhaps not surprising that a large portion of housekeepers report coming to work sick.



(Response: 213 yes, 24 no, 184 no answer. Of those who answered the question, the vast majority, 89.9%, indicated that they sometimes came to work sick.)

Notably, 89% say employment security is extremely important to them.

The workplace is considered dangerous: 30% report having been injured at work and filing for workers' compensation; 27% report being injured at work and not filing for workers' compensation. Fully 80% say safe working conditions are "extremely important".

Despite evidence of inadequate housekeeping staff to keep the hospitals safe, hospital housekeepers report in late 2016 speed up, the addition of extra duties, working short, and skipping breaks.

Instead of responding to the need for more and better cleaning, this is more evidence that the situation is getting worse.

The workplace for the largely female housekeeping workforce is made worse by widespread concerns about: [1] employment security, [2] pressure to attend work even while sick, [3] workplace stress that is causing physical and mental health issues, and [4] injuries at work. The majority do not feel the workplace is safe.

3. Creeping privatization

The CUPE survey also reveals that there is a growing problem with private-for profit delivery of hospital environmental services. ***A quarter of CUPE hospitals now report some degree of privatization of environmental services***. While there has been some success ending privatization of environmental services, the overall trend has been increasing privatization. But the experience in other jurisdictions indicates that privatization brings with it significant problems with infection control.

Contracting-out breaks up the infection control team. A 2014 study of Canadian hospitals concluded "A good working relationship (between infection prevention and control staff and environmental services staff), indicated by greater cooperation and collaboration between the 2 services, was associated with lower ARO (antibiotic-resistant organisms)." [8]

As one infection control specialist said of her fight to control a hospital Acinetobacter baumannii outbreak: "What was most important was our collaborative team approach — we had regular meetings with hospital staff, including people in labs, environmental services, and the physical plant department."

But creating a *team* is much more difficult if housekeeping, environmental services are contracted-out. There is also significant evidence of corner cutting at privatized hospital housekeeping services. [9]

CUPE environmental staff in hospitals believe these three developments should raise serious concerns about the capacity of hospitals to provide safe environments and effective infection control.

[8] Dick E. Zoutman et. al., "Working relationships of infection prevention and control programs and environmental services and associations with antibiotic-resistant organisms in Canadian acute care hospitals," American Journal of Infection Control 42 (2014) 349-52

[9] For more discussion of the problems for infection control that have occurred with privatization see "Appendix D: The experience in other jurisdictions". Specifically note the sections on Britain and British Columbia.

Appendix A — The increasing severity of hospital acquired infections and the increasing resistance of hospital infections to antibiotics

The two most important superbug infections are *C. Difficile* and MRSA (methicillin-resistant Staphylococcus aureus). *C. Difficile* (CDI) was recognized as a cause of illness in 1978. *C. Difficile* has become more severe in recent years. An epidemic strain, identified in 2004 appears to be more virulent, with ability to produce greater quantities of toxins. It is also more resistant to the antibiotic group known as floroquinolones.[10] The mortality rate attributable to CDI in Canadian hospitals more than tripled over a decade and a half, from 1.5% of deaths among CDI patients in 1997 to 5.4% in 2010.[11]

MRSA has become much more common in recent decades, with the infection rate increasing more than 1,000% from 1995 to 2009 and its development shows the threat of creeping antibiotic resistance. In the early 1940s, penicillin was completely effective in treating S. aureus. However, after this antibiotic became widely used, the micro-organism quickly adapted and became penicillin-resistant. In the early 1960s, the antibiotic methicillin was introduced and shortly after that Methicillin-resistant S. aureus emerged.[12]

The growth of antimicrobial resistance continues. For example, a new gene, MCR-1 first reported late in 2015 makes bacteria resistant to the last line of antibiotic drugs. The Public Health Agency of Canada has confirmed that scientists have found the gene present in Canada. While it remains unclear how easy it is to transmit the gene, these sort of ongoing developments and mutations clearly raise the prospect of having no drugs available to treat superbug infections. Resistance to the drug tetracycline grew from zero to 60 per cent in approximately four years due to a similar kind of resistance. Diseases that have long been treatable could become untreatable. Ordinary surgeries, chemotherapy and radiation treatments could become too risky.

“This is almost a perfect storm,” said Dr. Vanessa Allen, chief of medical microbiology at Public Health Ontario told media earlier this year. “It means there may be infections we can't treat.”[13]

In 2013, what is believed to be the first Canadian death from an infection that couldn’t be cured with standard antibiotics was reported. The infection was spread to five other hospital patients.[14]

The problem is compounded by a lack of interest among for-profit drug corporations in developing new antibiotics. Antibiotics are inexpensive, they are only used for a short period and so there is little profit to be made. Some governments are now investing public money, but we may not see new drugs for some time.

