

Legislative
Assembly
of Ontario



Assemblée
législative
de l'Ontario

STANDING COMMITTEE ON PUBLIC ACCOUNTS

HOSPITALS – MANAGEMENT AND USE OF SURGICAL FACILITIES

(Section 3.09, 2007 Annual Report of the Auditor General of Ontario)

1st Session, 39th Parliament
57 Elizabeth II

Library and Archives Canada Cataloguing in Publication Data

Ontario. Legislative Assembly. Standing Committee on Public Accounts
Hospitals – management and use of surgical facilities (Section 3.09, 2007 Annual report
of the Auditor General of Ontario)

Text in English and French on inverted pages.

Title on added t.p.: Hôpitaux – gestion et utilisation des installations chirurgicales (Rapport
annuel 2007 du vérificateur général de l'Ontario, section 3.09).

Also available on the Internet.

ISBN 978-1-4249-7449-8

1. Hospital utilization—Ontario. 2. Operating rooms—Ontario—Administration.

I. Title. II. Title: Hôpitaux – gestion et utilisation des installations chirurgicales (Rapport
annuel 2007 du vérificateur général de l'Ontario, section 3.09)

RD27.44.C2 O56 2008

362.1'09713

C2008-964025-XE

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The Honourable Steve Peters, MPP
Speaker of the Legislative Assembly

Sir,

Your Standing Committee on Public Accounts has the honour to present its Report and commends it to the House.

Norman W. Sterling, MPP
Chair

Queen's Park
September 2008

STANDING COMMITTEE ON PUBLIC ACCOUNTS

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LIST OF SELECTED ABBREVIATIONS

ACT	Anaesthesia Care Teams
ALC	Alternative Levels of Care
CCAC	Community Care Access Centre
CIHI	Canadian Institute for Health Information
GAC	Guidelines Advisory Committee
ICES	Institute for Clinical Evaluative Sciences
LHINs	Local Health Integration Networks
MAC	Medical Advisory Committees
OHA	Ontario Hospital Association
OR	Operating Room
PIDAC	Provincial Infectious Diseases Advisory Committee
PIE	Perioperative Improvement Expert
SET	Surgical Efficiencies Target
SPAI	Surgical Process Analysis and Improvement
WTIS	Wait Time Information System

PREAMBLE

The Standing Committee on Public Accounts (Committee) held hearings on the Auditor General's 2007 audit of hospitals regulated by the Ministry of Health and Long-Term Care—specifically, the Management and Use of Surgical Facilities (Sec. 3.09 of his 2007 Annual Report)—on February 21, 2008. The Committee has endorsed the Auditor's findings and recommendations.

This report constitutes the Committee's findings and recommendations. Background information on sections of the original audit report is followed by an overview of the hearings' main findings and, as appropriate, new recommendations. *Hansard*, the verbatim record of the hearings, should be consulted for the complete proceedings.

Acknowledgements

The Committee extends its appreciation to officials from the Ministry of Health and Long-Term Care (Ministry), the representatives of the three audited hospitals, and the newly-appointed president and CEO of the Ontario Hospital Association for their attendance at the hearings. The Ministry and its hospital partners expressed their appreciation for the help the audit would provide as they tackle the continuing challenges of improving surgical services. The Committee also acknowledges the assistance provided during the hearings and report writing deliberations by the Office of the Auditor General, the Clerk of the Committee, and staff of the Legislative Library's Research and Information Services.

1. AUDIT OBJECTIVES

The audit's objective was to assess whether selected hospitals had adequate policies and procedures in place to ensure the efficient management and use of surgical facilities to meet patients' needs. Audit work was conducted during fiscal 2006/07 at three hospitals of varying sizes in different communities as follows: Toronto East General Hospital, St. Joseph's Healthcare Hamilton (with surgical sites in Hamilton and Stoney Creek), and Sudbury Regional Hospital (with surgical sites at St. Joseph's Health Centre and Memorial in Sudbury).¹

In addition to reviewing relevant files, policies and procedures, and informational materials on the Ministry's Wait Time Strategy (Strategy) and materials from the Cardiac Care Network, audit staff interviewed appropriate hospital and Ministry staff as well as representatives of the Ministry's Surgical Process Analysis and Improvement (SPAI) Expert Panel, and engaged the services of independent consultants with expert knowledge in surgical facility management on an advisory basis.²

1.1 Main Findings

The Auditor noted that all of the hospitals visited were managing the use of their surgical facilities well in some areas. Moreover, the Ministry had introduced

several encouraging initiatives related to its Wait Time Strategy designed to help hospitals improve their surgical processes.

The Auditor expressed concern, however, that the Ministry did not have information on the overall capacity of hospitals' surgical facilities, the number of patients waiting for surgery, or the type of surgery they were awaiting. The Auditor found that the three audited hospitals needed to better utilize their surgical facilities to reduce patient wait times. More specifically, some of the more significant observations on the management and use of surgical facilities were as follows:

- **Initiatives:** Procedures to prioritize urgent surgical cases and screen elective patients prior to surgery had been implemented in the hospitals visited. The Ministry had also established several Expert Panels and coaching teams, and initiated pilot projects to improve the management/use of hospital surgical facilities and resources. Certain pilot projects, geared to centralizing patient referral and assessment, were aimed at providing patients with the option of choosing a surgeon with the shortest wait list.
- **Operating Room Capacity:** At the time of the audit, the Ministry lacked information on the number of hospital operating rooms in the province and their hours of use, making it difficult for the Ministry or Local Health Integration Networks (LHINs) to determine whether operating room capacity is sufficient to meet Ontarians' surgical needs. At the hospitals visited a significant percentage of operating room capacity was generally not used during certain times such as during the summer months.
- **Allocation of Operating Room Time:** Operating room time available to each surgeon at the hospitals visited was based primarily on historical time allocations to that surgeon rather than patients' needs and hospital priorities.
- **Urgent Emergency Cases and Targets:** The Auditor's report noted that information was maintained at two hospitals on whether urgent emergency cases had their surgery within hospital-established time frames. The information indicated 87% did and 13% did not.
- **Pre-Operative Patient Testing:** The Auditor's report also noted a significant variance in the rate of pre-operative electrocardiogram (ECG) and chest x-rays among medically stable patients undergoing low-risk procedures in Ontario hospitals despite clinical guidelines indicating such patients usually do not even require an ECG or chest x-ray.
- **Patient Reassessment:** Under the wait time funding agreement between hospitals and the Ministry for 2006/07, hospitals were to ensure that no patient waited for surgery longer than 10 months without a reassessment. None of the hospitals visited had followed up with the surgeons to ensure that the patients who had waited longer than 10 months were reassessed. At one hospital, some patients were still waiting after three years. Moreover, the maximum 10 month targeted time frame excluded patient wait times from the date of the family physician's referral to the date of the patient's appointment with the surgeon.

- **Timeliness of Patient Surgeries:** The Auditor noted a significant variance in the timeliness of the surgeries, in some cases, depending on the hospital in which the surgery was done or the LHIN in which the hospital was located. For instance, some hospitals performed Priority Level 3 cancer surgeries more quickly than other hospitals performed more urgent Priority Level 2 cancer surgeries.
- **Wait Times by Surgeon:** At the time of the audit, the Ministry was not planning to publicly report wait times by surgeon, and noted that such information is available in Alberta and British Columbia for certain surgeries. The Auditor felt such information could assist both referring physicians and patients in determining which surgeon could offer patients the quickest access to surgery.
- **Utilizing Wait Time Information:** The hospitals visited were not using information from the Wait Time Information System (System) to better monitor and manage patient wait lists, owing in part to the System's reporting function still being under development.
- **Patients Awaiting Alternative Accommodation:** At the time of the audit, two of the hospitals visited had about 13% of their in-patient beds occupied by individuals awaiting alternative accommodation such as in a long-term care home. The use of in-patient beds for this purpose reduced the number of beds available for post-operative patients, leading to delayed or cancelled surgeries.
- **Anaesthesiology Care Teams:** The Ministry's piloting of anaesthesiology care teams for selected low-risk surgical procedures involves one anaesthesiologist supervising more than one surgical procedure, thereby preventing surgery delays or cancellations. However, should the Ministry wish to expand the pilot, it will have to assess whether its current funding model needs to be revised to encourage adoption of the anaesthesiology team system.
- **Flash Sterilization:** All of the hospitals visited used a "flash sterilization" process, a quick alternative to regular cleaning and sterilization when it would take more time to complete the regular cleaning and sterilization than was available before the instrument was needed for surgery. The Auditor found that at one hospital, the reason recorded for 73% of flash sterilization occurrences was a lack of instruments. Such usage is contrary to a United States Guideline and advice provided to the Ministry by an infectious diseases advisory committee, which indicates that flash sterilization should only be used in emergency situations, such as when an instrument is accidentally dropped on the floor and time constraints rule out regular cleaning/sterilization.

The Auditor acknowledged that there will be challenges in addressing the issues raised, especially those necessitating the involvement of all key stakeholders—the hospitals, the Ministry, the LHINs, and the fee-for-service practitioners.

2. COMMITTEE REQUEST FOR MINISTRY RESPONSE

The Committee requests that the Ministry of Health and Long-Term Care provide the Committee Clerk with a written response within 120 calendar days of the tabling of this report with the Speaker of the Legislative Assembly, unless otherwise specified in a recommendation, as is the case in recommendations 2, 3, 4, 6, and 9.

2.1 Committee Recommendations

- 1. The Ministry of Health and Long-Term Care shall provide a report to the Committee clarifying whether the Ministry, the Local Health Integration Networks, or each individual hospital, will be responsible for ensuring that the recommendations and advice from the Ministry's various surgical Expert Panels are appropriately implemented.**
- 2. The Ministry of Health and Long-Term Care, working in conjunction with the Local Health Integration Networks and their hospital partners, shall provide a status report to the Committee in April 2009 indicating the rate of hospital implementation of recommendations made by the Ministry's various surgical Expert Panels. Where a significant number of hospitals have not implemented a particular recommendation by April 2009, the Ministry shall provide a follow-up status report a year later on the subsequent progress made.**
- 3. The Ministry of Health and Long-Term Care, working in conjunction with the Local Health Integration Networks and their hospital partners, shall provide the Committee with a status report in April 2009. The report should indicate the results of implementing the Surgical Process Analysis and Improvement (SPAI) Expert Panel's recommendation that hospitals place more emphasis on patients' needs rather than surgeons' historical time allocations when scheduling surgical operating room time.**
- 4. The Ministry of Health and Long-Term Care, working in conjunction with the Local Health Integration Networks and their hospital partners, shall provide the Committee with a status report in April 2009 on the rate of implementation of the standard patient priority classification system across Ontario for emergency and other urgent surgical cases.**
- 5. The Ministry of Health and Long-Term Care, working in conjunction with the Local Health Integration Networks and their hospital partners, shall provide a status report to the Committee on the adoption of clinical guidelines on pre-operative tests endorsed by the Ministry's Guidelines Advisory Committee, a partnership between the Ministry and the Ontario Medical Association. The Report should**

indicate the rate of pre-operative electrocardiograms (ECGs) and chest x-rays for medically stable patients undergoing low and intermediate risk surgical procedures, for each surgical hospital.

