

THE MEDICAL DEVICE REPROCESSING DEPARTMENT'S QUALITY ASSURANCE PROGRAM AT HUMBER RIVER HEALTH

Kevin Cleaver; Tara Curnoe; Mahak Sharma; Mathew Thomas



DESCRIPTION

Humber River Health's (HRH) Medical Device Reprocessing Department (MDRD) has a well established Quality Assurance (QA) program, which monitors and audits the cleaning, disinfection, and sterilization of medical devices using an integrated system of tests, controls, and procedures. This program uses internal and external service providers and resources to monitor critical points in the process, ensuring operations are functioning effectively. This monitoring and evaluation of systems and processes complies with current standards of the Canadian Standards Association, Public Health Ontario - Provincial Infectious Disease Advisory Committee, and Occupational Health and Safety Act.

OBJECTIVE

To continuously identify improvement opportunities within the MDRD systems by refining the QA program to ensure optimal outcomes.

ACTIONS TAKEN

The MDRD QA program involves:

- Visual and physical monitoring include mechanical, chemical indicators, and biological audits, which are incorporated into daily, weekly, monthly, and annual operational activities
- Routine Tests are functional audits that include:
 - Daily: activities for washers, ultrasonic washers, bowie dick test, biological indicators, temperature and humidity monitoring
 - Weekly: leak test and descaling
 - Scheduled: water and air quality, preventative maintenance for equipment.

This resulted in more than 50% changes to instrument tracking system data to improve efficiency and accuracy.

SUMMARY OF RESULTS

Since returning services back in-house from an external vendor, HRH's MDRD is averaging 0.25% errors, reducing discrepancies making it to the end user through:

- Assembly inspection and testing identified discrepancies, resulting in 2% of medical devices being returned for further reprocessing
- Additional 7% of returns were identified from the Supervisors/QA team audits.

The QA program's goal is to further reduce errors by 50% with continuous education, resource mixing, and streamlining processes.

LESSONS LEARNED

An effective MDRD QA program is the responsibility of all stakeholders involved and requires continuous monitoring of reprocessing processes and procedures.



Total Units Reprocessed vs. Incident Reports

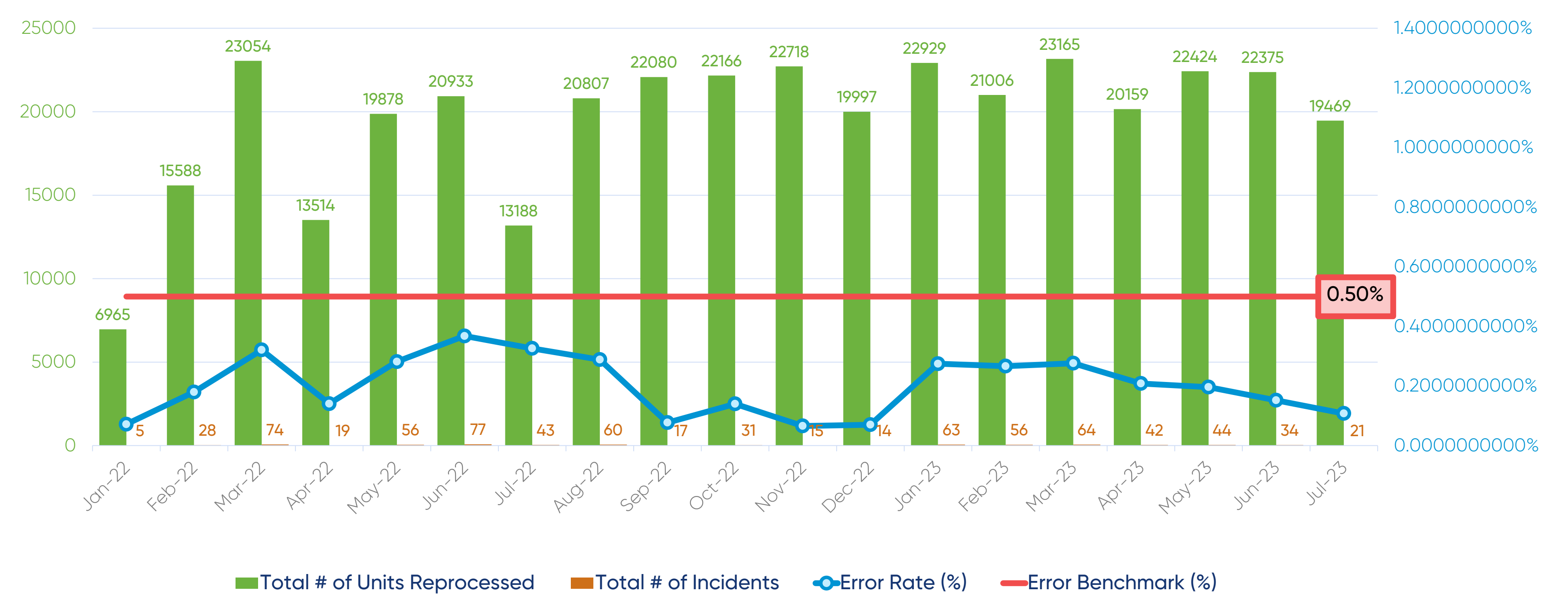


Figure 1. Incident rates January 2022 to July 2023.