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[10] Centre for Disease Control, “Information about the Current Strain of Clostridium difficile,” 2010: http://www.cdc.gov/hai/organisms/cdiff/cdiff-current-strain.html

[11] Public Health Agency of Canada, op. cit.

[12] For more detail on superbugs see Appendix B.

[13] Ottawa Citizen, “Superbug gene discovered in former Ottawa patient,” January 5, 2016.

[14] CTV News, June 16, 2013, Doctors warn they are losing battle against superbugs, http://www.ctvnews.ca/health/health-headlines/doctors-warn-they-are-losing-battle-against-superbugs-1.1328388/comments-7.407042

Appendix B — Background on key hospital-acquired infections

MRSA: Short for methicillin-resistant Staphylococcus aureus. S. aureus, including MRSA is one of the most common causes of hospital acquired infections in Canada and is spread from person to person through direct contact and by contact with contaminated surfaces. It lives harmlessly on the skin but causes havoc when it enters the body. Patients who survive MRSA, often spend months in the hospital and endure several operations to cut out infected tissue. The Canadian Nosocomial Infection Surveillance Program reports consistently rising MRSA rates at hospitals. Since its first report in 1995, MRSA rates have increased *ten-fold*. In 1974, 2 percent of U.S. staph infections were from MRSA. By 1995, that number had soared to 22 percent. Between 1995 and 2007, the incidence of MRSA soared 17-fold at Canadian hospitals. There has, however, been a (much more modest) decline since 2008.[15]

Today, experts estimate that more than 60 percent of staph infections are MRSA. MRSA can be found on everything from hospital cabinets to bedside tables. MRSA can live on surfaces for weeks. Once patients and caregivers touch these surfaces, their hands can spread the disease. Ordinary cleaning solutions can kill these bugs, but surfaces need to be drenched in disinfectant for several minutes, not just sprayed and wiped quickly.[16]

A U.S. study indicates that hand contamination by the MRSA superbug is as likely to come from touching environmental surfaces in hospitals as from touching the patient's skin. *Infection Control Today* **reports** that the risk of any gloved-hand contamination after contact with the skin sites and the environmental surfaces was not significantly different (40 percent versus 45 percent). Another **study** from researchers at the University of California indicates that the risk of MRSA superbug infection in intensive care units (ICUs) was sharply reduced through enhanced cleaning practices.

***C. Difficile*:** *C. Difficile* is a bacterium spread by touching a surface or skin that is contaminated with fecal matter. *C. Difficile* is very difficult to remove. It creates spores that are resistant to many of the usual cleaning and disinfection practices. The spores can survive for up to 5 months on surfaces such as tables, medical equipment and other objects, making hygiene critically important in hospitals and healthcare institutions. As levels of environmental contamination increase, so does the occurrence of *C. Difficile* transmitted between healthcare workers and from them to patients.[17] A new strain, twenty times more virulent, went through Quebec hospitals for several years killing an estimated 1,500 people. This new, more virulent strain has moved into Ontario.[18]

The Canadian Medical Association Journal reported in 2009: “Thirty days after contracting *C. Difficile*, mortality rates for patients are 17.9 per 100 in Ontario and Quebec, 15.1 in

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[15] Public Health Agency of Canada, *Canadian Antimicrobial Resistance Surveillance System Report 2016.* http://healthycanadians.gc.ca/publications/drugs-products-medicaments-produits/antibiotic-resistance-antibiotique/antimicrobial-surveillance-antimicrobioresistance-eng.php#a3

[16] *The New York Times*, “Coming Clean,”Mon 06 Jun 2005,Page: 19,Section: Editorial Byline: Betsy McCaughey

[17] Public Health Agency of Canada, op. cit.

[18] Laura Eggertson, “Hospital-Acquired Infection *C. difficile*: by the numbers,” Canadian Medical Association Journal, July 6, 2004; 171 (1). Laura Eggertson, “*C. difficile* strain 20 times more virulent,” Canadian Medical Association Journal, May 2005; 172: 1279; 10.1503/cmaj.050470.

Atlantic Canada and 10.7 in the western provinces, according to the latest (2007) figures from the Canadian Nosocomial Infection Surveillance Program."[19]

While there has been a marked increase in *C. Difficile* incidence over the last decade across Canada, there has been some reduction in the incidence of *C. Difficile* reported since the incidence peaked in 2008.[20] However, today's *C. Difficile* is characterized by the emergence of a highly virulent and resistant strain, increases in severity of infection, increases in failed responses to existing therapies, and a growing number of recurrences following treatment.

