

## **Diagnostic X-ray Centre/Dental X-Ray/OPG Centre:**

A Diagnostic X-ray/Dental X-ray/ OPG centre shall be defined as a facility with the following minimum requirements as listed in sections A to G below:

- A. Personnel**
- B. Services**
- C. Premises - Physical Design, Layout, Furnishing and Ancillary Facilities**
- D. Equipment Devices and Supplies**
- E. Safety and Security**
- F. Schedules**
- G. Records**

### **A. Personnel**

The minimum qualification for the practitioner in charge shall be

- A registered Radiographer (2 years post qualification experience and registered with Allied Health Professions Council).

The addition staff

- Radiographer/attendant

### **B. Services**

- Diagnostic X-ray
- Dental X-ray
- OPG
- Any other requirement that may be prescribed by the Board.

### **C. Premises – Physical Design, Layout, Furnishing and Ancillary Facilities**

- Information desk
- A waiting and reception area; separate from the radiation area
- Standard X-ray room with walls made of 6 inches-thick blocks and lead-coated doors;
- Room size approximately 14 X 14 feet for housing the X-ray Machine & dark room size 8X8 feet waiting area, separate from the radiation area.
- X-ray tube should not be facing the inhabited area

- Provision for changing room.
- A protective cubicle;
- One sizeable processing room equipped with a set of manual processors, including a drier;
- Backup of Generator, UPS, emergency light
- Washable floors with floor drains
- Clean patients' toilet and bath facilities with adequate water supply;
- Adequate general water supply;
- Constant electricity supply with alternative power supply in good working condition
- Wheel chair (s)
- Patient trolley (s)
- Provision for hard copy & computer printout reports
- Procedures for processing (transport, disposal) of used medical devices, supplies and equipment
- Any other requirement that may be prescribed by the Board.
- Approved certification for facilities with diagnostic x-ray services from the Nuclear Regulatory Authority.
- Any other requirement that may be prescribed by the Board.

#### **D. Equipment, Devices and Supplies**

- X-ray machine should be of minimum 500 MA with the Image intensifier TV system.
- The Portable X-ray machine should be minimum of 60 MA.
- The dental X-ray will be of 6 MA and OPG 4.5 to 10 MA
  - (Enclose a scanned copy of Supporting Document in respect of above three wherever applicable)
- One x-ray couch
- One chest stand
- Hangers – all sizes;
- Cassettes – all sizes;
- X-ray viewing box
- Automatic film processor.
- Portable X-ray machine, equipment, dark room in separate room
- Boyles trolley in X-ray room

- Equipment for resuscitation of patients like Boyle trolley, suction machines, emergency drugs, to combat any allergic reactions.
- Anesthetics Coverage during procedures involving IV contrast media use.
- Sterilized instruments & disposable syringes needles, catheters for procedures like HSG, MCU, RGU etc.
- Wheel chair (s) should be able to go to equipment room
- Patient trolley (s) should be able to go to equipment room
- Provision for hard copy & computer printout reports
- Procedures for processing (transport, disposal) of used medical devices, supplies and equipment
- Any other requirement that may be prescribed by the Board.

## **E. Safety and Security (Sections 1 to 12)**

### **1. Structural**

- a. Unobstructed access to facility
- b. Easily accessible to the disabled and aged
- c. Parking area
- d. Roof walls and ceiling intact
- e. Windows and Doors for facility intact with mosquito netting
- f. Facilities for storage of outer garments and personal items away from work area
- g. Adequate working space
- h. Clear separation of different general areas (reception, registration, consulting, diagnostics, observation areas)
- i. Separate work and storage areas are provided within the facility for processes/procedures, administration tasks and associated paperwork/reference material.

### **2. General**

- a. Non-slip floors
- b. Unobstructed walkways, paths and corridors
- c. Adequate illumination
- d. Adequate ventilation

### **3. Signage**

- a. Department/ Unit signs

- b. Directional signs
- c. Warning signs
- d. Emergency evacuation diagram clearly displayed in all areas
- e. Entry and exit signs
- f. Hazard/safety signage on entrance/s clearly visible and contains information including:
  - i. Authorized access only
  - ii. No food or drink allowed
  - iii. Type of chemicals
  - iv. Supervisor contact details

#### **4. Hygiene and Sanitation**

- a. Fairly distributed number of pedal operated dust bins
- b. Means of decontamination of hands
- c. Posters on appropriate handwashing technique
- d. Posters on appropriate use of toilet facilities
- e. Signs for disposal of different types of waste
- f. Cleaning time tables for all rooms, offices and bathrooms

#### **5. Protective Clothing and Gear**

- a. Lead-lined aprons
- b. Thyroid & Gonads protective shield
- c. Masks
- d. Gloves
- e. Covered shoes
- f. Goggles /Protective eye gear
- g. Protective hair nets
- h. Protective laboratory coats
- i. Protective feet covers
- j. Provision for washed and clean linen

#### **6. Biohazards**

- a. Procedures for handling, storage, treatment, transportation and disposal of waste (colour codes for different waste etc)
- b. Sharps disposal
- c. Consumables disposal
- d. Biological waste disposal
- e. Incineration procedures for biological waste

- f. Protocols and procedures for managing accidents with sharps
- g. Protocols and procedures for managing cross contamination

## **7. Emergency**

- a. Exit doors clearly marked and can be opened from inside (not padlocked)
- b. Exit doors unobstructed from inside and outside the building
- c. Fire equipment (fire blanket, extinguisher, hose reel) is accessible and clear of obstruction
- d. Fire equipment (fire blanket, extinguisher, hose reel) have been inspected/tagged within the last 6 months.
- e. Fire exit and escape (for structures 2 storey and above) clearly marked and devoid of obstruction
- f. A first aid kit is located in the near vicinity.
- g. Smoke detectors are working and clear of obstruction.

