

Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.

Educational Section

Hospital accreditation and the surgeon: The Canadian experience

Accreditation is an internationally recognised process through which healthcare organisations are able to improve the safety and quality of services delivered to patients. The focus of accreditation is to help organisations understand what they are doing well and what opportunities are available for improvement. The Canadian approach to accreditation is a rigorous peer review process comprised of a self-assessment against a set of standards, an on-site survey and follow-up action on recommendations that arise from the survey. The accreditation standards can be used effectively to guide the surgical teams in the transformation of the specialty. The 17 standards that are used to evaluate surgical teams relate to the activities that represent the continuum of clinical care as well as aspects related to learning. Within the subsections and standards are opportunities for surgeons and surgical teams to use the standards to effectively deliver services and to continuously improve patient care. In 38 recent Canadian Accreditation AIM surveys, that included at least one surgical team, there were a total of 75 recommendations made to the teams. Most recommendations related to process as opposed to outcome issues, implying that surgeons need to become more proactive in the functioning of the surgical team and to participate more effectively in management issues related to surgical care. Attention to these details will position surgical programmes to effectively deal with the rapid pace of change that is inherent in a modern surgical practice

Keywords: Accreditation, standards, criteria, outcomes, indicators, quality, transformation Surg J R Coll Surg Edinb Irel., 1 December 2004, 321-326

INTRODUCTION

Accreditation is an internationally recognised process through which healthcare organisations are able to improve the safety and quality of services delivered to patients. The Canadian Council on Health Services Accreditation (CCHSA) is a not-for-profit organisation independent of government that sets standards for, evaluates and accredits healthcare organisations in Canada and several other countries including Saudi Arabia, Abu Dhabi and Bermuda. The CCHSA has also provided mentoring for a number of nations as they developed their own accreditation systems, including France, Italy and Ireland.¹ Accreditation is an aspirational process based on achievable standards, voluntary participation, arms-length from government and peer review. This is in contradistinction to compulsory minimum standard models that are the hallmark of government operated accreditation in some countries including

Belgium, France and Scotland. The focus of accreditation is to help organisations understand what they are doing well and what opportunities are available for improvement. In compulsory government accreditation programmes, the focus is on what organisations do that is hazardous or harmful.²

THE AIM ACCREDITATION PROGRAMME

In 2001, the CCHSA introduced the Achieving Improved Measurement (AIM) Accreditation Programme. The Canadian approach to accreditation is a rigorous peer review process comprised of a self-assessment against a set of standards, an on-site survey and follow-up action on recommendations that arise from the survey. In Canada, the process occurs over a three-year cycle. The standards are national in scope and allow for both standardisation and benchmarking against similar organisations throughout Canada. The standards were

J. A. Robblee E. G. Heidemann

Canadian Council on Health Services Accreditation Ottawa, Ontario, Canada

Correspondence to: James A. Robblee, Division of Cardiac Anesthesiology, University of Ottawa Heart Institute 40 Ruskin Street, Ottawa, Ontario Canada K1Y 4W7 Email: jrobblee@ottawaheart.on.ca

REFERENCES

- Canadian Council on Health Services Accreditation. 2002 National Health Accreditation Report. 2003. Ottawa, CCHSA.
- Scrivens E. Accreditation and the Regulation of Quality. In: Saltman RB, Busse R, Mossialos E, editors. Regulating Entrepreneurial Behaviour in European Healthcare Systems. Buckingham: Open University Press; 2002. p. 91-105.

 Canadian Council on Health Services Accreditation. AIM: Achieving Improved Measurement Accreditation Programme. Second Edition. 2004.

 Brauer CM. From Standardisation to the Creation of the joint Commission: 1910

 1954. Champions of Quality in Healthcare. Lyme, Connecticut: Greenwich Publishing Group, 2001: 12-35.

developed and are updated using a broadly based consultation process with input from healthcare professionals across Canada. The standards address patient care issues within a quality framework that defines the programme. The quality framework is applicable to the organisation as a whole and is based on four quality dimensions: Responsiveness, System Competency, Client/Community Focus and Work-life. The quality dimensions represent a balanced scorecard relevant to healthcare organisations within which organisations may structure their quality improvement initiatives. Surgery and all other care teams function within this framework. While the quality framework underpins the accreditation programme, it also forms a basis for delivery of acute care services such as surgery.

