

Chapter 1

Section 1.08

Ministry of Health and Long-Term Care

Large Community Hospital Operations

Follow-Up on VFM Section 3.08, 2016 Annual Report

RECOMMENDATION STATUS OVERVIEW						
	# of Actions Recommended	Status of Actions Recommended				
		Fully Implemented	In Process of Being Implemented	Little or No Progress	Will Not Be Implemented	No Longer Applicable
Recommendation 1	1	1				
Recommendation 2	4	4				
Recommendation 3	3	1 1/3	1 2/3			
Recommendation 4	2	2				
Recommendation 5	1	1/3	2/3			
Recommendation 6	3	2	1			
Recommendation 7	1		1			
Recommendation 8	1	1				
Recommendation 9	3	3				
Recommendation 10	1	2/3	1/3			
Recommendation 11	1	2/3	1/3			
Recommendation 12	1	1				
Recommendation 13	1			1		
Recommendation 14	1			1		
Recommendation 15	2	2				
Recommendation 16	4	3	1			
Recommendation 17	3	3				
Total	33	25	6	2	0	0
%	100	76	18	6	0	0

Overall Conclusion

As of August 3, 2018, about 76% of the actions we recommended in our *2016 Annual Report* had been fully implemented, specifically in the areas of monitoring the bed-wait time on a regular basis, developing a crisis response system to handle difficult cases and high case volumes, publicly reporting wait-time performance data by urgency level of surgery, and performing maintenance on inventory of medical equipment. About 18% of the actions we recommended were in the process of being implemented, specifically in the areas of implementing a centralized patient referral and assessment system for elective surgeries, identifying ways to alleviate the backlog of urgent elective surgeries, and analyzing the reasons for delays in emergency surgeries. Little or no progress was made on implementing another 6% of the actions we recommended, mainly in the areas of reviewing the appointment and appeal processes for physicians working in hospitals.

The status of the actions taken on each of our recommendations is described in this report.

Background

Ontario's network of 147 public hospitals includes 57 large community hospitals, which are distinguished from other hospitals by the high number of patients they treat. The Ministry of Health and Long-Term Care (Ministry) defines large community hospitals as those with 2,700 or more acute and day-surgery weighted cases in any two of the prior three years.

The 57 large community hospitals account for about 14,990 of Ontario's 31,000 hospital beds—or 48%.

Our audit in 2016 included visiting three large community hospitals. Among our findings:

- Patients waited too long in emergency rooms. Many patients who required hospital admission waited longer than the Ministry-set target of no more than eight hours from triage (prioritizing patients according to the urgency of their conditions) to being transferred to intensive-care units or other acute-care wards. In 2014/15, at the three hospitals we visited, only 52% of patients were transferred to intensive care in eight hours, not the 90% target set by the Ministry.
- Although most hospital sites we visited had nine to 12 operating rooms, only one at each site remained open evenings, weekends and statutory holidays for emergency surgery only. Our survey also found that most hospitals had planned operating-room closures over March break and for two to 10 weeks during the summer.
- At the three hospitals we visited, one in four patients with critical or life-threatening conditions had to wait four hours on average for surgeries that should have started within two hours.
- Emergency surgeries had to compete with elective surgeries for operating-room time, resulting in long wait times for patients requiring emergency surgeries. All three hospitals we visited had policies that allow the most critical emergency surgeries to bump all others. However, other types of emergency surgeries typically had to wait until after hours, when that day's elective surgeries had been completed, or for a weekend slot.
- We reviewed wait times for elective surgeries at all 57 large community hospitals and noted that they had not improved in the five years leading up to 2015/16. We also noted that some large community hospitals were struggling to meet the Ministry's wait-time targets for the most urgent elective surgeries—for example, only 33%, not 90%, of urgent neurosurgeries were completed within the Ministry's 28-day target.

Another area of concern in our audit was patients developing new health problems as a result of their hospital stay. For example:

- Patients discharged from Ontario hospitals had a relatively high incidence of sepsis. Canadian Institute for Health Information data for March 2015 showed Ontario hospital patients had the second-highest rate of sepsis in Canada (after the Yukon): 4.6 cases per 1,000 patients discharged, compared with an average of 4.1 for the rest of Canada.
- At one of the hospitals we audited, senior alternate-level-of-care patients (that is, patients who no longer require hospital care but must remain there until a bed becomes available in another care setting) fell 2½ times more often than residents of long-term-care homes in the same Local Health Integration Network (LHIN) area between January 2014 and March 2016.
- We identified three health problems that Ontario hospitals did not manage or prevent as well as hospitals outside Ontario:
 - *Post-operative pulmonary embolism:* Ontario hospital patients aged 15 or over have a relatively high incidence of post-operative pulmonary embolism after hip- and knee-replacement surgeries: 679 cases per 100,000 patients discharged, compared with 660 Canada-wide and 362 for the 34 other Organisation for Economic Co-operation and Development (OECD) countries.
 - *Objects left inside surgical patients:* Ontario surgical patients aged 15 or over experienced a higher rate of errors: 7.5 per 100,000 discharges, compared with 4 for the 34 other OECD countries (the Canada-wide rate is 8.6).
 - *Vital life-saving medical equipment not adequately maintained:* Medical equipment such as ventilators, anesthesia units and defibrillators are used to keep patients alive. We found that at one hospital we

visited, 20% of the equipment was not being maintained according to schedule; for some equipment, the last required maintenance was two years overdue.

Among our other findings:

- We noted some instances where hospitals were not able to resolve human resources issues with physicians quickly, such as hospital privileges, because of the comprehensive legal process that the hospitals are required to follow under the *Public Hospital Act*.
- As of March 2016, about 4,110 alternate-level-of-care patients were occupying hospital beds even though they no longer needed them. About half were waiting for long-term-care-home beds because there were not enough available in the community.
- The three hospitals we audited did not have adequate access controls over private patient information. We found computer accounts still active for people no longer employed, computers without automatic logout function and unencrypted portable devices.
- None of the hospitals we visited had a centralized scheduling system to efficiently track and manage scheduling for all nursing units. As a result, nurses worked significant amounts of overtime, with a correspondingly significant number of sick days.

The report contained 17 recommendations, consisting of 33 actions, to address our audit findings.

