Quality control of radiographic equipment and fluoroscopic equipment
Quality control definition

Quality Control (QC) is part of quality management focused on fulfilling quality requirements.

Quality Control (QC) is observation of procedures and performance of staff members for identification of protocol errors.

Purpose
The goal of QC is to detect errors and correct them before patients’ results are reported.
A QC Manual should be created and reviewed at least annually. The manual should include the facility’s objectives, QC instructions, QC results, and personnel responsibility. Items that should be included in a QC Manual are:
1. A list of the tests to be performed and the frequency for each test, including acceptable test limits, test procedures, maintenance, and service records.

2. A list of equipment to be used for testing.

3. Policy and procedures for QC tests as well as for the facility.
Questions asked during a review might include:

1. Is image quality maintained at the desired level?
2. Does any equipment need to be replaced?
3. Do any QC procedures need to be changed or updated?
4. Are personnel adequately performing assigned tasks?
5. Is patient and personnel radiation exposure as low as reasonably achievable?
6. Are all documents up-to-date and accurate?
RECOMMENDED QUALITY CONTROL TESTS FOR RADIOGRAPHIC MACHINES

Warm-up Procedures
Processor QC
Darkroom QC
System Constancy Check
View boxes
Repeat Analysis
Film and Chemical Storage
RECOMMENDED QUALITY CONTROL TESTS FOR RADIOGRAPHIC MACHINES

Artifact Evaluation
Cassettes and Screens
Collimation Checks
Lead Apron Check
Radiation Safety Survey
Quality control of fluoroscopic equipment
RECOMMENDED QUALITY CONTROL TESTS FOR FLUOROSCOPIC MACHINES

Each day during the x-ray generator warm-up, and before exposing the first patient to x-rays, check for indicator malfunction (mA, five-minute timer, etc.) and the mechanical and electrical safety of the x-ray system. Malfunctions and unsafe conditions must be corrected promptly.
RECOMMENDED QUALITY CONTROL TESTS FOR FLUOROSCOPIC MACHINES

- Laser Film Printer test
- Video Monitor Setup
- Artifact Evaluation
- Contrast material tests (expire date, correct contrast material)
- Catheters tests
- Repeat justification
RECOMMENDED QUALITY CONTROL TESTS FOR FLUOROSCOPIC MACHINES

All foot and hand switches designed to energize the fluoroscopic tube should be tested to ensure that x-ray production is terminated as soon as the switch is released.

The table, image intensifier, and tube, as applicable, should move smoothly and freely without requiring excessive force.
RECOMMENDED QUALITY CONTROL TESTS FOR FLUOROSCOPIC MACHINES

Check all switches, lights and meters on the table, control panel and image intensifier for appropriate function.

Verify that all of the indicators on the control panel are functioning.

Lead Aprons – annually
Output, Scatter, Leakage
OVERFRAMING
Collimation check

More Tissue Irradiated

Better Practice
Questions...!
Thank you!