VRE: Of perhaps even more concern is vancomycin (or glycopeptide) — resistant enterococci (VRE or GRE). For the first time since the introduction of antibiotics, here is a strain of clinically important bacteria that is resistant to all available antimicrobials.

Acinetobacter baumannii is becoming increasingly prevalent in healthcare facilities according to one report. The A. baumannii infection is drug-resistant and particularly problematic for hospitals. Not only can the bacteria survive for months on wet and dry surfaces, but the mortality from the infection is high — ranging from 8% to as high as 42% for patients in intensive care units (ICUs).

Dr. Louis B. Rice, a U.S. infectious-disease specialist told the *New York Times* that "In many respects it's far worse than MRSA...There are strains out there, and they are becoming more and more common, that are resistant to virtually every antibiotic we have." The *Times* adds: "The bacteria, classified as Gram-negative because of their reaction to the so-called Gram stain test, can cause severe pneumonia and infections of the urinary tract, bloodstream and other parts of the body. Their cell structure makes them more difficult to attack with antibiotics than Gram-positive organisms like MRSA."

Between 1999 and 2007, the infection rates of VRE remained relatively stable in Canada. Between 2008 and 2012, however, the rates began a steady increase.[21]

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[19] Ann Silversides, "Public reports of infection rates urged," *CMAJ October 27, 2009 vol. 181 no. 9.*

[20] Public Health Agency of Canada, *Canadian Antimicrobial Resistance Surveillance System Report 2016.* *http://healthycanadians.gc.ca/publications/drugs-products-medicaments-produits/antibiotic-resistance-antibiotique/antimicrobial-surveillance-antimicrobioresistance-eng.php#a3*

[21] *Ibid.*

Appendix C — Hospital Environmental Services

A variety of responses are needed to deal with these "Superbugs". But clean hospitals are the backbone of infection control and hospital support workers keep our hospitals clean. Hospital support services have been cutback ruthlessly over the last 30 years. Further cuts should not be on the agenda — but unfortunately, they are, as the provincial government squeezes hospital budgets. Likewise, reasonable bed occupancy rates are also needed as part of our response to HAIs, but this too is disregarded.

Hospital Support Work Today: Approximately 50,000 support workers are employed in Ontario hospitals performing a variety of tasks. They are the lowest paid workers in hospitals, less than the average hourly wage or industrial wage. Most support workers are females and half work only part-time hours (although the overwhelming majority would prefer to work full-time).

Coinciding with increased problems with HAIs, spending on hospital support services has fallen. The Canadian Institute for Health Information reported in 2002 that hospitals had actually *cut* the dollars spent on support services in the recent past: Housekeeping spending had been cut (on average) 1.8% per year; Material management cut 2.2% per year; Patient food services cut 3.1% per year; Plant administration and operation cut 1.1% per year.[22] Indeed, a 2005 CIHI study indicates that since the mid-1970s, hospital spending on support services has been squeezed — dropping from 26% to 16% of hospital spending.[23]

Moving Forward: An important part of the solution lies in the meticulous cleaning of equipment and hospital rooms. As researcher Kris Owens — who recently demonstrated that MRSA can live on surfaces for weeks — told the media: "The results of this study clearly demonstrate the need for frequent hand washing and environmental disinfection in healthcare settings."

Hiring more cleaning staff after an outbreak is becoming a typical response. A better response would be to ensure — before the outbreak — high quality cleaning by adequate numbers of hospital staff who are part of a single, integrated healthcare team operating under the coordinated direction of the public hospital.

Hospital Support Services Under Attack: Real hospital funding cuts by the Ontario government make cuts to cleaning services virtually inevitable, particularly given the requirement of the government that the number of procedures and services not be cut despite eroding funding. But cleaning hospitals is labour intensive. Staff costs account for the vast majority of the cost of cleaning. As a result, "efficiencies" are largely at the expense of staffing cuts.

[22] Canadian Institute for Health Information, *National Health Expenditure Trends, 1975-2002*, 2002.
[23] Canadian Institute for Health Information, *Hospital Trends in Canada*, 2005.

Appendix D — The Experience in Other Jurisdictions

So what has been the experience of jurisdictions that have attacked support services through cuts or privatization?

Britain: Britain experimented with compulsory contracting of hospital housekeeping services. The result? In the last 15 years, the number of hospital cleaning staff has dropped from nearly 100,000 to 55,000. The outbreak of infectious diseases in British hospitals and the filthy condition of British hospitals has become a major public policy issue.

Twenty out of 23 of the hospitals that had poor standards of cleanliness used contract cleaners. A National Audit Office report found that "Cleaning and portering service unit costs were higher at PFI (i.e. privatized) hospitals and were perceived as providing a lower quality of service."

