Chest X-ray Taking Procedures Training for X-ray technicians/ Radiographer

“Quality Assurance”

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**Content**

- Quality Assurance
- IQC Measures for Radiography Work
- EQA Assessment
- QC Test
Quality Assurance
Quality assurance

QA ➔ IQC + EQA

Measure

Supervisory Support

Routinely radiographer produces images

Higher-level radiology department (regional/state/district)

lower-level radiology department (township/peripheral)
IQC Measures for Radiography Work
IQC Measures for Radiography Work

Daily - cleaning of the department

Weekly - cleaning of the film cassette

Monthly - cleaning of the lead apron, gonad shield, etc.,

Annually - Any fault detected in the X-ray unit or control panel should be immediately reported to the appropriate engineers.
EQA Assessment
EQA Assessment

“TB supervisors from the higher level should undertake EQA visits to the radiology section at the lower level.”
**EQA Assessment – Cont.**

**Assess**
- overall performance of the radiographer for TB CXR for IQC measures

**Randomly select**
- radiography images (3-5) and assess their quality

**Interview radiographer**
- achievements and challenges in quality and workload

**Compile and share assessment report with radiologists/trained medical officer**
- outlines corrective and improvement measures
QC Test
<table>
<thead>
<tr>
<th>No</th>
<th>Equipment</th>
<th>Frequency of testing</th>
<th>Method of testing</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>X-ray tube output</td>
<td>1-2 months</td>
<td>Dose at various exposures measured with ionisation chamber at known distance</td>
</tr>
<tr>
<td>2</td>
<td>Light beam alignment</td>
<td>1-2 months</td>
<td>Light beam field compared to exposed field on film</td>
</tr>
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Reference: 10e RADIOLOGIC SCIENCE FOR TECHNOLOGISTS: PHYS, BIOL PROTECTION By Bushong ScD FACR FACMP Stewart.
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<tr>
<td>3</td>
<td>Automatic exposure control (AEC) sensitivity</td>
<td>1-3 months</td>
<td>1mm copper imaged with exposure under AEC device control.</td>
</tr>
<tr>
<td>4</td>
<td>Low contrast sensitivity</td>
<td>4-6 months</td>
<td>Uses Test Object</td>
</tr>
</tbody>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>DR/CR limiting</td>
<td>4-6 months</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Focal spot</td>
<td>Annual</td>
<td>Pinhole radiographed and size, shape and inconsistencies of focal spot calculated from image produced</td>
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Reference: 10e *RADIOLOGIC SCIENCE FOR TECHNOLOGISTS: PHYS, BIOL PROTECTION* By *Bushong* ScD FACR, FACMP, Stewart.
### QC Test – Cont.

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<tr>
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<td><strong>Star test object</strong></td>
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THANK YOU!