Standing Committee on Public Accounts

In April 2017, the Standing Committee on Public Accounts (Committee) held a public hearing on our 2016 Large Community Hospital Operations audit. As a result of this hearing, the Committee tabled a report in the Legislature, in February 2018, in which it endorsed our findings and recommendations. The Committee also made 16 additional recommendations and asked the Ministry and hospitals to report back by June 22, 2018. However, at

the time of our follow-up, the Legislative Assembly was dissolved following the provincial election on June 7, 2018. As such, the Committee did not have a membership to accept the responses from the Ministry and hospitals until properly reconstituted after the resumption of the House. The Committee's recommendations and our follow-up on its recommendations are found in **Chapter 3, Section 3.03** of this volume of our *2018 Annual Report*.

Important Event Following Our 2016 Audit

Amalgamation of Hospitals

Our 2016 audit focused on three large community hospitals: Trillium Health Partners (Trillium), Windsor Regional Hospital (Windsor), and Rouge Valley Health System (Rouge).

Subsequent to our audit, two sites of Rouge have merged with two other hospitals in response to the recommendations by the Scarborough/West Durham Expert Panel, which reviewed and reported back to the Ministry on how to improve integration and access to acute health care services. Effective December 1, 2016, Rouge's Centenary site has merged with The Scarborough Hospital to create Scarborough and Rouge Hospital, and Rouge's Ajax/Pickering site has merged with Lakeridge Health.

To ensure completeness of our follow-up work, we assessed the status of actions taken by Rouge based on information provided by both Scarborough and Rouge Hospital (formerly Rouge's Centenary site) and Lakeridge Health (formerly Rouge's Ajax/Pickering site).

Status of Actions Taken on Recommendations

We conducted assurance work between April 1, 2018, and August 3, 2018, and obtained written

representation from the Ministry of Health and Long-Term Care (Ministry) and hospitals that, effective October 31, 2018, they have provided us with a complete update of the status of the recommendations we made in the original audit two years prior.

Year-End Funding Confirmation for Cancer Surgeries Not Timely

Recommendation 1

To ensure that funding to hospitals accurately reflects patient needs, the Ministry of Health and Long-Term Care should plan appropriately so that surgeries are delivered when needed.

Status: Fully implemented.

Details

Our 2016 audit found that one hospital we visited spent about \$321,000 more than its mid-year projection on cancer surgeries. However, the Ministry did not confirm with this hospital that it would receive additional funding for the shortfall until six months after the year-end.

During our follow-up, we noted that the Ministry had distributed its funding allocations to hospitals early in the fiscal year. The Ministry had also established processes for the hospitals and LHINs to review their current funding and correct any data-quality issues before potential investments are made. In addition, the Ministry has updated the Quality-Based Procedures (QBP) Volume Management Instructions, which outlines the policies under the Ministry's Health System Funding Reform (HSFR). These instructions provide direction regarding in-year reallocations, and year-end reconciliations and processes for the 2017/18 fiscal year so that LHINs can be flexible in responding to patient needs when managing services in their communities.

Patients Waiting Too Long in Emergency Rooms

Recommendation 2

To better ensure timely transfer of patients from the emergency room to an acute-care bed when needed, hospitals should:

- monitor the bed-wait time by acute-care wards on a regular basis;

Status: All three hospitals: Fully implemented.

Details

Our 2016 audit found that many patients had to remain in the emergency room after being seen by a physician because beds in intensive-care units (ICUs) and other acute-care wards were unavailable.

During our follow-up, we noted the following actions taken by the hospitals:

- **Trillium:** It has set up a Capacity Management Dashboard to monitor the length of stay in real-time for all admitted patients in the emergency department.
- **Windsor:** It has implemented a new bed-allocation model for the Medicine Program as of October 2017 to move patients from the emergency department to the relevant ward quickly. The new model uses a software program to display information such as the number of patients in the emergency department that are waiting for a bed, the length of time patients have been waiting, and a bed-readiness status code of green (less than 30 minutes), yellow (31 to 60 minutes) or red (over 60 minutes).
- **Rouge:** It has implemented a Daily Access Reporting Tool to provide wait-time data. It has also set up a Patient Flow Team to monitor bed-wait time and ensure timely transfer of patients from the emergency department to an in-patient bed.

- investigate significant delays;

Status: All three hospitals: Fully implemented.

Details

Our 2016 audit found that delays in transferring a patient from emergency to an acute-care ward sometimes happened because beds were full or had not yet been cleaned.

During our follow-up, we noted the following actions taken by the hospitals:

- **Trillium:** It has put Admission Coordinators or Patient Care Coordinators in place to regularly review all admitted patients who waited in the emergency department longer than the target wait time. It also monitored bed-assignment and patient-in-bed times and contacted specific units when significant delays were identified.
- **Windsor:** When significant delays occurred, the hospital's Program Director and Command Centre Director investigated delays by reviewing patient charts and provided feedback to the appropriate units. These investigations and recommendations to address delays were discussed with the Patient Flow Team during its weekly meetings.
- **Rouge:** It has put an Operations Supervisor and a Bed-Allocation Team in place to oversee patient flow in real time and investigate any issues and delays. It has also updated its system for prioritizing patient transport and cleaning processes to prevent significant delays.

- develop a crisis response system to better handle difficult cases and high case volumes;

Status: All three hospitals: Fully implemented.

Details

Our 2016 audit found that bed-wait time varied depending on the patient's age and illness. This suggested that a crisis response system was needed to better handle difficult cases and high case volumes.

During our follow-up, we noted the following actions taken by the hospitals:

- **Trillium:** It has completed the Capacity Management Processes and Practices framework, which provides guidance for responding to different levels of capacity, raises awareness of patient flow practices across the hospital, and sets expectations in response to patient flow challenges. It has also set up an Overcapacity Leadership Team to improve patient flow. As well, it has implemented a Capacity Management Policy and Procedure, in effect since March 31, 2017, to outline the roles, accountabilities and corporate response to overcapacity.
 - **Windsor:** It has developed a surge plan for overcapacity situations, including opening beds at each site for which it receives no funding from the Ministry.
 - **Rouge:** It has implemented a patient-surge policy that is activated when there are more than 10 admitted patients waiting in the emergency department for in-patient beds. It has also set up a centralized staffing system with access to a nursing resource pool to assist with staffing during surge demands.
 - *take corrective actions as necessary.*
- Status: All three hospitals: Fully implemented.**

Details

Our 2016 audit found that emergency rooms were often overcrowded due to a backlog of patients awaiting beds elsewhere in the hospital, especially, for example, during high-volume times such as the winter holiday period. At the hospitals we visited, we saw patients placed on uncomfortable stretchers or gurneys in hallways and other high-traffic areas.

