

# PUBLIC SUBMISSION

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Training and Experience Requirements for Different Categories of Radiopharmaceuticals

**Comment On:** NRC-2018-0230-0001

Training and Experience Requirements for Different Categories of Radiopharmaceuticals

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## General Comment

See attached file(s)

## Attachments

updated NMAA as AU

A mid-level provider trained specifically in all aspects of radiation safety, radiation biology, radiation physics, instrumentation and radiation protection is now available in the position of the Nuclear Medicine Advanced Associate (NMAA). Functioning as clinical mid-level providers, the NMAA has extensive laboratory training for the use of radiopharmaceuticals in conjunction with a two year clinical internship which includes patient assessment, and theranostics. The NMAA is not a technologist, but a physician extender in Nuclear Medicine who has been trained at the Master's level, tested, and board certified in advanced nuclear medicine practice. The NMAA is required to complete 48 hours of continuing education annually, 24 hours are at the physician level CME. This training and practical experience would make those board certified as Nuclear Medicine Advanced Associates ideal candidates for authorized users. The NMAA has met the qualifications required under 10 CFR 35.390 to become authorized users.

As the goal of 10CFR 30.33(a) (3) of the NRC regulations is to ensure authorized users "protect health and minimize danger to life or property", the NMAA will add an increased level of protection and professionalism. With unsurpassed practical experience in receiving, shipping and administering all radiopharmaceuticals, addition of the NMAA as authorized user will result in a decline of: violations, patient concern, and physician work load.

**Whereas proposed language could be altered to now state:**

*Except as provided in § 35.57, the licensee shall require an authorized user of unsealed byproduct material for the uses authorized under § 35.200 and 35.100 to be a physician or **Nuclear Medicine Advanced Associate** who—*

*(a) Is certified by a medical specialty board whose certification process has been recognized by the Commission or an Agreement State and who meets the requirements in paragraph (c)(2) of this section. (The names of board certifications which have been recognized by the Commission or an Agreement State will be posted on the NRC's Web page- **recognizing the NMTCB as a specialty board.**) To have its certification process recognized, a specialty board shall require all candidates for certification to:*

*(1) Complete 700 hours of training and experience in basic radionuclide handling techniques and radiation safety applicable to the medical use of unsealed byproduct material for imaging and localization studies as described in paragraphs (c)(1)(i) through (c)(1)(ii)(G) of this section; and*

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

*(b) Is an authorized user under § 35.390 and meets the requirements in § 35.290(c)(1)(ii)(G), or equivalent Agreement State requirements; or*

*(c)(1) Has completed 700 hours of training and experience, including a minimum of 80 hours of classroom and laboratory training, in basic radionuclide handling techniques applicable to the medical use of unsealed byproduct material for imaging and localization studies. The training and experience must include, at a minimum-*

*(i) Classroom and laboratory training in the following areas—*

*(A) Radiation physics and instrumentation;*

*(B) Radiation protection;*

*(C) Mathematics pertaining to the use and measurement of radioactivity;*

*(D) Chemistry of byproduct material for medical use;*

*(E) Radiation biology; and*

*(ii) Work experience, under the supervision of an authorized user who meets the requirements in §§ 35.57, 35.290, or 35.390 and 35.290(c)(1)(ii)(G), or equivalent Agreement State requirements, involving—*

*(A) Ordering, receiving, and unpacking radioactive materials safely and performing the related radiation surveys;*

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

*(C) Calculating, measuring, and safely preparing patient or human research subject dosages;*

*(D) Using administrative controls to prevent a medical event involving the use of unsealed byproduct material;*

*(E) Using procedures to safely contain spilled radioactive material and using proper decontamination procedures;*

*(F) Administering dosages of radioactive drugs to patients or human research subjects; and*

*(G) 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, signed by a preceptor authorized user who meets the requirements in §§ 35.57, 35.290, or 35.390 and 35.290(c)(1)(ii)(G), or equivalent Agreement State requirements, that the individual has satisfactorily completed the requirements in paragraph (a)(1) or (c)(1) of this section and has achieved a level of competency sufficient to function independently as an authorized user for the medical uses authorized under §§ 35.100 and 35.200*

Except as provided in § 35.57, the licensee shall require an authorized user of unsealed byproduct material for the uses authorized under § 35.300 to be a physician or non-physician nuclear medicine advanced associate, who—

(a) Is certified by a medical specialty board whose certification process has been recognized by the Commission or an Agreement State and who meets the requirements in paragraphs (b)(1)(ii)(G) and (b)(2) of this section. (Specialty boards whose certification processes have been recognized by the Commission or an Agreement State will be posted on the NRC's Web page.) To be recognized, a specialty board shall require all candidates for certification to:

(1) Successfully complete residency training/internships in a radiation therapy or nuclear medicine training program or a program in a related medical specialty. These residency training programs/internships must include 700 hours of training and experience as described in paragraphs (b)(1)(i) through (b)(1)(ii)(E) of this section. Eligible training programs must 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 Committee on Post-Graduate Training of the American Osteopathic Association; for nuclear medicine advanced associates, clinical internship requires must be approved by the NMTCB certification board; and

(2) Pass an examination, administered by diplomates of the specialty board, which tests knowledge and competence in radiation safety, radionuclide handling, quality assurance, and clinical use of unsealed byproduct material for which a written directive is required; or

(b)(1) Has completed 700 hours of training and experience, including a minimum of 200 hours of classroom and laboratory training, in basic radionuclide handling techniques applicable to the medical use of unsealed byproduct material requiring a written directive. The training and experience must include-

(i) Classroom and laboratory training in the following areas—

(A) Radiation physics and instrumentation;

(B) Radiation protection;

(C) Mathematics pertaining to the use and measurement of radioactivity;

(D) Chemistry of byproduct material for medical use; and

(E) Radiation biology; and

(ii) Work experience, under the supervision of an authorized user who meets the requirements in §§ 35.57, 35.390, or equivalent Agreement State requirements. A supervising authorized user, who meets the requirements in § 35.390(b), must also have experience in administering dosages in the same dosage category or categories (i.e., § 35.390(b)(1)(ii)(G)) as the individual requesting authorized user status. The work experience must involve—

(A) Ordering, receiving, and unpacking radioactive materials safely and performing the related radiation surveys;

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

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

(D) Using administrative controls to prevent a medical event involving the use of unsealed byproduct material;

(E) Using procedures to contain spilled byproduct material safely and using proper decontamination procedures;

(F) [Reserved]

(G) Administering dosages of radioactive drugs to patients or human research subjects involving a minimum of three cases in each of the following categories for which the individual is requesting authorized user status—

(1) Oral administration of less than or equal to 1.22 gigabecquerels (33 millicuries) of sodium iodide I-131, for which a written directive is required;

(2) Oral administration of greater than 1.22 gigabecquerels (33 millicuries) of sodium iodide I-1312;

(3) Parenteral administration of any beta emitter, or a photon- emitting radionuclide with a photon energy less than 150 keV, for which a written directive is required; and/or

(4) Parenteral administration of any other radionuclide, for which a written directive is required; and

(2) Has obtained written attestation that the individual has satisfactorily completed the requirements in paragraphs (a)(1) and (b)(1)(ii)(G) or (b)(1) of this section, and has achieved a level of competency sufficient to function independently as an authorized user for the medical uses authorized under § 35.300. The written attestation must be signed by a preceptor authorized user who meets the requirements in §§ 35.57, 35.390, or equivalent Agreement State requirements. The preceptor authorized user, who meets the requirements in § 35.390(b) must have experience in administering dosages in the same dosage category or categories (i.e., § 35.390(b)(1)(ii)(G)) as the individual requesting authorized user status.

[67 FR 20370, Apr. 24, 2002, as amended at 68 FR 19325, Apr. 21, 2003; 68 FR 75389, Dec. 31, 2003; 69 FR 55738, Sep. 16, 2004; 70 FR 16364, Mar. 30, 2005; 71 FR 15009, Mar. 27, 2006; 74 FR 33905, Jul. 14, 2009]

2 Experience with at least 3 cases in Category (G)(2) also satisfies the requirement in Category (G)(1)

Non-physician nuclear medicine advanced associates may be recognized as authorized users, however a supervising authorized user physician must also review and approve the written directive for unsealed byproduct material. The supervising physician AU must delegate this authority to the NMAA in a delegation of services agreement. When signing a written directive, the NMAA is acting on behalf of and as an agent for the supervising physician AU.

Before a NMAA can sign written directives, the supervising physician AU must first prepare and adopt a written practice specific formulary and protocols that specify all criteria for the use of a particular radiopharmaceutical and any contraindications. The radiopharmaceuticals listed constitute the formulary and may only include radiopharmaceuticals that are appropriate for use in the practice.

Any variations require advance approval from the supervising physician AU for the particular patient before the NMAA may sign the written directive.

Unsealed byproduct material used includes:

Oral administration of less than or equal to 1.22 gigabecquerels (33 millicuries) of sodium iodide I-131

Oral administration of greater than 1.22 gigabecquerels (33 millicuries) of sodium iodide I-131

Parenteral administration of any beta emitter, or a photon-emitting radionuclide with a photon energy less than 150 keV, for which a written directive is required; and/or

Parenteral administration of any other radionuclide, for which a written directive is required.

Respectfully submitted,

Vicki LaRue