6. **The Ministry of Health and Long-Term Care, working in conjunction with the Local Health Integration Networks and their hospital partners, shall provide the Committee with a status report on the progress made in publicly reporting up to 50% of surgical wait times by summer 2008, and all surgeries by summer 2009.**
7. **The Ministry of Health and Long-Term Care, working in conjunction with the Local Health Integration Networks and their hospital partners, shall provide a status report to the Committee detailing the progress that hospitals are making with the implementation of the new Surgical Efficiencies Target (SET) Program.**
8. **The Ministry of Health and Long-Term Care, working in conjunction with the Local Health Integration Networks and their hospital partners, shall provide a status report to the Committee detailing whether hospitals are utilizing the information provided by the new SET Program to monitor key performance measures (such as operating room start time accuracy) against performance targets. Specifically, the Committee is interested in learning whether hospital management is utilizing the SET program and taking appropriate action to address significant variances.**
9. **The Ministry of Health and Long-Term Care, working in conjunction with the Local Health Integration Networks and their hospital partners, shall provide a status report to the Committee in April 2009 respecting the posting of performance indicators. The report should detail the progress at which all Wait Time Strategy-funded hospitals, as well as all other hospitals that perform surgery, are publicly posting performance indicators (such as utilization statistics) for all surgeries on their hospital websites. Specifically, the Committee is interested in making the hospitals more accountable for results and believes that the reporting of performance indicators may help hospital administrators achieve their goal of improving surgical efficiency.**
10. **The Ministry of Health and Long-Term Care, working in conjunction with the Local Health Integration Networks and their hospital partners, shall provide a status report to the Committee on the success of efforts by the Ministry and its partners to free up acute care beds now occupied by patients awaiting placement in alternative accommodation such as long-term care homes. This report should include the status of Ministry efforts to develop the concept of supportive housing, a type of alternative care more robust than home care but less so than long-term care, which may be appropriate for some hospital in-patients who no longer require hospital-level care.**

The Ministry should also report on the trends in the numbers of patients occupying hospital beds who are waiting for alternative accommodation.

11. The Ministry of Health and Long-Term Care, working in conjunction with the Local Health Integration Networks and their hospital partners, shall provide a status report to the Committee about the feasibility of repatriating rural patients from urban hospitals to smaller rural hospitals for post-operative care to ease the pressure on the former for surgical beds.
12. The Ministry of Health and Long-Term Care, working in conjunction with the Local Health Integration Networks and their hospital partners, shall provide a status report to the Committee on the results of its evaluation of the Anaesthesia Care Team (ACT) demonstration projects. This report should address outcomes and costs, as well as whether the Ministry proposes to expand the ACT model beyond the current nine hospitals, and if so, how the Ministry proposes to lessen the financial disincentive that the project model poses to hospital global budgets. The report should also address whether the Ministry proposes to expand the ACT model to other forms of surgery beyond cataract surgery. Finally, the Ministry's report to the Committee should include information clarifying whether Ontario is still experiencing a shortage of anaesthesiologists, and if so, what measures the Ministry is taking to address this shortage.
13. The Ministry of Health and Long-Term Care shall provide a status report to the Committee detailing the rate at which its hospital partners are adopting an acceptable threshold for the use of flash sterilization, as recommended by medical experts.
14. The Ministry of Health and Long-Term Care and the Ontario Hospital Association shall provide a status report to the Committee on the operating room supply chain project of the Ontario Buys initiative. More specifically, the Committee requests a follow-up report on whether this initiative is helping hospitals to secure sufficient instrumentation to minimize the need to use flash sterilization in routine circumstances; and if not, what further initiatives will be undertaken.

3. OVERVIEW

3.1 Key Roles and Responsibilities—Ontario's Health Care System

The *Ministry of Health and Long-Term Care Act* establishes the duties and functions of the Minister and the Ministry to oversee and promote the health and physical and mental well-being of Ontarians, and to be responsible for the

development, co-ordination and maintenance of comprehensive health services. This includes an integrated system of hospitals, long-term care, family health and primary health care, laboratories, ambulances and other health care providers/services.³ Under the *Ministry of Health and Long-Term Care Act*, the Minister's duties and functions include governing the care, treatment, and services and facilities provided by hospitals. As well, the Minister is responsible for administering and enforcing the *Public Hospitals Act* and regulations.⁴ The *Public Hospitals Act* sets out the responsibilities of hospital boards of directors and, importantly, the medical advisory committees that report to the boards. Recognizing that physicians have the expertise to supervise and assess the quality of care being provided to patients, every board is required to establish a medical advisory committee, which is responsible for recommendations to the board concerning the quality of care provided in the hospital by the medical staff and specified other health professionals. The board of the hospital is ultimately accountable for the quality of patient care provided in the hospital.⁵

Public hospitals in Ontario are, for the most part, incorporated under the *Corporations Act*, and regulated by the *Public Hospitals Act* and regulations. Each hospital board is responsible for the hospital's operations and determining its own priorities to address patient needs in the communities it serves.⁶

Each of the regulated health professions, including the profession of medicine, is governed by the *Regulated Health Professions Act, 1991* and a specific profession act. Under these acts, each of the health professions has a college that is the self-regulating body for its members. The colleges are to protect the public through the regulation of the practice of the profession and its members.⁷

Effective April 1, 2007, Local Health Integration Networks assumed responsibility for prioritizing, planning, and funding selected health care services, including the funding of hospitals and, as of that date, hospitals report to their LHIN rather than directly to the Ministry of Health and Long-Term Care. The *Local Health System Integration Act, 2006*, provides for an integrated healthcare framework.⁸

The Ministry provided approximately 85% of total hospital funding in 2006/07. Total operating cost of the over 150 hospital corporations was about \$19 billion. Hospitals in Ontario performed about 844,000 surgical procedures in 2006/07 of which 35% required an in-patient stay. As well, hospitals performed over 135,000 other diagnostic procedures (e.g., biopsies and imaging) in operating rooms in 2006/07.⁹

The Ministry indicated that total hospital operating room expenditures were approximately \$1.2 billion in 2006/07.¹⁰ Over the past decade or so, the demand for selected surgeries has risen in Ontario, primarily owing to such factors as a growing and aging population and technological innovations. Audit work was conducted at three hospitals which performed about 44,000 surgical procedures in their 42 operating rooms during 2006/07, costing approximately \$65 million.¹¹

The Committee discussed the fact that Ontario's Auditor General is currently in the third year of conducting value-for-money audits of broader public sector organizations in connection with the passage of Bill 18, the *Audit Statute Law Amendment Act, 2004*, which expanded the Auditor's mandate.¹² This development was expected to enhance accountability in the province since about one-half of total government expenditures (excluding interest on the debt) is in the form of transfer payments to organizations in the broader public sector, which includes hospitals as well as schools, universities, and colleges (the "SUCH" sector).

Spending on health programs in Ontario is expected to reach \$40.4 billion in 2008/09 (or 46% of total program spending in the province).¹³ Members of the Public Accounts Committee are keenly interested in hospitals, as these institutions account for about 40% of the \$40.4 billion projected health care expenditures.¹⁴ The Auditor General's *2007 Annual Report* examined hospitals—specifically, the management and use of surgical facilities (Sec. 3.09). This is his third hospital-related audit since the broadening of his mandate in November 2004.¹⁵

AUDIT OBSERVATIONS AND RECOMMENDATIONS

4. MINISTRY INITIATIVES

The Auditor noted that the Ministry had undertaken a number of recent initiatives to promote best practices in perioperative processes. Perioperative processes include the scheduling of patients, the preparation of patients for surgery and discharge, the operation itself, and recovery-room care. To help ensure efficient perioperative processes, the Ministry introduced a number of initiatives, many of which are critical to the Ministry's Wait Time Strategy announced in November 2004. Under the Strategy, the five priority areas for wait time reductions are (1) cancer surgery; (2) selected cardiac procedures; (3) cataract surgery; (4) total hip and knee-joint replacements; and, (5) magnetic resonance imaging (MRI) and computed tomography (CT) scans.

The-above-noted initiatives include the following:

A Surgical Process Analysis and Improvement (SPAI) Expert Panel was established in October 2004 and reported in June 2005 on best practices for increasing capacity within available hospital resources and made recommendations on promoting efficient surgical practices in Ontario's health care system.

The General Surgery Expert Panel (GSEP) was established to review non-cancer surgeries performed by general surgeons. The Panel is developing a priority rating scale with access targets for general surgery. This Expert Panel was expected to report in the fall of 2007.

The **Quality Expert Panel (QEP)** was established to examine quality-of-care and patient-safety indicators for surgery and provide informal feedback to the Ministry.

Perioperative Improvement Expert (PIE) Coaching Teams were created to work with hospitals to identify areas and develop strategies around improving surgical-management processes. These teams had visited about 35 hospitals at the time of the audit, including one of the three hospitals visited by the audit team. The **Wait Time Information System (WTIS) (System)** was introduced in March 2006 (subsequent to an interim system implemented in July 2005) to track and help in the management of surgical wait times. All of the approximately 80 hospitals receiving Strategy funding were using the System by June 2007.

The **Surgical Efficiency Targets (SET) (Program)** measures surgical processes in hospitals and targets areas for improvement. (The Ministry subsequently indicated that it would also be used to track the number of operating rooms.) The initiative produces a set of four performance indicators comparable among hospitals. The SPAI Expert Panel may add other key performance indicators to the SET Program in future. Results are expected to be produced for each participating hospital and to be summarized for each LHIN and the entire province. Almost 60 hospitals had implemented the Program as of June 2007. The remaining hospitals participating in the Program expected to do so by the end of summer 2007.

As part of the Wait Time Strategy, the Ministry has introduced a number of other clinical projects. Examples include:

- a centralized referral system, e.g., a regional eye medicine and surgery centre; and
- a centralized patient-assessment system, e.g., a joint health and disease management program.

Many of these piloted approaches to improving patient care may yield benefits in terms of shorter patient wait times to see a surgeon. To reap the full benefit of these initiatives, the Auditor indicated that the Ministry should ensure these projects are evaluated once they are fully implemented, and if warranted, promote their province-wide implementation.¹⁶

Committee Hearings

The Committee was encouraged by references in the Auditor General's 2007 *Annual Report* to the many initiatives and Expert Panels currently underway in Ontario to improve the use of operating rooms.¹⁷ The Committee is aware that many of these Expert Panels have already issued recommendations to promote best practices in perioperative processes or will do so in the future. Yet, it is unclear to the Committee whether the Ministry or the LHINs will be responsible for overseeing the implementation of all the recommendations and advice. The Committee seeks further clarification around this process.

Committee Recommendations

The Committee recommends that:

- 1. The Ministry of Health and Long-Term Care shall provide a report to the Committee clarifying whether the Ministry, the Local Health Integration Networks, or each individual hospital, will be responsible for ensuring that the recommendations and advice from the Ministry's various surgical Expert Panels are appropriately implemented.**
- 2. The Ministry of Health and Long-Term Care, working in conjunction with the Local Health Integration Networks and their hospital partners, shall provide a status report to the Committee in April 2009 indicating the rate of hospital implementation of recommendations made by the Ministry's various surgical Expert Panels. Where a significant number of hospitals have not implemented a particular recommendation by April 2009, the Ministry shall provide a follow-up status report a year later on the subsequent progress made.**

5. ACCESSING SURGERY

5.1 Information on Operating Room Availability/Use

The audit included details on the 42 surgical operating rooms (ORs) and minor procedure rooms at all three hospitals visited, including what factors hospitals took into account to determine the hours to run their ORs. Data was provided and examples given about use patterns of ORs on a weekly basis, during statutory holidays, on the weekends, during the summer months, the December holidays and March school break for elective surgeries. The utilization patterns of ORs for urgent and emergency surgeries at the three hospitals were also provided. The reasons given by hospital staff for not utilizing all ORs were insufficient funding to staff the rooms, a lack of in-patient beds, and insufficient availability of staff, such as anaesthetists.