During our follow-up, we noted the following actions taken by the hospitals:

- **Trillium:** It has set up an Emergency Operations Centre to manage ongoing capacity pressures and challenges. It has also begun circulating the Capacity and Workforce Management Bi-Weekly Status Report to all clinical vice presidents and members of its

Capacity Management and Workforce Planning Taskforce. The status report identifies overcapacity issues and outlines recommendations to improve patient flow by using the Capacity Management Processes and Practices framework. In addition, it established a Surge Planning Task Force to develop a plan for managing the challenges and pressures during the winter holiday period.

- **Windsor:** It has begun holding daily meetings at every medical or surgical unit, with social workers, nurses and other care providers to identify any issues that need to be escalated to the appropriate departments or senior management. It has also updated care and discharge plans daily to improve patient flow.
- **Rouge:** It has put a Patient Flow Team in place to ensure the timely transfer of patients from the emergency department to an in-patient bed while giving priority to intensive-care unit patients and patients who require urgent surgeries. In April 2017, it also set up a Medical Short Stay Unit for patients expected to be discharged within 48 hours. It was also diverting patients to outpatient clinics (such as fracture clinics) as much as possible.

Patients Waiting Too Long for Emergency Surgeries

Recommendation 3

To better ensure the equitable and timely treatment of patients requiring emergency surgery, hospitals should:

- *on a regular basis, track and assess the timeliness of emergency surgery performed;*

Status: Trillium Health Partners: Fully implemented.

Windsor Regional Hospital: In the process of being implemented by April 2020.

Rouge Valley Health System: Fully implemented.

Details

Our 2016 audit found that hospitals did not formally evaluate how quickly they performed all emergency surgeries. The hospitals we visited did not consistently track sufficient information to assess the timeliness of surgeries and document reasons for surgical delays.

During our follow-up, we noted the following actions taken by the hospitals:

- **Trillium:** In May 2017, it implemented a tracking tool and guidelines to provide a standardized approach for documenting emergency surgeries. It also established a committee on perioperative care (care that is given before and after surgery) to monitor and report the information collected by this tool.
- **Windsor:** Since October 2017, it has reviewed the non-scheduled surgical list daily to prioritize and develop an action plan for emergency surgeries. In April 2018, it initiated further work to confirm the criteria for placing patients on the non-scheduled surgical list and develop an electronic system to track and assess the timeliness of emergency surgeries. It expects to complete this work by April 2020.
- **Rouge:** In March 2017, it performed an audit to track and assess the timeliness of emergency surgeries. The audit showed that all cases of orthopedic, gynecologic, and plastic and reconstructive surgeries were performed within the targeted time.

- *document and analyze the reasons for delays in performing emergency surgery;*

Status: Trillium Health Partners: In the process of being implemented by the end of December 2018.

Windsor Regional Hospital: In the process of being implemented by April 2020.

Rouge Valley Health System: Fully implemented.

Details

Our 2016 audit found that 38% of patients in our samples who required emergency surgeries did not get them within the time frames recommended by the Ministry.

During our follow-up, we noted the following actions taken by the hospitals:

- **Trillium:** In 2017/18, it initiated a project to develop an audit and analysis process regarding delays in performing emergency surgeries. The project is expected to be completed by the end of December 2018.
- **Windsor:** It was in the process of analyzing delays with the Chief of Anesthesia and the operating room leadership team. In April 2018, it began developing an electronic system to document the reasons for delays in performing emergency surgeries. It expects to complete this work by April 2020.
- **Rouge:** It has analyzed and identified the top two reasons for delays in emergency surgeries: limited dedicated operating-room time and patient-related factors (for example, a patient needs to receive medication first to be medically stable for the surgery, or a patient is taking blood thinner medication and needs to stop for a few hours before surgery).
- *evaluate dedicating emergency-surgery operating-room time and/or take other measures, such as ensuring surgeons perform only emergency surgeries while they are on call, as part of their regular planned activity, in order to reduce the risk that emergency-surgery delays result in negative impacts on patient health.*

Status: Trillium Health Partners: In the process of being implemented by November 2018.

Windsor Regional Hospital: In the process of being implemented by the end of March 2019.

Rouge Valley Health System: Fully implemented.

Details

Our 2016 audit found that the hospitals we visited had policies that allowed the most urgent surgeries to bump all others for the next available operating room. However, other types of emergency surgeries had to wait until after 3:00 p.m., when elective surgeries had been completed, or wait for a slot after hours or on the weekend.

During our follow-up, we noted the following actions taken by the hospitals:

- **Trillium:** Its Divisions of Orthopedic Surgery and General Surgery have dedicated week-day operating-room blocks for emergency surgeries related to trauma cases and acute care. It has also engaged an external expert to perform a surgical platform optimization review, which includes analyzing opportunities related to emergency care. The review is expected to be completed in November 2018.
- **Windsor:** Its Department of Orthopedic Service has dedicated 90 minutes each day to complete non-scheduled emergency surgeries. However, it indicated that significantly more action is still needed to address this recommendation as it is still in the early stages of reviewing wait times for patients requiring emergency surgery. It also informed us that a surgical leadership team, including chiefs and physician leaders of the surgical program, were reviewing two to four years of data to determine the number of surgical beds and operating rooms required for non-scheduled and scheduled emergency surgeries. It expects to dedicate operating-room times for emergency surgeries or take other measures by the end of March 2019.
- **Rouge:** In May 2017, it started dedicating operating-room time for emergency surgeries. It has also implemented policies for scheduling and booking emergency surgeries, outlining a detailed process for emergency cases that need to be completed during business hours, after-hours and on weekends. These policies allow for bumping into the first

available room depending on the urgency of the emergency surgery.

Patients Waiting Too Long for Some Urgent Elective Surgeries

Recommendation 4

To ensure patients receive urgent elective surgery on a timely basis, the Ministry of Health and Long-Term Care (Ministry) should:

- *review the relationship between the level of funding provided for urgent elective surgeries, the wait-time targets for those surgeries, and the difficulties hospitals are facing achieving those targets within the level of funding provided;*

Status: Fully implemented.

Details

Our 2016 audit found that wait times for elective surgeries had not improved over the past five years from 2011/12 to 2015/16, and hospitals were struggling to meet the Ministry's wait-time targets for the most urgent elective surgeries.

During our follow-up, we noted that the Ministry has established processes to engage the LHINs in reviewing wait-time data for key surgical procedures. For example, it established the Orthopaedic Quality Scorecard in 2017 to track and monitor, on a quarterly basis, performance results related to hip and knee replacement surgeries. The Scorecard includes indicators such as average acute length of stay (days) and joint replacement wait time (days), and provides information for the Ministry and LHINs to review the relationship between funding levels and wait times for this type of urgent elective surgery. In much the same way, the Foot and Ankle Dashboard, also established in 2017, tracks performance metrics relating to foot and ankle procedures.

