Tube and catheter misconnections are common and can cause patient injury and death, the Joint Commission on Accreditation of Healthcare Organizations says in a Sentinel Event Alert issued April 3. JCAHO has received 9 reports of sentinel events involving misconnections, with 8 deaths and 1 permanent loss of function.

The US Pharmacopeia has reports of 300 misconnection cases, including IV infusions connected to epidural lines, bladder irrigation solutions using IV tubing connected as secondary infusions to peripheral or central IV catheters, and IV infusions mistakenly connected to Foley catheters.

“The basic lesson is that if it can happen, it will happen,” JCAHO says. Many of the errors involve Luer connectors because they enable functionally dissimilar tubes to be connected. Other causes include using tubes or catheters for unintended purposes, such as using IV extension tubing for epidurals or having dissimilar tubes close to one another.

**JCAHO recommendations**

JCAHO’s 10 recommendations include:

- Do not purchase nonintravenous equipment equipped with connectors that can physically mate with a female Luer IV-line connector.
- Test new tubing and catheter purchases to identify the potential for misconnections and measures to prevent them.
- Always trace a tube or catheter from the patient to the point of origin before connecting any new device or infusion.
- Recheck connections and trace all patient tubes and catheters to their sources upon the patient’s arrival in a new setting or service as part of the handoff. Standardize this “line reconciliation process.”
- Route tubes and catheters having different purposes in different standardized directions (eg, IV lines routed toward the head, enteric lines toward the feet). This is especially important in neonates.
- Inform nonclinical staff, patients, and families that they must get help from clinical staff when there is a need to connect or disconnect devices or infusions.
- For certain high-risk catheters (eg, epidural, intrathecal, arterial), label the catheter and do not use catheters that have injection ports.
- Never use a standard Luer syringe for oral medications or enteric feedings.
- Emphasize the risk of tubing misconnections in orientation and training.
- Identify and manage conditions and practices that may contribute to health care worker fatigue and take appropriate action.

The Sentinel Event Alert is at www.jcaho.org.