At the time of the audit, the Ministry lacked information on the number of hospital operating rooms in Ontario and their utilization. The SPAI Expert Panel surveyed the number and location of ORs in Ontario hospitals but the results were inconclusive owing to some hospitals not completing the survey and other reasons. Without specific data on the number of operating rooms in the province and their hours of operation, it is difficult for the Ministry or the LHINs to determine whether OR capacity is sufficient to meet the surgical needs of Ontarians.

The Auditor recommended that the Ministry of Health and Long-Term Care, in conjunction with the Local Health Integration Networks and hospitals, obtain and

review information on the number of operating rooms across Ontario and the extent of their use.¹⁸

The three audited hospitals agreed with this recommendation.¹⁹

In its initial response, the Ministry indicated that while this information was unavailable at the time of the audit, the information would be tracked by the Surgical Efficiency Targets (SET) Program and would be used by Local Health Integration Networks to support planning and management of their services.²⁰

Committee Hearings

The Ministry reported that a recommendation of the SPAI Expert Panel was the development of a surgical efficiency targets program to track and monitor predetermined operating room key performance indicators. The SET Program is a web-based tool where participating hospitals enter operating room data into the system. Although still in its implementation phase, all wait-times-strategy-funded hospitals are involved with the program and are tracking phase 1 key performance indicators (KPI), which include prime-time operating room utilization, start time accuracy and scheduling accuracy.²¹

The Ministry reported that, to date, there are 676 operating rooms currently in use among the 82 hospitals participating in the wait times strategy. Subsequent phases of the program will capture unused capacity in these hospitals.²²

The data that is collected on the SET program provides decision-makers at the participating hospital, the LHINs and the Ministry with current and reliable information regarding operating room performance. This system will, according to the Ministry, provide LHINs with accurate data to work with their hospitals and community stakeholders to more efficiently allocate resources, optimize surgical throughput, reduce wait times, and improve the patient experience.²³

Using this data, the local LHINs will work with the hospitals to develop work plans to achieve target improvements. Once performance targets are set, LHINs will be able to ensure that hospitals are managing in accordance with the best practices developed by the Expert Panel.²⁴

5.2 Allocation of Operating Room Time to Surgeons

The audit highlighted the importance of allocating OR time to surgical departments and surgeons in an effective manner. The report noted that responsibility for allocating operating room time to surgical departments (such as orthopaedics or urology) at the three hospitals varied, and was one of the following:

- the chief of surgery jointly with the medical director and the director of surgery; or
- an operating room committee composed of the chief of surgery, and representatives from anaesthesiology, administration, and other surgical/clinical departments.

Generally, the head of each surgical department allocated operating room time to each surgeon within that department.

Newly arrived surgeons generally took over a departing surgeon's operating room time. Where no surgeon was leaving, newcomers were fitted into the surgical speciality's existing block of time, thereby reducing existing surgeons' operating room hours accordingly.

Staff at the three hospitals indicated that allocation of operating room time to surgical departments and each surgeon was primarily based on past allocations. The SPAI Expert Panel reported in 2005 that this method did not consider important factors such as the urgency of the patient's condition compared to the conditions of patients of other surgical departments.

To remedy this, the Expert Panel recommended that hospitals adopt an OR allocation strategy based on (1) patient needs; (2) the strategic priorities of the organization; (3) the need to give physicians sufficient operating room time (as a retention strategy); and (4) the community priorities determined by LHINs.

The Auditor recommended that hospitals adopt the recommendations of the Ministry of Health and Long-Term Care's SPAI Expert Panel on allocating surgical operating room time to surgeons, which place more emphasis on patient needs than on the time that each surgeon has historically been allocated.²⁵

The audited hospitals generally concurred with the recommendation in principle; although two indicated that implementing it would pose some challenges.²⁶

In its initial response the Ministry agreed with this recommendation. Working with the LHINs, the Ministry will continue to encourage hospitals to implement the SPAI Expert Panel's recommendations.²⁷

Committee Hearings

One recommendation of the SPAI Expert Panel was that the Ministry implement Perioperative Improvement Expert (PIE) coaching teams and this program was started in the winter of 2005-06. These teams, composed of clinical and administrative experts in surgical practice, help hospitals to improve their operating performance. The teams, made up of peers with experience in the effective management of operating rooms, assist hospitals with planning, mapping their processes, analyzing results, identifying areas for improvement, and determining optimal human resources and scheduling of surgery. To date the PIE coaching teams have visited 46 sites.²⁸

The Committee heard from representatives of two of the audited hospitals that had opted for a visit from the Ministry-supported PIE coaching teams. The hospitals found the experience very valuable, helping them to look at what they are doing with their perioperative care and how they could become more effective and efficient. One of the hospitals had requested a follow-up visit.²⁹

The Committee recognizes that when allocating hospital operating room time, a balance has to be struck between patient needs, clinical considerations of hospital surgeons, and the amount of time each specialty area has historically been allocated. However, the Committee would, in future, like to see allocation patterns give patients' needs more prominence. The Committee is interested in receiving an update on progress or initiatives undertaken to ensure that the allocation of operating room time is largely based on patient needs.

Committee Recommendation

The Committee recommends that:

- 3. The Ministry of Health and Long-Term Care, working in conjunction with the Local Health Integration Networks and their hospital partners, shall provide the Committee with a status report in April 2009. The report should indicate the results of implementing the Surgical Process Analysis and Improvement (SPAI) Expert Panel's recommendation that hospitals place more emphasis on patients' needs rather than surgeons' historical time allocations when scheduling surgical operating room time.**

5.3 Scheduling of Patients for Surgery

5.3.1 Elective Surgery

After a surgeon and patient have decided to proceed with surgery, the surgeon and hospital estimate the time required to complete the surgery. Accuracy is important because under/over-estimating the time needed may result in the following surgical inefficiencies:

- staff working overtime;
- cancellation of scheduled surgeries;
- idle ORs; and
- longer patient waiting times for surgery.

The SPAI Expert Panel's 2005 report considered an effective OR scheduling process and listed several characteristics for consideration, one of which was to schedule cases based on the average actual time for each surgeon to complete a case, including the average actual time to set up and clean up the OR. At the hospitals visited, the practice was as follows:

- Surgeons notified the hospital of the date/time of each patient's surgery not less than two weeks before the date of surgery.
- Hospitals recorded this information and, based on the surgeon's requested time and historical average, estimated the expected total time to complete each surgery (including the set up and clean up time).

The Expert Panel recommended that hospitals annually evaluate whether the time for the scheduled surgery approximated the estimated time. One of the hospitals

had reviewed this data for 2006/07 and found that 46% of elective surgeries were estimated accurately, with 25% of cases taking more time than estimated, and 29% taking less.

The Auditor recommended that hospitals periodically compare the actual time taken for surgeries—including operating room set up and cleanup—with the time estimated for completing those surgeries (as indicated by the time booked for the operating room) and identify any recurring significant deviations, so that adjustments can be made to improve operating room utilization.³⁰

The audited hospitals agreed with this recommendation, and one indicated that it was already complying.³¹

In its initial response the Ministry agreed with this recommendation, again indicating that it will work with the LHINs to continue encouraging hospitals to implement the recommendations of the SPAI Expert Panel.³²

5.3.2 Emergency Surgery

In addition to scheduled elective surgeries, there are urgent cases where patients require surgery immediately or within a matter of hours. The SPAI Expert Panel observed that these cases accounted for up to 25% of a larger hospital's total surgeries. At the hospitals visited, urgent cases ranged from about 12 to 19% of total surgeries. One hospital reserved up to 45 hours per month of scheduled OR time for trauma cases.³³

Prioritizing Urgent Patients

The audit highlighted the importance of ensuring that patients with urgent needs are provided with timely access to surgery. This involves well-defined and agreed-upon priority levels in which to triage patients. In the absence of such a system, problems might arise among surgeons over whose cases should receive priority. This could lead to surgeons over-stating the urgency of their cases in order to gain additional operating room time and provide faster access to surgery for their patients.³⁴

A standard priority-rating system would help ensure that patients are provided with timely surgical care based on their clinical need. The Ministry indicated that it is working with the SPAI Expert Panel to develop this system for urgent patients.

At the hospitals visited, the audit found three or four different categories of urgent surgical cases with varying time frames for starting surgery, based on the severity of the patient's condition. With the exception of the most urgent category, the other urgent categories were not defined at any of the hospitals visited, but were generally based on the surgeon's judgement of urgency. Consultants hired by two of the hospitals noted that the policy for prioritizing urgent cases was often not followed or enforced; and at one of these hospitals, it appeared highly politicized and that the patient priority identified was not always accurate.³⁵

A review of perioperative processes by the PIE Coaching Team at one hospital noted the lack of a common understanding of the priority levels and of urgent cases. In an effort to reduce manipulation of the system by surgeons attempting to gain more surgical time, one of the hospitals performed a monthly review of each surgeon's urgent patient caseload to ensure appropriate prioritization. Staff explained that the methods employed at this hospital for dealing with improper prioritization of surgical cases were effective.³⁶

Meeting Targeted Time Frames

All three hospitals indicated that they gathered data to determine whether they were meeting targeted time frames for urgent surgical cases. Reviewing a sample from the two hospitals that had maintained this data, audit staff found that the most urgent emergency cases generally received surgery within targeted time frames, unlike urgent non-emergency cases (such as acute appendectomy) where 13% of patients were not operated upon within established time frames. These surgeries occurred from about one hour to four days past the targeted time frame.³⁷

Explanations for the delays included yielding to a higher priority case, the unavailability of a surgeon, and various clinical concerns involving the patient. The SPAI Expert Panel is examining the use of urgent priority classification systems across Ontario hospitals with a view to recommending the consistent use of a single priority system with associated time frames.³⁸

Reserving Operating Room Time for Urgent Patients

The daily setting aside of OR time for urgent patients (rather than extending OR time at the end of the day after completion of the scheduled elective cases) is viewed as a best practice by the Expert Panel. Two of the hospitals visited are already doing this and a third is exploring the practice. Studies in the United States indicate that establishing a dedicated operating room for urgent surgical cases increased hospital efficiency by, for example, reducing elective surgery cancellations.³⁹

The Auditor recommended that hospitals:

- in conjunction with the Ministry and Local Health Integration Networks, and considering any recommendations from the Ministry's SPAI Expert Panel, complete the development of and implement a consistent patient priority classification across Ontario hospitals for emergency and other urgent surgical cases;
- review whether urgent patients are being prioritized by all surgeons in accordance with hospital policy, as well as whether these patients are receiving surgery within the established time frames; and
- review the costs and benefits of dedicating operating room time each day for urgent surgical cases as part of their regular planned activity, in accordance with recommendations from the Ministry's Expert Panel.

