

Chapter 4

Section 4.06

Infection Prevention and Control at Long-term-care Homes

Follow-up on VFM Section 3.06, *2009 Annual Report*

Background

Long-term-care nursing homes and homes for the aged (now collectively called long-term-care homes) provide care, services, and accommodations to individuals unable to live independently and requiring the availability of 24-hour care. There are more than 600 such homes in Ontario, caring for about 75,000 residents, most of whom are over 65 years old. In the 2010/11 fiscal year, funding to long-term-care homes by the Ministry of Health and Long-Term Care (Ministry) through the Local Health Integration Networks totalled \$3 billion (\$2.8 billion in the 2008/09 fiscal year), with residents generally also making a co-payment to the home of between \$1,600 and \$2,200 per month.

There is a high risk of infectious organisms/diseases—such as *Clostridium difficile* (*C. difficile*), febrile respiratory illness (FRI) (e.g., colds, influenza, pneumonia), methicillin-resistant *Staphylococcus aureus* (MRSA), and vancomycin-resistant enterococci (VRE)—spreading among residents of long-term-care homes because they often share rooms and generally eat and participate in activities together. As well, older residents are generally more vulnerable to illness. When a resident acquires an

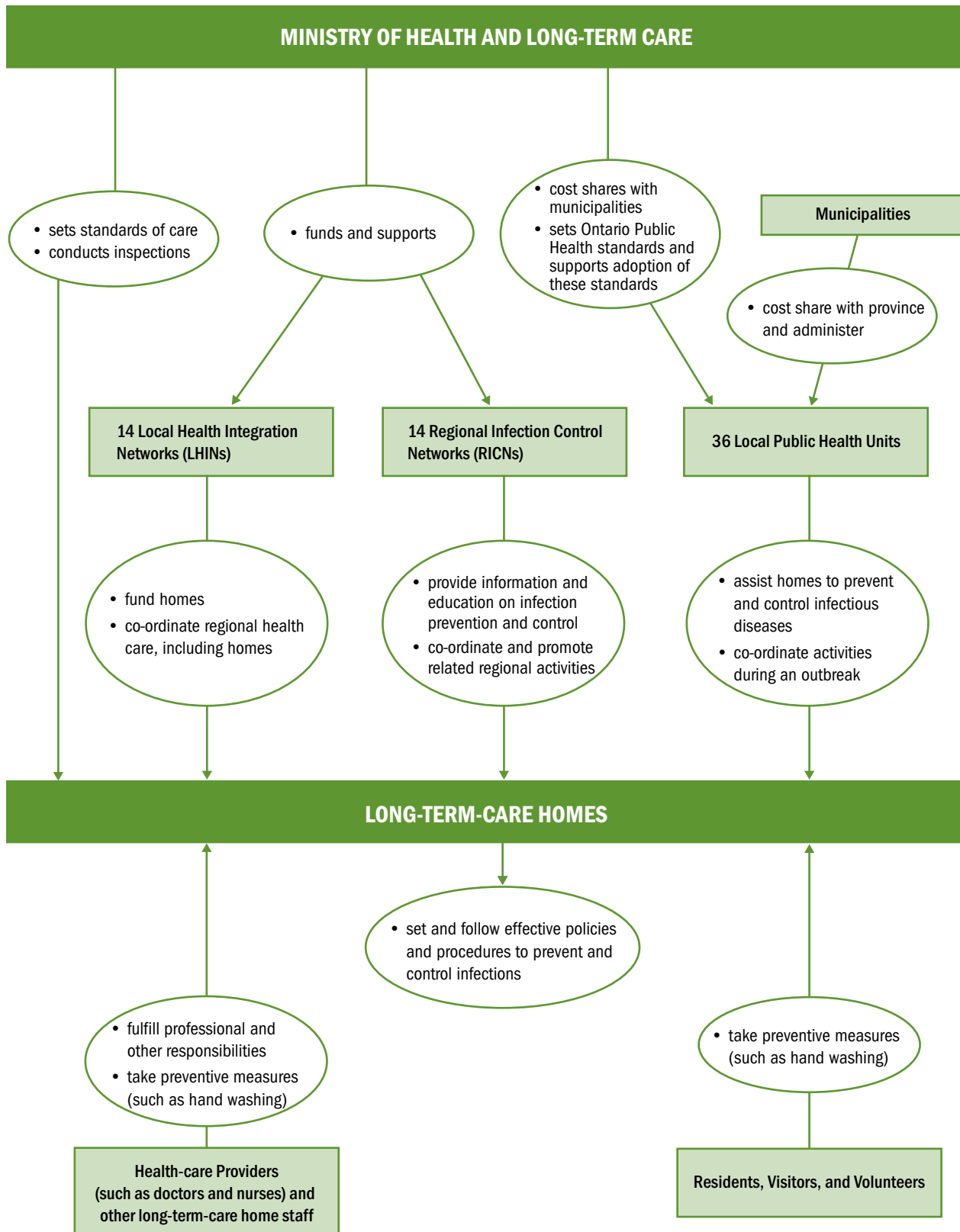
infection in a home, it is considered a health-care-associated infection (HAI). Numerous parties play a role in preventing and controlling the spread of infections in long-term-care homes, as shown in Figure 1.

