

## Technology for surgery

# Updated AORN RPs for laser safety

Updated AORN recommendations on laser safety cover safe practices wherever lasers are used in the health care facility. The recommendations reflect the new ANSI Z136.3 Safe Use of Lasers in Health Care Facilities standard, expected shortly from the Laser Institute of America.

AORN's revised "Recommended practices for laser safety in perioperative practice settings" were introduced at the AORN Congress in March 2010 in Philadelphia. Key points were covered by laser safety expert Vangie Dennis, BSN, RN, CNOR, CMLSO, administrative director for the Spivey Station Surgery Center, Jonesboro, Georgia.

These are highlights only. Please see the recommended practices (RPs) for complete information.

### Leased laser equipment

Lasers are expensive and specialized, and many facilities choose to rent or lease the equipment. But that does not negate the facility having a laser safety program and assigning a laser safety officer (LSO), Dennis cautioned.

"When facilities bring in a leasing company, they sometimes think a laser safety officer is not needed because the company is the LSO. That's not the case," she said.

AORN's Recommendation I states that a laser safety program should be established for all owned, leased, or borrowed laser equipment in any location where lasers are used in the health care organization.

In addition, the facility's laser safety committee should review activities related to third-party laser systems. The LSO or an appointee should assess any rented or borrowed equipment for compliance with all federal, state, local, and facility requirements. That includes any personnel that leasing companies provide, Dennis noted, pointing out that these individuals have the same accountability and responsibility as the OR staff. Like other vendors in the OR, they need to have a background check and to meet health, safety, and patient privacy standards.

"One issue is how you define their competencies," she said. "You have to be sure those individuals are as competent as they say they are by reviewing the employee's credentials to ensure that the training is reliable and based on the appropriate content."

### Laser safety committee

Recommendation I also says that a "multidisciplinary laser safety committee or safety committee is integral to establishing and monitoring patient safety."

Dennis commented, "The laser safety committee incorporates the entire hospital, not just the OR."

In a facility with a small laser program, the program can report directly to the safety committee, she added.

## **Laser safety specialist**

Under the AORN recommendations, "a laser safety specialist [LSS] or laser resource nurse should be designated and approved by the LSO to oversee safe laser use in each area where a laser is used." That includes, for example, the OR, the eye clinic, neonatal intensive care unit, and any other units where lasers are employed.

The LSS "becomes an extension of the LSO," Dennis said. "It could be a resource nurse or a surgical technologist, but [the person] should be approved by the LSO to oversee safe laser use in the OR."

The LSS is responsible for monitoring compliance with the facility's laser policies, she noted.

For example, if the facility's policy states that laser eyewear will be inspected upon distribution, the LSS must carry out the inspection.

The LSS is also accountable, Dennis explained. "If the LSS distributes the eyewear, and it is not in good condition, and somebody in the OR sustains an eye injury, who would be accountable? The LSS, because that person is an extension of the LSO."

## **Laser specialist in every room?**

Must 2 nurses be present in a room where a laser is used? Dennis says that's the most common question she receives.

Under the AORN recommended practices, the basic principle is that patients and personnel in the laser treatment area should be protected from unintentional exposure from the laser beam.

AORN's recommendation is similar to that in the previous 2004 RPs, stating: "The laser assistant (eg, RN, laser technician) should not have competing responsibilities that would require leaving the laser unattended during active use."

Two related statements:

- "Circulating responsibilities may preclude the ability to assume responsibility for laser operation."
- "The laser user operates the laser for its intended purpose within the user's scope of practice, education and experience."

Dennis explained, "I think the key is to make a determination through a hazard assessment what the safest way is to deliver [the laser beam]."

"If the LSS has a competing responsibility, then it becomes the manager's and the LSO's responsibility to have a second person in the room." An example is a procedure such as a laser laparoscopy in which the RN circulator must manage multiple pieces of equipment, such as irrigators, the electrosurgical system, and insufflator in addition to his or her circulating duties, including documentation. These responsibilities compete with the RN serving as the dedicated laser operator and may cause the laser to be left unattended.

Is it necessary to have a second person on vitrectomy cases using in the eye clinic when a laser is used?

Dennis responds that if the nurse in the room has the ability to inactivate the laser in the case of fiber breakage, "you are abiding by the standard." The key is not to have competing responsibilities.

She also noted that the laser user should have formal education specific to the wavelength, including laser physics, laser safety, tissue interaction, and the laser delivery system.

AORN's Recommendation VIII, which is new, states that "personnel working in laser environments should have demonstrated competency commensurate with their responsibilities." Education topics for the LSO and LSS are outlined. Laser education should be reinforced and competencies validated periodically and when new laser equipment, accessories, or safety equipment is brought into the practice environment.

### **Documenting compliance**

Regarding documentation, Recommendation X, says "documentation should be completed to enable identification of trends and demonstrate compliance with regulatory and accrediting agency requirements."

Among items to be documented are the on/off laser activation and deactivation times for head, neck, and chest procedures.

The rationale is to encourage collaboration among disciplines for the prevention of surgical fires when energy sources like lasers, electrosurgery, and electrocautery are used in the head, neck, and chest area. The fire safety precautions are outlined in the AORN RP as well as in recommendations from ECRI Institute and the Anesthesia Patient Safety Foundation ([www.apsf.org/resources\\_video.php](http://www.apsf.org/resources_video.php)) ❖

### **References**

AORN. Recommended practices for laser safety in perioperative practice settings. In *Perioperative Standards and Recommended Practices*. Denver, CO: AORN, 2011.

Safe Use of Lasers. ANSI Z136.1 (2007). Orlando, FL: Laser Institute of America, 2007. [www.lia.org](http://www.lia.org)

Safe Use of Lasers in Health Care Facilities. ANSI Z136.3 (2005). Orlando, FL: Laser Institute of America, 2005.