In 2002, the British National Health Service (NHS) began publishing the names of hospitals with high infection rates in newspapers and in July 2004, the NHS announced that every hospital will have to publicly display its infection rate.[24]

Amidst growing concern about hospital acquired infections, the Scottish health secretary pledged in October 2008 that there would be **no more privatization** of hospital cleaning and catering services.[25]

In fact, Scottish hospitals reduced *C. Difficile* superbug infections by 37% after ending for-profit delivery of hospital housekeeping. Scottish Health Secretary Nicola Sturgeon said: "The Government has put 1,000 additional cleaners in our hospitals, brought an end to the privatization of hospital cleaning contracts and introduced a tough new inspection regime by the Healthcare Environment Inspectorate. With the extra efforts, extra investment and contribution of people across the NHS we have made Scotland's hospitals cleaner and hospital treatment better and safer."[26]

Quebec: The *Montreal Gazette* has editorialized on the province's *C. Difficile* outbreak:

> A number of factors are believed to be contributing to this outbreak. An easily corrected one is the lack of proper hygienic cleaning in Quebec hospitals. Budget cutbacks that date from the mid-1990s have resulted in hospitals where patients' toilets and sinks are too rarely disinfected or even cleaned…..In some Montreal hospitals, housekeeping staff is stretched so thinly that a cleaner is given exactly 36 seconds to clean a toilet. This is completely unacceptable.[27]

Dr. Mark Miller, head of infection control at Montreal's Jewish General Hospital and a specialist in hospital-acquired infections told the *Gazette* that the hospitals just aren't clean

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[24] Committee to Reduce Infection Deaths web site, Hospital Infection Fact Sheet.

[25] Sturgeon orders war on superbug C difficile cases to be slashed by 30 per cent by 2011, *Scotland on Sunday* (Edinburgh, UK) Sun 19 Oct 2008 Page: 2, Byline: Tom Peterkin Scottish

[26] STV (Scottish Television), "Older patients contracting hospital bug C. diff drops by 37%, Number of new cases in under-65s has fallen by 45%," 6 April 2011, https://stv.tv/news/scotland/241830-older-patients-contracting-hospital-bug-c-diff-drops-by-37/

[27] Editorial, "How to better control C. difficile outbreak," *Montreal Gazette* Saturday, October 23, 2004

enough: “It’s the general sanitation in the hospitals that is under the microscopic eye right now…You’ve got fewer housekeepers. You’ve got less cleaning of patient rooms and less intensive (cleaning).”[28]

Other researchers investigating the Quebec *C. Difficile* outbreak concluded:

> The aging infrastructure of hospitals and our willingness to tolerate hospital rooms with 4 patients and a single bathroom, less than 3 feet between beds and progressively fewer resources assigned to housekeeping all facilitate the spread of this disease, as does our inability to achieve acceptable levels of hand hygiene among hospital staff. …This strain, or others similar to it, will almost certainly be introduced into hospitals across the rest of Canada in the next few months or years.[29]

After a subsequent *C. Difficile* outbreak, a St. Hyacinthe hospital hired 10 additional housekeepers in December 2006 and began disinfecting rooms twice rather than once. But this was months after the start of the hospital’s outbreak. As the lawyer representing victims’ relatives noted, “Unfortunately, many healthcare facilities cut maintenance staff in healthcare facilities for budgetary reasons without realizing that such cuts have a major impact on the health of patients”.

The hospital’s microbiologist later testified that the hospital failed to meet its own sterilization and disinfection standards. A strict plan to increase disinfection procedures was never enacted because of staff shortages. Rooms were not disinfected often enough and toilets in the emergency room were cleaned just once a day.

Sixteen people died.

The head of housekeeping and maintenance services testified that, “No one mentioned that it was so serious. I never knew the problem was so bad.”

The Quebec coroner fingered poor hospital hygiene in the the deaths of these patients at Honoré-Mercier Hospital. Coroner, Catherine Rudel-Tessier, concluded the principal problem was management's need to save money — and its decision to skimp on appropriate prevention measures.

The coroner’s inquest heard repeated accounts of poor hygiene at the hospital in Saint-Hyacinthe including bed railings and stethoscopes that weren’t properly disinfected before repeated use. Angry family members told the inquest they encountered stomach-churning conditions when they brought ailing loved ones to the hospital, including balls of dust, dried blood and pools of urine in the emergency room.

“Things have to change.” Ms. Rudel-Tessier said. “We must put more resources into the prevention and control of these infections. One death is too many.”

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[28] Debbie Parkes and Linda Slobodian, “Dirty hospitals lead to rise in deadly infections, says doctor,” Sat 5 Jun 2004, *Montreal Gazette.*
[29] L. Valiquette et al., **“***Clostridium difficile* infection in hospitals: a brewing storm,” Canadian Medical Association Journal, July 6, 2004; 171 (1).