All of the audited hospitals concurred with the Auditor's recommendation.⁴⁰

In its initial response the Ministry agreed with this recommendation, indicating that it planned to work with the LHINs to encourage hospitals to implement the recommendations of the SPAI Expert Panel.⁴¹ Subsequently, the Ministry tabled information with the Committee indicating that as part of the SET Program implementation, a consistent patient priority classification system for emergent and urgent surgical cases has been developed in collaboration with clinical experts and hospitals, and will be rolled out. A “toolkit” will be sent to all hospitals which will begin to track their cases accordingly in April 2008. As part of Phase II (expected to be completed by November 2008), hospitals will be prioritizing urgent patients similarly and will be able to use the SET Program to review whether or not patients are receiving care within specific timeframes.⁴²

Committee Recommendation

The Committee recommends that:

- 4. The Ministry of Health and Long-Term Care, working in conjunction with the Local Health Integration Networks and their hospital partners, should provide the Committee with a status report in April 2009 on the rate of implementation of the standard patient priority classification system across Ontario for emergency and other urgent surgical cases.**

5.3.3 Pre-operative Patient Screening and Testing

Patient screening for surgery typically includes required tests, patient education and discharge planning. The Expert Panel recommended that all elective patients be screened (by phone or in person) to minimize surgical delays and cancellations. Furthermore, it noted that patients with similar clinical conditions who are scheduled for similar surgical procedures should be screened in a similar manner, regardless of who the surgeon or anaesthesiologist is.

All three hospitals had a screening process called a patient pre-assessment scheduled by the surgeon or hospital no less than two weeks prior to surgery. Variations in the pre-assessment process occurred at all three institutions:

- One hospital required all patients to appear in person and meet with the anaesthesiologist. The PIE coaching team that visited this hospital had recommended that it examine whether it was necessary to screen all patients in person (particularly healthy, ambulatory patients undergoing elective surgery). It recommended that this hospital consider pre-operative screening via telephone for selected patients (depending on their condition).
- The other two hospitals undertook telephone pre-assessments with selected patients. Patients assessed at these hospitals generally met with an anaesthesiologist only if there was a medical issue specific to anaesthesiology.

The audit highlighted various clinical guidelines on the subject of surgical screening and pre-operative testing:

- The Ontario Guidelines Advisory Committee (GAC), a Ministry and Ontario Medical Association partnership, endorsed clinical guidelines indicating that most medically stable patients undergoing low and intermediate-risk surgical procedures do not require pre-operative electrocardiograms (ECGs) or chest x-rays.
- Research conducted by the Institute of Clinical and Evaluative Sciences (ICES) (based on earlier 2000-2002 data) recently found that despite these guidelines, Ontario patients often had ECGs and x-rays prior to low or intermediate risk surgery. ICES also found a great variability in pre-operative testing rates among hospitals. Some reported rates of patients having an ECG and/or chest x-ray prior to a low-risk surgical procedure as ranging from a low of 1% to a high of 98%.

GAC began a project in May 2003 to reduce the excessive use of pre-operative chest x-rays and ECGs in hospitals. GAC provided hospitals with data on their pre-operative chest x-rays and ECGs as well as best practice summaries to help surgeons decide when certain pre-operative tests should be ordered. The GAC project found that overall this initiative resulted in a small reduction (2.6%) in the rates of chest x-rays. Those hospitals with high rates of pre-operative chest x-rays had larger decreases in utilization than hospitals with lower rates. With respect to pre-operative ECGs, no overall change was noted.

The Auditor recommended that hospitals:

- establish policies, based on the patient's needs, on whether the patient's screening prior to surgery should be completed at the hospital or by other means, particularly for healthy, ambulatory patients undergoing elective surgery;
- determine specifically which patients, based on their condition, should be required to see an anaesthesiologist as part of the screening process, rather than requiring all such patients to be seen by an anaesthesiologist where this is the current practice of the hospital; and
- incorporate into their screening policies guidelines on pre-operative patient tests endorsed by the Guidelines Advisory Committee of the Ontario Ministry of Health and Long-Term Care and Ontario Medical Association.⁴³

All of the audited hospitals concurred with this recommendation.⁴⁴

In its initial response the Ministry said that it agrees with this recommendation and, working with the LHINs, will continue to encourage hospitals to implement the SPAI Expert Panel's recommendations.⁴⁵

Committee Hearings

The Committee heard that the Ministry is implementing the SPAI Expert Panel's recommendations on Perioperative Improvement Expert (PIE) Coaching.⁴⁶

In a status report tabled with the Committee, the Ministry noted that the issue of whether the patient's screening prior to surgery should be done in hospital versus other means was identified through the Expert Panel and is an issue that is being addressed through the PIE coaching team process.⁴⁷

The Committee heard that clinicians practice according to standards, and guidelines are developed to assist them in their practice. These matters are handled by medical advisory committees (MACs) within each of the 157 hospital corporations in Ontario.⁴⁸

Guidelines are established to assist the hospital and its medical staff in decision-making. These are the mechanisms generally used to establish best practices, such as the Provincial Infectious Diseases Advisory Committee (PIDAC) guideline for flash sterilization (referred to earlier in the Committee's report).

The Auditor General's *Annual Report* drew attention to the fact that clinical guidelines for pre-operative screening and testing of patients were being exceeded dramatically in some cases. It pointed out the variance of patient pre-operative screening and testing practices among hospitals. Despite clinical guidelines indicating that most medically-stable patients undergoing low-risk procedures do not require pre-operative electrocardiograms (ECGs) and chest x-rays, many hospitals still require patients to undertake these tests. This was flagged as a questionable utilization-of-scarce-resources issue. The Committee heard the following comments on how some might address the issue where hospitals exceed the clinical guidelines on pre-operative testing and screening:

- Hospitals could raise this matter with their MACs which would track and monitor whether their physicians were meeting or exceeding the clinical guidelines on patient pre-operative screening and testing.
- The Ontario Medical Association could be approached to address this with its Member physicians during the upcoming round of negotiations with the Ministry.
- An effort could be made in each institution to find out why physicians are, in some cases, exceeding guidelines. Have there been negative experiences and outcomes among physicians at the local level that have affected their tolerance to follow guidelines? Has this prompted some physicians to exceed the guidelines?
- Each hospital's utilization review committee could be asked to examine this use of resources in each institution.

Cost pressures associated with operating a hospital often prompt institutions to learn from each other about how to achieve savings. Whereas at one time hospitals admitted patients one to three days prior to surgery for purposes of testing and screening, that is no longer done. The Ontario Hospital Association offered to communicate variations in pre-operative testing among its members.⁴⁹

Committee Recommendation

The Committee recommends that:

- 5. The Ministry of Health and Long-Term Care, working in conjunction with the Local Health Integration Networks and their hospital partners, shall provide a status report to the Committee on the adoption of clinical guidelines on pre-operative tests endorsed by the Ministry's Guidelines Advisory Committee, a partnership between the Ministry and the Ontario Medical Association. The Report should indicate the rate of pre-operative electrocardiograms (ECGs) and chest x-rays for medically stable patients undergoing low and intermediate risk surgical procedures, for each surgical hospital.**

6. WAIT TIMES

The audit highlighted key developments and broad contextual information about Wait Times, summarized as follows:

As part of *A 10-Year Plan to Strengthen Health Care*, First Ministers agreed in September 2004 to target reductions in wait times in four surgical areas (1) cancer; (2) heart; (3) joint replacements; and (4) sight restoration by March 31, 2007.

Subsequently, the Minister of Health and Long-Term Care announced in November 2004 Ontario's Wait Time Strategy, an initiative to reduce wait times for adult Ontarians by December 2006 in the following five areas: (1) cancer surgery; (2) selected cardiac procedures; (3) hip and knee replacements; (4) cataract surgery; and (5) MRI/CT scans. Goals included:

- creating a system to monitor/manage wait times; and
- making wait time information accessible to the public and health care providers.

Since the Strategy's inception in November 2004, \$896 million has been paid to hospitals to provide over 1.2 million additional medical procedures in the five priority health services, including \$722 million for about 228,000 surgical procedures.

Historically, the number of patients waiting for surgery and the length of time spent waiting has been unknown by hospitals and the Ministry. To help remedy this, in July 2005 the Ministry implemented an interim system (at about 75 hospitals and later expanded to 80) to track wait times in the five Strategy areas. These hospitals performed about 90% of the total services across Ontario in the five Strategy areas.

In March 2006 the Ministry introduced a new Wait Time Information System (System) that tracked wait times by each patient from the "decision to treat" date

to the date the surgery or test was performed, including the priority level in the Strategy areas. As of March 31, 2007, 55 hospitals (including the three hospitals visited by the audit team) were utilizing this System.

The June 2006 report from the Federal Advisor on Wait Times highlighted concerns from the public and providers, namely that the focus on the five priority areas may have adversely affected other health care services.⁵⁰ The Institute for Clinical Evaluative Sciences found in May 2007 that, based on a sample of surgical procedures, there was no evidence of adverse impact on other surgeries across Ontario. ICES did recommend that future research evaluate access on a regional and institutional basis, and assess effects of the Strategy on surgical waits.

The federal government's 2006 Budget introduced the concept of a patient wait time guarantee (Guarantee). The concept is:

- similar to initiatives in the United Kingdom and Sweden; and
- seeks to ensure that Canadians receive necessary treatment within medically acceptable waiting times.

Provinces/territories were to select one priority area as a candidate for the health care wait time Guarantee to be established by 2010. In March 2007, Ontario selected cataract surgery, proposing to implement the Guarantee by January 1, 2009. Under this Guarantee, cataract patients waiting longer than the 182-day access target can opt to receive their surgery elsewhere in Ontario and have costs, such as travel, paid for by the hospital unable to provide the service.

6.1 Patient Priority Levels

- The Wait Time Information System incorporates patient priority levels (1 to 4) and associated targeted maximum wait times.
- Priority levels and associated wait time targets for hip, knee and cancer surgery, and a target percentage of patients to receive cataract surgery, were based on recommendations from Expert Panels. Methods to determine wait time targets for cardiac surgery were previously developed by the Cardiac Care Network.
- A Priority 4 patient for a hip/joint replacement would have minimal pain and disability with a targeted maximum wait time of 26 weeks, whereas a Priority 1 patient would have maximum pain/disability and should have immediate surgery.
- The Ministry indicated that it had provided training on priority levels to hospitals participating in the Strategy. At the hospitals visited by the audit team, however, surgeons and hospital staff expressed concern that both the decision-to-treat date and priority levels were being interpreted inconsistently among surgeons.

6.2 Wait Time Reporting

6.2.1 Actual Reported and Targeted Wait Times

- For hospitals participating in the Wait Time Strategy, the Ministry reports wait time information on its website showing the number of days that it took 90% of patients (excluding emergency patients) to receive surgery. This information is compared to the targeted time frames for Priority 4 patients (least urgent priority). The Ministry plans to make wait time information by priority level available by spring 2008.
- According to the 2006/07 wait time funding agreement between the Ministry and hospitals, the latter must ensure that no patient waits longer than 10 months for surgery without a reassessment by the surgeon; yet, none of the three hospitals visited received information on whether surgeons reassessed those patients waiting more than 10 months.
- Reviewing wait time data at one of the hospitals, the audit team noted that from October to December 2006, 67% of Priority 4 hip replacement patients had waited longer than their targeted wait time. Moreover, the System indicated that 37 hip and knee replacement patients were still waiting after at least three-and-a-half years.
- The 2007/08 wait time funding agreement expects hospitals to ensure that no patient waits longer than the Priority 4 target unless the patient has been reassessed. Moreover, hospitals are expected to review and analyze the reasons patients are waiting beyond the target time frames, and to improve performance.