In 2008, we conducted an audit of infection prevention and control in hospitals. In 2009, we used the knowledge gained on that audit to conduct a similar audit in the long-term-care home environment. We found that all three long-term-care homes we visited—Extendicare York in Sudbury, Nisbet Lodge in Toronto, and Regency Manor in Port Hope—had a number of processes in place to prevent and control HAIs. Furthermore, these homes had all recently conducted their first review of staff compliance with certain hand-hygiene policies, since hand hygiene is the most important activity for controlling the spread of infections. However, we noted areas where these homes could improve their practices. Some of our more significant observations included the following:

- The Ministry did not have information on the total number of cases of HAIs in long-term-care homes. The information collected at the homes we visited was generally not comparable because the homes defined and counted HAIs in different ways.

Figure 1: Selected Key Roles and Responsibilities for Infection Prevention and Control in Long-term-care Homes

Prepared by the Office of the Auditor General of Ontario



- Although the homes visited had policies to screen new residents for FRIs, documentation at two of the homes indicated that just 60% to 80% of new residents sampled were screened. At the third home, there was no evidence of formal screening for FRIs.
- Each home had a policy to test new residents for tuberculosis within 14 days of admission, as required by legislation. One home tested all new residents in our sample, but the other two tested only 70% and 80%, and often much later than within the required 14 days.
- Homes generally did not have unoccupied rooms to move infectious residents into. Although Ontario's Provincial Infectious Diseases Advisory Committee (PIDAC) indicates that residents with an FRI who share a room should have the curtain drawn around their bed, all three homes indicated that they would pull a curtain around a resident's bed only if the resident requested it.
- Although PIDAC recommends cleaning the rooms of residents who have *C. difficile* twice a day, none of the homes did this.
- In the 2008/09 fiscal year, 81 *C. difficile* outbreaks in homes were reported to the Ministry. The increased use of antibiotics has been shown to increase the risk of *C. difficile*. None of the homes had a formulary that lists the antibiotics that physicians can prescribe, as recommended by PIDAC.
- Unlike hospitals, long-term-care homes are not required to report publicly on certain patient-safety indicators, such as health-care-acquired cases of *C. difficile*, MRSA, and VRE, as well as hand-hygiene compliance among health-care workers.
- None of the Infection Prevention and Control Professionals designated by the homes had taken the specific training recommended by PIDAC.

STANDING COMMITTEE ON PUBLIC ACCOUNTS

The Standing Committee on Public Accounts held a hearing on this audit in May 2010. In February 2011, the Committee tabled a report in the Legislature resulting from this hearing. The report contained 11 recommendations and requested that the Ministry report back to the Committee with respect to the following issues:

- how best to ensure that hospitals and long-term-care homes exchange information on patients with infectious diseases who transfer to or from a long-term-care home;
- the steps long-term-care homes would be taking to implement cohorting or isolating patients suspected of having an HAI, especially given the limited availability of private rooms;
- whether the Ministry would be requiring each long-term-care home to publicly report the influenza immunization rates for its residents and staff, and whether the Ministry would also be publicly reporting this information for each long-term-care home;
- the Ministry's assessment of the advantages and disadvantages of mandatory influenza immunization programs for staff of long-term-care homes;
- the steps taken to periodically review the use of antibiotics in each long-term-care home;
- whether homes that had not yet undertaken a Medication Safety Self-Assessment would be required to do so, and, if so, by what date, as well as how frequently the self-assessment would be required to be completed;
- whether the Ministry would be establishing benchmark standards for infection rates in long-term-care homes by type of infection, and whether long-term-care homes would be required to publicly report comparable information on infection rates; and

- the number and percentage of long-term-care homes that then had a trained and certified infection-prevention-and-control professional on staff and, if a home did have one, how infection-prevention-and-control expertise could be accessed if needed.