In the self-assessment process, accreditation teams assess their relative strengths and identify opportunities for improvement. During the on-site survey, the self-assessment is validated by peer surveyors. The surveyors also identify exceptional practices that are publicised by the CCHSA in order that all Canadian healthcare organisations may benefit from the knowledge.³ The accreditation survey consists of four standards sections common to all organisations. These are Leadership and Partnership, Human Resources, Environment and Information Management. In addition, there are 15 client services standards. Most acute care organisations and regional health districts include one or more surgical teams in the accreditation survey.

Within Canadian healthcare organisations, surgery is accredited as an acute care service or as an acute care service within a regional health district. In larger hospitals or healthcare regions, subspecialties may be accredited using the same standards. Surgery representatives also frequently participate in Critical Care teams, Cancer Care teams and Ambulatory Care teams, reflecting the changes that have transformed surgical practice recently.

HISTORY OF SURGERY AND ACCREDITATION

Surgery has been at the forefront of accreditation since the earliest steps were taken to improve quality in healthcare. In 1912, the American College of Surgeons (ACS) was formed and at its inception, stated as an objective to implement the "end result" system based on methodical documentation of activities. In 1918, the ACS surveyed 692 hospitals in the United States and Canada to determine a minimum standard of care. Only 89 hospitals met the standard. In 1919, the ACS drafted and published five minimum standards that have formed the basis of accreditation ever since: • That physicians and surgeons with hospital privileges be organised as a group of staff

• That staff membership be restricted to graduates of medical schools in good standing and who were licensed, competent and worthy in character and in matters of professional ethics

• That the staff initiate and with the approval of the hospital's governing Board, adopt rules, regulations and policies governing the professional work of the hospital, including requirements that staff meetings be held at least monthly and that the staff review and analyse at regular intervals the clinical experience of departments

• That accurate and complete case records be written for all patients and filed in an accessible manner in the hospital

• That diagnostic and therapeutic facilities, including a clinical laboratory and an X-ray department, under competent supervision be available for the study, diagnosis and treatment of patients.⁴

In 1923, a Canadian obstetrician and gynecologist, Malcolm T. MacEachern was appointed Associate Director of the ACS responsible for the hospital standardisation process. Under his direction, the ACS published a Manual of Hospital Standardisation. In 1951, the Canadian Medical Association and the Royal College of Physicians and Surgeons joined with the American Medical Association, the American Hospital Association and the American College of Physicians to form the Joint Commission on the Accreditation of Hospitals. In 1953, a Canadian Commission on Hospital Accreditation was formed and in 1958, the Canadian Council on Hospital Accreditation was incorporated.

In the ensuing 46 years, accreditation in Canada has grown to include regional health districts, smaller specialty hospitals, community-based services such as mental health and rehabilitation, cancer services and long-term care facilities. The focus of accreditation has shifted from an emphasis on structure and process to one which is based on measurement, continuous quality improvement and outcomes.

THE VALUE OF ACCREDITATION TO SURGEONS

Accreditation of surgical teams in Canada is based on 17 standards that relate directly to the practice of surgery and the care delivered to patients. Surgical care teams are encouraged and expected to be interdisciplinary in structure and to function in an operational capacity within the organisation in matters related to patient care, planning of service delivery, best

322

practices, continuous quality improvement and research. Teams are expected to form linkages with community organisations to provide for continuity of care after discharge and to participate in health promotion activities that will benefit patients.

In Canada, the healthcare system is publicly owned and funded by government. However, accreditation is organised independently of government and relates to the self-interest of the organisation. It has been shown that self-regulating organisations have a better understanding of their processes and functions and can, therefore, act on their own problems.² This is particularly advantageous for surgery programmes because of the rapid evolution of surgical specialties which have changed across the continuum of care.

The accreditation standards can be used effectively to guide the surgical teams in the transformation of the specialty. The 17 standards are divided into nine subsections that relate to the activities of the teams. The subsections represent the continuum of clinical care as well as aspects related to learning. Within the subsections and standards are opportunities for surgeons and surgical teams to use the standards to effectively deliver services and to continuously improve patient care.

(a) Being a learning organisation covers topics of planning services, research, benchmarking and quality improvement.

It is increasingly important that surgeons and surgical programmes engage in the elements of a learning organisation if effective surgical care is to be delivered. The accreditation standards relating to planning of services and population health have been of particular importance recently because of the changes in surgery. Many hospital beds have been taken out of service in Canada despite growing volumes of surgery. This has been enabled due to the explosive growth of day surgery and minimally invasive surgery. The decrease in bed complements has also made it necessary for surgical teams to use care maps (clinical pathways) based on the application of best practices for efficient movement of patients through surgical units. Continuous quality improvement, research and the application of new methods and programmes are hallmarks of modern surgical practice and benchmarking is widely used to compare local practices with peer organisations.