6.2.2 Wait Times by Priority Level

- To assess whether patients received surgery within the targeted wait times established by the Ministry, the audit team requested preliminary wait time information by priority level for hospitals that had implemented the System at the time of the audit. As Figure 4 (p. 221) in the Auditor's Report shows, patients with more urgent needs generally received their surgery sooner than other patients but were less likely to receive surgery within the Ministry access targets, based on their priority level.
- The timeliness of surgery varied by hospital and the LHIN. Some hospitals performed Priority 3 cancer surgeries more quickly than other hospitals performed more urgent Priority 2 cancer surgeries.
- Cardiac procedures are tracked by the Cardiac Care Network (Network) and summary information appears on the Ministry's website. Network data indicated that cardiac patients generally received their procedures within their targeted maximum wait time (See Figure 5, p. 222 of the Auditor's Report).

6.2.3 Wait Times to see Surgeon

- Some surgeons the audit team spoke with were concerned that the Wait Time Information System (WTIS) did not track patient wait times between the date

of their family physician's referral and the patient's appointment with the surgeon.

- A 2006 Fraser Institute Report echoed this concern, noting that in Ontario the waiting time to see a surgeon varied among surgical areas (within the four surgical areas included in the Strategy, from an average high of 14 weeks for an orthopaedic specialist to an average low of three weeks for a cancer specialist).
- A January 2007 Ministry report recommended that the Ministry develop a framework to incorporate targeted maximum wait times for appointments with specialists. The Ministry plans to track and publicly report this information by 2010.

6.2.4 Wait Time Reporting in other Provinces

In February 2007, the Canadian Institute for Health Information (CIHI) compared wait time reporting among the provinces, noting a wide variation in reporting methods, making comparisons among provinces difficult (see examples highlighted on p. 222 of Auditor's Report).

Since surgeries included in the Wait Time Strategy only cover 14% of all surgeries, the Ministry plans to use the System to track wait times for all surgeries by June 2009. At the time of the audit, wait times were not publicly reported by surgeon. While the Auditor believes that this information would be valuable both to referring physicians and patients in determining which surgeon could offer patients the quickest access to surgery, the Ministry told audit staff that it had indicated to surgeons that it would not make this information public.

The Auditor recommended that the Ministry of Health and Long-Term Care—in conjunction with Local Health Integration Networks, hospitals, and surgeons—monitor patient wait times by each priority level and by surgeon for all types of surgery. As well, the Ministry should make information on patient wait times by priority level available to the public and reconsider its decision not to report at a future time wait times by surgeon or, as a minimum, make this information available to referring physicians.⁵¹

All of the audited hospitals concurred with the first part of the Auditor's recommendation, and agreed with public reporting of wait time by priority level. With respect to public reporting of wait time by surgeon, one hospital indicated that this information could be misinterpreted.⁵²

In its initial response, the Ministry reported that it is planning to publicly report wait time data by priority, but will not be reporting information by specific surgeon. The Wait Time Information System was created to support hospital accountability of wait time management. The System does report by surgeon; however, this information is only reported to the surgeon's hospital to assist it and, in particular, its perioperative teams, with wait list management.⁵³

Committee Hearings

The Committee heard that the Wait Time Information System (WTIS) was fully implemented in all Wait Time Strategy-funded hospitals as of July 2007, and is deployed in 82 hospitals across Ontario. WTIS tracks procedures in the five priority areas. Presently, this represents about 14% of all surgical volumes in the province. By the summer of 2008, the Ministry and participating hospitals expect to have the system implemented for all general surgery, all ophthalmology and all orthopaedics, which will represent over 50% of all surgeries in the province. By the summer of 2009, all surgical procedures at Wait Time Strategy-funded hospitals will be reported publicly on the Ministry's website.⁵⁴

Hospitals currently have the capacity to generate patient-priority-level reports from the WTIS, and this information is expected to be publicly available by the summer of 2008.⁵⁵

The Committee also heard why the Ministry was disinclined to report wait times by surgeon as is done in Alberta and British Columbia for selected surgeries.⁵⁶

In the past, surgeons were the only people who knew the length of patient wait-lists. Neither the hospital nor the Ministry had that information. Ontario is moving away from that model toward something more standardized and centralized which enables patients to see what is going on.⁵⁷

The Ministry pointed out that access to surgical services is addressed at the level of the institution and therefore attention needs to be focused there rather than on individual surgeons. Who actually performs the surgery is less important than achieving patient access to surgical services. For example, the Kensington Eye Institute performs cataract surgery. Patients are referred to the facility and the surgeon who performs the surgery is typically the next surgeon in the queue. This type of organizational model is more effective at bringing the patient to surgery quickly than alternatives which focus on particular surgeons, and whether or not they have surgical rooms available for selected days of the week.⁵⁸

The Committee also heard that some patients are unimpressed with surgeons who have short wait-lists and may incorrectly perceive that such physicians are inferior to surgeons with long wait lists, believing that a long wait list is associated with superior outcomes.

It was pointed out that, at the level of the institution, it is important that individual surgeons and surgical teams are provided with wait time information. Surgeons can look at the data and determine their own performance vis-à-vis their peers. For example, if a surgeon's peers were all clustered around the mean but their own performance deviated, the clinician may want to understand the reasons behind the variance.⁵⁹

The investments in the Ontario Wait Time Strategy (along with the efforts of the province's health workforce), have begun to show results. Surgical wait times are

down in four priority areas, according to the recent 2008 *Report of the Ontario Health Quality Council*:

The Ontario Wait Times Strategy has successfully reduced wait times for surgery in four priority areas. In the two years since the WTS began (2005-2007), wait times dropped for cataract surgery (from 311 to 118 days), knee replacements (440 to 253 days), hip replacements (351 to 198 days), and cancer surgeries (91 to 57 days).⁶⁰

The Committee acknowledges the progress made in tracking and making public the wait times for the five priority areas (representing about 14% of all surgeries) at Wait Time Strategy-funded hospitals. Nevertheless, the Committee is interested in an update of the progress being made by the Ministry in publicly reporting up to 50% of surgical wait times by summer 2008, and all surgeries by summer 2009.

Committee Recommendation

The Committee recommends that:

- 6. The Ministry of Health and Long-Term Care, working in conjunction with the Local Health Integration Networks and their hospital partners, shall provide the Committee with a status report on the progress made in publicly reporting up to 50% of surgical wait times by summer 2008, and all surgeries by summer 2009.**

6.3 Use of the Wait Time Information System by Surgeons and Hospitals

The System is intended to help surgeons and their staff manage their patient wait-lists and guide patient-scheduling decisions. Surgeons who spoke to the audit team acknowledged it as a step forward, but many of them noted that additional time is required to enter information into the System and there is no specific funding allocated to cover this activity. The Auditor also reported the following:

- Information was entered into the system by the surgeon's administrative assistant at two of the hospitals visited and by hospital staff at the other.
- Two of the hospitals purchased computer equipment for some surgeons to facilitate surgeon input of System information.
- The Ministry required information to be entered within two business days of the decision-to-treat date.
- The actual date that the surgery was performed on the patient was entered in the System.

To ensure that patients receive required surgery within a reasonable time frame, the Wait Time Information System relies on surgeons/staff to input information and manage the system. At the same time, hospitals can use the System to produce standard reports such as the hospital's median patient wait time by surgical area. The audit team found, however, that none of the three hospitals used the System to monitor and manage patient wait lists to ensure that patients received timely surgery.

One of the audited hospitals had initially experienced System limitations (subsequently corrected). At the other two, data was rarely downloaded because no hospital staff were dedicated to manage the System. Staff at the hospitals visited asked for standard System reports for managing surgical activities. As well, the hospitals were interested in accessing comparative data from other hospitals on the number of patients (by surgical area) awaiting surgery. The Ministry noted that the system was still under development and it was working with hospitals to implement system improvements. The hospitals visited also expressed concerns about the accuracy of some of the data in the System, prompting one hospital to reconcile, on a monthly basis, data on the number of completed surgeries in its internal reports with System information.

The Auditor recommended that the Ministry of Health and Long-Term Care and hospitals continue to jointly develop more standardized reports, utilizing data from the Wait Time Information System that would readily provide hospitals and surgeons with useful and comparative information on patient wait times. As well, hospitals should periodically test the accuracy of their key data elements in the System.⁶¹

The audited hospitals generally concurred with this recommendation, anticipating more standardized reports as the system is further developed.⁶²

The Ministry agreed with this recommendation in its initial response, and noted that it will continue to support hospitals by providing standardized reports. The development of standardized reports is an ongoing function and is guided by input from the hospitals participating in the Wait Time Strategy, which had not all implemented the Wait Time Information System until June 2007. Moreover, new functionality on the website was added in March 2007 which allows hospitals to compare their wait time performance with that of other hospitals.⁶³

Committee Hearings

The Ministry reported that in order to reduce wait times, it has committed to providing timely and appropriate access to key services in the five priority areas under the provincial Wait Time Strategy. To measure Ontario's wait times, the Ministry implemented the Wait Time Information System--a web-based tool used to track and monitor provincial wait times at all hospitals participating in the Wait Time Strategy.⁶⁴

The Wait Time Information System works as follows:

- Hospitals and surgeons submit data to the System that is then consolidated at the wait time information office. This information is then posted on the Ministry's website at www.ontariowaittimes.ca
- The WTIS was fully implemented in all Wait Time Strategy hospitals as of July 2007, after the Auditor General completed his audit of the three hospitals.⁶⁵
- At present the System is deployed in 82 hospitals across the province.⁶⁶
- Approximately 86% of all cases completed for the five priority areas are completed at the hospitals that participate in the Wait Time Strategy. Currently, the WTIS tracks the procedures in these five areas, and at present, this represents about 14% of the surgical volume of all hospitals in the province.
- By summer 2008, the Ministry and the participating hospitals will have implemented the System for all general surgery, all ophthalmology and all orthopaedics, which will represent over 50% of all surgeries in the province.
- By the summer of 2009, all surgical procedures at Wait Time Strategy-funded hospitals will be captured and reported publicly on the Ministry's website. As well, by 2009, the information system will include pediatric surgical cases at both academic and community hospitals.

Noting the reference in the Auditor's *Annual Report* to the need of the Ministry and hospitals to jointly develop standardized reports, the Ministry indicated that currently hospitals have the capacity to generate patient-priority-level reports from the Wait Time System. By the summer of 2008, wait times by patient-priority-level will also be publicly available. In addition, the information office is in the process of developing a decision support tool to assist hospitals in using this information. The tool will be provided to all Wait Time Strategy hospitals in the spring of 2008.⁶⁷

The Ministry noted that these enhancements enable hospitals to generate reports to help them understand internal wait time performance and make adjustments as necessary. They also make it easier for hospitals to compare their wait time performance with other hospitals. As the system evolves, further enhancements will be made to respond to needs as they arise.

To assist hospitals to use the wait time information, the Ministry has provided all hospitals with extensive training for all users of the information system. Users at each hospital are also supported by their respective wait time information system coordinators who ensure data quality and submission compliance and extract hospital-level reports for performance management purposes.⁶⁸

7. OPERATING ROOM EFFICIENCY

- The management of surgical processes has been studied in several jurisdictions outside of Canada (including the United Kingdom and the United

States) and in various provinces (including British Columbia, Saskatchewan, and Ontario).

- These studies are concerned with increasing the efficiency of perioperative processes.
- The Expert Panel recommended a plan to improve surgical efficiencies in Ontario's hospitals, and noted that adequate human, financial and capital resources were needed. However, greater efficiencies in the perioperative processes would increase the number of surgeries even further.