The (new) interim director of the hospital insisted Honoré-Mercier changed its ways: it began to produce a daily report on infection rates, hired new permanent cleaning staff, and allocated more funds for disinfection procedures.

Manitoba: Dr. Michelle Alfa, an infectious disease expert, sampled more than 1,000 toilets in two Winnipeg hospitals and found that **47 per cent of toilets** used by patients with *C. Difficile* in Winnipeg hospitals **had toxic bacteria spores on them**. One in 10 toilets had *C. Difficile* bacteria on them even if the patient using the washroom wasn't infected with it.

"The reality is it may look clean but there may be a lot of spores there." The researcher, Dr. Michelle Alfa, added: "I think it's time for us to look at the staffing and the compliance with housekeeping...We need to make sure we have adequate guidelines, adequate timelines and adequate staffing to get the cleaning done properly."

British Columbia: The B.C. Liberal government privatized thousands of healthcare support service jobs. Wages and working conditions were pulverized. Researchers interviewed workers in the new system and here is what we found.[30]

> **Poor training and high turnover:** "The contractors don't care how we use chemicals. They don't know how to clean…I opened clean linen and it was full of hair. Six or seven sheets a day like that. Nobody listens to us. It's frustrating." With poor working conditions, many of the staff plan to leave as soon as they can.
>
> **Breaking the connection with staff and patients:** Housekeeping staff are now often told to avoid talking with patients — to save time. As one experienced cleaner said: "We feel awful because the residents know us. They call to us." Similarly, hospital staff can't deal directly with housekeeping staff if a problem arises. Instead they have to call headquarters, breaking the link between housekeeping and infection control staff.
>
> **Supplies:** Staff are sometimes told to use only one pair of disposable gloves per shift. The gloves are flimsy and break after extended use, exposing the workers to hazardous bodily fluids and wastes. Moreover, using the same gloves all day could spread pathogens throughout the facility.
>
> **Cleanliness:** Many cleaners are concerned that inadequate staffing levels are exposing patients and workers to serious risks. "[The company] can do better but they don't," said a lead-hand housekeeper. A survey of a Vancouver hospital Emergency Room staff, found that 86% felt that overall cleanliness had declined since housekeeping services were privatized. As one B.C. Registered Nurse stated: "Ask any nurse and they will tell you how filthy the hospital is."
>
> The Supreme Court ruled that the law the B.C. government passed to break the collective agreement, fire hospital support staff, and privatize their jobs was unconstitutional. Despite this, the B.C. government continues to privatize healthcare support jobs.

[30] Jane Stinson, Nancy Pollack, and Marcy Cohen, *The Pains of Privatization, How Contracting Out Hurts Health Support Workers, Their Families, and Health Care,* Canadian Centre for Policy Alternatives, 2005.

Here is a commentary in the B.C. Nanaimo Daily News in January 2011 on superbug outbreaks at the local hospital:

> What VIHA (the local health authority) had to learn was this: to put the proper resources into cleaning and infection control rather than public relations. What we know from the last outbreak was that poorly paid and poorly trained cleaning staff were not doing a good enough job. The Daily News revealed continued understaffing, low pay, and poor training of cleaning staff by the private contractor hired to replace government workers after Bill 29 was introduced in 2002. While that was bad enough, VIHA was trying to hide those facts and that these problems among cleaning staff led in part to the last C. diff. outbreak.

The United States: Here's the conclusions of Former New York State Lt. Governor Betsy McCaughey:

> New data presented in April at the annual meeting of the Society for Healthcare Epidemiology of America documented the lack of hygiene in hospitals and its relationship to deadly infections. Boston University researchers who examined 49 operating rooms found that more than half of the objects that should have been disinfected were overlooked. A study of patient rooms in 20 hospitals in Connecticut, Massachusetts, and Washington, D.C., found that more than half the surfaces that should have been cleaned for new patients were left dirty.
>
> ….As long as hospitals are inadequately cleaned, doctors' and nurses' hands will be recontaminated seconds after they are washed—when they touch a keyboard, open a supply closet, pull open a privacy curtain, or contact other bacteria-laden surfaces. In a recent Johns Hopkins Hospital study, 26 percent of supply cabinets were contaminated with a dangerous bacterium, methicillin-resistant *Staphylococcus aureus* (MRSA) and 21 percent with another stubborn germ, vancomycin-resistant *Enterococcus* (VRE). Keyboards are such reservoirs of deadly bacteria that a few hospitals are installing washable keyboards, including one that sounds an alarm if it isn't disinfected periodically.
>
> **Hand to mouth.** Stethoscopes, blood pressure cuffs, and EKG wires are used on successive patients without being cleaned. Studies published as long ago as 1978 warn that blood pressure cuffs frequently carry live bacteria, including MRSA, and are a source of infection. In a newly released British report, one third of blood pressure cuffs were found to be contaminated with *Clostridium difficile,* a germ that can cause lethal diarrhea if it enters via the mouth. It's a short trip from a cuff to a patient's bare arm, then to the fingertips and into the mouth.
>
> The good news is that a simple solution—thorough cleaning with ordinary detergents and water—curbs the spread of deadly bacteria…
>
> Even the cash-strapped British National Health Service recognizes that intensive cleaning is a bargain compared with the cost of treating infections. By nearly doubling