Chemical Audits Process

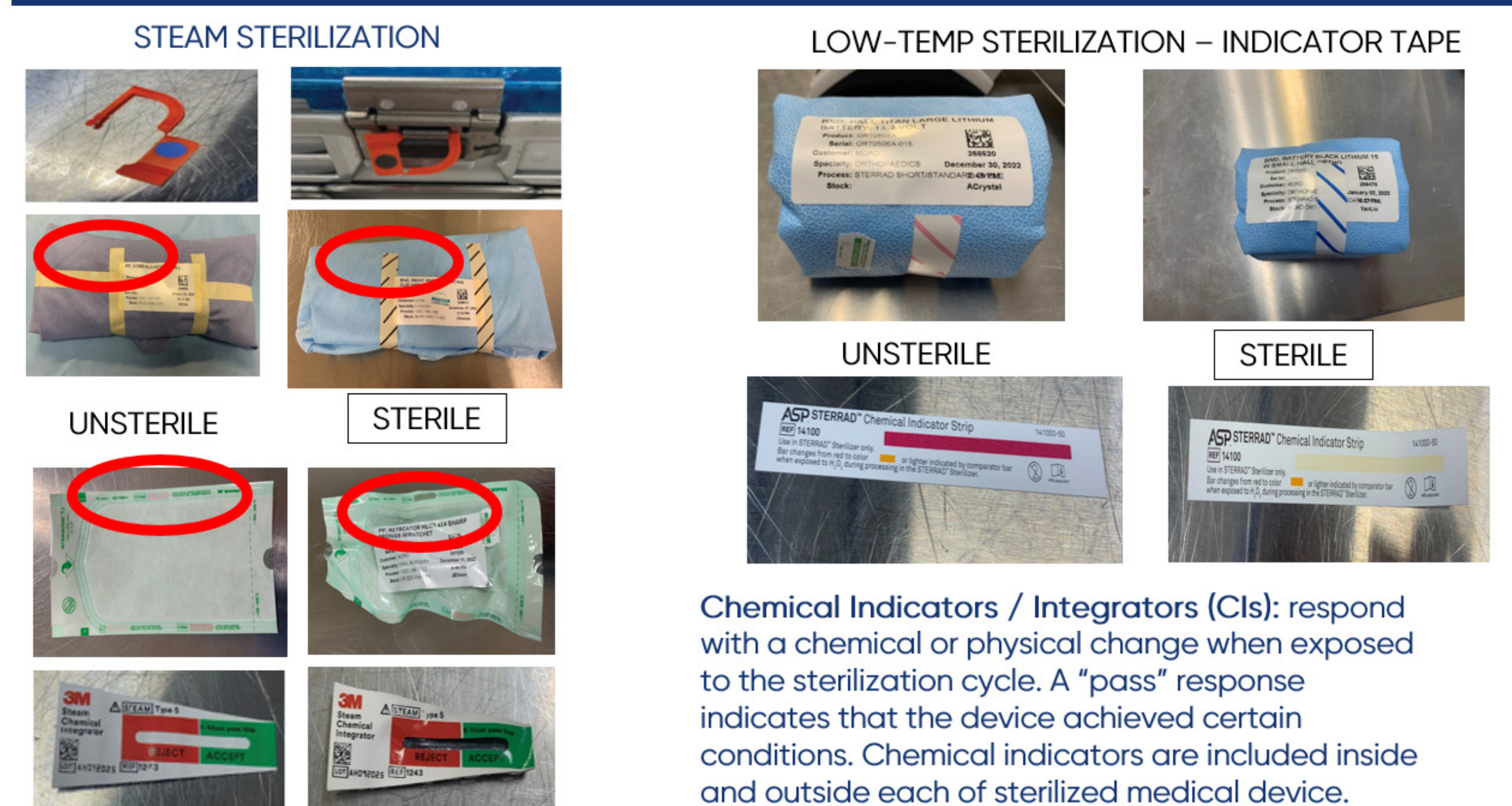


Figure 2. MDRD Quality Assurance team reviews, tallies, and reports collected data to Reprocessing Committee. The report includes volumes of trays processed as Key Performance Indicators (KPIs) against a target error rate of less than 0.5 as a percentage of volume.

Chemical Indicators / Integrators (CIs): respond with a chemical or physical change when exposed to the sterilization cycle. A "pass" response indicates that the device achieved certain conditions. Chemical indicators are included inside and outside each of sterilized medical device.