7.1 Monitoring of Performance Indicators for Operating Room Use

- Factors that affect operating room efficiency include:
 - cancellations on the day of surgery,
 - cancellations within 48 hours of the day of surgery,
 - delays caused by the late start of the first surgery of the day; and,
 - unplanned operating room closures.
- Hospitals participating in the Wait Time Strategy signed funding agreements in 2005/06 and 2006/07 with the Ministry agreeing to track and summarize information affecting operating room efficiency. The three hospitals visited had tracked some of the required information, but no hospital tracked unplanned operating room closures.
- Performance measures are useful to evaluate how a hospital is performing relative to other comparable hospitals and to identify areas for improvement.
- At the time of the SPAI Expert Panel's 2005 Report, hospitals with surgical programs did not collect/assess information on surgical performance measures against benchmark targets on a provincial basis.
- The Expert Panel recommended that Ontario develop and implement Ontario-wide surgical benchmark targets. Consequently, in 2006 the Ministry introduced the Surgical Efficiencies Target Program mentioned earlier, expecting it to be implemented in the approximately 80 hospitals participating in the Strategy.

As of June 2007, almost 60 hospitals had implemented the Program, which tracks a number of performance measures including start-time accuracy for the first case of the day (+/- 5 minutes) and subsequent cases (+/-15 minutes).

All three hospitals visited had implemented the Program by May 2007.

The audit team obtained 12 months of data ending in the spring of 2007 on start time accuracy for the almost 60 hospitals. It noted the median start time accuracy for the first (69%) and subsequent (58%) surgeries of the day, as well as significant variations in hospital performance.

The best start time accuracy rate for first surgery was 95%, the lowest was 17%. The Ministry has not yet published this information because the system is new and it has not yet verified the data.

Unused capacity of operating rooms can result from lack of funding, lack of staff, a lack of available beds and holiday schedules. At one of the hospitals visited, the actual use of rooms versus the planned use was fairly consistent, but showed some unused capacity.

According to the Ministry, once all participating hospitals are using the SET Program, performance targets will be established on the basis of province-wide data. Results are anticipated for each participating hospital and are to be summarized by each LHIN and provincially. Once the program is fully implemented, it is expected that LHINs will review Program results to determine whether any regional efficiencies can be achieved.

The Auditor recommended that hospitals utilize the information provided by the new SET Program to monitor key performance measures against performance targets (once the targets are established by the Ministry of Health and Long-Term Care), as well as against internal benchmarks and the performance of comparable hospitals.⁶⁹

All the audited hospitals concurred with this recommendation.⁷⁰

The Ministry agreed with this recommendation in its initial response, indicating that it was continuing with the implementation of the SET Program.⁷¹

Committee Hearings

The Committee supports the goal of hospitals reducing patient wait times for surgery through greater surgical efficiencies. Members noted their surprise about the start time accuracy rates for hospital surgical facilities highlighted in the Auditor's *2007 Annual Report*. In particular, Members learned about some significant variances, namely, as stated earlier, that the best start-time-accuracy rate for the first surgical case of the day was 95% while the lowest was 17%.⁷²

In response, the Committee heard that it can be a challenge for hospital management to get all of the key health care professionals (the anaesthesiologists, surgeons and nursing staff, as well as the patient) into the operating room at the same time. The issue of getting the first surgery of the day to start on time, however, was not viewed as insurmountable, and can be addressed through effective hospital management. As the surgical day progresses, however, the ability to stay on schedule can be affected by other factors, such as the patient's condition and the skill of the surgeon.⁷³ The Committee recognizes the challenges that hospitals and LHINs face in addressing this shortcoming but is interested in seeing that surgical procedures proceed as scheduled and that hospital management respond to significant variances.

The Committee subsequently learned about a small rural hospital (performing cataract surgery) that participated in an operating room benchmarking collaborative through its involvement in the Wait Time Strategy. This institution ranked first among 106 hospitals based on its operating room utilization, start time and scheduling accuracy for a 12-month period.⁷⁴ The Committee is greatly encouraged by this achievement and is hopeful that similar results can be obtained by other Ontario hospitals.

In this spirit, the Committee believes that all Ontario Wait Time Strategy-funded hospitals, as well as all other hospitals that perform surgery, should begin to publicly post operating room performance indicators (such as utilization statistics) for all surgeries on their websites.

Committee Recommendations

The Committee recommends that:

- 7. The Ministry of Health and Long-Term Care, working in conjunction with the Local Health Integration Networks and their hospital partners, shall provide a status report to the Committee detailing the progress that hospitals are making with the implementation of the new Surgical Efficiencies Target (SET) Program.**
- 8. The Ministry of Health and Long-Term Care, working in conjunction with the Local Health Integration Networks and their hospital partners, shall provide a status report to the Committee detailing whether hospitals are utilizing the information provided by the new SET Program to monitor key performance measures (such as operating room start time accuracy) against performance targets. Specifically, the Committee is interested in learning whether hospital management is utilizing the SET program and taking appropriate action to address significant variances.**
- 9. The Ministry of Health and Long-Term Care, working in conjunction with the Local Health Integration Networks and their hospital partners, shall provide a status report to the Committee in April 2009 respecting the posting of performance indicators. The report should detail the progress at which all Wait Time Strategy-funded hospitals, as well as all other hospitals that perform surgery, are publicly posting performance indicators (such as utilization statistics) for all surgeries on their hospital websites. Specifically, the Committee is interested in making the hospitals more accountable for results and believes that the reporting of performance indicators may help hospital administrators achieve their goal of improving surgical efficiency.**

7.2 Surgical Bottlenecks

Surgical bottlenecks arise due to various reasons, such as a lack of available beds for post-operative patients or a lack of available staff, such as anaesthesiologists. These bottlenecks can lead to delayed and cancelled surgeries.

7.2.1 Availability of Hospital Beds

- According to staff at two hospitals visited by the audit team, shortages of in-patient beds occur when patients no longer requiring hospital care remain in hospital while awaiting alternative accommodation, such as in a long-term care home.
- At the time of the audit these two hospitals had a total of 148 such patients occupying 13% of each of the hospitals' beds. In November 2006, patients awaiting alternative accommodation occupied 23% of one of the hospital's beds.
- Surgical bottlenecks occurred at two of the hospitals visited, resulting in delayed or cancelled elective surgeries.
- This problem of delay and cancellations arises, in part, from the lack of in-patient beds for post-operative patients. In some cases, patients remained in the recovery room until an in-patient bed was available, forcing other patients to wait in the operating room until a bed was available in the recovery room and therefore delaying the next surgery. Rather than cancel surgeries, however, one of these hospitals kept its recovery rooms open overnight 37 times in 2006 to accommodate 98 patients.

The Auditor recommended that the Ministry of Health and Long-Term care, in conjunction with hospitals and Local Health Integration Networks, develop and implement strategies to reduce the number of patients who no longer require hospital care but are occupying hospitals beds.⁷⁵

All of the audited hospitals concurred with this recommendation.⁷⁶

In its initial response, the Ministry reported that it has been working with the LHINs and their health-care partners on a number of initiatives to address this issue and improve patient flow through improved access to alternative services as follows:

- On February 16, 2007, the government announced \$13.7 million in one-time funding over two years to alleviate pressures in hospitals by, for example,
 - increasing home care and community-support services;
 - placing additional Community Care Access Centre (CCAC) staff in hospitals to enable faster access to community services; and
 - funding temporary transitional beds in selected communities.
- The Ministry's Ontario Health Performance Initiative is a quality-improvement project focused on improving patient flow in various ways,

including enhanced capacity and improved discharge planning. The 18-month project began in July 2007 and involves 32 hospitals as well as the LHINs and CCACs.

- On October 27, 2006, the Ministry announced a longer-term solution—1,750 new long-term-care beds and 662 replacement beds expected to be completed in 2010.⁷⁷

Committee Hearings

The Ministry reported that it has put into effect a number of strategies to improve the flow of patients through the health system. This includes investments in alternative levels of care (ALC) which were announced on February 16, 2007, and the four-year, \$700 million “aging-at-home” strategy which was announced by the government on August 28, 2007.⁷⁸ The LHINs are primarily responsible for the implementation of the aging-at-home strategy, to be done over a three-year period.

The focus of both these strategies is fivefold:

1. improving health programs for seniors at home;
2. diverting the admissions of senior citizens in hospital emergency departments;
3. building appropriate community settings and seniors’ programs within those settings;
4. improving care delivery; and
5. improving hospital performance related to seniors’ care.⁷⁹

The Committee heard that ALC patients occupying medical acute care beds indirectly impede surgical processes. Typically ALC patients occupy medical acute care beds while awaiting a more appropriate alternative bed in the community (for example, in their own home with home care support; in an assisted living facility; or in a nursing home).

In March 2008, the newly-appointed President and CEO of the Ontario Hospital Association drew public attention to the fact that some 2,800 hospital beds were being occupied by patients who require care outside an acute care hospital. According to this senior official, those ALC beds constitute 18% of all beds in the province.⁸⁰ This is roughly equivalent to 10 medium-sized hospitals. The proportion of hospital beds being occupied by ALC patients has led to bottlenecks in hospital emergency rooms and cancelled elective surgeries, due to bed shortages.

It was pointed out that about 70% of surgery done in Ontario is day surgery where the patient leaves hospital following surgery. Day surgery is rarely affected by the ALC population. It is the 30% of surgery affecting people requiring a hospital stay that is most impacted by ALC patients occupying acute care beds.⁸¹

The Committee also heard that a high ALC population impairs the ability of hospitals to expand the volumes of hip and knee surgical procedures. Hospitals are disinclined to schedule more of these procedures when they do not have beds for the patients following the surgery.⁸²

The Committee also asked whether rural patients who travel to urban hospitals for surgery could be “repatriated” for post-operative care to smaller rural hospitals closer to home. This possibility could serve two purposes. First, it would free up beds at the busy urban hospital facing a shortage of surgical beds for post-op care. Secondly, the rural patient may wish to convalesce closer to home, where relatives and a support system are nearby.⁸³

The Committee also heard that following an assessment of the population of people living in nursing homes in a particular LHIN, it was determined that 25% of those residents did not need nursing home care and could have been cared for at home or in an assisted living environment. Thus, potentially 20,000 people could be more appropriately placed in a setting other than a nursing home. It was pointed out that once people are placed in a nursing home it is often difficult to place them back home because their homes are frequently sold.⁸⁴

Finally, the Committee heard that a consensus seems to be emerging around the notion of “supportive housing.” This is a type of alternative medical care that falls short of hospital care and long-term care but is more robust than home care. The Ministry is currently looking into this as an alternative means of providing services that foster independence among patients. A challenge will be in targeting appropriate additional resources to provide supportive living subsidies, and ensuring that such monies are available equitably across all 14 LHINs.⁸⁵

The Committee urges the Ministry, the LHINs, and the hospitals, to continue working diligently toward innovative solutions to the ALC issue. Not only would the Committee like to see hospitals address the problem of delayed or cancelled surgeries, but resolution of the ALC dilemma could enable some hospitals to expand the capacity of their surgical procedures.

Committee Recommendations

The Committee recommends that:

- 10. The Ministry of Health and Long-Term Care, working in conjunction with the Local Health Integration Networks and their hospital partners, shall provide a status report to the Committee on the success of efforts by the Ministry and its partners to free up acute care beds now occupied by patients awaiting placement in alternative accommodation such as long-term care homes. This report should include the status of Ministry efforts to develop the concept of supportive housing, a type of alternative care more robust than home care but less so than long-term care, which may be appropriate for some hospital in-patients who no longer require hospital-level care.**

The Ministry should also report on the trends in the numbers of patients occupying hospital beds who are waiting for alternative accommodation.

