Ultrasound QC need more structure?

QC-Track®

ATIRIX® Medical Systems

Go Paperless with QC-Track®

Inspectors are looking more closely at Ultrasound QC than ever before, especially with US infection control a "TJC Top 5" concern. QC-Track helps you be *Always Inspection Ready*™. Here's how.

Let's start with the basics.

START

Ultrasound managers and infection control teams need to have three different types of tracking:

1. **Base Unit Device QC -** Can you prove that filters were regularly cleaned? Was the device ready for patient exams?
2. **Transducer Phantom QC -** Can you prove that **all** transducers and base units were properly tested with a phantom?
3. **Per Exam HLD Traceability -** Can you prove that transducers, especially intra-cavity or those in contact with non-intact skin, were properly cleaned prior to the patient's exam? Will you be able to quickly identify and contact patients in the event of an outbreak?

...yet many facilities still track Ultrasound QC and traceability using spreadsheets and paper log books.

US teams have special tracking challenges, including
LOGISTICS: large numbers of easily moved transducers, and
COMPLEXITY: three different QC cycles for three different audiences.

QC-Track, with paperless QC workflows, makes it easy. How?

1 For Weekly/Monthly/Quarterly Base Unit Device QC:

Audience: Clinical Engineering, Physics Team

- QC-Track uses a scheduled workflow with checklist worksheets to track filters, overall unit cleanliness, monitor cleanliness, a visual check of transducers, and mechanical functions.
- Scheduled checklists can also be used to track the status of ancillary units, like a CleanShield closet.

The result is consistent structure for US QC across your devices and locations.

2 For Transducer Phantom QC:

Audience: ACR, AIUM, Clinical Engineering, Physics Team

- QC-Track uses a scheduled workflow, with barcode tags on transducers and ultrasound base units, for transducer phantom QC.
- Reconciliation reports help ensure that all transducers are tested and give details on transducer and base unit testing history.

Note: Although annual per ACR CQC, clients have recently been advised by ACR inspectors to perform "Quality Control Tests" on at least a semi-annual basis, and some of our clients are doing this test monthly.

The result is high assurance that transducer phantom QC is being performed on all of your transducers.

3 For Per Exam HLD Traceability:

Audience: Hospital Infection Management, TJC

- Semi-critical devices, such as intra-cavity ultrasound transducers and those that come in contact with non-intact skin, are an area of concern for TJC. *See TJC Quick Safety Issue 33, displayed on back side.*
- QC-Track uses an on-demand workflow and QC Worksheets with adhesive barcode tags on transducers and cleaning units, such as Trophon, to track and link the patient exam with the prior cleaning record.
- The US team can track and report on the cleaning history of transducers and HLD cleaning systems, meeting the needs of both device QC tracking and TJC "Culture of Safety."

The result is an easy, secure method for traceability and a powerful new tool for infection research.

THE RESULTS: An ultrasound QC process with all the benefits of paperless device QC

QC-Track provides the foundation for a comprehensive quality control program. Ultrasound managers, infection control teams, and inspectors have everything—reports, logs, and documents—at their fingertips. And you will appreciate the structure and consistency of paperless QC.

Ready? Contact Atirix now to learn more about QC-Track and enterprise imaging QC solutions for ultrasound and more.
877-273-1764 | atirix.com | QC-Answers@Atirix.com

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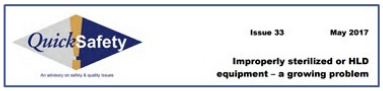
Ultrasound Device QC Recommendations and Requirements

Samples of recommendations and standards from TJC, ACR, and IAC are provided below. They are provided only as examples. Consult with your QC coordinator, biomedical engineer, medical physicist, and/or Infection Control Team to determine your facility's specific ultrasound device QC workflow requirements.

The Joint Commission – Quick Safety 33



"Standard IC.02.02.01 requires organizations to reduce the risk of infections associated with medical equipment, devices and supplies. This standard is applicable to Joint Commission-accredited hospitals (HAP), critical access hospitals (CAH), ambulatory (AHC) and office-based surgery (OBS) facilities."

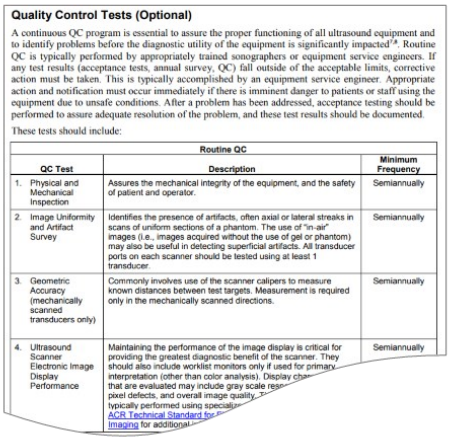
"According to reports to The Joint Commission's Office of Quality and Patient Safety, findings from non-complying organizations include:

…

- Lack of monitoring or documentation for sterilization or HLD of equipment, which makes it difficult to track the use of equipment on a specific patient, complicating the patient notification process when an outbreak occurs.
- Equipment is spread throughout the facility and may be processed or stored in numerous locations, making it difficult to track the equipment for documentation purposes."