The Ministry formally responded to the Committee in July 2011. A number of the issues raised by the Committee were similar to our observations. Where the Committee's recommendations are similar to ours, this follow-up includes the recent actions reported by the Ministry to address the concerns raised by both the Committee and our 2009 audit.

Status of Actions Taken on Recommendations

The long-term-care homes and the Ministry provided us with information in spring and summer 2011 on whether and the extent to which they had implemented our recommendations. According to this information, some progress has been made in implementing many of the recommendations we made in our *2009 Annual Report*. The current status of the actions taken by the Ministry and the homes is summarized following each recommendation.

SCREENING

Recommendation 1

To ensure that residents with infectious diseases are identified quickly enough to minimize the risk of the disease spreading to others, long-term-care homes should periodically monitor whether their screening processes are in accordance with the recommendations made by the Provincial Infectious Diseases Advisory Committee and legislative requirements.

Status

At the time of our follow-up, all three of the audited long-term-care homes indicated that they were

monitoring whether their screening policies are in accordance with the recommendations made by the Provincial Infectious Diseases Advisory Committee (PIDAC) and legislative requirements. They noted that they either had updated or were in the process of updating these policies. One of the homes commented that it receives regular notifications of PIDAC updates from its Regional Infection Control Network (RICN), which the home uses to update its practices. Another home commented that its Infection Prevention and Control Committee analyzes its screening processes on a regular basis. This home also noted that it was continuing to work with its local hospital to get the hospital's screening results for patients who will be coming or returning to the home as residents. The third home indicated that it had reviewed compliance with its MRSA and VRE admission and readmission screening protocols for 2009 to 2011 and noted that compliance had improved after the protocols were reinforced with staff. The Ministry indicated that all of the long-term-care homes in Ontario have now implemented a new computerized assessment-and-planning system as part of a ministry initiative. The Ministry noted that this system can help prevent and control infections by having homes monitor and report symptoms more consistently.

RESIDENT CARE

Recommendation 2

In order to better prevent the transmission of infectious diseases:

- *long-term-care homes should monitor whether prevention best practices (such as hand hygiene and the use of personal protective equipment) and infection-specific precautions (such as twice-daily cleaning of rooms of residents who have C. difficile) are conducted in accordance with the recommendations made by the Provincial Infectious Diseases Advisory Committee (PIDAC) and review their monitoring methodology to ensure that abnormally high compliance rates are reflective of actual practices;*

- the Ministry of Health and Long-Term Care should develop guidance to assist homes in determining how best to meet PIDAC's recommendations on isolating and cohorting residents who have or are at high risk of having infectious diseases, given the limited availability of private rooms; and
- long-term-care homes should continue to promote and monitor the immunization of residents and staff.

To help prevent residents from acquiring an infected skin breakdown, long-term-care homes should adopt processes, such as using a sign-off sheet for recording when residents are repositioned, to enable supervisory staff to monitor compliance with established procedures.

Status

At the time of our follow-up, the three audited homes indicated that they were all monitoring their hand-hygiene initiatives. They noted that they had implemented the “Just Clean Your Hands” program, which included staff education and hand-hygiene audits. All three homes also noted that they were providing immediate feedback to staff persons not complying with hand-hygiene protocols. As well, two of the homes were monitoring the use of personal protective equipment, and the third home indicated that it planned to commence monitoring in late 2011. The three homes also indicated that twice-daily cleaning of rooms of residents who have *C. difficile* was now being conducted in accordance with PIDAC recommendations. Two of the homes commented that they used a checklist to ensure compliance, and the third home indicated that it planned to implement, by fall 2011, a checklist for the twice-daily cleaning of the bathrooms of residents with *C. difficile*. One of these homes noted that its manager was reviewing and signing completed housekeeping checklists and that the checklists were also being used to direct room cleaning during outbreaks to minimize the spread and severity of the outbreak. Another home noted that it was providing a commode for any resident with *C. dif-*

ficile who shared a room so that this resident would not share the bathroom with other residents.

