

Assuring enterprise compliance

How to simplify quality control of medical displays



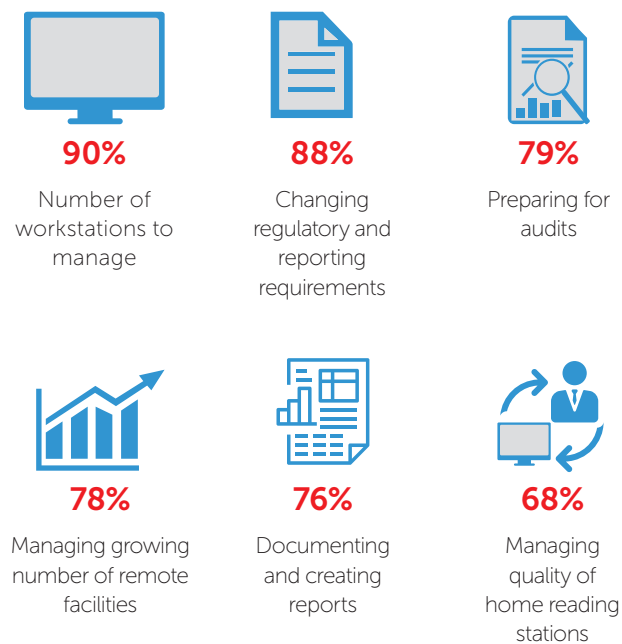
Financial pressures, new ways of working, and the focus on value-based care are fueling the rapid consolidation of healthcare enterprises. At the same time, regulatory standards are becoming stricter around the world. This poses challenges for healthcare IT staff who are responsible for the uptime and quality of a hospital's medical display fleet, in an increasingly complex environment. In this ebook, we'll discuss best practices and considerations to manage compliance across a large, geographically dispersed healthcare enterprise.

Challenge 1: Multi-site installations

According to a 2017 market study¹, 95% of QA managers believe compliance with current quality control guidelines is their biggest challenge. What they consider most difficult to manage are: the number of workstations (90%), changing regulations (88%), and remote sites (78%).

Their challenges are driven by recent trends, such as enterprise consolidation, home working and teleradiology. Although focused on healthcare efficiency, these changes make the IT infrastructure more complex to manage. Reading clinical images from home, for example, reduces the time clinicians spend on commuting and enables more efficient on-call commitments. However, 68% of QA admins experience difficulties managing the quality of home reading workstations¹.

Biggest challenges among QA managers



Challenge 2: The rise of medical regulations

People rely on medical devices every day. Whether it's a blood glucose meter, a CT scanner or a medical display, health outcomes depend on the quality and safety of these devices. That's why countries around the world defined standards to regulate quality control and compliance.

In many regions such as Western Europe, North America and Japan, medical standards have been in place for years. And they are becoming stricter. In Germany, for example, the new DIN standard (DIN 6868-157) defines strict requirements based on how (use cases) and where (room classes based on the level of ambient light) medical displays are used.

At the same time, other regions, such as Central and Eastern Europe, the Middle East and countries in Africa and across Latin America are starting to define and enforce similar guidelines. Initiatives such as the Standards Alliance Project to promote regulatory practices in Latin America clearly demonstrate this evolution.

Medical standards

- **Safety standards**
CE, EMI, FCC, VCCI, UL, and IEC
- **Environmental standards**
RoHS, WEEE, REACH
- **Quality Assurance**
AAPM, ACR, SIIM, The Joint Commission, DICOM, DIN, EUREF, MQSA, JESRA, AdvaMed
- **Regulatory compliance**
MDD, FDA



¹ Survey by The MarkeTech Group, 2017 – data collected from 150 healthcare organizations in the US and Europe.

Best practices for reducing the workload of Quality Assurance managers

There are a few best practices to help IT professionals and QA administrators with the increasing complexity of managing the compliance of a healthcare enterprise's dispersed display fleet. These include remote and central access to medical displays and automation of important tasks, such as calibration, compliance, testing, and reporting. An automated and scalable solution will help them to not only save time but also reduce expenses while assuring quality.

Sensor-based image consistency and calibration

It is important to invest in medical displays with integrated technology to maintain image consistency over time, including automated calibration and self-QA. The sensors integrated in the display will constantly measure and monitor the display brightness and perform subtle auto-calibrations, to ensure compliance with image quality standards at all times. This will help you save valuable time and resources. Make sure calibration and self-QA is done in the background so you don't interrupt clinicians in the viewing process.

Central & remote management

Remote capabilities for quality assurance help you save time and guarantee display uptime. It means you can easily log in from anywhere inside or outside the hospital and instantly check the status of every display or add a new display if required, without manual interventions.

Through central management and monitoring, you can track your entire display fleet, even those at remote facilities, and ensure maximum availability of all workstations with minimum effort.

