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**NRLSD BULLETIN NO. 91-3**

**HOSPITAL CARE AND HANDLING OF  
RADIOACTIVE PATIENTS**

**A. ADDRESSEES**

All licensees using radiopharmaceuticals for therapeutic purposes.

**B. PURPOSE**

This Bulletin is issued to explain the provision of regulatory requirements of Section 17(c) of CPR Part 2 requiring each licensee to provide adequate clinical facilities for patients receiving radiopharmaceuticals for therapy and requiring hospitalization. This section also implies that licensees must provide radiation safety instructions and precautions for the protection of its hospital staff attending to radioactive patients, the public and the radioactive patient as well.

**C. DESCRIPTION OF CIRCUMSTANCES**

It had been noted during regulatory inspections of medical clinics and hospitals that the observance of radiation safety in the performance of radiotherapy procedures had been inadequate. Some observations that were noted were the following:

1. Some attending physicians were not wearing any personnel monitoring devices like film badges or pen dosimeters;
2. Some attending physicians even instructed and allowed patients' relatives or companions to administer the radioisotope to the patient;
3. Non-radiation workers, like janitors, were allowed to do cleaning chores in the radioactive patient's room without proper instructions from the RHSO;
4. Some radioactive patients were confined in hospital wards assigned for non-radioactive patients;
5. Some radioactive patients occupied private rooms that did not have facilities needed for these types of patients.

These observations indicate potential failure of the radiation safety program of licensees.

## **D. DISCUSSIONS**

To comply with Section 17(c) of CPR Part 2, the following procedures to enforce safety in the administration of radiopharmaceuticals will serve as guidance for licensee's compliance to the regulations.

### **1. Hospitalization**

Safety precautions must be followed when radioactive patients must be hospitalized until the amount of radioactivity in them is low enough to allow their release or discharge from the hospital. For I-131 therapy, hospitalization is required if the activity administered to the patient is equal or greater than 15 mCi, or if the dose rate at 1 meter distance from the radioactive patient is equal or greater than 2.5 mR/hr.

### **2. Dedicated Room**

When possible, each patient receiving radiopharmaceutical for therapy and is hospitalized shall be provided with a dedicated room furnished with private toilet and bathroom, and entrance door posted with appropriate radiation warning sign. Floors and walls should have smooth and non-absorbent surfaces which can be easily cleaned. Floor coverings (e.g., PVC) and surface finishes (e.g., wax polish, paint) should be removable for decontamination purposes, if necessary. The room should have sufficient shielding to reduce radiation levels in the adjacent rooms that may be occupied.

Areas and fixtures in the room and the toilet (e.g. telephone, refrigerator, door knobs, faucet, flush, etc) that are more likely to be contaminated must be covered with protective material, e.g., plastic sheet, to catch any contamination from handling or from sputum, vomitus or urine.

The patients' room must be located as far away from the nursing station and from hallways that may be congested with people.

The room vacated by a radioactive patient must not be occupied by a non-radioactive patient until the RHSO has certified it to be free from contamination or has conducted decontamination activities if required, and issued a written order for new occupancy.

### **3. Radiological Health and Safety Officer (RHSO)**

The RHSO must make daily visits on the patient to conduct an overall radiological assessment. Records of such visits must be attached or incorporated in the patient's chart. Any event, problem, or unforeseen circumstances involving the radioactive patient must be reported to the RHSO and reports there to must be incorporated in a log book/patient's chart.

Radiation survey of the room and the surrounding areas must be conducted immediately after administration of the therapeutic dosage of radioactive material. Exposure rates shall be measured at bedside, 1 meter away from the patient and at the door. The RHSO must determine how long visitors may remain outside a delineated area which shall be posted on the patients' chart and on the door. He must conduct daily monitoring of the room and the surrounding areas and recalculate permitted times for visitors. The form: **Nursing Instructions to Radioactive Patient** must be filled up and completed immediately upon the confinement of the patient. A copy of the filled-up form shall be kept with the patient's chart.

When the patient is discharged, the room must be monitored for contamination, and decontaminated if so required. Clearance for the consequent use of the room must be issued by the RHSO.

#### **4. Authorized User**

The authorized user or the physician must conduct regular assessment of the patient to determine potential radiation effects on the patient other than that intended by the therapy procedures. Any potential effects must be recorded and evaluated.

#### **5. Nursing Care**

The nurse/s who will be attending to hospitalized radioactive patients must have basic knowledge on radiation protection and must be properly trained to handle such patients.

The nursing staff must be instructed on the details of the nature and activity of the radioactive substances, the time and date of administration, and any relevant instructions for nurses and visitors.

The nurses must be provided with film badges or TLDs, and pocket ionization chambers, if possible.

Nurses must limit their time spent near the radioactive patient. Special restrictions must be noted on the patient's chart by the RHSO. Nurses must become familiar with the RHSO's instructions or restrictions before attending to the patient.

#### **6. Technologists/technicians**

Attending nuclear medicine technologists/technicians must wear disposable rubber or plastic gloves when handling urinals, bedpans, emesis basins, etc. After use, they must dispose the gloves in the designated radioactive waste container then wash their hands.

## **7. Visitors**

The RHSO must delineate the area where visitors can approach the patient and limit the visiting time in order to minimize the visitor's exposure dose. Visitors below 18 years old and pregnant women are only permitted with the permission and instructions of the RHSO. Standard hospital rules for visitors must be followed.

## **8. Radioactive Wastes Disposal**

Whenever possible, only disposable items shall be used in attending to radioactive patient. All used disposable plates, cups, eating utensils, tissue paper and other similar waste items must be collected into tagged plastic bags and placed in designated waste containers. The waste materials shall be removed from the room daily, checked for contamination and stored to decay in the radioactive waste storage room.

Non-disposable items, such as linens, hospital gowns, laundry used by the radioactive patient shall be contained and sealed in plastic bags. After checking for contamination, the items may be washed for normal use, stored to decay, or decontaminated, as may be appropriate.

## **9. Release of Patients**

The patient can be discharged if the radiation level at one meter from the patient is less than 2.5 mR/hr. Even if the patient will be discharged, he must not come in contact with children or pregnant women.

## **E. REQUIRED LICENSEE ACTION**

Strict compliance of the requirements of Section 17(c) of CPR Part 2 is required in this bulletin. Licensees shall inform the Institute of the actions taken to comply with this Bulletin within 60 calendar days after receipt hereof.

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