



Arkansas Department of Health

Radioactive Materials Program
4815 West Markham Street, Slot H-30 • Little Rock, Arkansas 72205-3867 • Telephone (501) 661-2173
Governor Mike Beebe
Paul K. Halverson, DrPH, FACHE, Director and State Health Officer

ARKANSAS INFORMATION NOTICE 11-01

To: All Arkansas Medical Radioactive Material Licensees using Iodine-131 Sodium Iodide

From: Jared Thompson, Program Manager
Radioactive Materials Program

Date: March 4, 2011

Subject: Release of Iodine-131 therapy patients under RH-8420 to locations other than private residences

This Information Notice (IN) is to advise licensees conducting Iodine-131 Sodium Iodide therapy greater than 33 millicuries of the Department's policy on the release of these patients under RH-8420 to locations other than private residences.

Background

RH-8420 of the Rules and Regulations for Control of Sources of Ionizing Radiation was developed with the intent to create a regulation that would allow licensees to release patients where the dose to third parties was not likely to exceed 500 mrem. As regulatory guidance makes clear, the Department anticipated that the 500 mrem standard, in contrast to the standard of 100 mrem generally acceptable to the public under RH-1208.a.1., would apply principally to the patient's family or other caregivers, typically in a home setting. (See "Arkansas' Standard for Radiological Protection for Release of Patient Administered I-131 Sodium Iodide," referenced in RH-8420.a.2. This document is available upon request.)

The regulations require that oral and written instructions on how to keep doses as low as reasonably achievable (ALARA) be given to the released individual or the individual's parent or guardian. To develop instructions adequate to meet this requirement, licensees need to analyze each patient's specific circumstances to determine the appropriate recommendations to give to the patient/caregiver prior to the patient being released. Reportedly, the Nuclear Regulatory Commission is aware of continuing concerns regarding instances when these patients in question are being released to hotels or motels.

Summary

RH-8420 permits a licensee to authorize the release from its control of any individual who has been administered Iodine-131 as Sodium Iodide if (1) the total patient concentration has been determined to be 33 millicuries or less or (2) if the total effective dose equivalent to any other individual from exposure to the released individual is not likely to exceed 500 mrem and criteria outlined in "Arkansas' Standard for Radiological Protection for Release of Patient Administered I-131 Sodium Iodide" have been met. Although release to family or other caregivers in a home setting is a longstanding practice by most licensees, current regulations neither authorize nor restrict release of patients to particular destinations. However, in all cases, the patient must meet the release criteria sanctioned in RH-8420.a.2. Licensees must provide sufficient

instructions to patients which, if followed, will assure that doses to other individuals will be ALARA. Licensees therefore must consider the destination (such as a private home, apartment, hotel, dormitory, etc.) to which a patient will be released and consider the potential for exposures to others, to assure instructions compliant with RH-8420 are provided to the patient.

Although RH-8420 does not expressly prohibit the release of the patient to a location other than a private residence, the Department strongly discourages this practice because it can result in radiation exposures to members of the public for which the licensee may not be able to fully assess compliance with RH-8420.a. and may result in doses which are not ALARA. Licensees are reminded that the ability of the licensee to provide adequate instructions under RH-8420.c. may depend upon the licensee's consideration of the destination to which the patient will be released. When the licensee is aware of the patient's destination, the licensee can best estimate the likely cumulative exposures to other members of the public (e.g., hotel workers and guests) then direct appropriate protective measures by way of the patient instructions.

When a patient is released under RH-8420 to a private residence, the patient is likely able to fully describe details of the living situation that allow a licensee to make reasonable estimates of exposures to other individuals. The Department recognizes, however, that there may be infrequent cases in which a patient eligible for release will be adamant on not going to a private residence or being hospitalized and will select an alternative location (e.g., hotel, etc.) as their post-therapy destination. Even so, licensees must provide adequate instructions to assure that, if followed, the dose to other individuals from the released patient meets the ALARA requirement.

While not specifically required by RH-8420, as part of a licensee's approach for determining safe patient release, a licensee may choose to encourage patients who share living space with individuals whose exposure to radiation may pose a higher risk (e.g., young children and pregnant females) to temporarily relocate such individuals to alternative locations. Criteria put forth in "Arkansas' Standard for Radiological Protection for Release of Patient Administered I-131 Sodium Iodide," though, does require that if living conditions may result in radiation exposure of small children or others that depend on the patient for care, then the patient must be admitted for treatment as an inpatient.

As a reminder, in accordance with RH-8420.e., a record of the basis for authorizing the release must be maintained.

Also, RH-8420.c. lists specific requirements for release instructions in regards to children and breast-feeding infants.

This IN requires no specific action or written response. If you have any questions regarding this notice, please contact the Radioactive Materials Staff at (501) 661-2173.

This information is provided as a result of the Nuclear Regulatory Commission's Regulatory Issue Summary 2011-01 dated January 25, 2011 and entitled "NRC Policy on Release of Iodine-131 Therapy Patients Under 10 CFR 35.75 to Locations Other Than Private Residences." A copy of this RIS is available for your review upon request.