

Training/Practice Training/Health Policy and Promotion Standards for Provision and Accreditation of Echocardiography in Ontario

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ABSTRACT

In March of 2010, the Ontario Ministry of Health and Long-term Care and Ontario Medical Association jointly commissioned a Working Group to make recommendations regarding the provision and accreditation of echocardiographic services in Ontario. That commission undertook a process to examine all aspects of the provision, reporting and interpretation of echocardiographic examinations, including the echocardiographic examination itself, facilities, equipment, reporting, indications, and qualifications of personnel involved in the acquisition

RÉSUMÉ

En mars 2010, le ministère de la Santé et des Soins de longue durée de l'Ontario et l'Association médicale de l'Ontario ont mandaté un groupe de travail pour faire les recommandations en ce qui concerne l'offre et l'agrément des services échocardiographiques en Ontario. Cette commission a entrepris un processus pour examiner tous les aspects de l'offre, de la communication et de l'interprétation des examens échocardiographiques, incluant l'examen échocardiographique en soi, les installations, l'équipement, la communication, les indications et les

In March of 2010, the Ontario Ministry of Health and Long-term Care (MOHLTC) and Ontario Medical Association (OMA) jointly commissioned a Working Group to make recommendations regarding the provision and accreditation of echocardiographic examinations in Ontario. The stated mandates of that group were:

- To review data on the delivery of echocardiography in the hospital outpatient and community (physician office/clinic) sectors;
- To discuss potential options, measures, and initiatives that could be implemented to further improve patient care and appropriateness in the delivery of community-based echocardiography; and
- To make recommendations, including the development of work plans, timelines, and options, in a report to the Physician Services Committee.

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See page 398 for disclosure information.

The Cardiac Care Network of Ontario, with support of the MOHLTC and OMA, undertook the sponsorship of this project. The full text of the recommendations submitted to

and interpretation of studies. The result was development of a set of 54 performance standards and a process for accreditation of echocardiographic facilities, initially on a voluntary basis, but leading to a process of mandatory accreditation. This article, and its accompanying Supplemental Material, outline the mandate, process undertaken, standards developed, and accreditation process recommended.

the Physician Services Committee is provided in the Supplemental Material. This article will summarize the process undertaken, principles applied to the development of standards, and review the accreditation process recommended.

The Process

A primary panel was assembled and met several times in between late 2010 and early 2012. The panel was selected based on expertise and experience in the practice of echocardiography, and was co-chaired by 2 of the authors of this article (A.J.S. and K.J.K.). The panel communicated regularly and received input from representatives of the MOHLTC and the OMA. A secondary panel was assembled consisting of stakeholders nominated by the sponsoring agencies and members of the primary panel. To reflect national standards in practice, the panel was supplemented by 5 physicians from other provinces expert in the practice of echocardiography and experienced in the development of guidelines and accreditation processes. The membership of the primary and secondary panels is outlined in the Supplemental Material.

The process agreed to and undertaken was as follows:

1. The primary panel reviewed and updated the 2005 Canadian Society of Echocardiography/Canadian Cardiovascular Society guidelines document on provision of echocardiography in Canada.¹ In doing so, it considered available new guidelines and evidence, particularly 2 recent relevant reviews^{2,3} and evolving standards of practice. Decisions were arrived at through a consensus process and agreement by all members was achieved.
2. From this review, a set of standards was developed, intended to express the principles of echocardiographic practice in terms that would allow for objective assessment of examinations, reports, facilities, and providers.
3. Based on these standards, the primary panel developed a proposal for implementation of a process for assessment, quality improvement, and eventual accreditation.
4. A primary draft of the standards and recommendations was developed and underwent review by all members of the secondary panel.
5. All commentaries provided by secondary panellists were collated by the Cardiac Care Network of Ontario and reviewed individually by the primary panel. This review was undertaken in a blinded fashion so that primary panellists were unaware of the authorship of any commentary. In this process, more than 300 individual commentaries were reviewed.
6. Based on the review of commentaries received, a second draft was prepared and resubmitted to the secondary panel. All secondary panelists agreed to the content of

qualifications du personnel visé par l'acquisition et l'interprétation d'études. Le résultat a mené à l'élaboration d'un ensemble de 54 normes de performance et d'un processus pour l'agrément des installations échocardiographiques, initialement sur une base volontaire, mais menant à un processus d'accréditation obligatoire. Cet article et ses annexes décrivent le mandat, le processus entrepris, les normes élaborées et le processus d'agrément recommandé.

the second draft and allowed their names to be included. The finalized document was submitted in April 2012 to the Assistant Deputy Minister of Health and Long-term Care.

The Standards

For the purposes of this project, the primary panel defined "standards" as: "demonstrable performance characteristics that provide evidence of quality service provision. In their entirety, standards provide a means of identifying appropriate service and ensuring all patients receive timely and effective assessment."