The Ministry told us that although it had not issued any specific guidance to homes on isolating or cohorting residents who are at high risk of having infectious diseases, it expected that new room designs (part of its Renewal Strategy, announced in 2007, involving 35,000 older long-term-care home beds) would assist homes in following PIDAC's recommendations. The Ministry further indicated that the strategy's first phase, involving almost 4,100 long-term-care home beds, would be completed by 2015, with the remaining phases being completed within 10 to 15 years. The Ministry also noted that, in the case of the local Public Health Unit declaring an outbreak at a home, ministry inspectors work collaboratively with the Unit to identify strategies and best practices to manage the outbreak.

All three long-term-care homes indicated that they were continuing to promote and monitor the immunization of residents and staff. One home stated that its seasonal influenza campaign included education as well as immunization. Another home commented that it ran influenza clinics for residents, staff, volunteers, and visitors, and provided incentives to staff to get the annual influenza shot. The third home noted that it promoted immunization by displaying posters and other promotional material provided by its local Public Health Unit and Regional Infection Control Network, as well as by providing information to both residents and staff. However, this home commented that its 2011 influenza immunization rates were below expectations. It believed that this was the result of misunderstandings about the H1N1 immunization vaccination. The Ministry highlighted that a regulation under the *Long-Term Care Homes Act, 2007*, which came into force on July 1, 2010, specifically requires long-term-care homes to have an immunization program for both residents and staff.

As for preventing infected skin breakdowns, one home indicated that in October 2010 it implemented a sign-off sheet to record when residents

are repositioned. The other two homes indicated that they had electronic point-of-care systems (that is, patient charting systems that can be used in the same location where the resident's care is provided). One of these homes noted that its system enabled it to create resident-specific monitoring when necessary. This home also indicated that senior staff were informally monitoring resident repositioning when observing the care practices of their staff. The other home noted that, for residents requiring frequent repositioning, staff were documenting the repositioning on the home's electronic point-of-care system. The home indicated that it was also monitoring residents with skin breakdowns and analyzing data relating to newly acquired and worsening skin breakdowns. Furthermore, to help prevent residents from acquiring an infected skin breakdown, the home's wound and skin co-ordinator was assessing resident skin breakdowns weekly and, where needed, also reviewing resident treatment plans, educating staff, and liaising with physicians.

ANTIBIOTIC USE

Recommendation 3

To help prevent antibiotic-resistant organisms and reduce the susceptibility of residents to certain infections, the Ministry of Health and Long-Term Care, in conjunction with other interested stakeholders, should:

- *assist long-term-care homes to develop a drug formulary; and*
- *periodically review the use of antibiotics in long-term-care homes so that follow-up action can be taken where the use of antibiotics seems unusually high.*

Status

The Ministry noted in its follow-up response regarding this recommendation that it was continuing to rely on physicians to determine which antibiotics to prescribe to residents and on pharmacists to regularly review the use of antibiotics at

long-term-care homes. The Ministry also stated that a regulation under the *Long-Term Care Homes Act, 2007* that came into effect July 1, 2010, requires that every long-term-care home develop an interdisciplinary medication management system. The system is to provide for appropriate and safe use of medications, including antibiotics, as well as effective and optimal drug therapy outcomes for residents.

The regulation further requires that each long-term-care home establish a multidisciplinary team to review drug utilization trends and patterns quarterly and take action where necessary. The multidisciplinary team is to include the home's medical director (who is often the physician prescribing medications for many of the home's residents) as well as the home's administrator, the home's director of care, and in most cases a pharmacist. The Ministry indicated that it expected the review of drug utilization trends and patterns to include a review of antibiotic usage. The Ministry also noted that long-term-care homes can reduce the need for antibiotics by encouraging residents to be immunized against specific infectious diseases such as pneumococcal pneumonia, tetanus, and diphtheria.