(b) Achieving wellness covers topics of health promotion, prevention and early detection.

Early detection is clearly of major

importance to surgeons. The role of surgeons in the early detection of many cancers has been well documented. The value of surgical involvement and support of promotion and prevention programmes is well established for breast cancer, prostate cancer, cervical cancer and colorectal cancer.5-7 Until recently, the role of surgery in health promotion and prevention has been of less importance than other aspects of the specialty.8 Surgeons are participating in collaborative settings that are directed to prevention of a wide range of surgical problems. These include alcohol-related violence and the prevention of maxillofacial injury, exercise promotion for heart patients and smoking cessation. The presence of surgeons lends authority and credibility to these programmes.9-12

(c) Being responsive covers topics of continuity and first contacts with the organisation.

The rapid evolution of surgery and the surgical subspecialties has created many challenges for surgeons and other members of the surgical team. In most organisations, 80 to 85 per cent of all surgical procedures are now done on an outpatient basis. It has been necessary for organisations to develop pre-operative and pre-anaesthetic clinics to insure that patients are properly assessed and prepared for surgery. Accreditation in Canada provides a framework through application of the standards to address continuity issues related to outpatient surgery and affords an opportunity for surgical teams to develop initiatives related to appropriate assessment and better patient education. This in turn leads to fewer cancellations caused by patient conditions or inadequate work-up. For example, one institution reported a reduced cancellation rate of 21% when a pre-operative teaching programme was started.

(d) Addressing needs covers topics of patient assessment and diagnostic services.

Surgical programmes have responded to the trend towards same day admission for patients undergoing major procedures. The basis of effective pre-operative management is multidisciplinary assessment and patient education, both core values of accreditation. One cardiac surgical unit reported that 80% of patients referred for heart surgery had co-morbidities. Treatment was changed in 15% of patients after assessment by the team which included the surgery, anaesthesiology, nursing, respiratory therapy, social work and physiotherapy.

Many surgical patients present to hospital with pain as a primary complaint. In many Canadian hospitals, acute pain services have

- Ernst MF, Voogd AC, Coebergh JW, Roukema JA. Breast carcinoma diagnosis, treatment, and prognosis before and after the introduction of mass mammographic screening. *Cancer* 2004; 100(7):1337-44.
- Hugosson J, Aus G, Lilja H, Lodding P, Pihl CG. Results of a randomised, population-based study of biennial screening using serum prostate-specific antigen measurement to detect prostate carcinoma. *Cancer* 2004; 100(7):1397-1405.
- Levin B, Smith RA, Feldman GE, Colditz GA, Fletcher RH, Nadel M *et al.* Promoting early detection tests for colorectal carcinoma and adenomatous polyps: a framework for action: the strategic plan of the National Colorectal Cancer Roundtable. *Cancer* 2002; **95(8)**:1618-28.
- Wolfson P. Teaching prevention in surgery-is it an oxymoron? *Academic Medicine* 2000; 75(7):S77-S84.
- Dorner DB. Of cigarettes and surgeons. *Am Surg* 1992; 58(9): 513-520.
- Jue NH, Cunningham SL. Stages of exercise behavior change at two time periods following coronary artery bypass graft surgery. *Prog Cardiovasc Nurs* 1998; 13(1): 23-33.
- Warburton AL, Shepherd JP. Alcohol-related violence and the role of oral and maxillofacial surgeons in multiagency prevention. *Int J Oral Maxillofac Surg* 2002; **31(6)**: 657-63.
- Committee on Quality of Health Care in America. To Err is Human: Building a Safer Health System. Washington, D.C.: National Academy Press, 2000.

- Baker GR, Norton PG. Adverse events and patient safety in Canadian health care. *CMAJ* 2004; **170(3)**:353-54.
- 14. Guru V, Gong Y, Rothwell DM, Tu JV. Report on Cardiac Surgery in Ontario Fiscal Years 2000 and 2001. The Institute for Clinical Evaluative Sciences, Toronto Ontario, Canada in collaboration with the Steering Committee of the Cardiac Care Network of Ontario; 2003.
- Rogers J, Curtis P. The achievement of continuity of care in a primary care training programme. *Am J Public Health* 1980; **70**:528-30.

developed which use patient-controlled analgesia or epidural narcotics to control pain. The assessment of pain has been an important focus for accreditation. Many surgical teams are using reproducible pain scales in the assessment of pain, the objective assessment of effectiveness of treatment of pain and the development of CQI programmes relating to pain control.