The Ministry also reviewed the Cataract Capacity Plan, submitted by the Provincial Vision Task Force (PVTf) in November 2017, to examine the factors, such as funding level, that affect

the supply of cataract surgery services and their relationship with wait times. To achieve wait-time targets, the Ministry plans to use the recommendations from the PVFT's Cataract Capacity Plan for future funding decisions with a goal of achieving wait-time targets.

- *using the information from this review, determine future urgent-elective-surgery funding needs, such that the risk to patients is addressed and hospitals are enabled to achieve the Ministry's urgent-elective surgery wait-time targets.*
Status: Fully implemented.

Details

Our 2016 audit found that the more urgent the surgery, the less likely it was to be performed within the wait-time target.

During our follow-up, we noted that the Ministry has used information from the reports mentioned above, such as the Orthopaedic Quality Scorecard and the Cataract Capacity Plan, to determine funding needs and achieve wait-time targets. For example, in December 2017, the Ministry made an additional investment to fund over 160 more hip and knee replacements across the LHINs with the greatest wait-time performance challenges. As mentioned above, the Ministry plans to make future funding decisions for cataract surgery based on the recommendations in the Cataract Capacity Plan to target areas of the province with higher needs. The Ministry also plans to continue to work with LHINs to identify hospitals with wait-time challenges and find potential solutions.

Recommendation 5

To continue to make the most effective use of hospital resources within funding constraints, and to better ensure that patients get urgent elective surgeries within the wait-time targets established by the Ministry of Health and Long-Term Care (Ministry), hospitals should consult with the Ministry and the Local Health Integration Networks (LHINs) when necessary, and work with surgeons to identify ways

to alleviate the backlogs, such as scheduling some elective surgeries for times other than typical daytime business weekdays.

Status: Trillium Health Partners: In the process of being implemented by the end of March 2021.

Windsor Regional Hospital: In the process of being implemented by April 2020.

Rouge Valley Health System: Fully implemented.

Details

During our 2016 audit, over half of the surgeons who responded to our survey said that their hospitals had no policy to schedule elective surgeries on evenings and weekends because of funding constraints.

During our follow-up, we noted the following actions taken by the hospitals:

- **Trillium:** It implemented the Acute Care Surgery model at one of its sites in 2017/18 due to its demonstrated success with implementing this model at another site in 2012 to help reduce the competition for operating rooms after hours by moving unplanned general surgery from evenings to daytime hours. It also plans to explore additional opportunities through a broader Operating Room Efficiency Analysis, which is expected to be completed by the end of March 2021.
- **Windsor:** It indicated that significantly more action is still needed to address this recommendation as it is still in the early stages of reviewing wait times for patients requiring surgery. As mentioned under **Recommendation 3**, it expects to develop an electronic system for documenting the reasons for delays by April 2020, after which it intends to identify ways to reduce the backlogs or delays for surgery.
- **Rouge:** It has implemented measures to reduce wait time and alleviate backlogs of urgent elective surgeries. For example, it has set up three Diagnostic Assessment Units (prostate, thyroid and breast) to reduce wait

time from referral to diagnosis and surgery. It has also implemented swing rooms (two operating rooms with staggered operation start times and schedules that surgeons can “swing” between as their patients are ready) for orthopedic surgery. These swing rooms reduce the turnaround time of operating rooms and allow surgeons to perform two additional surgeries. In addition, it has put a physician assistant in place to help manage pre- and post-operative care, freeing up orthopedic surgeons to perform surgeries.

Recommendation 6

To help ensure that both patients and health-care providers make informed decisions, and that patients undergo elective surgery within an appropriate time, the Ministry of Health and Long-Term Care (Ministry) should work with hospitals to:

- *implement a centralized patient referral and assessment system for all types of elective surgeries within each region;*

Status: In the process of being implemented by the end of March 2019.

Details

Our 2016 audit found that although eight of the 14 LHINs across Ontario had central referral services for hip and knee replacement surgeries in their regions, there was no centralized system in place for booking other types of elective surgeries.

During our follow-up, we noted that in December 2017, the Ministry announced an investment of \$37 million over three years to expand the centralized patient referral and assessment system, known as Rapid Access Clinics (RACs), across the province to musculoskeletal care, starting with hip and knee replacement as well as low back pain management over 2017/18 and 2018/19.

Some LHINs have started implementing the RACs for hip and knee replacement and for low back pain management. The Ministry expects that all LHINs will implement the RACs by the end of

March 2019. Going forward, funding will be provided to test and evaluate the RACs for expansion to other types of surgeries or procedures.

- *break down the wait-time performance data by urgency level for each type of elective surgery on the Ministry’s public website;*

Status: Fully implemented.

Details

Our 2016 audit found that while the Ministry publicly reported wait-time performance by hospital for all 12 types of elective surgery, it did not report wait-time performance by level of urgency.

During our follow-up, we noted that the Ministry has introduced a new online tool to help people find wait-time performance data for surgeries and procedures by urgency or priority level across the province. Since August 2017, wait-time data has been made available on both Health Quality Ontario’s (HQO’s) and the Ministry’s websites.

Wait-time data on the websites are broken down by priority level, which is assigned to each patient based on an assessment performed by clinicians to determine their urgency of care. There are four levels of priority: Priority 1 (Immediate/Emergency), Priority 2 (Urgent), Priority 3 (Semi-urgent) and Priority 4 (Non-urgent). Since patients with emergency conditions (Priority 1) are seen immediately, their wait times are not included in wait-time data. Each priority level of a procedure or surgery (such as cataract surgery, cancer surgery and orthopedic surgery) has an associated wait-time target. The websites show the percentage of surgeries at each priority level completed within the associated target.

- *publicly report the complete wait time for each type of surgery, including the time from the date of referral by family physician to the date of a patient’s appointment with a specialist.*

Status: Fully implemented.

Details

Our 2016 audit found that unlike other jurisdictions such as Nova Scotia and the United Kingdom, Ontario did not report full wait times. Although the Ministry did track the time a patient waited for a specialist consultation, it did not report it publicly or include it in its wait times for surgeries.

As mentioned above, as of August 2017, the Ministry has publicly reported wait-time performance data for surgical procedures on its and HQO's websites. Such data shows complete wait time by including two components: (1) the time between a referral received from a family physician or nurse practitioner and the patient's first appointment with a surgical specialist; and (2) the time between the decision on a surgery or procedure and the date of the surgery or procedure.