cleaning-staff hours on one ward, a hospital in Dorchester reduced the spread of MRSA by 90 percent, saving 312 times the added cleaning costs.

Hospitals once tested surfaces for bacteria, but in 1970, the CDC and the American Hospital Association advised them to stop, saying testing was unnecessary and not cost effective. MRSA infections since then have increased 32-fold, and numerous studies have linked unclean hospital equipment and rooms to infections…

Testing is essential because bacteria are invisible. A study in the *Journal of Hospital Infection* showed that 76 percent of various hospital sites checked by researchers had unacceptably high levels of bacteria, although only 18 percent of them looked dirty. In another study, Boston University researchers found that cleaning improved significantly once they sampled surfaces for bacteria and showed cleaning personnel the areas they had missed.

...In 2005, health officials in Ireland and Scotland began rating hospitals annually for cleanliness—red (the dirtiest), amber, or green—and publishing the ratings. The first-year results made headlines, putting pressure on the worst Irish hospitals to clean up and earn higher marks in 2006.

In England last month, Gregory Barker, a Member of Parliament, rolled up his sleeves and worked a shift with the cleaning staff at a hospital in his district. "Hospital cleaning is a vital part of patient care," he said in a statement released by his office. Where are his counterparts in Washington, D.C.?[31]

Ontario: In the Sault Ste. Marie Hospital, an outbreak of *C. Diffcile* appeared in 2006 killing 10 patients directly and another 8 indirectly. The hospital, which had privatized housekeeping services, was forced to increase housekeeping staff by 40% and institute a range of other measures. The hospital fell into deficit.

After another outbreak at Joseph Brant hospital, housekeeping was also increased and the hospital was forced to settle a lawsuit with patients or (where the patient died) their families for $9 million. The Burlington hospital disclosed in the spring of 2008 that 91 patients infected with *C. Difficile* had died, and 225 had been infected. While under the out of court settlement the hospital never admitted wrongdoing, the statement of claim alleged the hospital was not properly cleaned, maintained and disinfected.[32]

The government also finally began to publicly report superbug cases in the latter part of 2008. This is something CUPE had promoted for many years. However, the government has failed to promise any move towards public reporting on deaths associated with these infections, a serious shortcoming. And as the Auditor General pointed out, there is not even a requirement to report in long-term care facilities, despite the high risk of infection at those facilities. Not surprisingly, none of the LTC facilities the Auditor reviewed even cleaned the rooms of residents twice a day.[33]

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[31] Betsy McCaughey, "Why aren't hospitals cleaner?" *US News and World Report* July 15, 2007

[32] J. Walters, "Jo Brant hospital settles C. diff suit for $9 million" *Hamilton Spectator*, October 15, 2012.

[33] Auditor General, 2009 Annual Report, Chapter 3, Infection Prevention and Control at Long-term-care Homes, and 2011 Annual Report, Chapter 4 Follow-up Section 4.06 347 Infection Prevention and Control at Long-term-care Homes.

Appendix E — Quality Can Save Patients *and* Money

Hospital-acquired infections cost a lot of money to treat. Former New York State Lt. Governor Betsy McCaughey argued in the *New York Times* that when hospitals invest in proven precautions "they are rewarded with as much as tenfold financial return. These infections add about $30 billion annually to the nation's health costs. This tab will increase rapidly as more infections become drug-resistant."[34]

Over fifteen years ago, Canadian researchers estimate that the total attributable cost to treat MRSA infections is $14,360 *per* patient.[35] Peter G. Davey, Professor from the Health Informatics Centre at the University of Dundee reports that patients in the intensive care unit (ICU) who contracted *C. Difficile* stayed in ICU for 6.1 days as compared to 3 days for patients with no *C. Difficile*. ICU costs increased to $11,353 versus $6,028 for patients with no *C. Difficile*.[36] The Sault hospital in Ontario was forced into deficit due to its *C. Difficile* outbreak.

