Joint Commission Alerts Organizations to Tubing Misconnection Risks

(OAKBROOK TERRACE, Illinois – August 20, 2014) The Joint Commission issued a new Sentinel Event Alert today that addresses the risks of accidental medical tubing misconnections that can cause severe patient injury or death. Examples of potentially fatal misconnections include a feeding administration tube mistakenly connected to a tracheostomy tube, or an intravenous tube connected to an epidural site.

According to the alert titled “Managing Risk During Transition to New ISO Tubing Connector Standards,” the risk for tubing misconnection is high, considering that almost all patients admitted to the hospital are likely to receive an IV. This risk isn’t confined to hospitals—it also is seen in other types of health care settings, including long term care and in patients’ own homes.

Accidental tubing misconnections occur because medical tubes with different functions can easily be connected with luer-style connectors that are used to make leak-free connections between medical tubing. The tubing connections can also be rigged using adapters, tubing or catheters. In an effort to prevent dangerous tubing misconnections, the International Organization for Standardization (ISO) has developed new international manufacturing standards for connectors. The standards are being introduced in phases and include engineering specifications for small-bore connectors with an inner diameter of less than 8.5 millimeters. The new connectors manufactured under the ISO standards will make it nearly impossible to connect tubing delivery systems that serve different functions.

Although connectors manufactured to the new specifications are expected to enter the marketplace by October 2014, the old connectors will remain in use until supplies are depleted. This is leading to concerns about the potential for misconnections to still occur. Due to the
continuing risks, The Joint Commission urges health care organizations to be vigilant and begin planning for the transition to the new connectors, which will introduce changes and new risks into the health care environment. Because the old tubing supplies will be in use until they are depleted, temporary adaptors are being introduced to connect the old tubing with the new tubing and the potential for misconnections will still exist.

The Joint Commission is alerting health care organizations to begin preparing for the changes in connectors and do everything possible during the transitional period to avoid tubing misconnections. The benefit of the transition is that, ultimately, the engineered solutions will make systems safer for all patients.

“Tubing misconnections are the root cause of too many episodes of patient harm, and The Joint Commission is committed to helping health care organizations prevent them,” says Mark R. Chassin, M.D., FACP, M.P.P, M.P.H., president and CEO, The Joint Commission. “Organizational leadership is the first line of defense in this transition to the new connectors. Leaders must assume the responsibility for ensuring the safe adoption of the new standards and they must empower their employees to not be afraid to speak up if they discover a problem.”

The new ISO connector standards were developed through a collaboration of ISO, the Association for the Advancement of Medical Instrumentation, clinicians, manufacturers and regulators, including the U.S. Food and Drug Administration. The Joint Commission does not anticipate introducing new accreditation or certification standards related to tubing connectors at this time.

According to the Sentinel Event Alert, it is believed that tubing misconnections are underreported overall, especially when the mistake does not result in harm to the patient, and when they are reported it is sometimes under a sentinel event category such as a medication error.

In the Sentinel Event Alert, The Joint Commission offers several detailed strategies in preparation for the launch of the new ISO connector standards. The strategies address assessing and managing current risks of injury; assessing and adapting existing systems, processes and protocols to carefully transition to the new ISO connectors; effective processes and procedures for prevention of misconnections; and implementation of safe practices for the administration of high-alert medications.

The alert is just one part of a larger communication effort led by the Global Enteral Device Supplier Association (GEDSA) called Stay Connected. The Joint Commission participates on the Stay Connected committee, helping to form and facilitate communications
about this important initiative. The Stay Connected website, www.StayConnected2014.org, includes a timeline, a question and answer section, and other information.

Much of the information and guidance provided in The Joint Commission's periodic Sentinel Event Alerts is drawn from its Sentinel Event Database, one of the nation’s most comprehensive voluntary reporting systems for serious adverse events in health care. The database includes detailed information about both adverse events and their underlying causes. Previous Alerts have addressed risks associated with the use of opioids, health care worker fatigue, diagnostic imaging risks, violence in health care facilities, maternal deaths, health care technology, anticoagulants, wrong-site surgery, medication mix-ups, healthcare-associated infections and patient suicides, among others. The complete list and text of past issues of Sentinel Event Alert can be found on The Joint Commission website at www.jointcommission.org/sentinel_event.aspx.

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