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Patient Care + Research + Clinical Trials

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Midline Catheter Flushing Protocol

Purpose

Midline catheters provide improved access and quality of life for subjects receiving repeated daily IV infusions. The purpose of this document is to provide standardized guidance for the safe and effective flushing of midline intravenous (IV) catheters to maintain patency and reduce risk of complications.

Scope

This protocol applies to all healthcare staff responsible for the maintenance of midline IV access devices.

Protocol

1. General Principles

- Always perform hand hygiene before and after accessing the midline.
- Use aseptic technique for all flushes.
- Assess the site for redness, swelling, pain, leakage, or discharge before flushing.
- Use single-use prefilled saline syringes whenever possible.

2. Flushing Frequency

- Flush before and after medication administration.
- Flush before and after blood sampling (if permitted for use).
- Flush every 12 hours if the line is not in active use.
- Flush after each infusion to maintain patency.

3. Flushing Solution and Volume

- 0.9% Sodium Chloride (normal saline) is the standard flush solution.
- Recommended flush volume: 5–10 mL, depending on institutional policy and catheter size.
- Heparin flushes are not routinely required unless specified by protocol or manufacturer instructions.

4. Flushing Technique

- Use a 10 mL syringe or larger to avoid excessive pressure.
- Apply the push-pause (stop-start) technique to create turbulent flow and minimize occlusion risk.
- Do not force flush if resistance is met; stop and assess catheter function.
- Clamp the catheter (if applicable) while maintaining positive pressure on the syringe plunger to prevent blood reflux.

5. Troubleshooting

- If unable to flush, check for kinks in tubing or clamps closed.
- Reposition the patient's arm and retry.
- If resistance persists, notify the IV team or responsible clinician; do not apply force.

Documentation

- Record date, time, flush volume, solution used, and any complications.
- Document site assessment findings.
- Report any signs of infection, infiltration, or occlusion immediately.