A more recent academic study found that lives would be saved and millions of pounds cut from National Health Service (NHS) budgets if hospitals took on just one extra cleaner on each ward, according to new research. The study found that an extra cleaner had a "measurable effect" on the clinical environment, cutting the number of patients who contracted MRSA and saving an estimated £30,000 to £70,000 per hospital.

The union sponsored microbiologist Dr. Stephanie Dancer to carry out in-depth research into MRSA and cleaning at the Southern General Hospital in Glasgow.

The findings revealed that enhanced cleaning was associated with a 32.5% reduction in microbial contamination at hand-touch sites, while cases of MRSA fell in the six months of targeted cleaning on one of the wards. They rose again when the extra cleaner moved to another ward, which in turn saw the number of cases fall. Dr. Dancer's study was published in BMC Medicine.[37]

Finally, a 2009 study from the U.S. Centre for Disease Control (CDC) estimates that the annual medical costs to treat Hospital Acquired Infections (HAIs) at U.S. hospitals ranges from **$28.4 billion to $45 billion** (the range depends in large part on different inflation estimates). This is a major increase in costs from a 1992 study of U.S. HAIs.[38]

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[34] *The New York Times*, "Coming Clean," Mon 06 Jun 2005,Page: 19,Section: Editorial Byline: Betsy McCaughey

[35] Tony Kim, MA; Paul I. Oh, MD; Andrew E. Simor, MD, "The Economic Impact of Methicillin-Resistant *Staphylococcus aureus* in Canadian Hospitals," *Infect Control Hosp Epidemiol* 2001; 22:99-104.

[36] Medical News Today April 2, 2007

[37] Dr. S. Dancer, et. al.," Measuring the effect of enhanced cleaning in a UK hospital: a prospective cross-over study," BMC Medicine2009 7:28 http://bmcmedicine.biomedcentral.com/articles/10.1186/1741-7015-7-28

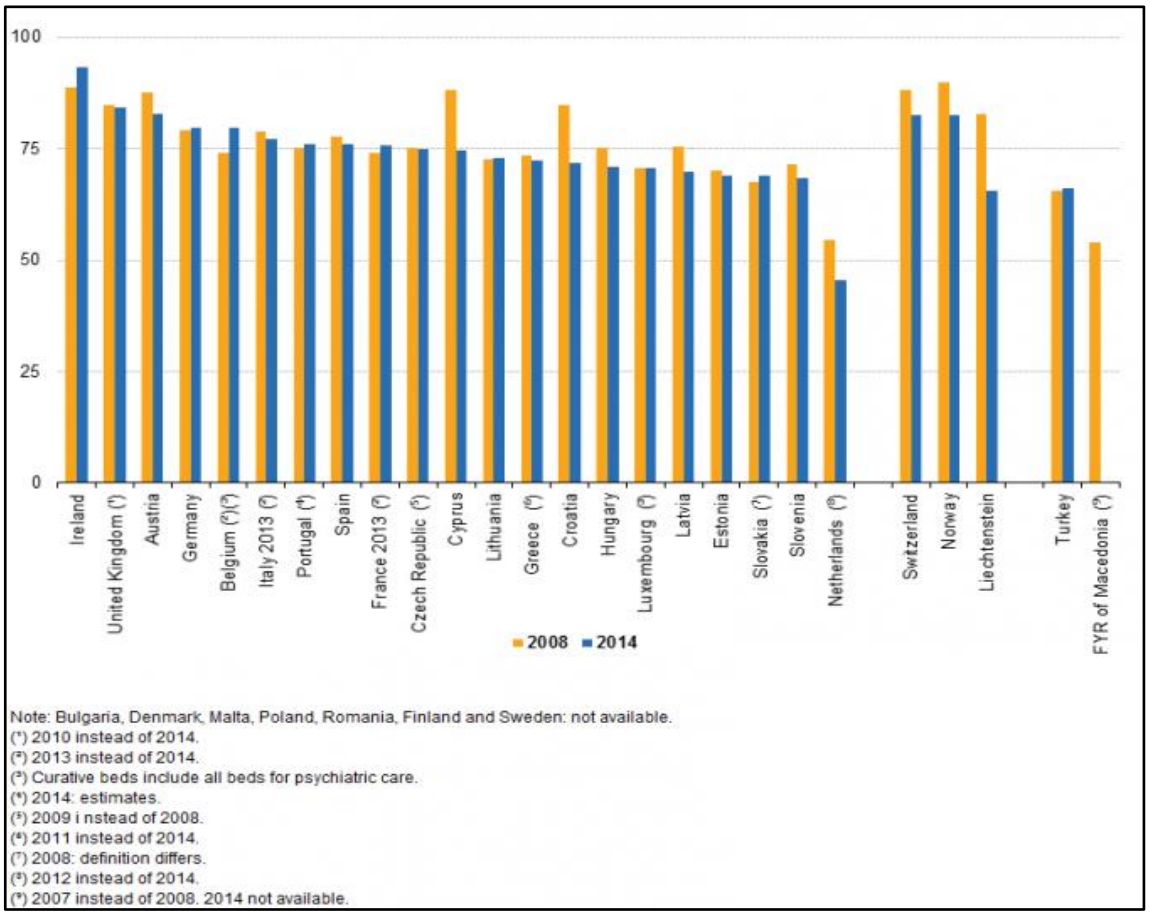
[38] CDC, "The Direct Medical costs of Healthcare-Associated Infections in U.S. Hospitals and the Benefits of Prevention," 2009, https://stacks.cdc.gov/view/cdc/11550/