The final document describes a set of 54 such standards, distributed among the following performance domains:

1. The echocardiographic examination (5 standards described).
2. Echocardiographic facilities, equipment, and procedures (9 standards regarding the transthoracic examination; 7 additional standards for facilities providing transesophageal examinations; 6 additional standards for facilities providing stress echocardiography).
3. The echocardiographic report (6 standards).
4. Personnel involved in the acquisition and interpretation of echocardiographic examinations (12 standards).
5. Indications for echocardiographic examinations (a set of appropriate indications is provided, and 3 standards regarding their incorporation).
6. Quality assurance (6 standards).

A Proposal for Review, Quality Improvement, and Eventual Accreditation of Echocardiographic Facilities

It was recognized that, in order to positively influence patient care and service delivery, methods must be developed whereby standards are actively implemented and thereby influence laboratory processes. In the case of echocardiography, this can occur in 1 of 3 ways.

1. *Self review.* The simple availability of these standards allows all operators of echocardiography facilities to use them to modify their processes and procedures in a way that will better assure optimal service delivery. Developing, accepting, and publishing these standards will hopefully promote that process and thereby enhance quality in and of itself.
2. *Voluntary external review.* This is a process whereby laboratories can choose to engage an external, arms length agency to review their operation with respect to accepted standards and to provide constructive feedback as to their performance. To be effective, such feedback must include

education and practical suggestions as to how full compliance can be achieved.

3. *Mandatory external review.* This is a process whereby all laboratories providing echocardiography would require external accreditation, which would attest that they are achieving all standards. The failure to achieve such external mandatory accreditation would result in the loss of public approval or reimbursement for echocardiography services.

The authors recommend mandatory accreditation of all Ontario echocardiographic facilities. In addition, it is believed that all provincial and territorial medical jurisdictions would benefit from a common approach regarding standards and process for accreditation.

Recognizing that implementation must be carried out in a manner that does not inhibit the provision of echocardiographic services, they advocate a phased implementation, as follows.

Phase 1: Publication and dissemination of these standards. This will provide all echocardiographic facilities a common reference to facilitate review of their procedures. This should be carried out immediately.

Phase 2: Provision of opportunities for voluntary review. Voluntary external review requires a process whereby accepted standards are used to assess the performance of an echocardiography laboratory. To accomplish this, internal and external laboratory review and adjudication of that review by a qualified third party is required. The end result of the process should be the provision of instructive feedback to the laboratory regarding their performance with respect to all of the standards. That review should include suggestions as to how the laboratory can improve its performance with respect to standards in which it is found to be deficient. It is recommended that the period of voluntary review last no longer than 3 years.

Phase 3: Mandatory review and credentialing. Mandatory review or accreditation of echocardiography laboratories must evolve in Ontario. This will require a governmental regulatory framework, the development of which is beyond the scope of this article. However, the implementation process established will need to take into consideration a number of logistic issues, and the following processes are suggested:

1. That an echocardiography review panel be established to oversee assessment of echocardiography laboratories in Ontario.
2. That structured review templates be developed based on the standards outlined in these documents. These templates should provide guidance as to how laboratories can demonstrate and provide evidence with regard to their performance in each standard.
3. That qualified reviewers be engaged to carry out and coordinate assessments of echocardiography laboratories. These reviewers would be qualified and highly experienced in the application of echocardiography. They would assist the laboratory in development of their internal review and coordinate the review with the central panel.

The process for review would therefore take the following steps.

Step 1: During the voluntary phase, the laboratory identifies itself as wishing to undertake review. During the mandatory phase, laboratories would be notified of a scheduled review.

Step 2: The laboratory is provided with instruction and documentation templates necessary for carrying out its internal review.

Step 3: A reviewer is assigned to assist and guide the laboratory in the review process.

Step 4: The material is submitted to the central review panel.

Step 5: A laboratory visit is undertaken by the assigned reviewer and 1 member of the review panel.

Step 6: The review panel assesses the submitted material and results of the laboratory visit. Detailed feedback with respect to performance in all standards is provided to the laboratory, including appropriate recommendations with respect to how the laboratory can improve its performance in areas of deficiency.

Step 7: If necessary, a review visit is scheduled to reassess standards found to be in noncompliance.

Laboratories found to be in full compliance of standards should be entitled to recognition in a variety of ways, including publication on a public Web site and prominent displays within their laboratory and on their reports. It is anticipated that compensation for echocardiographic examinations will eventually be linked to accreditation.

Summary

This article and its accompanying Supplemental Material outline the process followed in developing standards of practice for echocardiography, and suggest a mechanism for the implementation of those standards in practice. This initiative is intended to ensure the provision of appropriate, high quality, and efficiently delivered echocardiographic services. Although developed for application in Ontario, this work has implications for all medical jurisdictions and should promote nationally accepted standards and processes for the performance and compensation of echocardiographic examinations.

Disclosures

The authors have no conflicts of interest to disclose.

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Supplementary Material

To access the supplementary material accompanying this article, visit the online version of the *Canadian Journal of Cardiology* at www.onlinecjc.ca and at <http://dx.doi.org/10.1016/j.cjca.2012.11.024>.