## **8. Biosafety**

- a. Procedures in place to account for all samples, reagents or materials
- b. Appropriate biosafety signage at the entrance to applicable units and on storage room doors/vessels
- c. A supply of disinfectant for decontamination purposes is available and is clearly labelled.
- d. Instructions for dilution of disinfectant is clearly displayed e.g chlorine solution
- e. Diluted bleach is stored away from heat and is kept in lightproof containers with the preparation date displayed.

## **9. Biosecurity**

- a. There is appropriate signage at the entrance to all areas.
- b. All GMO and Quarantine samples labelled appropriately
- c. All samples, reagents, liquids are appropriately stored in appropriate storage vessels and clearly labelled
- d. All samples are secondary contained (fridges and freezers count as secondary containment within a lab)
- e. Security arrangements are in place and various applicable areas have clearly marked restricted access
- f. Procedures are in place for the transport of materials
- g. All surfaces (including furniture) within the laboratory are smooth, impermeable to water and resistant to any decontaminant materials.

- h. There are locks on fridges and freezers.
- i. There are appropriate pest control procedures in place (spraying, weeding etc.)
- j. All windows and walls are intact and sealed and there are no gaps.

#### **10. Chemicals, Handling and Storage**

- a. Chemicals stored in appropriate containers.
- b. Containers are labelled correctly (e.g. not handwritten, label contains minimum chemical name and pictogram depicting hazard level).
- c. Chemicals are stored according to compatibility.
- d. Compatibility chart is readily available.
- e. Dangerous goods are stored under COSHH guidelines (Control of Substances Hazardous to Health).
- f. COSHH cabinets must be used, labelled and maintained in accordance with COSHH practices and other international best practices including but not limited to
  - i. Self-closing and close fitting doors
  - ii. Locking automatically (flammable)
  - iii. Locking mechanism in 2 or more places (flammable/corrosive)
  - iv. Self-releasing locking mechanism (oxidizing agents and organic peroxides)
  - v. Clearance from ignition/heat sources (flammable, oxidizing agents, organic peroxides)
  - vi. Ventilation
  - vii. COSHH approved labels for various hazards (toxic, danger to environment, corrosive etc.)

#### **11. Flammable Liquids (if applicable)**

- a. Must be stored in suitable closed vessels in limited quantities in fire resistant cabinets or bins designed to retain spills
- b. Cabinets to be located in designated well ventilated areas away from the immediate area for processing but not placed in a way to jeopardize the means of escape from other areas
- c. Must be stored away from other dangerous substances that can increase the risk of fire or compromise the integrity of the storage container or cabinet

#### **12. Radiation**

- a. Access to Designated Radiation Areas limited only to authorised persons.

- b. Suitable radiation/contamination monitoring equipment is available and in working condition.
- c. X-ray and other radiation producing equipment is kept in a room solely dedicated to it.
- d. Ionizing equipment is contained in appropriate enclosures.
- e. Enclosures have interlocks preventing users from being within the confines of the enclosure.
- f. Visible and audible signals are provided inside and outside enclosures to provide warning before and during irradiation.
- g. Fail-safe mechanisms are provided to prevent generation of X-rays.
- h. The laboratory is secured against unauthorised access.
- i. Radiation storage sites are lockable, secured and shielded as required.
- j. All work with radioactive material is segregated from other work.
- k. Spill trays and absorbent bench coverings are available.
- l. The counting apparatus is in a separate room.
- m. All containers are labelled appropriately.
- n. Routine radiation monitoring of all technical staff & doctor through DRP/BARC
- o. The monitoring equipment has been calibrated and up to date.
- p. The radioisotope laboratory is placarded with
  - i. The identification of the laboratory,
  - ii. Main potential hazards,
  - iii. Personal protective equipment is to be worn,
  - iv. After hours contact name and phone number.

#### **F. Schedules**

- Preventive maintenance schedules for the building housing the facility together with fixtures
- Preventive maintenance scheduled for equipment used in the facility
- Standard Operation Procedures
- Fire practices, drills, fire alarm tests and their results and action taken where applicable
- Any other applicable schedule or drill.

#### **G. Records**

- Facility equipment records;

- Facility inspection records;
- Waste tracking log book;
- Occupational log books to record results of all staff investigations;
- Log books for recording accidents and injuries at the facility;
- Log books for recording potential and actual infections
- Routine (monthly/quarterly) data on ailments/illnesses/conditions reported at the facility
- Any other relevant records prescribed by the board