Recommendation 7

To ensure patients receive timely elective-surgery consultation from a specialist, the Ministry of Health and Long-Term Care (Ministry) should identify the reasons why there is a long wait for some specialists and work with the Local Health Integration Networks (LHINs), hospitals and specialists to improve wait time and access to specialists and specialist services.

Status: In the process of being implemented by the end of March 2019.

Details

Our 2016 audit found that if wait times to see specialists were considered, it would add months to the wait time for some surgeries. Depending on the urgency level of the surgery, patients could then wait another 78 to 181 days to receive their surgery.

As mentioned under **Recommendation 6**, the Ministry has committed to improve access to specialist services by expanding the centralized patient referral and assessment system, known as Rapid Access Clinics (RACs), to patients who require hip and knee replacement as well as low back pain management. Some LHINs have implemented RACs, through which patients will receive an inter-professional assessment—typically a nurse

practitioner, physiotherapist, or chiropractor with advanced skills and training—within four weeks of the referral and a determination will be made whether a surgical consultation is needed. Patients who do not require a surgery will be provided with non-surgical recommendations. The Ministry expects that all LHINs will implement the RACs by the end of March 2019.

As well, the Ministry indicated that the RACs will be implemented based on the existing evidence-based models that have been proven to provide benefits to patients. These models include the Central Intake and Assessment Centre (CIAC) model and the Inter-professional Spine Assessment and Education Clinic (ISAEC) model. These models help patients who need surgery get faster access to surgical consultations and help develop self-management care plans for those who do not need surgery. The CIAC model, for example, has reduced wait times for hip and knee replacement in the Champlain LHIN by 90% by distributing patients across all surgeons' waiting lists.

Poor Surgical-Safety Performance

Recommendation 8

To ensure the safety of surgical patients, the Ministry of Health and Long-Term Care should work with hospitals to ensure hospitals regularly monitor patient incident occurrences and take corrective actions as necessary.

Status: Fully implemented.

Details

Our 2016 audit noted that the Ministry did not know which hospitals contributed to poor surgical performance, nor had it taken any actions to address this shortcoming.

During our follow-up, we noted that the Ministry has worked with hospitals to ensure that hospitals regularly monitor patient incident occurrences and take corrective actions as necessary. For example:

- The Ministry began funding the Ontario Surgical Quality Improvement Network (ON-SQIN), which brings together surgical teams from hospitals to assess clinical data, identify areas of focus in surgical safety and patient outcomes, and share ideas and practices. As of June 1, 2018, 46 Ontario hospitals have participated in the ON-SQIN, which has tracked and assessed 14 indicators from a patient's pre-surgery period to 30 days post-surgery, while adjusting the data for age and pre-existing illness to ensure comparability of findings. Examples of indicators include unplanned intubations, urinary tract infections, surgical site infections, sepsis, and venous thromboembolism.
- The *Quality of Care Information Protection Act (QCIPA)*, originally enacted in 2004, was amended and replaced by the *QCIPA 2016*, which came into force on July 1, 2017. The *QCIPA 2016* increases transparency by affirming the rights of patients to access information about their own health care and clarifying that facts about critical incidents cannot be withheld from patients and their families.
- The Ministry has continued to require all Ontario hospitals to report critical incidents relating to medication or intravenous fluids through the National System for Incident Reporting, a web-based tool that allows users to report, analyze and share information on patient safety incidents.
- *ensure that alternate-level-of-care patients waiting in hospital are safe and receive the restorative and transitional care they need while they wait;*
Status: Fully implemented.

Details

Our 2016 audit found that about 14% of hospital beds in the province were occupied by alternate-level-of-care patients who no longer required hospital care but who had to remain there until a bed became available in another setting such as a long-term-care home. Acute-care hospital units are not the ideal setting for these patients.

During our follow-up, we noted that the Ministry has allocated about \$40 million to the LHINs to support over 40 pilot projects and initiatives related to Assess and Restore interventions, which are short-term rehabilitative and restorative care services provided in the community to people who have experienced a reversible loss of their functional ability. At the time of our follow-up, services had been provided to about 28,000 seniors and training had been provided to over 2,000 clinicians. The hospitals and LHINs have reported improved access and patient flow from acute to sub-acute and rehabilitative beds, reduced lengths of stay at hospitals, and earlier discharges with the enhancement of in-home restorative services.

- *evaluate policies in other jurisdictions aimed at placing reasonable limits on the time patients can spend waiting in hospital for beds in long-term-care homes, such as by discharging patients to the first appropriate available home within reasonable proximity;*

Status: Fully implemented.

Details

Our 2016 audit found that in Ontario, patients have the right to stay in hospital until a spot becomes available in the long-term-care home(s) of their choice. In comparison, British Columbia, Manitoba, Newfoundland and Labrador, Nova Scotia, and Prince Edward Island all require patients to go to

Bed Shortages Caused by Patients Waiting in Hospital for Other Types of Care

Recommendation 9

To ensure optimal use of health-care resources for patients requiring hospital care and for those requiring long-term care, the Ministry of Health and Long-Term Care should:

the first available vacant long-term-care-home bed in the province.

During our follow-up, we noted that in early 2017, the Ministry reviewed and evaluated placement policies in other jurisdictions. The review included examining “first available bed” provisions as well as patients in high-risk and special categories. The Ministry has used, and will continue to use, the information it has gathered through this review to inform its decisions regarding the placement process for long-term-care homes.

- *conduct capacity-planning for senior care and address bed shortages, if any, in long-term-care homes.*

Status: Fully implemented.

Details

Our 2016 audit found that the Ministry did not have long-term-care capacity planning in place, nor did it know the future demand for long-term-care beds.

During our follow-up, we noted that the Ministry has conducted capacity-planning for senior care and addressed bed shortages. In October 2017, the Ministry announced an investment of over 2,000 additional hospital beds to reduce wait times in hospitals. The Ministry has also worked with the LHINs and health service providers to enhance and expand supports available in the community. This partnership created about 600 transitional care spaces and 200 supportive housing units in 2017/18 to assist patients transitioning out of hospitals and back to their own homes or community. To further increase the capacity of community care, the Ministry will be investing an additional \$187 million in 2018/19.

Hospitals Lack Efficient Systems for Allocating Beds

Recommendation 10

To help reduce the time that hospital patients must wait for beds after admission, hospitals should conduct cost-benefit analysis in adopting more efficient

bed-management systems that provide real-time information about the status of hospital beds, including those occupied, awaiting cleaning or available for a new patient, as well as the number of patients waiting for each type of bed in each acute-care ward.

