

Placing Infusion Pumps Outside COVID-19 Patient Rooms

In an effort to reduce exposure of healthcare providers to COVID-19 and to decrease the use of personal protective equipment (PPE), clinicians have begun placing infusion pumps outside of COVID-19 patient rooms. Several lessons have emerged from this practice.

- Central lines should be utilized for vascular access; midline or peripheral lines may not work as well with low flow through extension tubing.
- Small bore extension tubing, three sets totaling 15 feet in length, are typically attached to the pump's primary administration set and run under the door.
 - Macro-bore tubing may be too large to fit under the door.
 - Resistance can occur with high infusion rates.
 - Utilize Triport and Y-site connectors if more than one medication is infused; cover all connectors with port protectors.
 - Compatible medications can be infused together, up to three via the same line including neuromuscular blocking agents, vasopressors, sedatives and antibiotics.
 - Place disposable pads on the floor over tubing connection sites to prevent tripping; avoid placing Y-site connectors on the floor.
- Site assessment and independent double checks
 - Assess intravenous (IV) sites every two hours when repositioning patients.
 - Ensure double-checks are conducted by a second staff member for all high-alert medications to verify medication/solution, concentration/dose and pump settings.
 - When bar code scanning of the patient's identification band cannot be accomplished, consider placing a patient barcode outside the room and label IV pumps with the patient's name and date of birth to help reduce errors.
- Alarms
 - One benefit of placing IV pumps outside patient rooms is the decrease in alarm issues as nurses are able to hear and respond quickly when alarms that go off in the hallway.

There are some barriers to placing a COVID-19 patient's IV pump outside of the room which include:

- Utilizing three or more IV tubing extension sets has resulted in a shortage of supplies; vendor are attempting to increase production or create longer extension sets (i.e. twelve feet) to meet this demand.
- For some hospitals, barcode scanning at the bedside may not be feasible.
- Decreasing the number of times a clinician enters a patient room also reduces the opportunities to monitor and interact with the patient.
- Independent double checks are more difficult or not possible to complete.
- Long extension tubing may impair flow rates and slow the speed that medications and solutions are delivered to the patient.
- Low flow rates may delay occlusion alarms.
- High flow rates may frequently trigger alarms.
- Accidental bolus medication doses can be delivered when the line is flushed.
- Electrical cords and extension tubing are tripping hazards.

Reference

1. Institute for Safe Medication Practices. (2020). *Nurse Advise-ERR*. Retrieved from Institute for Safe Medication Practices: <http://www.ismp.org/newsletters/nursing/issues/NurseAdviseERR202004pdf>

- There may not be enough outlets in the hallways to accommodate the infusion pumps.
- Avoid using one pump for two patients as that will lead to administration errors.

Reference

1. Institute for Safe Medication Practices. (2020). *Nurse Advise-ERR*. Retrieved from Institute for Safe Medication Practices: <http://www.ismp.org/newsletters/nursing/issues/NurseAdviseERR202004pdf>