- 11. The Ministry of Health and Long-Term Care, working in conjunction with the Local Health Integration Networks and their hospital partners, shall provide a status report to the Committee about the feasibility of repatriating rural patients from urban hospitals to smaller rural hospitals for post-operative care to ease the pressure on the former for surgical beds.**

7.2.2. Availability of Anaesthesiologists

All of the hospitals visited were at least somewhat concerned about ensuring the availability of anaesthesiologists for surgery. The Expert Panel estimated that Ontario was short 80 to 100 anaesthesiologists.

To address this shortage, in 2007 the Ministry piloted anaesthesiology care teams (ACTs) at nine medical sites. Comprised of an anaesthesiologist who supervises anaesthesia assistants and nurse practitioners, the team provides conscious sedation and administers anaesthetic gases and medication.

One of the hospitals visited was planning to use anaesthesiology care teams for cataract surgery. Other hospitals that have used anaesthesiology care teams have doubled the throughput of cataract patients without affecting patient safety, according to the Expert Panel. It was pointed out by the Panel, however, that hospital global budgeting does not encourage this efficiency model since anaesthesiologists are paid through the Ontario Hospital Insurance Plan and the other members of the anaesthesiologist care team are paid by the hospital. From the standpoint of a hospital, it is less expensive to have more anaesthesiologists than to use anaesthesiology care teams.

At one of the hospitals visited, some low-risk cataract surgeries were performed without an anaesthesiologist present when operating rooms were short of anaesthesiologists. The audit team noted at least one other Ontario hospital that performed low-risk cataract surgeries without an anaesthesiologist present and highlighted several studies published in medical literature as well as guidelines on cataract surgery from the United Kingdom that supported this practice.

While the audit team was unable to find any similar Canadian guidelines, it noted that the Clinical Practice Parameters and Facility Standards for Ophthalmology at Independent Health Facilities, issued by the College of Physicians and Surgeons of Ontario, refers to the use of a non-anaesthesiologist physician, rather than an anaesthesiologist, to assist the ophthalmologist with local anaesthesia and sedation.

The Auditor recommended that to help ensure the best utilization of anaesthesiology services while still ensuring that patients requiring anaesthesia receive it in a safe and efficient manner:

- the Ministry of Health and Long-Term Care analyze the results of the anaesthesiology care teams pilot projects and, if warranted, encourage the expansion of this concept to other Ontario hospitals while reviewing current funding mechanisms to ensure that they support this initiative; and
- hospitals, in conjunction with the College of Physicians and Surgeons of Ontario, determine under what circumstances an anaesthesiologist needs to be present for cataract surgeries.⁸⁶

All the audited hospitals generally agreed with this recommendation. One hospital noted that it was participating in the Anaesthesiology Care Team (ACT) pilot project.⁸⁷

The Ministry noted in its initial response that it was encouraged by this recommendation and will continue with the evaluation of the Anaesthesia Care Team Program.⁸⁸

Committee Hearings

The Committee heard that a key limiting factor in some hospitals for increasing surgical procedures is insufficient numbers of anaesthesiologists. The shortage of anaesthesiologists is a growing concern in Ontario. The Ministry is actively pursuing the Anaesthesia Care Team model as there seems to be efficiencies from spreading the expertise of an anaesthesiologist across a broader group of people within the surgical team.

The Ministry engaged in extensive discussions with the Ontario Medical Association and there was agreement to launch demonstration projects around this model. Currently the ACT teams are limited to cataract surgery only, and nine hospitals are participating in the demonstration projects. Two trained staff will assist, one in each operating room (OR), with one anaesthesiologist supervising two ORs. The training component was developed with the help of the Michener Institute in Toronto.⁸⁹

The Ministry is relying on these ACT demonstration projects (which started in late 2007) to help inform policy development around the issue of compensation. The Ministry is considering a number of possible scenarios. For example,

- should the Ministry pay a lump sum to the hospital for the project?
- should the Ministry pay hospitals on a fee-for-service basis?
- should the Ministry pay the respiratory therapist as an adjunct to the anaesthesiologist?

These questions will be addressed by the Ministry as it gathers information from the demonstration project evaluations sometime in 2008. The Committee also heard that without these “anaesthesia care extenders” as they are often called, some hospitals would be unable to meet the increased surgical volumes associated with the Wait Time Strategy.⁹⁰ The Ministry is still piloting the ACT

demonstration projects and the Committee is interested in how the Ministry plans to lessen the financial disincentives that the project model poses to hospital global budgets.

Committee Recommendations

The Committee recommends that:

- 12. The Ministry of Health and Long-Term Care, working in conjunction with the Local Health Integration Networks and their hospital partners, shall provide a status report to the Committee on the results of its evaluation of the Anaesthesia Care Team (ACT) demonstration projects. This report should address outcomes and costs, as well as whether the Ministry proposes to expand the ACT model beyond the current nine hospitals, and if so, how the Ministry proposes to lessen the financial disincentive that the project model poses to hospital global budgets. The report should also address whether the Ministry proposes to expand the ACT model to other forms of surgery beyond cataract surgery. Finally, the Ministry's report to the Committee should include information clarifying whether Ontario is still experiencing a shortage of anaesthesiologists, and if so, what measures the Ministry is taking to address this shortage.**

Within the perioperative processes of the three audited hospitals, the audit uncovered examples of economy and efficiency, but also noted areas where improvements could be made, and, in the Committee's view, need to be addressed. The Committee encourages the Ministry to consider the use of incentives to change the behaviour of health care providers where such conduct results in inefficiency in perioperative processes including the pre-assessment process.

8. SURGICAL INSTRUMENTS

Having the correct surgical instruments properly cleaned, sterilized, and available is an important component of surgical efficiency and safety in Ontario hospitals. The Expert Panel identified a number of best practices, including that there be sufficient surgical instruments to support the operating room schedule. The Panel highlighted how too few surgical instruments and lack of time between surgeries to clean and sterilize them can result in cancelled surgeries.

At the hospitals visited, the audit team reviewed the methods used for ensuring that surgeons have adequate instruments for each surgery. All hospitals visited listed the number and type of instruments needed for a particular operation or for a particular surgeon, and used these lists to prepare trays of required instruments.

Staff at all three hospitals were concerned about the shortage of instruments given the Wait Time Strategy and the increased volume of surgeries. The schedule of

surgeries for each day was reviewed at all three hospitals, and was modified where needed to reduce problems with unavailable instruments.

All three hospitals indicated they used a quick process called “flash sterilization” when there was a lack of time to complete the regular cleaning/sterilization of instruments before they are needed for the next surgery.

The audit cited infection control guidelines regarding flash sterilization, including the following:

- Health Canada’s infection control guidelines;
- the Provincial Infectious Diseases Advisory Committee’s (PIDAC’s) *Best Practices for Cleaning, Disinfecting and Sterilization in All Health Care Settings*, and
- an applicable United States *Guideline for Prevention of Surgical Site Infection (SSI)*.

All the above indicate that flash sterilization is “not recommended” and should only be used in emergency situations (such as when an instrument drops on the floor during surgery).

Where flash sterilization is used as prescribed, other health care associations, such as the Association of Perioperative Registered Nurses in the United States, indicated that flash sterilization should be kept to a minimum, as it may be associated with increased risk of infection to patients owing to pressure on personnel to eliminate steps in the cleaning and sterilization process.

Citing other authorities such as the Canadian Standards Association, the audit stated that the use of flash sterilization is not recommended if time permits the regular sterilization process.

Both PIDAC and the United States Guideline clarify that a lack of instruments is an unacceptable reason to use flash sterilization.

PIDAC’s *Best Practices* recommend maintaining a record with various identifying data such as which instruments were flash sterilized, and more importantly, which surgeon used the instrument on which patient.

Of the hospitals visited, the audit noted various practices, as follows:

- A flash sterilization log was not maintained at the first hospital, but it had established a working group to review PIDAC recommendations, including those relevant to flash sterilization.
- The second hospital maintained a log of the instruments flash sterilized, but not the name of the surgeon or patient; however, when flash sterilized equipment was used, this was documented in patients’ files.

- The third hospital tracked all the required information, including the reason for flash sterilizing the equipment.
- One of the hospitals periodically reviewed its use of flash sterilization, indicating that it had implemented changes to reduce risks related to cleaning/transporting of flash sterilized instruments. It had also purchased additional instruments. Of the reasons recorded for flash sterilizations at this hospital over a seven-month period, the audit noted that almost 73% occurred due to a lack of available surgical instruments.
- Another hospital used flash sterilization less than eight times a month, but did not review the reasons for its use.
- The third hospital had not periodically reviewed the frequency or reasons for its flash sterilizations.
- None of the hospitals visited had implemented an instrument-management system (for example, using bar codes and scanning technology) to track instrument location by status (e.g., awaiting cleaning, in use). Thus, while hospitals knew generally how many surgical instruments they had, they didn't know the number available for surgery on any given day.
- One of the hospitals had commissioned a consultant's report which noted that there was no system at that facility to ensure that all instruments were brought for cleaning after surgery. Therefore, many instruments were lost.
- All the hospitals visited did, however, have processes in place to ensure that medical instruments were not accidentally left inside patients.

The Auditor recommended that hospitals:

- re-examine the practice of using flash sterilization in non-emergency situations (in light of the Provincial Infectious Diseases Advisory Committee's best practices guidance);
- where flash sterilization is used, ensure that a record is maintained of the instruments that are flash sterilized, including the name of the surgeon who subsequently used the instrument and the name of the patient it was used on, in accordance with PIDAC's recommendations; and
- review the costs and benefits of implementing an instrument-management system to track instrument location and status.⁹¹

All of the audited hospitals concurred with this recommendation.⁹²

In its initial response the Ministry supported the recommendation and agreed that there is a need for hospitals to track instruments that have been flash sterilized. Furthermore, it noted that PIDAC's recommendations are best practices. The Ministry has distributed PIDAC's *Best Practices for Cleaning, Disinfection and Sterilization in all Health Care Settings* to all hospitals and related associations, as well as to professional colleges.

Currently, the Ministry is working with the Infection Control Professionals in each hospital across the province and the Regional Infection Control Networks to assist hospitals and other health-care organizations to implement these best practices in all areas of cleaning, disinfection, and sterilization. As indicated in the Auditor General's report, the Ministry agrees that there is a role for flash sterilization in emergencies and that a threshold for this should be developed in consultation with experts.⁹³

Committee Hearings

The Committee heard that upon receiving the Auditor General's draft report, the Ministry, jointly with the OHA, forwarded a letter to all hospitals asking them to review their sterilization procedures in relation to the Provincial Infectious Diseases Advisory Committee guidelines entitled *Best Practices for Cleaning, Disinfection and Sterilization in all Health Care Settings*.⁹⁴ Subsequently, the Ontario Hospital Association followed that letter with a videoconference viewed by 274 individuals from OHA member hospitals during which PIDAC's experts discussed the appropriate use and methods of flash sterilization. The videoconference was archived on the OHA website and has since been viewed by an additional 186 individuals. The Association has also distributed to hospitals a flash sterilization *fact sheet* to reinforce the advice. The OHA is examining additional opportunities such as educational conferences, to reinforce best practices on this subject.⁹⁵

The OHA reported that it has also worked with the Ontario Buys program to create and launch the operating room supply chain project.⁹⁶ The objective of this program is to assist hospitals to make targeted improvements that would ensure sufficient instrumentation and supplies and

- to support operating room schedules;
- to separate physical supports from clean and soiled instrumentation and supplies; and
- to standardize instrument supplies and vendors.⁹⁷

The Committee also heard that some in the hospital and the infection control community perceive the risks posed by flash sterilization (compared to regular sterilization) as less pressing than other concerns such as inadequate hand-washing and the threat posed by MRSA, VRE or *C. difficile*.⁹⁸

Committee Recommendations

The Committee recommends that:

- 13. The Ministry of Health and Long-Term Care shall provide a status report to the Committee detailing the rate at which its hospital partners are adopting an acceptable threshold for the use of flash sterilization, as recommended by medical experts.**

14. The Ministry of Health and Long-Term Care and the Ontario Hospital Association shall provide a status report to the Committee on the operating room supply chain project of the Ontario Buys initiative. More specifically, the Committee requests a follow-up report on whether this initiative is helping hospitals to secure sufficient instrumentation to minimize the need to use flash sterilization in routine circumstances; and if not, what further initiatives will be undertaken.