Status: Trillium Health Partners: In the process of being implemented by the end of March 2019.

Windsor Regional Hospital: Fully implemented.

Rouge Valley Health System: Fully implemented.

Details

Our 2016 audit found that one of the hospitals we visited was able to transfer emergency patients to hospital beds in acute-care wards more quickly than the other two because it had an information-technology system for hospital-wide bed management.

During our follow-up, we noted the following actions taken by the hospitals:

- **Trillium:** Its 2017/18 capital allocations included up to \$2 million for a bed-management system to improve patient flow and capacity management. The hospital was planning for next steps at the time of our follow-up. In June 2018, it engaged an external expert to review the current state of bed management, conduct a cost-benefit analysis, and recommend improvements. The cost-benefit analysis has been drafted and will be issued by the end of March 2019.
- **Windsor:** As mentioned under **Recommendation 2**, it has implemented a new bed-allocation model for the Medicine Program, as of October 2017, to move patients from the emergency department to the relevant ward quickly after admission. The new model uses a software program to display information about the status of hospital beds, such as the number of patients in the emergency department waiting for a bed, the length of time patients have been waiting, and a bed-readiness status code of green (less than 30 minutes), yellow (31 to 60 minutes) or red (over 60 minutes).

- **Rouge:** Rouge's Centenary site (now Scarborough and Rouge Hospital) did not conduct a cost-benefit analysis for a bed-management system because the merger of this site and The Scarborough Hospital provided the opportunity to leverage the existing systems at both hospitals. As a result, it has developed a Demand Capacity Board to supplement the existing bed-management system and improve the performance and accuracy of a web portal to view patient flow status. Rouge's Ajax/Pickering site (now Lakeridge Hospital) has developed the Bed Management Tool, an automated information system that tracks patient flow in real time.

Poorly Scheduled Admissions and Discharges Cause Longer Bed-Wait Times

Recommendation 11

To help reduce the time patients have to wait for beds after admission, hospitals should review the times and days of the week where patients are waiting excessively at admission and discharge, and make necessary adjustments to allow sufficient time for beds to be prepared for new admissions, especially those arriving at peak times.

Status: Trillium Health Partners: In the process of being implemented by the end of March 2019.

Windsor Regional Hospital: Fully implemented.

Rouge Valley Health System: Fully implemented.

Details

Our 2016 audit found that patients admitted via the emergency room on weekends had to wait, on average, 35 minutes longer than the typical 10-hour wait on weekdays for in-patient beds because there were fewer physicians and support staff during weekends.

During our follow-up, we noted the following actions taken by the hospitals:

- **Trillium:** Its Corporate Services has developed a plan for optimizing housekeeping activities to improve patient flow and allow sufficient time for beds to be prepared for new admissions. It has also addressed this recommendation through other initiatives such as the Capacity Management Processes and Practices and the Overcapacity Leadership Team as mentioned under **Recommendation 2**, and a cost-benefit analysis on bed management solutions as mentioned under **Recommendation 10**. The cost-benefit analysis has been drafted and will be issued by the end of March 2019.
- **Windsor:** As mentioned under **Recommendations 2 and 10**, it has implemented a new bed-allocation model for the Medicine Program, as of October 2017, to move patients from the emergency department to the relevant ward quickly. The new model includes the use of assessment bays (where doctors can expedite diagnostic tests for patients, confirm their diagnosis, and establish an expected day of discharge).
- **Rouge:** It has established an Efficient Patient Flow Working Group, which has launched the following initiatives: revising the Bed Management and Surge Policy; streamlining daily bed-management meetings; and producing a daily Expected Date of Discharge report to help improve patient flow.

Hospital Beds Not Ready for Patients on a Timely Basis

Recommendation 12

To help reduce the time that patients have to wait for beds, hospitals should ensure that a sufficient number of housekeeping staff are on duty to clean recently vacated rooms and beds on a timely basis, and that the order of cleaning is prioritized based on the types of beds most in demand.

Status: All three hospitals: Fully implemented.

Details

Our 2016 audit found that patients had to wait at least 1½ hours longer in the emergency room for beds in acute-care wards once the day shift ended for housekeeping staff, because there were significantly fewer housekeeping staff on duty during the night shift.

During our follow-up, we noted the following actions taken by the hospitals:

- **Trillium:** It completed a staffing analysis and implemented new staffing schedules in September 2017 to push start times for housekeeping staff later to cover times of higher housekeeping needs. It has added two five-hour shifts (ending at 11 p.m.) and three overnight shifts (ending at 7 a.m.) to address housekeeping needs later in the evenings. It has also set a target cleaning turnaround time of 45 minutes, which it monitors daily. It plans to continue monitoring discharge data and staffing schedules to ensure there is sufficient staff on hand to properly accommodate cleaning workloads.
- **Windsor:** It has restructured its cleaning staff, resulting in an increase of housekeeping staff available from 12 p.m. to 8 p.m. and from 11 p.m. to 7 a.m. to assist with discharge cleaning on afternoons and overnight. It has also changed its cleaning process so that the supervisor now assigns a housekeeper the task of cleaning a bed at the same time as assigning a porter the task of moving a patient out of the bed. This has saved 20 minutes in the cleaning process and improved housekeeping efficiency.
- **Rouge:** It has implemented a Priority Task System to identify and clean beds based on the priority of patients. It has also implemented a Flow Focused Model by moving routine tasks (such as regular cleaning) to the end of day to minimize any duplication of efforts and better align available staff with demand. In addition, it has implemented a surge-escalation plan to ensure that staffing

is increased ahead of an anticipated increase in demand.

Appeal Process for Hospitals and Physicians under *Public Hospitals Act* Needs Review

Recommendation 13

To ensure that hospitals, in conjunction with physicians, focus on making the best decisions for the evolving needs of patients, the Ministry of Health and Long-Term Care should review the physician appointment and appeal processes for hospitals and physicians under the Public Hospitals Act.

Status: Little or no progress.

Details

Our 2016 audit found some instances where hospitals were not able to resolve human resources issues with physicians quickly because of the comprehensive legal process that the hospitals were required to follow under the *Public Hospitals Act*.

During our follow-up, the Ministry indicated its commitment to develop a process to address this issue. The Ministry will consider this issue once it settles negotiations on the Physician Services Agreement between the provincial government and the Ontario Medical Association (OMA).

Co-ordinating with Physicians Is a Challenge for Hospitals

Recommendation 14

To ensure that hospitals are able to make the best decision in response to the changing needs of patients, the Ministry of Health and Long-Term Care should assess the long-term value of hospitals employing, in some cases, physicians as hospital staff.