At the time of our follow-up, all three of the audited homes told us that they were reviewing antibiotic usage quarterly.

SURVEILLANCE

Recommendation 4

To enhance the effectiveness of infection-prevention-and-control programs, the Ministry of Health and Long-Term Care, in conjunction with the long-term-care homes, should:

- *require long-term-care homes to identify and track infections in a consistent and comparable manner, using standard definitions and surveillance methods;*
- *establish reasonable targeted maximum rates/benchmarks for the more prevalent infections; and*

- *look into requiring that long-term-care homes report publicly, as hospitals do, on certain patient-safety indicators, such as cases of C. difficile and hand-hygiene compliance among resident-care staff, using standard definitions and surveillance methods.*

As well, long-term-care homes should ensure that staff, including designated infection-prevention-and-control professionals, have the infection-surveillance training recommended for their position.

Status

The *Long-Term Care Homes Act, 2007*, which came into force on July 1, 2010, requires that long-term-care homes establish an infection-prevention-and-control program. This includes daily monitoring to detect infections. In addition, the regulation under the Act requires that symptoms indicating the presence of an infection be monitored in accordance with evidence-based practices where they exist and, if there are none, in accordance with prevailing practices. The regulation also requires that symptoms be analyzed daily and reviewed at least monthly to detect trends, for the purpose of reducing the incidence of infection and outbreaks. The Ministry commented that each home decides how best to identify and track infections, rather than there being a standard definition of an infection and standard surveillance methods. Nevertheless, the Ministry was working toward developing standard definitions and surveillance methods. One of the homes indicated that it was using a spreadsheet to track infection data from each unit within the home. The home was using the results to develop an action plan to reduce the number of infections in the home.

At the time of our follow-up, the Ministry indicated that it encourages long-term-care homes to follow basic surveillance principles, including determining rates of respiratory and enteric (gastrointestinal-tract) infections (generally called the baseline rate) that can be compared to future rates of these infections. The Ministry stated that this would enable the long-term-care home to

assess the impact of its infection-prevention-and-control program over time. The Ministry further commented that this was a more appropriate approach than using system-wide benchmarks insofar as a home's rates of certain infections, such as influenza, tend to be more influenced by the presence of the infection in the local community than by the home's infection-prevention-and-control practices.

The Ministry indicated that it had examined whether long-term-care homes should be required to publicly report patient-safety indicators such as HAI rates, as hospitals do. The Ministry noted that it had consulted with the long-term-care homes and other stakeholders and that there was a high level of satisfaction with the current extent of voluntary public reporting through Health Quality Ontario. Although Health Quality Ontario does not provide public information on cases of *C. difficile* or hand-hygiene compliance among resident-care staff, it does report on other patient-safety indicators, such as the percentage of residents with worsening bladder function and the percentage of residents who had a new pressure ulcer (such as a bedsore) or a pressure ulcer that recently got worse. At the time of our follow-up, only about 125 long-term-care homes, including the three homes audited, reported information publicly on the Health Quality Ontario site. However, the Ministry anticipated that all homes would be participating by March 2012. The Ministry also indicated that it would re-evaluate in the future the decision not to have homes publicly report on *C. difficile* and hand-hygiene compliance among resident-care staff.

One home indicated that its infection-control practitioner has attended several infection-control and quality-management workshops held by its Regional Infection Control Network and its Local Health Integration Network. As well, the infection-control practitioner had applied to take a non-acute-care infection-control practitioners' course offered by its Regional Infection Control Network but did not get accepted due to the overwhelming response to the course. Furthermore, this home

noted that infection-control training is provided to all staff in accordance with the requirements of their position. This includes education on routine practices and special precautions, cleaning and disinfection, and hand hygiene.

Another home indicated that its infection-control practitioner was scheduled for a formal surveillance training course at a college in fall 2011. This home also told us that its staff completed general infection-control training in 2010, which included training on hand hygiene and the proper use of personal protective equipment. This home further noted that infection-control training was done again in May 2011.

The third home indicated that it was recruiting a new Assistant Director of Care who would be the home's infection-control practitioner. If the person hired does not have sufficient training in infection prevention and control, the home will arrange for such training. In the interim, the home has access to the expertise of professionals employed by the home's corporate owner, including a person certified in infection control.