NOTES

¹ Toronto East General is part of Local Health Integration Network (LHIN) 7 Toronto Central; St. Joseph's Healthcare Hamilton is part of LHIN 4 Hamilton Niagara Haldimand Brant; and Sudbury Regional Hospital is part of LHIN 13 North East.

² Ontario, Office of the Auditor General, *2007 Annual Report* (Toronto: The Office, 2007), pp. 205-6.

³ Ontario, Legislative Assembly, Standing Committee on Public Accounts, *Hansard: Official Report of Debates*, 39th Parliament, 1st Session (21 February 2008): P-6.

⁴ Auditor General, *2007 Annual Report*, p. 204.

⁵ Standing Committee on Public Accounts, *Hansard*, p. P-6.

⁶ Auditor General, *2007 Annual Report*, p. 204.

⁷ Standing Committee on Public Accounts, *Hansard*, p. P-6.

⁸ Auditor General, *2007 Annual Report*, p. 204.

⁹ *Ibid.*

¹⁰ This amount includes nurses' salaries and medical supplies and excludes most physicians including surgeons' services provided to hospital patients, as these services are paid for by the Ministry through the Ontario Health Insurance Plan (OHIP). See *ibid.*, p. 205.

¹¹ *Ibid.*

¹² Following the passage of the *Audit Act* in 1978, the Auditor was permitted to undertake inspection audits of transfer payment recipients such as schools, universities, colleges, and hospitals, but the wording of the legislation precluded the Auditor from conducting full-scope value-for-money audits of these organizations in the broader public sector. Many in the Office of the Provincial Auditor advocated in support of an expanded mandate, reasoning that broader public sector organizations needed to be held more accountable to the Legislature and Ontario taxpayers. This goal became a reality in 2004 with the passage of Bill 18. See Office of the Auditor General of Ontario, "Our History," Internet site at http://www.auditor.on.ca/en/about_history_en.htm (accessed on May 29, 2008).

¹³ Ontario, Ministry of Finance, *2008 Budget: Budget Papers* (Toronto: The Ministry, March 25, 2008), p. 124.

¹⁴ *Ibid.*, p. 119. According to the 2008-09 Budget Plan, hospitals' net expense is \$18.4 billion.

¹⁵ The *2006 Annual Report of the Auditor General of Ontario* reported on two separate hospital audits—the use of Magnetic Resonance Imaging (MRIs) in hospitals as well as medical equipment acquisition in hospitals.

¹⁶ *Auditor General 2007 Annual Report*, p. 210.

¹⁷ The Deputy Minister of Health and Long-Term Care expressed appreciation to the Auditor General for acknowledging and highlighting in his *2007 Annual Report* the good work of the Surgical Process Analysis and Improvement (SPAI) Expert Panel, the Perioperative Improvement Expert (PIE) Coaching Teams, and the Surgical Efficiency Targets (SET) Program, as well as the new models of care being developed such as the Anaesthesia Care Teams (ACTs) and the Wait Time Information System (WTIS). See Standing Committee on Public Accounts, *Hansard*, pp. P-6-7.

¹⁸ Auditor General, *2007 Annual Report*, p. 211.

¹⁹ *Ibid.*

²⁰ *Ibid.*

²¹ Standing Committee on Public Accounts, *Hansard*, p. P-8.

²² *Ibid.*

²³ *Ibid.*

²⁴ *Ibid.*

²⁵ Auditor General, *2007 Annual Report*, p. 212.

²⁶ *Ibid.*

²⁷ *Ibid.*, p. 213.

²⁸ Standing Committee on Public Accounts, *Hansard*, p. P-8.

²⁹ *Ibid.*, p. P-24.

³⁰ Auditor General, *2007 Annual Report*, p. 213.

³¹ *Ibid.*

- ³² Ibid., p. 214.
- ³³ Ibid.
- ³⁴ Ibid.
- ³⁵ Ibid.
- ³⁶ Ibid., p. 215.
- ³⁷ Ibid.
- ³⁸ Ibid.
- ³⁹ Ibid.
- ⁴⁰ Ibid., p. 216.
- ⁴¹ Ibid.
- ⁴² Ontario, Ministry of Health and Long-Term Care, Office of the Deputy Minister, *Status Report*, February 12, 2008, pp. 3-4.
- ⁴³ Auditor General, *2007 Annual Report*, p. 217.
- ⁴⁴ Ibid.
- ⁴⁵ Ibid.
- ⁴⁶ Standing Committee on Public Accounts, *Hansard*, pp. P-7-8.
- ⁴⁷ Ontario, Ministry of Health and Long-Term Care, *Status Report*, February 12, 2008, p. 5.
- ⁴⁸ Standing Committee on Public Accounts, *Hansard*, pp. P-16-17.
- ⁴⁹ Ibid, pp. P-16-18.
- ⁵⁰ The Federal Advisor on Wait Times, Dr. Brian Postl, was engaged by the federal government to provide recommendations and advice to ensure the reduction of wait times for health-care services. See Auditor General, *2007 Annual Report*, p. 218.
- ⁵¹ Auditor General, *2007 Annual Report*, p. 223.
- ⁵² Ibid., pp. 222-3.
- ⁵³ Ibid., p. 223.
- ⁵⁴ Standing Committee on Public Accounts, *Hansard*, p. P-7.
- ⁵⁵ Ibid.
- ⁵⁶ Alberta and British Columbia report wait time by surgeon for certain surgeries such as joint replacements, cardiac surgeries, and eye surgeries. Auditor General, *2007 Annual Report*, p. 222.
- ⁵⁷ Standing Committee on Public Accounts, *Hansard*, p. P-16.
- ⁵⁸ Ibid., p. P-15.
- ⁵⁹ Ibid.
- ⁶⁰ Ontario Health Quality Council, *Monitor*, 2008 Summary Report of the Ontario Health Quality Council (Ontario: The Council, 2008), p. 3. Internet site at http://www.ohqc.ca/pdfs/ohqc_2008_report_summary_-_english.pdf (accessed on May 21, 2008).
- ⁶¹ Auditor General, *2007 Annual Report*, p. 224.
- ⁶² Ibid.
- ⁶³ Ibid., pp. 224-25.
- ⁶⁴ Standing Committee on Public Accounts, *Hansard*, p. P-6.
- ⁶⁵ This information system is changing the way hospitals manage their wait times. In 2007 the WTIS project won the 2007 Diamond Award from the Canadian Information Productivity Awards for excellence in the non-profit sector. Ibid., p. P-7.
- ⁶⁶ Participating hospitals are those that have elected to take part in the Wait Time Strategy by agreeing to complete additional surgical cases, which is part of their funding agreement. Ibid.
- ⁶⁷ Standing Committee on Public Accounts, *Hansard*, p. P-7.
- ⁶⁸ Ibid.
- ⁶⁹ Auditor General, *2007 Annual Report*, p. 226.
- ⁷⁰ Ibid.
- ⁷¹ Ibid., p. 227.
- ⁷² Standing Committee on Public Accounts, *Hansard*, p. P-28. [These findings were generated by an analysis conducted as part of the audit and were reported on p. 226 of the Auditor General's *2007 Annual Report*. This analysis included surgical case start time accuracy rates of 60 Ontario hospitals utilizing 12 months' of data ending in the spring of 2007. The median start time accuracy for the first surgery of the day was 69%; for subsequent surgeries the median was 58%. In terms of significant variations, as pointed out in this report, the best start time accuracy rate for the first case of the day was 95%, while the lowest rate was 17%. Start time accuracy rates for subsequent surgical cases (later in the day) ranged from a high of 98% to a low of 25%. As noted in the *2007*

Annual Report, this information had not been verified or publicly reported by the Ministry, as the Surgical Efficiencies Target Program was relatively new. See Auditor General, *2007 Annual Report*, p. 226.]

⁷³ Standing Committee on Public Accounts, *Hansard*, p. P-28.

⁷⁴ Nancy Boutin, "Tillsonburg Hospital a cut above: TDMH tops in surgical efficiency," *Tillsonburg News*, May 9, 2008, Internet site at <http://cgi.bowesline.com/pedro.php?id=301&x=story&xid=399472> (accessed on May 15, 2008).

⁷⁵ Auditor General, *2007 Annual Report*, p. 227.

⁷⁶ *Ibid.*

⁷⁷ *Ibid.*, p. 228.

⁷⁸ Standing Committee on Public Accounts, *Hansard*, pp. P-12 and P-26.

⁷⁹ *Ibid.*, p. P-8.

⁸⁰ Mohammed Adam, "Hospital bed crunch is 'critical'; Surgeries cancelled as nearly 1 in 5 beds occupied by people who can't find other care," *Ottawa Citizen*, March 3, 2008, p. A1.

⁸¹ Standing Committee on Public Accounts, *Hansard*, p. P-12.

⁸² *Ibid.*, p. P-26.

⁸³ *Ibid.*, p. P-19.

⁸⁴ *Ibid.*, p. P-26.

⁸⁵ *Ibid.*, pp. P-25 and 29.

⁸⁶ Auditor General, *2007 Annual Report*, p. 229.

⁸⁷ *Ibid.*

⁸⁸ *Ibid.*

⁸⁹ Standing Committee on Public Accounts, *Hansard*, p. P-23. The Michener Institute for Applied Health Sciences is located in Toronto and advances applied health sciences among associated professionals.

⁹⁰ *Ibid.*, p. P-24.

⁹¹ Auditor General, *2007 Annual Report*, p. 231.

⁹² *Ibid.*

⁹³ *Ibid.*

⁹⁴ Standing Committee on Public Accounts, *Hansard*, p. P-8.

⁹⁵ *Ibid.*, pp. P-8-10.

⁹⁶ The Ontario Buys program was announced in 2004. Known formally as Ontario Buys, Broader Public Sector, Supply Chain Secretariat, within the Ontario Ministry of Finance, the program helps hospitals, universities, colleges and other institutions consolidate and streamline purchasing processes. See Ontario, Ministry of Finance, *Ontario Budget 2007 Excerpts* (Toronto: The Ministry, 2007), Internet site at <http://www.fin.gov.on.ca/english/ontariobuys/documents/budget2007.html> accessed on April 2, 2008.

⁹⁷ Standing Committee on Public Accounts, *Hansard*, p. P-10.

⁹⁸ MRSA is the acronym for Methicillin-resistant *Staphylococcus aureus*, a type of bacteria resistant to some antibiotics. VRE stands for Vancomycin-resistant enterococcus, a normally benign bacterium with a strain that is resistant to antibiotics. C. difficile stands for *Clostridium difficile*. Hand washing is essential to prevent the spread of this bacterium.