Status: Little or no progress.

Details

Our 2016 audit found that, because the hospital-physician relationship is governed by the *Public Hospitals Act*, hospitals do not have the authority to manage physicians in the same way they manage

hospital staff. We found instances where hospital management and individual physicians did not work collaboratively, and were therefore unable to deliver patient-centred health-care services.

During our follow-up, the Ministry indicated its commitment to develop a process to address this issue. The Ministry will consider this issue once it settles negotiations on the Physician Services Agreement between the provincial government and the Ontario Medical Association (OMA).

More Effective Scheduling of Nurses Needed

Recommendation 15

To ensure better use of hospital resources for nursing care in each ward, hospitals should:

- assess the need for implementing a more efficient scheduling system, such as a hospital-wide information system that centralizes the scheduling of all nurses based on patient needs;

Status: All three hospitals: Fully implemented.

Details

Our 2016 audit found that while scheduling nurses efficiently through a centralized system could reduce overtime and staffing costs, none of the three hospitals we visited had such a system to track and manage individual nurse schedules.

During our follow-up, we noted the following actions taken by the hospitals:

- **Trillium:** It has assessed the need for implementing a more efficient scheduling system and plans to enhance its Human Resources Information System with a system that provides more advanced functionality to support scheduling and proactive workforce planning or monitoring. It has developed requirements for the new system but has not yet determined the timing of implementation.
- **Windsor:** It has assessed the need for a more efficient scheduling system and implemented a scheduling program and a daily, shift-by-

shift acuity tracker that manages their nursing levels based on patient needs.

- **Rouge:** It has assessed the need for a more efficient scheduling system and implemented an electronic scheduling system. It has also improved the system's communication capabilities by including a Shift Broadcast Notification feature that allows staff to send mass text messages to all units or departments. In addition, it has introduced a centralized staffing office model that allows all departments to review available staff in different areas to help fulfill scheduling needs.
- *more robustly track and analyze nurse overtime and sick leave, and conduct thorough cost/benefit studies to inform decision-making on the use of different types of nursing staff without over-reliance on agency nurses to fill in shortages.*

Status: All three hospitals: Fully implemented.

Details

Our 2016 audit found that many of the nurses in the hospitals we visited consistently worked significant amounts of overtime. We also found that the number of nurse sick days was on the rise.

During our follow-up, we noted the following actions taken by the hospitals:

- **Trillium:** It has implemented additional due diligence for using overtime and agency nurses by requiring formal approval by Director. It has also begun issuing weekly reports to managers on overtime, sick leave and the use of agency nurses. In addition, it has examined nursing staffing ratios for all clinical areas, which are in line with the staffing ratios of peer hospitals.
- **Windsor:** It has engaged an external expert to review the staffing mix across all its patient care areas. It has also benchmarked its cost performance to peer hospitals, and plans to review this annually. As part of this benchmarking, it has reviewed and analyzed its

staffing mix, sick time and overtime. It does not use any agency nurses.

- **Rouge:** It has developed a quarterly scorecard for a senior management team to review the use of overtime, sick leave and agency nurses. It also requires Director or Vice President approval for any use of overtime or agency nurses. As well, it has used the Registered Nurse/Registered Practical Nurse Utilization Tool kit and the Patient Care Needs Assessment Tool to analyze the nursing care needs at an in-patient unit.

Protection of Patients and Their Personal Health Information Needs Improvement

Recommendation 16

To ensure the safety of patients and that their personal health information is safeguarded, hospitals should have effective processes in place to:

- *perform criminal record checks before hiring new employees, and periodically update checks for existing staff, especially those who work with children and vulnerable patients;*

Status: Trillium Health Partners: In the process of being implemented by the end of December 2019.

Windsor Regional Hospital: Fully implemented.

Rouge Valley Health System: Fully implemented.

Details

Our 2016 audit found that hospitals in British Columbia required every individual who works with children or vulnerable adults to undergo a criminal record check before hiring, and at least once every five years from then on. In contrast, Ontario hospitals did not have a similar legal requirement.

During our follow-up, we noted that the Ontario Hospital Association produced a document in July 2017 to guide hospitals when developing a criminal reference check program or enhancing an existing

program. We also noted the following actions taken by the hospitals:

- **Trillium:** It has developed a Criminal Reference Check Project Plan to perform criminal record checks on new hires and current employees. At the time of our follow-up, internal policy development was under way to support the phased implementation of criminal record checks by the end of December 2019.
- **Windsor:** It has implemented criminal record checks for all new employees, volunteers and professional staff. It also requires all existing employees to provide updated information if they have been subject to criminal charges or convictions after initial employment criminal checks.
- **Rouge:** It has implemented a Criminal Background Checks Policy effective January 1, 2017, that requires a satisfactory background check for all new board members, employees, physicians and volunteers. The Policy also requires all existing members of the workforce and contractors to submit a self-reporting form within two weeks of being formally charged with, or found guilty of, a criminal offence in any jurisdiction.
- *deactivate access to all hospital information systems for anyone no longer employed by the hospital;*
Status: All three hospitals: Fully implemented.

Details

Our 2016 audit found weaknesses in the protection of patients and their personal information on computer systems. For example, we found active computer accounts for people no longer employed, delays in notifying the IT department about staff changes, and multiple computer accounts for some employees for no justifiable reason.

During our follow-up, we noted the following actions taken by the hospitals:

- **Trillium:** It has conducted a monthly audit to reconcile system accounts against individuals who have left the hospital to ensure that those accounts are closed. Its Human Resources and IT staff have also worked with managers to reduce the time between employee termination date and notification to Human Resources.
- **Windsor:** It has implemented a new process, called Active Directory Automation, through which any staff terminations made by its Human Resources department will automatically create a ticket to notify system managers. In addition, it has performed quarterly audits to validate if terminations have been completed.
- **Rouge:** It has developed a Service Access Request form to handle all staff terminations and deactivate terminated staff access to all hospital information. As a safeguard, its Human Resources department also sends a bi-weekly termination list to the IT team to ensure that all systems have been updated.

- *where appropriate, implement adequate automatic logout functions for computers and any information systems containing patient information;*

**Status: Trillium Health Partners:
Fully implemented.**

Windsor Regional Hospital: In the process of being implemented by December 2018.

Rouge Valley Health System: Fully implemented.

Details

Our 2016 audit found cases where hospital computers had no automatic logout function, and a key application containing personal health information was programmed to log out automatically only after 12 hours of inactivity.

