



Information Notice ORH 2009-01

**DATE:** June 29, 2009

**TO:** Medical Licensees Authorized Therapeutic Use of Iodine-131

**FROM:** Office of Radiological Health

**SUBJECT:** **Guidance on Release of Patients Administered Therapy Quantities of Radioactive Iodine-131**

In January, 1997, the NRC amended the patient release criteria in Title 10 of the Code of Federal Regulations, Section 35.75 (10 CFR 35.75) "Release of Individuals Containing Unsealed Byproduct Material or Implants Containing Byproduct Material". Release criteria were previously activity-based or dose-based. These were replaced with limits based on projected radiation dose to other individuals exposed to the patient released after therapeutic administration of a radionuclide, such as oral sodium iodine-131.

Later work, such as ICRP Publication 94, *Release of Patients after Therapy with Unsealed Radionuclides, 2004*, warns that the internal dose to the thyroid of infants and young children who come into contact with a patient who has been administered therapy quantities of I-131 has the potential of being much greater than the dose from external exposure. That is, the thyroid dose to children in the household due to exposure to contaminated bodily fluids (saliva) of a radioiodine therapy patient during the first few days after patient release was significantly underestimated when the release criteria were first amended in 1997.

For this reason, the physician should give the released radioiodine therapy patient clear release instructions, to be followed for a specific period of time. That period of time would be determined by the physician, depending on the amount of iodine-131 administered, and would typically be for two to seven days following treatment. In certain cases the patient should not be released for a period after treatment, particularly if exposure to sensitive groups - young children or infants will result.

Release instructions should include, but not be limited to:

1. Avoid direct or indirect contact with infants, young children or pregnant women. Have these family members stay outside the home with other relatives if possible. If they are in the home, keep a distance of at least three feet.
2. Use separate bed and bathroom from spouse and other family members.
3. Keep bathroom especially clean. Flush 2 or 3 times after each use. Wash hands

thoroughly after each use.

4. Avoid prolonged contact with young children or pregnant women outside the home as well. Keep a distance of at least six feet.
5. Don't use public transportation.

To avoid sending iodine therapy patients home, do **NOT** advise patients to go to a hotel. A hotel presents substantial probability of close contact with infants, young children, pregnant women, and of course the general public. In a serious, and not at all implausible case, a patient could have their room or dining area cleaned by a pregnant woman who could come into very close contact with radioiodine-containing-bodily fluids.

enclosure:

NRC REGULATORY ISSUE SUMMARY 2008-11. "PRECAUTIONS TO PROTECT CHILDREN WHO MAY COME IN CONTACT WITH PATIENTS RELEASED AFTER THERAPEUTIC ADMINISTRATION OF IODINE-131" dated May 12, 2008

