

# POLICY : RADIOGRAPHIC SERVICES

ITEM B-H (3-2003) POLICY ON RADIOGRAPHIC SERVICES  
MC 30.6.2004

## RESOLVED:

1. **That** the policy on Radiographic Services attached as **Annexure 'A'** to the report **BE APPROVED**.
2. **That** the financial implications of the policy for Council **BE CLEARLY** identified before the policy is implemented and that a further report **BE SUBMITTED** thereon.



**Ekurhuleni**  
METROPOLITAN MUNICIPALITY

# **POLICY ON RADIOGRAPHIC SERVICES**

## POLICY FOR RADIOGRAPHIC SERVICES

### 1. PURPOSE

The purpose of this policy is to:

- 1.1 To provide a uniform standard for x-rays services in facilities of Ekurhuleni Metropolitan Council.
- 1.2 Provide guidelines for the protection of patients and radiographic personnel, and ensure safe limits of radiation exposure and performance standards for listed electronic products.
- 1.3 Ensure compliance with legal aspects of radiation control.

### 2. BACKGROUND

Radiology refers to the use of X-rays as a tool for diagnostic purposes. Some conditions such as fractures, respiratory conditions (pneumonia pleural effusion) intestinal obstruction are diagnosed clinically and confirmed by X-ray.

X-rays are useful if used responsibly. Unnecessary or excessive exposure to X-rays can cause cancer or lead to abnormalities in the unborn child and cause skin burns. X-rays should, therefore, be used with caution and both patients and personnel (radiographer/dark room assistants) should be protected from unnecessary exposure to radiation.

The main reason is to ensure that adequate measures are taken to guard the user/patients and community from adverse effects of radiation.

Most disestablished local authorities had no X-ray services. Only a few had either mobile units or fixed facilities equipped only to take miniature x-rays.

The Directorate of Radiation Control carries out a program to control radiation so that optimal balance between risks and benefits of radiation can be achieved.

The X-ray facilities are both fixed and mobile

### 3. LEGAL FRAMEWORK

- Health Act 1977 (No. 63 of 1977)
- Occupational Health and Safety Act 1993 (No. 85 of 1993)
- Nuclear Energy Act 1982 (No. 92 of 1982)
- Hazardous Substances Act 1973 (Act 15 of 1973)

### 4. APPLICATION GUIDELINES AND PROCEDURES

- 4.1 This policy shall apply to all facilities providing radiographic services in Ekurhuleni Metropolitan Municipality.
- 4.2 There should at least be one Radiographer per service delivery region

- 4.3 Only qualified persons who are registered as such with the Health Professions Council of South Africa and the Department of Health as Radiation workers should provide radiographic services.
- 4.4 These services shall be provided by facilities that are safe and comply with set standards for provision of x-ray services.
- 4.5 No unauthorized persons may be allowed in the X-ray room.
- 4.6 Appropriate warning signs must be displayed on the X-ray facilities.
- 4.7 A nurse practitioner shall make requests for x-rays in the absence of a medical practitioner. The request should be made using x-ray request forms provided for this purpose. Such request forms shall contain the following information:
  - Patients name and surname
  - Age
  - Registration number
  - Date of request
  - Reasons for request including provisional diagnosis
  - X-rays and views required
  - Nurses/Doctors name (in full) and signature
  - Indicate if patient is pregnant
  - Previous X-rays taken
  - Ask if patient is pregnant
- 4.8 Only bacteriology should be used to identify infectious TB patients. No x-rays shall be taken routinely for patients with TB except where extra - pulmonary TB (non lung TB) is suspected.
- 4.9 The over use of x-rays is discouraged as the primary means to confirm the diagnosis of Tb because it does not tell whether a patient is infectious, and it is difficult to distinguish between active TB and other lung diseases or scarring. This leads to over diagnosis so that health workers could be treating many patients that do not have active TB. More importantly, energies should be concentrated on curing infectious TB patients to stop the spread of this disease.
- 4.10 Undue exposure to x-rays should be avoided as far as possible in pregnant women. A warning should be placed at the facility requesting pregnant women to inform radiographer of their pregnancy status especially during the first trimester (1st three or four months) of pregnancy, when dangers of radiation to the unborn are most likely.
- 4.11 Extreme care should be taken to prevent patients, radiographers and other radiographic staff from unnecessary exposure to radiation by using the recommended protective lead aprons, shields, lead lined cubicles, barium plaster on wall and lead lined doors.
- 4.12 Radiographers and permanent assistants should wear dosimeters (film badges) at all times which should be submitted monthly to the South African Bureau of Standards (SABS) Radioprotection Division for determining the quantity of radiation exposure. They should also wear lead aprons to protect themselves.
- 4.13 Examinations should be made for all workers exposed to radiation with special emphasis on eyes, urine, hands and thyroid.

- 4.14 Radiographers should have Full Blood Counts and differential white cell counts done yearly and abnormal results should be reported and acted upon.
- 4.15 All x-ray facilities should be licensed and registered with Directorate: Radiation Protection (Control) in accordance with the Hazardous Substances Act of 1973t.
- 4.16 All facilities and equipment should be inspected annually by the SABS Directorate Radiation Protection to prevent radiation leakages and may not be utilized until faults discovered during inspection have been corrected.
- 4.17 All equipment should be maintained regularly according to maintenance contracts and in line with the manufacturer's recommendations. EOSY every 6 months: X-ray film processors every 3 months.
- 4.18 The machine serial number must be displayed on the X-ray machine.
- 4.19 Information on X-ray facilities should be submitted annually to the Department of Health especially if changes are made on the equipment.

#### **4.20 Mobile X-ray units: The following will apply**

The medical use of the mobile x-ray unit is limited to radiological examination of the chest only.

Mass miniature radiographs may not be undertaken on persons under the age of 14 or pregnant women

The electrical requirements for the proper functioning mobile X-ray unit should have the following:

- Single phase supply- not wired to an earth –leakage relay system
- Maximum 250 Volts, minimum 210 Volts
- 30-60 Amps – required for X-rays
- 16mm Cable (3 care)
- Wall socket with conduit box
- Mains impedance of max ½

Any adult assisting with the X-raying of children should wear protective apron.

One patient one radiation. No queues in the X-ray room.

## **5. ROLES**

### **5.1 Ekurhuleni Metropolitan Municipality**

- 5.1.1 To ensure that staff employed to provide the radiographic services are appropriately qualified.
- 5.1.2 Provision of resources for the radiographic services.
- 5.1.3 Ensure that the radiographic service is practised within the provided legislation.
- 5.1.4 Ensure that employed staff renews their annual registration with the Health Professions Council of South Africa.
- 5.1.5 Keep a register of all x - ray facilities within the region.

## 5.2 National Department of Health

5.2.1 Must conduct a regular programme of inspection of all facilities and equipments used in the provision of radiographic services.

5.2.2 Must issue licenses to institutions as per the requirements of the Act.