During our follow-up, we noted the following actions taken by the hospitals:

- **Trillium:** It has implemented automatic logout after 30 minutes.
 - **Windsor:** It was in the process of implementing a four-hour timeout process, which is expected to be completed by December 2018.
 - **Rouge:** It has implemented automatic logout functions at two levels: 1) operating system, which is set to logout after 30 minutes for most workstations; and 2) application, which varies according to the functionality offered by each vendor.
 - *encrypt all portable devices, such as laptops and USB keys, used by hospital staff to access patient information.*
- Status: All three hospitals: Fully implemented.**

Details

Our 2016 audit found cases where the hospitals had either no controls in place to prevent employees from using unencrypted USB keys or no process in place to manage USB keys.

During our follow-up, we noted the following actions taken by the hospitals:

- **Trillium:** It had already encrypted all its portable devices, including the USB keys, at the time of our 2016 audit, and has continued to do so.
- **Windsor:** It completed its encryption policies in May 2018 and has encrypted all portable devices, including USB keys.
- **Rouge:** It enforces encryption of all hospital-provided devices, including portable devices such as mobile phones, laptops, notebooks, and USB keys.

Patients at Risk from Poorly Maintained Medical Equipment

Recommendation 17

To ensure medical equipment functions properly when needed, and that both patients and health-care workers are safe when equipment is in use, hospitals should:

- *maintain a complete inventory of medical equipment, with accurate and up-to-date information on all equipment that requires ongoing preventive maintenance;*

Status: All three hospitals: Fully implemented.

Details

Our 2016 audit found cases where not all medical equipment was part of the hospital's preventive maintenance program and the hospital's preventive maintenance database was outdated.

During our follow-up, we noted the following actions taken by the hospitals:

- **Trillium:** It has completed an inventory update by walking through every patient room and department to ensure that all medical devices have been entered into the database. It has introduced a new policy and procedures for inspecting and entering new medical devices into the database, and retiring medical devices from the database when they are no longer in the hospital. To maintain the accuracy of the database, its Biomedical Engineering department has sent a memo to remind staff to inform the Biomedical Engineering department when new devices are purchased or when the location of devices changes.
- **Windsor:** It has maintained a complete inventory of medical equipment by conducting an annual review of inventory during capital planning. During the annual review, the Biomedical Engineering Manager meets with the manager of each patient care area and reviews the inventory items. Inventory data is then updated in the Biomed Database System.
- **Rouge:** It has maintained a complete inventory of medical equipment and included such information in the Biomedical Engineering department's Computerized Maintenance Management System database. It has also performed a review of the equipment main-

tenance management plan to ensure accurate and up-to-date information on all equipment.

- *perform preventive and functional maintenance according to manufacturers' or other established specifications, and monitor maintenance work to ensure that it is being completed properly and on a timely basis;*

Status: All three hospitals: Fully implemented.

Details

Our 2016 audit found that some high-risk medical equipment was not being regularly serviced and maintained according to schedule, service manuals or hospital policy.

During our follow-up, we noted the following actions taken by the hospitals:

- **Trillium:** It has a preventive maintenance program in place for all critical medical devices based on manufacturer recommendations and best practices. It has continued to perform annual audits to ensure that preventive maintenance has been completed on time. The latest audit was completed in November 2017.
- **Windsor:** Its preventive maintenance is scheduled on a medical device once it is received. A checklist is created that highlights all the tests outlined in the service manual. These tests are then checked off during each scheduled preventive maintenance. If there is a failure during preventive maintenance, corrective work is completed and another preventive maintenance is performed to ensure the medical device passes. The Biomedical Engineering Manager has daily meetings with the Lead Biomed to determine preventive maintenance compliance, shortfalls and/or challenges. A weekly automated preventive maintenance compliance report is generated and reviewed by the Biomedical Engineering Manager to ensure timelines are being met.
- **Rouge:** For Rouge's Centenary site (now Scarborough and Rouge Hospital), it has

assigned a preventive maintenance strategy and schedule to each classification of device and recorded the schedule in a database to monitor inspection progress. The frequency of inspections is determined based on manufacturers' recommendations and other factors such as risk levels, industry standards, utilization, history and past experiences. Preventive maintenance work orders are automatically generated at the beginning of the month by the database and inspection results are recorded in the database. For Rouge's Ajax/Pickering site (now Lakeridge Hospital), its Clinical Engineering department has performed preventive maintenance on all medical equipment. During its merger with Lakeridge Hospital, an audit of all medical equipment was performed where asset numbers were assigned and preventive maintenance schedules were set up based on manufacturers' recommendations (every six months or 12 months) to create a new database for routine and scheduled preventive maintenance.

- *monitor the performance of preventive maintenance staff to ensure equipment is being maintained in accordance with appropriate scheduling.*

Status: All three hospitals: Fully implemented.

Details

Our 2016 audit found that all three of the hospitals we visited missed scheduled preventive maintenance mainly because of incomplete and inaccurate maintenance schedules, insufficient maintenance staff to perform all the necessary work, and a lack of performance-monitoring for preventive maintenance staff.

During our follow-up, we noted the following actions taken by the hospitals:

- **Trillium:** For biomedical equipment, it has reported, on a quarterly basis, the completion rate of preventive maintenance based on

equipment risk classification. For facilities assets, it has reported the preventive maintenance completion rate monthly.

- **Windsor:** It has performed routine semi-annual audits and annual performance reviews to monitor the biomedical engineering technicians who perform preventive maintenance. It has reviewed completed work orders monthly to ensure that each technician has followed manufacturer specifications and completed preventive maintenance as outlined in the service manual. As mentioned above, the Biomedical Engineering Manager has daily meetings with the Lead Biomed to determine preventive maintenance compliance, shortfalls and/or challenges. The Biomedical Engineering Manager reviews a weekly automated preventive maintenance compliance report to ensure timelines are being met. In addition, the Manager generates a monthly metrics report, which outlines preventive maintenance compliance percentages and other key performance indicators, and shares it with Directors to check the status of preventive maintenance compliance and address challenges.
- **Rouge:** Rouge's Centenary site (now Scarborough and Rouge Hospital) has maintained inspection schedules and results in a database to monitor the progress and performance of inspection staff. It also affixes a yellow sticker on all medical equipment to indicate that it has undergone planned inspection and to show the next inspection date. Items that cannot be found are referred to clinical staff for help to locate them. Rouge's Ajax/Pickering site (now Lakeridge Hospital) has implemented a new preventive maintenance system to monitor the maintenance schedule and staff performance. It has also assigned a manager to review outstanding maintenance work monthly.