Appendix F — Dangerously high levels of bed occupancy must be reduced

Ontario likely has the lowest ratio of hospital beds to population in the developed world.[39]

Since 1990, Ontario has eliminated 19,000 hospital beds (and 30,000 since 1980). With these cuts, bed occupancy has increased. Canada-wide it was 84.7% in 1995-96. By 2010 bed occupancy was 97.9% in Ontario.

Among the European Union member states, the occupancy rate of curative care beds in 2014 generally ranged from 68% in Slovenia to 84 % in the United Kingdom (2010), with the Netherlands below this range (46 % in 2012) and Ireland (93 %) above it.[40]



Overcrowding, rapid turnover between patients and overworked healthcare staff seriously hamper infection control procedures.[41] The British Department of Health found that high bed occupancy and rapid movement of patients are associated with the spread of HAIs and

[39] Defend Public Healthcare, "Ontario hospital capacity falls far behind other provinces," http://ochuleftwords.blogspot.ca/search/label/bed%20occupancy and "Correction: Ontario has the lowest acute care beds per capita," http://ochuleftwords.blogspot.ca/2011/07/correction-ontario-has-lowest-acute.html .

[40] Eurostat, "Health care resource statistics – beds," 2016, http://ec.europa.eu/eurostat/statistics-explained/index.php/Healthcare_resource_statistics_-_beds

[41] See, Defend Public Healthcare, "British Medical Association calls for lower bed occupancy to stop hospital acquire infections." http://ochuleftwords.blogspot.ca/2011/06/british-medical-association-calls-for.html

Britain aims to keep bed occupancy lower than 85% to combat hospital acquired infections. Netherlands, which has a low rate of MRSA, has a low bed occupancy rate.

Dr. Charles Saunders, deputy chair of the British Medical Association Scotland, recognized that Scotland has made progress fighting hospital acquired infections, but flags the threat rising bed occupancy now poses:

> "There is pretty good evidence that once you get high bed occupancy rates then it is very difficult to stop a lot of HAI. Part of that is because you don't have time to get things properly cleaned and partly it is because once you get to those high rates, you tend to move people around hospitals a lot. So they get admitted to one ward and maybe go through three or four different wards in the next few days. If they have anything when they come in, they have an opportunity to spread it quite widely and they also obviously increase the opportunity they have to pick up stuff by being in different wards."[42]

Yet, Scotland has more than twice as many hospital beds per capita compared with Ontario.

Overcrowding at hospitals hamper housekeepers' efforts to keep up with cleaning and puts additional strain on nursing staff, who have to follow meticulous protocol visiting patients. Overcapacity creates too many opportunities for the spread of infection.

The Auditor General takes up a similar point in her recent 2016 report exposing the lack of capacity in hospitals and long emergency room waits for hospital beds. The Auditor flags the high levels of sepsis (the presence in tissues of harmful bacteria and their toxins, typically through infection of a wound).

> "Patients discharged from Ontario hospitals had a relatively high incidence of sepsis: Sepsis occurs when the body's fight against infection actually harms the patient, and can result in death. Canadian Institute for Health Information data for March 2015 shows Ontario hospital patients had the second-highest rate of sepsis in Canada (after the Yukon): 4.6 cases per 1,000 patients discharged, compared to an average of 4.1 for the rest of Canada. Bed occupancy rates of 85% or higher contribute to the likelihood of infection while in hospital. During 2015/16, 60% of all medicine wards in Ontario's large community hospitals has occupancy rates higher than 85%."[43]

Problems with high bed occupancy have been raised with the Ontario government for at least six years, but this has always been met with indifference or denial that this is a problem by the government.

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[42] The Herald, "The war against superbugs," http://www.heraldscotland.com/news/13046534.The_war_against_superbugs/

[43] Auditor General of Ontario, *Annual Report 2016*, Chapter 3, "Large Community Hospital Operations."