The status of laboratories, diagnostic imaging equipment and access to these services is significant. Since the earliest days of accreditation, the adequacy of equipment and the credentials of technical staff has been a core standard. Accreditation has been used in the Canadian experience to highlight the status of equipment in some health organisations and to provide leverage for replacement or upgrading. Accreditation has been used as a lever to improve turnaround times for reporting of results and improved access to diagnostic facilities. In many accredited organisations, utilisation management and review have been the COI vehicles used to ensure that patients have appropriate access to these types of services.

(e) Empowering the clients covers topics of providing information, informed consent and patients rights.

Patient and family empowerment has followed the general trend in Canadian society to greater individual rights which began with the introduction of the Canadian Charter of Rights and Freedoms (1982). Since that time, the legislatures and Parliaments have enacted legislation related to privacy, confidentiality, patient rights and responsibilities and substitute decision makers. At the same time, there has been an increase of advance directives and requests for do-not-resuscitate status. These standards have proven to be among the most challenging for many surgical teams to achieve acceptable compliance.

(f) Setting goals covers topics related to the planning of individual patient service provision.

The purpose of this standard is to ensure that there is an integrated service delivery plan for each patient. It is very common for surgical teams to use guidelines, care maps or clinical pathways to standardise care and to measure progress following surgical procedures. The overall purpose of clinical pathways is to improve outcome by providing a mechanism to coordinate care and to reduce fragmentation, and ultimately cost. Guidelines have been developed in Canada for many surgical procedures and are widely used. Computerisation of the medical record will enable the application of guidelines and the development of variance tracking frameworks.

(g) Delivering services covers topics relating to the delivery of service, medications and patient responsibilities.

The standards and criteria in this subsection include the framework for patient safety, safe and effective delivery of medications, adverse event reporting and management and crisis management. It also includes the patient and family role and responsibilities in the service delivery plan.

The Institute of Medicine report To Err is Human raised the awareness of physicians to the fact that many patients die or suffer adverse events related to the care they receive.¹³ A recent study confirmed that preventable adverse events are common in Canadian hospitals.¹⁴ The Canadian study corroborated the results of similar studies in Australia, New Zealand and England. The foundation of patient safety is incident reporting in a blamefree environment which has been vigorously pursued by accreditation survey teams. More recently, survey teams have focused on adverse event reporting, critical incident analysis and morbidity and mortality review to round out the safety framework. As a result, there are many organisations, encouraged by accreditation, that have begun programmes to mark the side or site of surgery prior to transfer to the operating room. Accreditation standards and surveys have been used to encourage the removal of potassium from ward stock in most hospitals in Canada and to support COI initiatives related to antimicrobial-resistant organisms. During the recent severe acute respiratory syndrome (SARS) outbreak which affected hospitals in Canada, accreditation surveyors reviewed, with surgical and other teams, the response to public health measures that were implemented to protect healthcare workers and prevent a more catastrophic crisis than the one that occurred.

As surgical care has become more complex and as healthcare has become less patriarchal, the responsibilities of patients have grown. This includes areas of importance for surgical patients like maintaining NPO medication compliance and attendance at follow-up clinics. Accreditation addresses education programmes that are directed towards patient understanding of responsibilities.

(h) Achieving positive outcomes covers the topics of best possible results.

This standard closes the loop with the "end results" objective that was the stated goal of the American College of Surgeons

324

in 1912. Most physicians and surgeons are more interested in outcomes as a measure of the success of their programmes or practices than in the processes that lead to successful outcomes. With the increasing sophistication of data collection and analysis by electronic means, there has been a proliferation of information available to surgeons about the outcome of their practices. In one Canadian province, the institutional results of cardiac surgery are public information posted on the website. Each surgeon in the province receives an individual summary of the outcomes detailing his or her practice.¹⁵

Provincial governments are considering requiring institutions to sign-off on accountability agreements which will include outcomes as a basis for funding. An appropriate framework for these types of agreements will include indicator measurement and continuous quality improvement. Accreditation surveyors will be encouraged to examine those elements that support the accountability agreements.

(i) Maintaining continuity covers topics relating to transition to community.

