POSITION STATEMENT: SAFETY CODE 35

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COMP strongly endorses the provincial and territorial adoption of Health Canada Safety Code 35. Given the continual increase in the amount of diagnostic imaging and corresponding population dose, and the increase in number and complexity of interventional procedures and corresponding risk of individual tissue reactions, the need for radiation safety standards and qualified personnel has never been greater. Development of similar safety codes for nuclear medicine, magnetic resonance imaging, and ultrasound is also strongly recommended.

Executive Summary

Provincial and territorial adoption of Health Canada, Safety Code 35 (SC35) - *Radiation Protection in Radiology – Large Facilities* will bring Canada into alignment with international standards. The COMP Imaging Taskforce is uniquely positioned to assist Health Canada in future safety code initiatives. COMP encourages the use of the taskforce as a resource by provinces and territories as they update their radiation safety and quality control regulations. Creation of analogous guidelines for nuclear medicine, magnetic resonance imaging, and ultrasound is necessary to ensure optimal medical imaging in Canada.

Background

Safety Code 35 (SC35) was published in 2008 and brings Canada's standards in line with those in European countries and the United States. This safety code is a much-needed update of the previous Safety Code 20A (SC20A) published in 1999. SC20A focused on film technology and was severely lacking in information

on digital systems. The adoption of SC35 will reduce patient dose while providing the best quality diagnostic images and a safe work environment.

With the increased use of diagnostic imaging and the parallel increase in volume and complexity of interventional fluoroscopic procedures, there is a greater need for radiation safety experts than ever before. Interventional procedures can cause tissue reactions in individual patients and diagnostic imaging, with its large number of patients, can cause stochastic effects in the population. Furthermore, training in the safe use of fluoroscopy has not kept pace with expanding clinical applications of procedures that may be performed by non-radiologists. SC35 provides guidelines for use by safety and quality assurance personnel that assist in training and privileging programs, setting dose limits, performing dose estimates, and ensuring the dose indicators provided by the equipment are accurate and reliable.

While there is room for improvement within SC35, it does provide an excellent guide for quality control and radiation safety. It defines the requirements of radiologists, medical physicists, biomedical service personnel, medical radiation technologists, and the facility radiation safety officer. The safety code outlines the minimum requirements for quality control and radiation safety. Medical physicists are ideally equipped to identify gaps, determine which parts of the code do not apply in certain scenarios, and can appropriately extend the safety code to address more advanced equipment as it enters the clinic. Through this position statement, COMP is also hoping to set an example for other organizations communicating the importance of SC35 to their members. Through COMP medical physicists can provide organized feedback to Health Canada, and optimize and standardize safety requirements and quality control testing procedures.

Implementation of SC35 will likely increase the amount of testing that many sites will need to perform, but the investment will result directly in improved quality and patient safety. Effective quality control and radiation safety programs reduce healthcare costs by identifying problematic equipment before adverse use. Early identification of problematic equipment helps reduce hospital waiting times caused by improperly functioning equipment and improves patient diagnosis and treatment by ensuring the safe operation of equipment. In

addition, optimizing image quality, while keeping radiation doses to the lowest possible levels, helps reduce the future burden on the health care system, both in the short term by preventing and minimizing tissue reactions, and in the long term by minimizing stochastic effects such as cancer and cardiovascular diseases.

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