

CENTRAL LINE-ASSOCIATED BLOODSTREAM INFECTIONS OVERVIEW

BACKGROUND

Central line associated bloodstream infections (CLABSI) are associated with specific intravascular catheters or central lines that must be in place at the time of, or within 48 hours before the onset of the infection. A central line is an intravascular catheter (tube in a vein or artery) that terminates at or close to the heart or in one of the great vessels specified by NHSN. Two examples of a great vessel are the aorta and superior vena cava. A central line can be used to infuse fluids, withdraw blood or monitor fluid volume in patients. An umbilical catheter (i.e., a tube placed in the umbilical cord) is a central vascular catheter inserted through the umbilical artery or vein in a neonate (infant \leq 30 days old). Central lines can be either permanent or temporary. Permanent lines are those that are tunneled under the skin before entering a great vessel. These can include certain dialysis lines and implanted catheters such as a port. Temporary lines are those that are not tunneled.

All patients with central lines are at risk for CLABSI. However, certain groups are at higher risk for infection: elderly, neonates, dialysis patients, patients with weak immune systems (e.g., cancer patients, transplant patients), diabetics and patients with burn injuries.

Colorado requires that all adult critical care units, neonatal critical care units Level II/III and III, long term acute care hospitals (LTAC), inpatient rehabilitation units and rehabilitation hospitals report CLABSI data into NHSN.

Every CLABSI data table below lists all Colorado hospitals and hospital unit(s) reporting central line use, their cities, number of central line days per year, infection counts and rates, and comparisons to national infection rates. The number of central line days is the total number of days a central line was used in the unit during the reporting period. The CLABSI rate is the number of infections per 1,000 central line days. The three categories summarizing how a Colorado facility compares to the national infection rate for that unit are:

1. Statistically lower (**better**) infection rate than the national rate;
2. Statistically similar (**same**) infection rate as the national rate; or
3. Statistically higher (**worse**) infection rate than the national rate.

LONG-TERM ACUTE CARE HOSPITALS

A long-term acute care hospital (LTAC) is a specialty care hospital that cares for patients with complex medical conditions requiring intense, specialized treatment for a long period of time. The average length of stay for a patient is 25 days. These patients often transfer from critical care units in traditional hospitals. Patients in these facilities have a higher severity of illness often with multi-system complications posing a challenge for infection control.

LTAC report infection data for patients with either permanent or temporary central lines. As previously noted, permanent lines are those that are tunneled and can include certain dialysis lines and implanted catheters such as a port. Temporary lines are those that are not tunneled. Permanent lines are commonly used in LTAC patients and historically have had lower rates of infection than temporary lines.

This past year, nine LTAC reported 38,465 central line days; three hospitals reported zero CLABSI and two of those performed better than the national average.

RESULTS

Table 18 shows facility specific data for **CLABSI in LTAC**. The table contains data from Aug. 1, 2010 through July 31, 2013.

In Colorado this past year, nine LTAC reported 38,465 central line days; three hospitals reported zero CLABSI and two of those performed better than the national average.

TABLE 18: Long-Term Acute Care Hospital CLABSI Rates, Aug. 1, 2010 – July 31, 2013

Central Line Associated Blood Stream Infections (CLABSI) in Long-Term Acute Care Hospitals: Aug. 1, 2011 – July 31, 2013													
Health Facility and City		August 2010 – July 2011				August 2011 – July 2012				August 2012 – July 2013			
		CL Days	CLABSI Count	CLABSI Rate	National Comparison	CL Days	CLABSI Count	CLABSI Rate	National Comparison	CL Days	CLABSI Count	CLABSI Rate	National Comparison
Colorado Acute Long Term Hospital	Denver	6,710	6	0.9	Same	6,656	5	0.8	Same	5,902	7	1.2	Same
Craig Hospital	Englewood	4,835	1	0.2	Better	3,748	3	0.8	Same	3,283	3	0.9	Same
Kindred Hospital	Denver	4,985	9	1.8	Same	6,015	10	1.7	Same	5,540	10	1.8	Same
Northern Colorado Long Term Acute Hospital	Johnstown	3,709	6	1.6	Same	4,018	7	1.7	Same	595	0	0	Same
Select Long Term Care Hospital	Colorado Springs	4,248	4	0.9	Same	4,991	1	0.2	Better	4,070	0	0	Better
Select Specialty Hospital South Campus	Denver	4,678	2	0.4	Same	3,550	0	0	Better	2,641	1	0.4	Same
Select Specialty Hospital	Denver	5,818	4	0.7	Same	4,744	0	0	Better	3,278	0	0	Better
Triumph Acute Long Term Care Hospital of Aurora	Aurora	4,151	9	2.2	Same	4,398	9	2.0	Same	4,067	1	0.3	Same
Vibra Long Term Acute Care Hospital	Thornton	8,068	3	0.4	Better	6,085	3	0.5	Same	6,249	10	1.6	Same

Note: CL=Central Line.

Facility CLABSI rates are per 1,000 central line days.

*** Indicates value not shown due to suppression of infection data, no national or historical rate available, or an expected infection count of zero.

Infections for facilities with fewer than 50 central line days per year are suppressed to protect confidential health information. These facilities fulfilled reporting requirements.

Source: National Health Care Safety Network (NHSN) Database.