THE STUDY VAULT

Clinical Chaos

Cap Changes

SKILL SNAPSHOT

Purpose
- Replaces a needleless connector on a central-line lumen without introducing air, organisms, or catheter damage.

When to use
- At the facility/manufacturer interval and immediately for contamination, damage, blood residue, disconnection, or malfunction.

Supplies needed
- New compatible sterile needleless connector; antiseptic; sterile saline flush; syringes; mask; gloves; clamp if catheter design requires.

PREP + PATIENT SETUP
- Verify CVAD type, clamp sequence, connector type, flush volume, and change interval.
- Explain procedure; assess line/site and ensure patient can remain still.
- Prime new connector with sterile saline if

VAULT TIP
- Prepare and prime first; then expose the hub for the shortest possible time.

STEP-BY-STEP
1. Hand hygiene; identify patient; position line so hub remains visible and controlled.
2. Stop infusions and verify medication compatibility/timing. Apply mask to nurse and patient as policy requires.
3. Open supplies aseptically. Prepare and fully prime the new connector without touching sterile ends.
4. Apply clean or sterile gloves according to policy. Place sterile barrier under lumen if required.
5. Clamp catheter before removal when the catheter design requires clamping. Never clamp over the catheter's reinforced segment incorrectly.
6. Disinfect the old connector/hub area and allow antiseptic to dry.
7. Stabilize catheter hub. Unscrew old connector without touching exposed catheter end or allowing the catheter to twist.
8. Immediately scrub the exposed hub threads/end with approved antiseptic for the required time and allow it to dry.
9. Attach the primed new connector securely using aseptic no-touch technique; do not overtighten.
10. Unclamp as appropriate and flush using prescribed volume/technique. Verify patency without forcing.
11. Apply a new antiseptic-impregnated disinfection cap if used. Label change date/time per policy.
12. Repeat one lumen at a time. Restart infusions, verify connections, remove gloves, hand hygiene, and reassess patient/line.

SAFETY REMINDERS
- Never leave the catheter hub open to air.
- Clamp sequence depends on catheter and connector type.
- If sterility is broken, discard and restart with new supplies.
- Watch for air embolism symptoms during an open connection.

COMMON MISTAKES
- Failing to prime connector.
- Changing all lumens at once.
- Touching exposed hub.
- Wrong clamp sequence.

DOCUMENTATION
- Date/time and lumen(s) changed.
- Connector type and aseptic technique.
- Flush/patency and blood return per policy.
- Site/line assessment.
- Complications and interventions.