CORRESPONDENCE

A survey of focused cardiac ultrasonography training in Canadian anesthesiology residency programs

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To the Editor,

Focused cardiac ultrasonography (FoCUS) is being increasingly used by anesthesiologists, intensivists, and emergency physicians to assess patients in perioperative and acute care settings.¹ Accordingly, FoCUS training has recently been incorporated in many Canadian anesthesiology residency programs.² Although a recent study demonstrated that FoCUS training in anesthesiology training programs in the United States is uncommon,³ little is known about the penetration of FoCUS in Canadian training programs. Given the value of perioperative FoCUS and the likelihood that it may become a mandatory part of residency training, the purpose of this study was to assess the current state of FoCUS training in anesthesiology residency programs in Canada. After local research ethics committee approval was obtained (June 2015), a survey was sent by mail and e-mail to the 17 program directors of Canadian anesthesiology residency training programs in September 2015.

Of the 17 surveys sent, 13 (77%) were returned. Among them, 12 (92%) programs thought that FoCUS training should be a mandatory part of residency training. The overall percentage (range) of staff anesthesiologists using FoCUS was 12 (3–25) % across all programs. Staff anesthesiologists who regularly using FoCUS were either exclusively or mainly trained in transesophageal echocardiography (TEE) in ten (77%) departments and equally trained in TEE and transthoracic echocardiography in three (23%) departments.

Nine (75%) programs currently have mandatory ($n = 3$, 25%), elective ($n = 3$, 25%), or medicine elective ($n = 3$, 25%) rotations in FoCUS. The remaining three (25%) programs offer teaching in FoCUS but with no formal rotation. Training was supervised exclusively by anesthesiologists in five (42%) programs, by anesthesiologists in combination with cardiologists or intensivists in five (42%) programs, and by cardiologists or intensivists (without involvement of anesthesiologists) in two (17%) programs. Five (42%) programs had set minimum targets for FoCUS studies performed during training. The average (range) target was 49 (25–90) studies. Details of the amount and type of didactic training are presented in the Table. All of the programs with a mandatory rotation had more than 20 hr of didactic training and a required minimum number of studies to be performed. Identified barriers to implementation of a FoCUS program included the lack of manpower ($n = 6$, 46%), expertise ($n = 6$, 46%), a standardized curriculum and standardized training requirements ($n = 5$, 39%), and necessary equipment ($n = 4$, 31%).

At the time of the survey, the availability of FoCUS training in Canadian anesthesiology residency training programs was considerably variable. Program directors do appear, however, to recognize its importance for future anesthesiologists, with a large majority offering formal or elective rotations. Most programs offer at least ten hours of didactic training using a combination of lectures, online resources, bedside teaching, and simulation. Some experts propose that basic FoCUS competence can be achieved with as little as 12 hr of didactic and practical training.⁴ These levels are currently being surpassed by a majority of the programs. Although no minimum requirements for training currently exist for perioperative FoCUS, most programs with a formal rotation meet recent critical care

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Table Characteristics of didactic teaching

Characteristics	Number of Programs (%)
Duration of Didactic Teaching	
1-10 hr	3 (25.0%)
10-20 hr	3 (25.0%)
20-50 hr	5 (42%)
>50 hr	1 (8%)
Modalities of Didactic Teaching	
Lecture	11 (92%)
Online Resource	9 (75%)
Simulation	9 (75%)
Bedside Teaching	9 (75%)
Echo Laboratory	7 (58%)

recommendations⁵ and seem to surpass the suggested necessary portfolio in a recent “call to action” for anesthesiologists.⁶

This study highlights the need for a formal national curriculum and minimum training requirements for FoCUS, which would help with the country-wide adoption of effective FoCUS training in anesthesiology residency programs across Canada. Previous studies have suggested that a lack of proficiency by staff is an impediment to widespread implementation in training programs,³ which appears to be the case in Canada as well. Further efforts are needed to address this lack of proficiency and other identified barriers to implementation. We agree, however, with a recent editorial that the incorporation of FoCUS is achievable and should be a high-priority goal for our specialty training programs.⁷

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