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DESCRIPTION

Central line infections (CLIs) are a challenge that intensive care units (ICU) face, at Humber River Health strategies were implemented to help reduce the number of confirmed CLIs. HRH's ICU had 3 confirmed CLIs in the 2022-23 fiscal year and this increased to 8 in the 2023-24 year. Upon investigation CLIs were identified to be developing more than 3 days after insertion of the central line (CL), therefore it was not related to the insertion process. This highlights the importance of focusing interventions on care and maintenance of the CL.

OBJECTIVE

To encourage practice changes in the ICU in order to reduce the number of CLIs.

ACTIONS TAKEN

- A key area of focus identified was the need to update the practices around CL dressing changes.
- A CL dressing change kit was created which included all the supplies needed for a CL dressing change.
- The CL reference guide was created to support staff in identifying the contents of kit and appropriate steps to perform CL dressing changes.
- Communication was provided through different channels to help ensure staff were educated and informed of the practice changes, these included safety huddles, new staff orientation, and skills days.



Figure 1. Newly developed Central Line Dressing Kit utilized in HRH ICU.

Central Line Dressing Change Steps:

- Gather all equipment (Found in this kit. If PICC line, please get a STAT lock)
- Perform hand hygiene and don gloves
- Open and prepare all equipment (aseptic technique)
- Remove old dressing and gloves
- Perform hand hygiene and don new gloves
- Clean the site using hashtag motion with CHG swabsticks
- Prepare skin using Cavilon
- Apply new dated dressing

CVAD Dressings changed q7days and PRN

Figure 2. Central Line Dressing Change steps included as part of the Central Line Dressing Kit.

Central Line Infections in the ICU

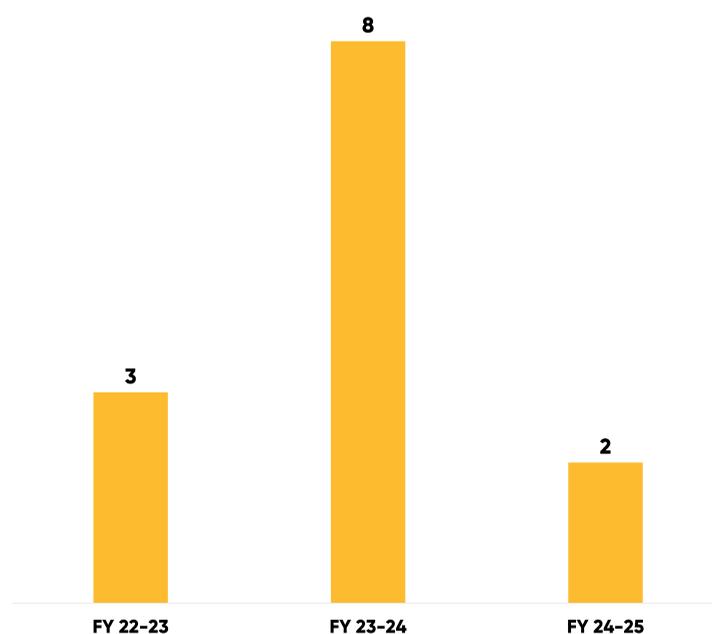


Figure 3. Comparison of CLIs in the ICU from FY 22-23 to FY 24-25.

SUMMARY OF RESULTS

The newly introduced CL dressing change kits has had a positive impact on the ICU, as confirmed CLIs have decreased by 75% after implementation. Staff demonstrated more confidence in articulating and performing the standardized steps needed for CL dressing changes. This change has led to increased staff capacity and helped lower patient safety incidents related to CLIs. HRH's ICU continues to focus on providing quality patient care and monitoring incidents of CLI.

LESSONS LEARNED

A pre-packaged and ready to use CL dressing kit created for nurses is an effective strategy to help decrease the confirmed cases of CLIs in the ICU.

