

An Overview of the Development of National Competency Profiles and Certification Procedures for Canadian Sonographers

Safe and effective diagnostic ultrasound practice depends upon a sonographer's ability to carry out defined job tasks in a proficient manner. Level of proficiency is something that normally increases over time, based upon education and experience.

As a certification agency, CARDUP's role is to verify that sonographers entering practice can function safely and effectively. Key questions for us are therefore:

What job tasks must the sonographer be able to carry out?

and

What level of proficiency is acceptable?

Until 2003, the only certification available to sonographers in Canada was the process offered by ARDMS (the American Registry of Diagnostic Medical Sonographers). ARDMS is a widely respected certification agency, but its standards are based upon the needs of the profession in the United States, which are somewhat different from those in Canada (for example, in the US the sonography profession is much larger and practice is much more diversified).

In 2001 CARDUP (with financial support from the Canadian government) undertook a Canada-wide survey of sonography employers to determine their scanning and employment needs. As a result, CARDUP determined that three unique and distinct categories of sonographer would best meet Canadian requirements: the *Generalist Sonographer*, the *Cardiac Sonographer* and the *Vascular Sonographer*.

CARDUP then began a process to develop National Competency Profiles (NCPs) for these sonographer categories. The NCPs were to list, in an integrated fashion, the *competencies* (job tasks and proficiency levels) required of each type of sonographer (on the understanding that there would be some core competencies applicable to all sonographers, and other unique competencies applicable to only one type).

CARDUP partnered with CSDMS and CSVT, as well as sonography educators, to create expert committees which, over a period of about 12 months, drafted competency statements. The competencies were validated by means of a national sonographer survey that determined the importance, and the frequency of use, of each competency in the Canadian workplace.

In 2003 the Boards of Directors of CARDUP and CSDMS approved the first National Competency Profiles, and CARDUP began its certification activities. Also, the NCPs were submitted to the Canadian Medical Association Committee on Conjoint Accreditation, and in 2004 accepted for use in the accreditation of sonography education programs. From that point on, all Canadian-accredited sonography education programs have been required to be designated as Generalist, Cardiac and / or Vascular programs, and to teach the competencies in the corresponding NCP.

In 2004 CARDUP began the development of a Clinical Skills Assessment Process (CSAP), successful completion of which would become a requirement for certification. The verification of clinical skills is a complex and difficult process, but a critical one in terms of safe and effective

practice. Sonography educational programs from across Canada worked with CARDUP on this project, and now these programs carry out comprehensive clinical skill assessment to the national standards required by CARDUP. Especially important, some programs now function as clinical testing sites for foreign-trained sonographers applying for CARDUP certification.

Like any health care profession, sonography is continually developing and it is important that the certification requirements both reflect current needs and position sonographers to respond to new diagnostic approaches. CARDUP's goal is to undertake a complete review of the NCPs every five years – and consequently a re-validation process took place in 2007 – 2008.

A CARDUP / CSDMS Steering Committee oversaw the re-validation, and made recommendations for NCP changes to the Boards of Directors of both organizations. First, the Steering Committee (based on members' own experience) identified competency areas where changes were to be anticipated. Then an on-line survey was used to find out from certified sonographers how frequently various competencies were actually used in their work settings.

Next, sonography employers were asked key questions about how certain competencies currently contribute to departmental effectiveness, and also about how things may change 5-10 years into the future. The results gave the Steering Committee a picture of emerging training needs.

Finally, sonography education programs were consulted about the feasibility of their modifying curricula to include these new competencies.

In March 2008 the CARDUP and CSDMS Boards approved new NCPs that will drive certification and accreditation requirements over the next few years.

CARDUP is now hard at work developing the final pieces of its certification process – written examinations that will work in concert with CSAP to fully assess the knowledge, skills and attributes of certification applicants. The first step will be a written exam for our largest membership category, Generalist Sonographers, which will become operational in 2010. The exam will be blueprinted on the Generalist Sonographer NCP, with content priorities determined by the workplace frequency of examinable competencies. Written exams for Cardiac and Vascular Sonographers will follow for implementation in future years.