

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.

REHABILITATION HOSPITALS AND INPATIENT HOSPITAL UNITS

Rehabilitation hospitals and hospital units care for patients who have lost function due to acute or chronic pain, musculoskeletal problems, stroke, brain or spinal cord dysfunction, or catastrophic events resulting in complete or partial paralysis. The goal for these areas is to evaluate, treat and restore optimal functioning of the patients physically and mentally.

Rehabilitation hospitals and hospital units report infection data for patients with either permanent or temporary central lines. 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.

RESULTS

Table 19 shows facility specific data for CLABSI in rehab hospitals and wards. The table contains data from Jan. 1, 2012 through July 31, 2013.

Five rehabilitation hospitals and 11 rehab wards reported 8,157 central line days this past year. All but one facility reported zero infections and all facilities' rates were similar to the national average.

TABLE 19: Inpatient Rehabilitation Hospital and Ward CLABSI Rates, Jan. 1, 2012 – July 31, 2013

Central Line Associated Blood Stream Infections (CLABSI) in Inpatient Rehabilitation Hospitals and Wards: Jan. 1, 2012 – July 31, 2013									
Health Facility and City		January 2012 – July 2012				August 2012 – July 2013			
		Central Line Days	CLABSI Count	CLABSI Rate	National Comparison	Central Line Days	CLABSI Count	CLABSI Rate	National Comparison
Boulder Community Hospital	Boulder	283	0	0	Same	797	0	0	Same
Centura Penrose St Francis Health	Colo Springs	284	0	0	Same	697	0	0	Same
Centura Porter Adventist Hospital	Denver	490	1	2.0	Same	605	0	0	Same
Centura St Anthony Hospital	Lakewood	252	0	0	Same	633	2	3.2	Same
Centura St Mary Corwin MC	Pueblo	142	0	0	Same	202	0	0	Same
Denver Health MC	Denver	240	0	0	Same	294	0	0	Same
HealthSouth Rehabilitation Hospital of Colorado Springs	Colo Springs	255	0	0	Same	662	0	0	Same
HealthSouth Rehabilitation Hospital of Denver	Denver	Not yet operating				59	0	0	Same
Memorial Hospital Central	Colo Springs	478	0	0	Same	726	0	0	Same
Northern Colorado Rehabilitation Hospital	Johnstown	951	1	1.1	Same	911	0	0	Same
Poudre Valley Hospital	Fort Collins	125	0	0	Same	29	***	***	***
Spalding Rehabilitation Hospital	Aurora	709	0	0	Same	1,370	0	0	Same
Spalding at PSL	Denver	851	0	0	Same	871	0	0	Same
St Mary's Hospital	Grand Junction	371	0	0	Same	Data Not Reported			
Swedish MC	Englewood	284	0	0	Same	502	0	0	Same
University of Colorado Hospital	Aurora	988	0	0	Same	1,169	0	0	Same

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.