

Mobile Radiography

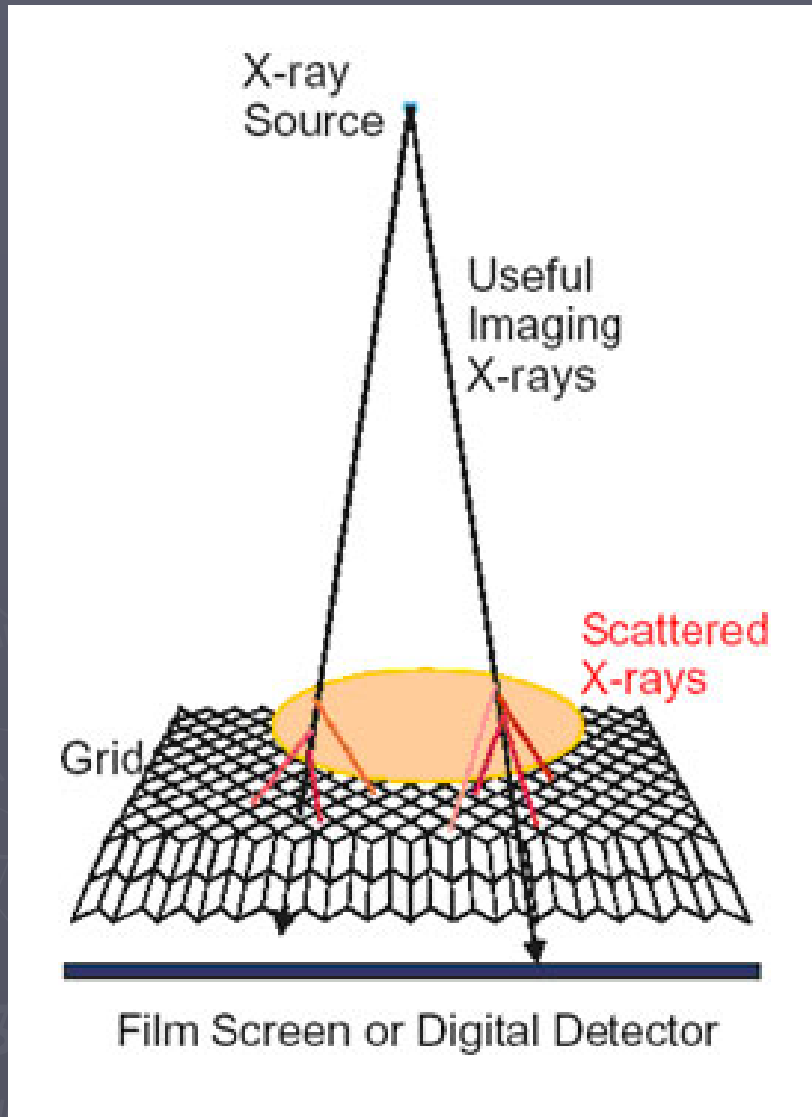
BIOMEDICAL IMAGING DEPARTMENT
UNIVERSITY MALAYA MEDICAL CENTER
(UMMC)
KUALA LUMPUR

MOBILE RADIOGRAPHY



- ▶ Mobile radiography is bedside radiography examination performed on patients who are unable to be transported to the Bio-Medical Imaging Department
- ▶ These machines are self-propelled and battery dependent
- ▶ Chest X-ray is the most requested mobile radiography examination

Radiation Safety...



- ▶ X-rays are present only when the x-ray beam is activated by pressing the exposure switch
- ▶ The majority (>99%) of the x-rays are absorbed in the patient or to the image detector (cassette) and are **harmless to you (people surrounding)**
- ▶ Scattered X-ray from the source then decrease in intensity the further away you stand from the patient.

‘ALARA’ PRINCIPLE...

(As Low As Reasonable Achievable)

- ▶ Nuclear Regulatory Commission in December 1977 came out with this radiation standards that lowered the dose to patients and occupational workers
- ▶ Protective measures to reduce external dose include:
 - **Time** - Minimizing the amount of time in a radiation field will lower the total dose received
 - **Distance** - Maximizing distance from a source of radiation will reduce the dose rate that you are exposed to a point source (a source having a small size) if the distance is doubled, the dose rate falls to one-fourth of the original dose rate
+ Always maximize the distance between you and any source(s) of radiation
 - **Shielding** - Lead, concrete, and steel are effective in shielding gamma and x-ray radiation

Do I need Lead Gown?



Lead skirt



Lead Gown

- ▶ X-ray beam is less for than a second
- ▶ Maintaining the distance of 6 feet or 1.8 meters or more provide adequate protection
- ▶ Radiographers who are in-charge the examination will protect themselves with lead apron for double protection
- ▶ The patient will be covered especially at their gonad area with gonad shield or small lead gown

Workflow...



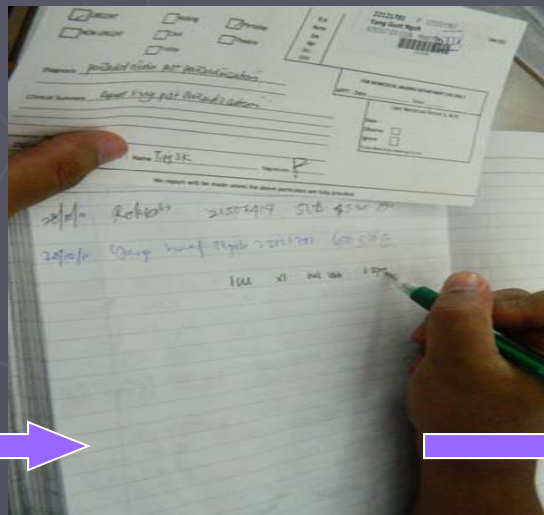
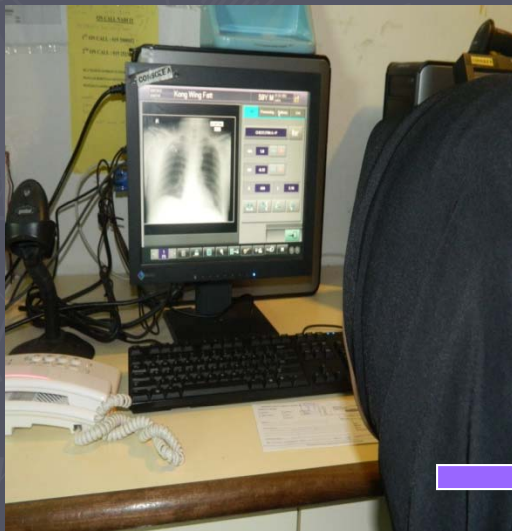
1. From the biomedical imaging department...



2. Positioning the patient...
patient care must be the **First Priority!!!**



3. Radiographer were doing the image processing procedure...



4. Radiologist was doing the reporting...



5. Called the ward to inform the examination was **COMPLETED**



6. Clean the Portable X-ray Machine and Cassette after used..



Disinfections Wipes for Medical Devices



Cassette



Portable X-ray Machine

Thank You