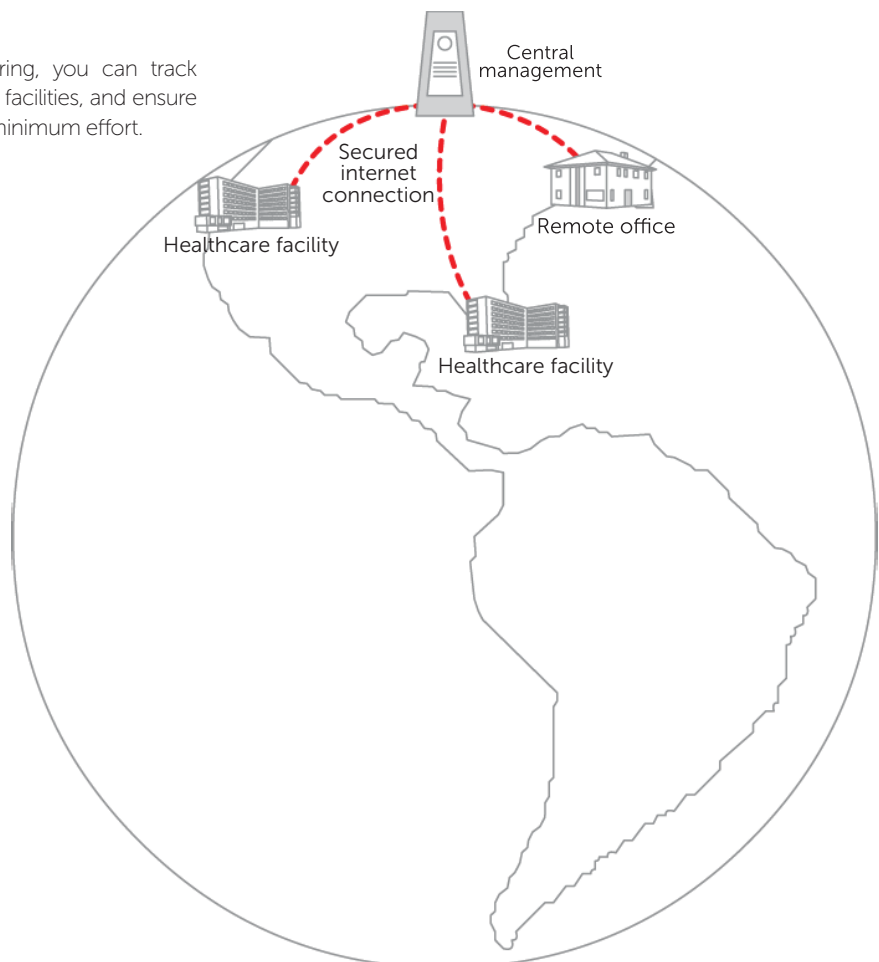
Online capabilities

A web-based solution will help you manage QC tests, generate needed reports and prepare for audits. It also allows you to manage display settings for multiple displays in any location at the touch of a button.

Auto-healing and reporting

Fast issue identification should help you to undertake all necessary corrective actions. This can only be achieved with a smart system that proactively offers self-healing options so no precious time is lost.

Reports, such as activity and compliance reports should be easy to pull from the system. This kind of functionality will enable you to control assets as well as costs, and gain insight into your display network. This will help you save financial and personnel resources.



MediCal QAWeb: medical compliance made easy

Barco's MediCal QAWeb is a unique, online service for automatic calibration, quality assurance and asset management. Installed in over 3,500 hospitals worldwide, this software service has proven to deliver greater operational efficiency and significant cost-savings.

A cloud-based solution, MediCal QAWeb allows you to check, track and monitor any display. QA tasks can be scheduled to run remotely and at night to reduce downtime. And with just one mouse click, you can generate audit trails, test results, and usage reports.

In a typical medium-sized facility with 20 diagnostic displays, for example, Medical QAWeb could reduce the QA and service costs by more than 10 percent! It means you can focus on more pressing priorities and better plan for budgeting and procurement.

"We can quickly and easily share QA/QC reports with remote hospital clients to enable them to comply with their FDA QA requirements for equipment."

Jamie Burgess, PACS Administrator,
Women's Imaging Associates, US

Case study

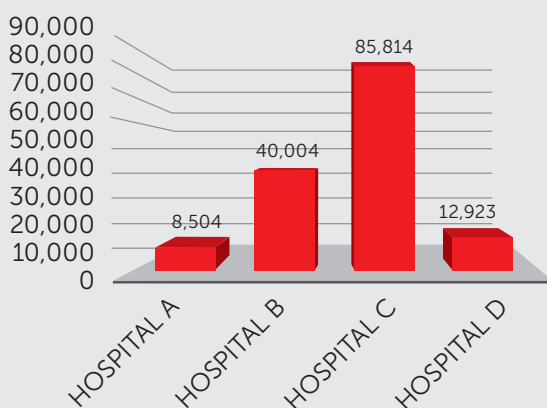
Customer profile

- 4 national IDNs of different sizes
- Close to 100 facilities
- Tracking more than 600 workstations

Let's take a look at a sampling of Integrated Delivery Networks (IDNs) in the US, managing more than 600 workstations at close to 100 facilities. They have been using Barco's MediCal QAWeb solution for 5 years. In a 10-month period, they performed almost 150,000 tests and more than 2,500 incidents were flagged. Thanks to the automation of tests and self-healing capabilities, they saved close to \$226,000 in this 10-month period alone.

It is clear that with MediCal QAWeb, it takes less time and money to manage compliance, allowing IT staff to focus on addressing other issues. At the same time, radiologists and hospital administrators can have confidence in their quality commitment to patients.

Jan-Oct YTD Tests Performed

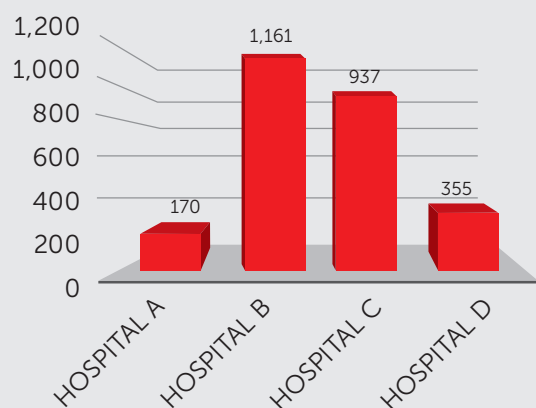


Minimum time to test: 2min

Automated test savings: \$196,327

Automatic calibration, display QA test and compliance test

Jan-Oct YTD Closed Issues



Minimum time to resolve an issue: 15min

Self-healing savings: \$26,233