Memorandum

Date: May 12, 2021
To: ECC/ZEOCs
From: IPC ABHR and Disinfectant Working Group

RE: Improper cleaning and disinfection of critical electronic devices causes damage and malfunctioning resulting in patient safety risks and increased costs

Cleaning and disinfection of shared patient equipment reduces the risk of infection. Each device has manufacturer’s cleaning and disinfection instructions that must be followed to prevent damage and keep the device functioning as intended. Cleaning process instruction documents are available on Insite or at the following links: infusion pumps or shared patient equipment. Incorrect cleaning of IV pumps can damage connections between batteries and modules.

During the COVID-19 pandemic, reports of damage to electronic devices due to incorrect cleaning such as oversaturation, lack of rinsing, and use of wrong disinfectant have increased.

- Clinical Engineering has accrued substantial service and parts expenditures to repair equipment.
- Medical Device Safety has also received numerous reports of infusion pump failures during the infusion of critical medications.

Contributing factors may include:

- Medical devices with complex instructions, e.g., disassembly, cleaning with soft brushes, use of two different disinfectants, rinsing, drying and reassembly.
- Lack of removal of cleaning products/rinsing after the required contact time.
- Increased frequency and rigor of cleaning and disinfection of patient care equipment.
- Disinfectant supply disruptions, e.g., ready-to-use (RTU) liquid disinfectant with dry wipes substituted for pre-moistened (RTU) wipes; and spraying disinfectants directly onto devices may cause oversaturation and seepage into devices.

Recommendations

- Alert all staff to this safety issue, e.g., Baxter Sigma Spectrum 8 Infusion Pump (2020-04-09) (albertahealthservices.ca), BD Alaris Infusion Pump System (2020-07-06) (albertahealthservices.ca).
- Refer to November 5, 2020 related memo: Update on Availability of Disinfectants and Avoiding Damage to Medical Devices
- Train staff and/or consider assigning specific staff trained to clean and disinfect complex medical equipment, e.g., IV pumps, ECG carts and touch screens.
- Follow manufacturer’s instructions for cleaning/disinfection, i.e., process and products.
• Avoid over-saturation of the device. **Do not** spray or pour products directly onto medical or electronic devices as it may damage the device.

• Refer to Infection Prevention and Control (IPC) resources [Key Points for Ready-to-use Disinfectant Wipes, Handling, Cleaning and Disinfecting Mobile DI Devices](#), and [Cleaning and Disinfection during the COVID-19 Pandemic: Addressing Disinfectant Supply Challenges](#) for details.

• Provide device specific disinfectants and necessary supplies for staff to reduce device damage and related patient safety issues, e.g., IV pumps.
  o Some manufacturer's provide supply kits, e.g., soft brushes, component covers and laminated instruction cards.

• Report all medical device incidents and device failures as per the [Medical Device Incident and Problem Reporting](#) process.

• Consult with Biomedical and Clinical Engineering if needed.