Advanced Automated Calibration Technique - Way Forward for Medical Equipment

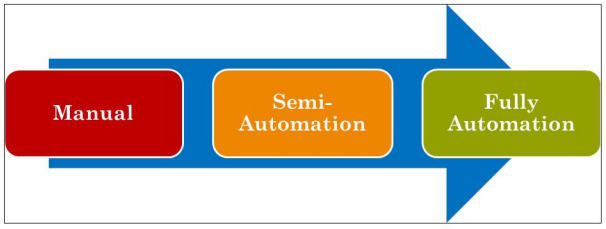
Introduction

Medical equipment calibration and testing is an important maintenance management activity in Healthcare Support Services.

Need for Automated Calibration

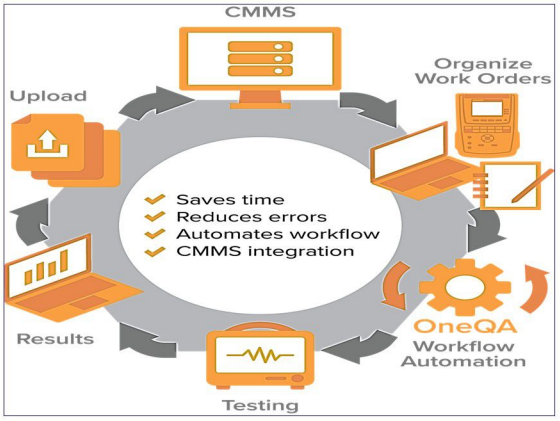
- Due to the large quantity of equipment in our institution, the manual process is time-consuming and has many errors in calibration.
- Advanced automation of the calibration process, eliminates errors and consumes less time to calibrate an equipment.
- Advanced Automated Calibration Technique ensures the accuracy, reliability & safe use of medical equipment according to international standards or as recommended by the OEM.
- Calibration is essential for the NABH/JCI/NABL accreditation process.

Evolution of the Calibration Process

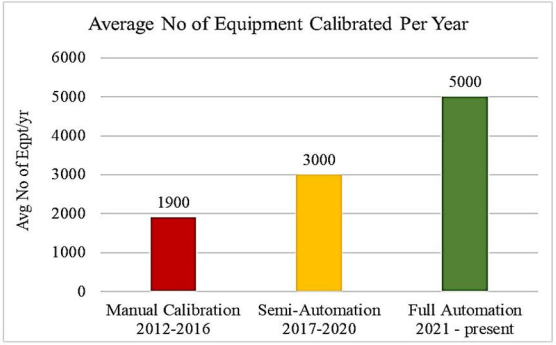


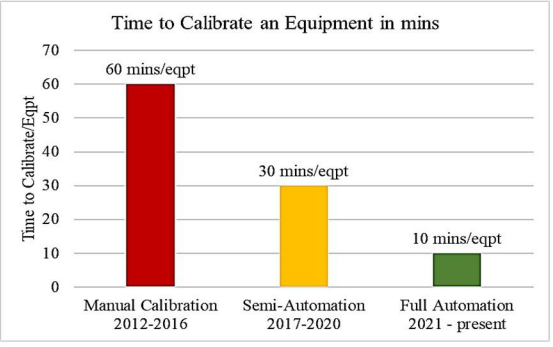
Automated Calibration with OneQA

Effectiveness



Efficiency





Economical

Cost Benefit Analysis	In INR
Total Value of Analyzer	4100774.00
Depriciation (Cost/7 year)	585824.86
Annual Maintenance / yr	186560.00
Operator Salary	840000.00
Overhead Charges	240000.00
Total Expenses/yr	1852384.86
Cost Saved in Calibration of 5437 equipment	5361600.00
Cost Recovered	3509215.14

Equity

- Standardized and automated workflow
- Eliminates the errors and missteps
- Embedded with asset location
- Import OEM manuals or SOP into procedures with self-explanatory tools
- Adheres to regulatory standards.
- Data integrity – Cloud storage
- CMMS integration

With the advent of newer technologies and artificial intelligence, the adoption of automated calibrated techniques has added an equitable value to biomedical engineering in hospitals ensuring increased efficiency of equipment performance in compliance with international standards and effective patient safety, economically reducing the maintenance cost