**Section 335.9040 Training for Imaging and Localization Studies**

Except as provided in Section 335.9160, a licensee shall require the authorized user of unsealed radioactive material for the uses authorized under Section 335.4010 not requiring a written directive to be a physician who:

a) Is certified by a medical specialty board whose certification process has been recognized by the Agency, the U.S. Nuclear Regulatory Commission, or an Agreement State. To have its certification process recognized, a specialty board shall require all candidates for certification to meet the following requirements:

1) Complete 700 hours of training and experience in basic radionuclide handling techniques and radiation safety applicable to the medical use of unsealed radioactive material for imaging and localization studies as described in subsection (c); and

2) Pass an examination administered by diplomates of the specialty board, that evaluates knowledge and competence in radiation safety, radionuclide handling and quality control; or

b) Is an authorized user who meets the requirements of Section 335.9050 and meets the requirements in subsection (c)(1)(B)(vii) or equivalent U.S. Nuclear Regulatory Commission or Agreement State requirements; or

c) Has successfully completed 700 hours of training and experience, including 80 hours of classroom and laboratory training, in basic radionuclide handling techniques applicable to the medical use of unsealed radioactive material for imaging and localization studies.:

1) The training and experience shall include at a minimum:

A) Classroom and laboratory training in the following areas:

i) Radiation physics and instrumentation;

ii) Radiation protection;

iii) Mathematics pertaining to the use and measurement of radioactivity;

iv) Chemistry of radioactive material for medical use;

v) Radiation biology; and

B) Work experience under the supervision of an authorized user who meets the requirements in this Section, Section 335.9160 or Section 335.9050, together with subsection (c)(1)(B)(vii), or equivalent U.S. Nuclear Regulatory Commission or Agreement State requirements, involving:

i) Ordering, receiving and unpacking radioactive materials safely and performing the related radiation monitoring;

ii) Performing quality control procedures on instruments used to determine the activity of dosages and performing checks for proper operation of survey instruments;

iii) Calculating, measuring and safely preparing patient or human research subject dosages;

iv) Using administrative controls to prevent a medical event involving the use of unsealed radioactive material;

v) Using procedures to contain spilled radioactive material safely and using proper decontamination procedures;

vi) Administering dosages of radioactive drugs to patients or human research subjects;

vii) Eluting generator systems appropriate for preparation of radioactive drugs for imaging and localization studies, measuring, and testing the eluate for radionuclidic purity and processing the eluate with reagent kits to prepare labeled radioactive drugs; and

2) Has obtained written attestation that the individual has satisfactorily completed the requirements described in subsection (c)(1) and is able to independently fulfill the radiation safety-related duties as an authorized user for the medical uses authorized under Sections 335.3010 and 335.4010. The attestation shall be obtained from either:

A) A preceptor authorized user who meets the requirements in this Section, Section 335.9160 or Section 335.9050 together with subsection (c)(1)(B)(vii) or equivalent U.S. Nuclear Regulatory Commission or Agreement State requirements; or

B) A residency program director who affirms in writing that the attestation represents the consensus of the residency program faculty where at least one faculty member is an authorized user who meets the requirements in this Section, Section 335.9160 or Section 335.9050, together with subsection (c)(1)(B)(vii) or equivalent U.S. Nuclear Regulatory Commission or Agreement State requirements, and concurs with the attestation provided by the residency program director. The residency training program shall be approved by the Residency Review Committee of the Accreditation Council for Graduate Medical Education, the Royal College of Physicians and Surgeons of Canada, or the Council on Postdoctoral Training of the American Osteopathic Association and shall include training and experience specified in subsections (c) and (c)(1).

AGENCY NOTE: Specialty boards whose certification processes have been recognized by the Agency, the U.S. Nuclear Regulatory Commission or an Agreement State will be posted on the NRC's website.

(Source: Amended at 46 Ill. Reg. 966, effective December 21, 2021)