Quick Safety 33: Improperly sterilized or HLD equipment – a growing problem, published 22 May 2017, accessed at www.jointcommission.org/issues on 4 August 2017

American College of Radiology – Ultrasound Accreditation Program Requirements



Quality Control Tests (Optional)

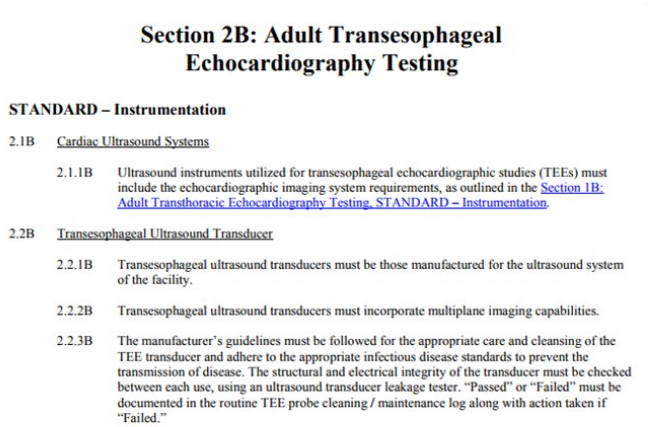
A continuous QC program is essential to assure the proper functioning of all ultrasound equipment and to identify problems before the diagnostic utility of the equipment is significantly impacted[7,8]. Routine QC is typically performed by appropriately trained sonographers or equipment service engineers. If any test results (acceptance tests, annual survey, QC) fall outside of the acceptable limits, corrective action must be taken. This is typically accomplished by an equipment service engineer. Appropriate action and notification must occur immediately if there is imminent danger to patients or staff using the equipment due to unsafe conditions. After a problem has been addressed, acceptance testing should be performed to assure adequate resolution of the problem, and these test results should be documented.

These tests should include:

Routine QC		
QC Test	Description	Minimum Frequency
1. Physical and Mechanical Inspection	Assures the mechanical integrity of the equipment, and the safety of patient and operator.	Semiannually
2. Image Uniformity and Artifact Survey	Identifies the presence of artifacts, often axial or lateral streaks in scans of uniform sections of a phantom. The use of "in-air" images (i.e., images acquired without the use of gel or phantom) may also be useful in detecting superficial artifacts. All transducer ports on each scanner should be tested using at least 1 transducer.	Semiannually
3. Geometric Accuracy (mechanically scanned transducers only)	Commonly involves use of the scanner calipers to measure known distances between test targets. Measurement is required only in the mechanically scanned directions.	Semiannually
4. Ultrasound Scanner Electronic Image Display Performance	Maintaining the performance of the image display is critical for providing the greatest diagnostic benefit of the scanner. They should also include worklist monitors only if used for primary interpretation (other than color analysis). Display cha… that are evaluated may include gray scale resp… pixel defects, and overall image quality. … typically performed using specialize… ACR Technical Standard for … Imaging for additional	Semiannually

Ultrasound Accreditation Program Requirements, updated 22 March 2017, accessed at www.acraccreditation.org/Modalities/Ultrasound on 4 August 2017

IAC – Standards and Guidelines for Adult Echocardiography Accreditation



Section 2B: Adult Transesophageal Echocardiography Testing

STANDARD – Instrumentation

2.1B Cardiac Ultrasound Systems

2.1.1B Ultrasound instruments utilized for transesophageal echocardiographic studies (TEEs) must include the echocardiographic imaging system requirements, as outlined in the Section 1B: Adult Transthoracic Echocardiography Testing, STANDARD – Instrumentation.

2.2B Transesophageal Ultrasound Transducer

2.2.1B Transesophageal ultrasound transducers must be those manufactured for the ultrasound system of the facility.

2.2.2B Transesophageal ultrasound transducers must incorporate multiplane imaging capabilities.

2.2.3B The manufacturer's guidelines must be followed for the appropriate care and cleansing of the TEE transducer and adhere to the appropriate infectious disease standards to prevent the transmission of disease. The structural and electrical integrity of the transducer must be checked between each use, using an ultrasound transducer leakage tester. "Passed" or "Failed" must be documented in the routine TEE probe cleaning / maintenance log along with action taken if "Failed."

IAC Standards and Guidelines for Adult Echocardiography Accreditation, accessed at www.intersocietal.org/echo/seeking/echo_standards.htm on 10 August 2017