

HIGH PRIORITY - S0394: COVID-19 – ECRI Exclusive User Experience Network

Large-Volume Infusion Pump Administration Sets—Responding to Possible Availability Disruptions

Medical Device Special Report - Published 4/3/2020

UMDNS Terms

Infusion Pumps, Multitherapy, Large Volume [28057]

Geographic Regions

Worldwide

Suggested Distribution

Anesthesia, Clinical/Biomedical Engineering, Critical Care, Infection Control, IV Therapy, NICU, Nursing, Obstetrics/Gynecology/Labor and Delivery, OR/Surgery, Pharmacy, Materials Management, Risk Management/Continuous Quality Improvement

This alert is a living document and may be updated when ECRI receives additional information.

Problem

- Large-volume infusion pump sets in the U.S. are proprietary.
- Shortages of some infusion pump administration set configurations can necessitate exploring alternatives.
 - Most vendors have several infusion pump administration set configuration options, which vary (e.g., in length, count of needle-free connectors).
 - Extensions and additional connector attachments can, in some cases, aid in the configuration of the set to meet the clinical need.
 - Note: most Luer lock-compatible extension sets and administration set accessories (e.g., filters) are not proprietary. For information related to the use of long extension sets with large-volume pumps, see Special Report [S0392](#).
- Shortages of several infusion pump administration set configurations may result in a need to explore infusing some drugs with alternative methods, including:
 - Syringe pumps
 - Manual rate control devices (e.g., Dial-a-Flow, AccuFlo, EasyDrop)
 - Gravity infusion sets, burette sets (e.g., Buretrol)
- The use of non-standard methods to deliver drugs can result in medication errors; however, this may be required in the case of limited administration set availability.

Recommendations

Nurse Managers/Pharmacists/Medication Safety Officers

- Identify low-risk infusions, such as fluids for patients who could be candidates for delivery with alternative infusion methods, as outlined above.
- If administration set shortages are experienced, inform front line clinicians of the alternative infusion methods that are acceptable to conserve infusion pump administration sets for high-risk drugs and critical infusions.
- Ensure that the frontline clinicians are adequately trained in the alternative methods.
- Consider the use of professional chat rooms to share information on successes and identified risks of unique practices related to the COVID-19 response.

Supply Chain

- Identify available alternative large-volume infusion pump set configurations that could meet the clinical need.
 - Note: most pump vendors offer several large-volume infusion pump set configurations.
- While pump sets are available from original equipment manufacturer (OEM) and third-party distributors, ECRI is not aware of any third-party manufacturers of large-volume infusion pump sets in the U.S.
 - Consider stocking additional extensions and other attachments to provide flexibility to configure available pump sets to meet the clinical need.
 - Consider stocking additional manual rate control devices, burette sets, and gravity sets.

Clinical Staff

- Use extensions and other attachments (e.g., needle free connector attachments) to configure sets to meet the clinical need.
- If shortages with pump sets are experienced:
 - Prioritize high-alert drugs and critical infusions for pump delivery if there is a shortage of administration sets.
 - Infuse only low-risk infusions (e.g., fluids with alternative methods without an infusion device) as a temporary solution.

About ECRI

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Background

- None of the major U.S. pump vendors report administration set shortages; however, some vendors report that the administration sets are on manual/protective allocation.

Manufacturer's Perspectives or Comments

- Baxter:
 - The firm currently has a protective allocation in place to ensure consistent, reliable supply. Baxter does not have administration set shortages or delivery problems at this time.
- B.Braun:
 - No administration set delivery problems have been reported at this time.
 - The firm is increasing set production for critical items.
 - The firm is adding long extension sets to its assortment.
- BD:
 - BD Alaris infusion sets are on manual inventory allocation until further notice.
 - For further information, see Alert [A34788](#).
 - For BD's COVID-19 response, [click here](#).
 - For information on BD's manual inventory allocation, [click here](#).
- ICU Medical:
 - COVID-19 supply effects are fluid, and ICU Medical's current supply chain of all administration sets is healthy and at full capacity. The Plum 360 primary administration set is at full inventory levels nationally, including multiple U.S. warehouses/distribution points, as well as exceeding required safety-stock levels.

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