The issues of continuity of care are well addressed by the accreditation standards and have an impact on all types of surgical practice. Transition to home with appropriate follow-up of day surgery patients is addressed in the standards. CQI projects reported include follow-up telephone contact and the impact on re-admission to emergency rooms, programmes to reduce post-operative nausea and vomiting, and pain control. The importance of continuity of care by house staff has been well documented and include

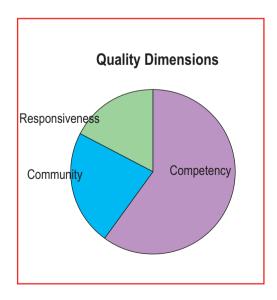


Figure 1: Recommendations by quality dimension.

benefits for residents, improved patient compliance and decreased healthcare costs.¹⁶

RECENT EXPERIENCE

In 38 recent Canadian Accreditation AIM surveys that included at least one surgical team, there were a total of 75 recommendations made to the teams. When recommendations were assigned to the four quality dimensions, 45 related to team competency, 17 to community and 13 to responsiveness. There were no recommendations that related to work-life (Figure 1). The descriptors that define the Quality Dimensions that were encountered most frequently were effectiveness. participation and partnership, availability, appropriateness and safety (Table 1). Of the 75 recommendations, there was a wide distribution across the subsections. Twenty-one out of seventy-five (28%) of the recommendations were in Subsection A, Being a Learning Organisation. Only two out of seventy-five (2.7%) related to subsection H, Achieving Positive Outcomes (Figure 2).

These qualitative data provide a sampling of the recommendations that are directed at surgical teams that arise from accreditation surveys. In this sample, process issues are addressed with a very high frequency relative to outcome issues. This would imply that surgeons in the accredited organisations need to become more proactive in the functioning of the surgical team and to participate more effectively in management issues related to surgical care. Attention to these details will position surgical programmes to effectively deal with the rapid pace of change that is inherent in a modern surgical practice.

CONCLUSION

Surgeons have played a significant role in accreditation since it was first conceptualised by the American College of Surgeons in 1912. Accreditation is relevant to surgeons because it offers goals to be reached in the quest for excellence and in some cases the leverage to develop programmes needed in individual hospitals or communities. Accreditation is an internationally recognised process that encourages the use of continuous quality improvement in healthcare organisations. In Canada, the standards are applied on a national basis and allow teams and organisations an opportunity to benchmark and to share exceptional practices. The Acute Care Standards that are used to assess surgical teams reflect the continuum of clinical care and the learning opportunities inherent in a rapidly changing healthcare environment. Current areas of significant relevance to surgeons are

TABLE 1. QUALITY DIMENSIONS AND DESCRIPTORS					
Quality Dimensions					
Responsiveness		System Competency		Client/Community Focus	
Descriptor	N	Descriptor	N	Descriptor	N
Availability	8	Effectiveness	19	Partnership	9
Timeliness	2	Appropriateness	8	Communication	5
Accessibility	1	Safety	8	Respect and Caring	3
Continuity	1	Legitimacy	6		
		Efficiency	3		
		Alignment	1		
Total	12	Total	45	Total	17

the use of indicators for CQI, the use of clinical pathways, pain assessment, empowerment of patients through the informed consent process and the development of frameworks for patient safety. Accreditation is the ideal vehicle to drive these areas of relevance in Canadian surgical practice because of the national scope of the programme. Surveyors are encouraged to highlight these areas in on-site surveys and the organisations are able to benchmark against services in similar types of organisations. Also, by continuously evaluating the changes that occur in healthcare, the CCHSA is uniquely positioned to emphasise emerging trends in the accreditation process. Of the four quality dimensions as defined by the CCHSA the majority of recommendations were related to system competency. The most frequently encountered descriptors of quality were effectiveness, partnership, availability, appropriateness and safety. The process of surgical management is more frequently cited in recommendations to surgical teams than outcomes. The importance of team building in the modern surgical practice has been shown in the limited number of surveys cited. It is not surprising that patient safety has been the subject of a significant number of recommendations. This reflects the emphasis on this area by the accreditation process and the overall importance of safety as an issue in complex medical systems. As surgery evolves, accreditation will be increasingly important in defining a framework for the transformation of surgical care.

Copyright 4 November 2004

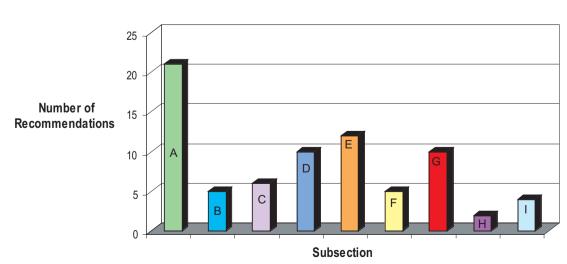


Figure 2: Recommendations by subsection.

326