You work in a small, free standing ambulatory surgery center. “Dr. R.”, a pain management physician, has just joined the staff. During the monthly staff meeting, your manager announces that OR staff (RN’s and surgical technologists) will be required to operate a c-arm fluoroscope during Dr. R.’s facet joint injections. Although excited about the opportunity to work with a new specialty, you are a little concerned about safely operating an unfamiliar and potentially hazardous piece of equipment. What types of information/resources related to this new role will you need to obtain prior to Dr. R.’s first case? Please provide the evidence-based rationale for your response.

Response:

Just as non-nursing health care providers (unlicensed assistive personnel, physician assistants, etc.) have assimilated some of what have traditionally been considered nursing roles, nurses have also been asked to expand their expertise beyond typical nursing duties. In the United States, the licensing of health professionals is overseen by individual states. “Scope of practice” is defined and regulated by each state board of nursing in their Nurse Practice Act, so this is a good place to start when asked to perform a task that is outside the normal range of duties encountered during a typical work day. It would be impossible for a state to list every task covered-or not in its Nurse Practice Act, but all states base their scope of practice criteria on what was taught in a basic nursing program.

Operating an x-ray imaging machine is included in the curriculum for radiology technologist (RT), not nursing, programs. RT programs typically last 2 years (ASRT, 2009), award an associate’s degree (although certificate and bachelor’s degrees are also available), and cover such fundamentals as positioning, safety, and care and use of medical imaging machines. Although such terms as “mini c-arm” tend to underemphasize the complexity of these devices, operators of fluoroscopy units are held to the same state and federal regulations as all other radiological sources (AORN, 2012, p. 309).

The greatest likelihood of occupational radiation in the OR occurs during fluoroscopy (Vetter, 2010). Therefore, one of the most important patient safety concerns is minimizing operator and patient exposure to unnecessary radiation. Since the radiation dose is directly proportional to the amount of time the x-ray beam is on (Davros, 2007), it is safe to hypothesize that inexperience with the equipment/procedure will result in longer “beam-on” times and larger than normal doses of radiation. On-the-job training may not be the best teaching strategy when taken in this context.

The following additional items should be taken into account in proposing the development of a radiation program:

1. Identify a radiation officer or designee who would ensure compliance with state and federal regulations, distribution of radiation monitoring devices and safety shielding, annual competency validation, development of policies and procedures, and other staff education as necessary to provide safe care for both patients and personnel.

2. Facility and/or individual nurses’ liability insurance may not cover nurses operating medical imaging equipment.
3. Medicare payment is contingent on the setting for the service provided (e.g. outpatient, clinic, physician office, or inpatient), the level of physician supervision, and the involvement of radiologist assistants. Utilizing physician extenders (nurses) who have not been appropriately trained and credentialed may result in Medicare denying payment (Ellenbogen, et al, 2007; Greeson and Pitts, 2011).

4. After state and institution-based regulations have been addressed, the use of Nurse Practitioners and Physician Assistants (Rosenberg et al, 2009; Taylor et al, 2012) who have undergone special training and credentialing may help alleviate the shortage of qualified operating personnel.

Health care trends will continue to challenge existing practitioner roles as the number of qualified health care providers cannot meet consumer needs. The level of training, certification, and licensure will need to be consistent across specialties in order to achieve optimal levels of safe patient care.

References and resources:


