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National Healthcare Safety Network (NHSN) Report, Data Summary for 2013, Device-associated Module

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Background

This report is a summary of Device-associated (DA) Module data collected by hospitals participating in the National Healthcare Safety Network (NHSN) for events occurring from January through December 2013 and reported to the Centers for Disease Control and Prevention (CDC) by June 1, 2014. This report updates previously published DA Module data from NHSN and provides contemporary comparative rates.[1] Figure 1 provides a brief summary of highlights from this report. This report complements other NHSN reports, including national and state-specific progress reports for select healthcare-associated infections (HAIs).[2]

NHSN data collection, reporting, and analysis are organized into five components: Patient Safety, Outpatient Dialysis, Healthcare Personnel Safety, Biovigilance, and Long-term Care Facility. Each component is comprised of one or more modules for which standardized methods and definitions are provided.[3-5] Healthcare facilities may use modules singly or simultaneously, but once selected, the facilities must use the module(s) for a minimum of one calendar month for the data to be included in CDC analyses. All infections are categorized using standard CDC definitions that include laboratory and clinical criteria.[4,5] The DA Module within the Patient Safety Component may be used by facilities other than acute care hospitals, including inpatient rehabilitation facilities (IRFs) and long-term acute care hospitals (LTACHs). NHSN facilities contributing HAI surveillance data to this report did so voluntarily, in response to state mandatory reporting requirements, or to comply with the Centers for Medicare and Medicaid Services' (CMS's) Quality Reporting Programs.[6-8] CDC aggregated these data into a single national database for 2013, consistent with the stated purposes of NHSN, which are to:

- Collect data from a sample of healthcare facilities in the United States to permit valid estimation of the magnitude of adverse events among patients and healthcare personnel.
- Collect data from a sample of healthcare facilities in the United States to permit valid estimation of the adherence to practices known to be associated with prevention of these adverse events.
- Analyze and report collected data to permit recognition of trends.
- Provide facilities with risk-adjusted metrics that can be used for inter-facility comparisons and local quality improvement activities.
- Assist facilities in developing surveillance and analysis methods that permit timely recognition of patient and healthcare worker safety problems and prompt intervention with appropriate measures.
- Conduct collaborative research studies with NHSN member facilities (e.g., describe the epidemiology of emerging healthcare-associated infection [HAI] and pathogens, assess the importance of potential risk factors, further characterize HAI pathogens and their mechanisms of resistance, and evaluate alternative surveillance and prevention strategies).
- Comply with legal requirements – including but not limited to state or federal laws, regulations, or other requirements – for mandatory reporting of healthcare facility-specific adverse event, prevention practice adherence, and other public health data.
- Enable healthcare facilities to report HAI and prevention practice adherence data via NHSN to the U.S. Centers for Medicare and Medicaid Services (CMS) in fulfillment of CMS's quality measurement reporting requirements for those data.
- Provide state departments of health with information that identifies the healthcare facilities in their state that participate in NHSN.
- Provide to state agencies, at their request, facility-specific, NHSN patient safety component and healthcare personnel safety component adverse event and prevention practice adherence data for surveillance, prevention, or mandatory public reporting.

Patient- and facility-specific data reported to CDC are kept confidential in accordance with sections 304, 306, and 308(d) of the Public Health Service Act (42 USC 242b, 242k, and 242m(d)).

Methods

Data Collection Methods

For reporting to the DA Module, healthcare facility personnel responsible for infection prevention and patient safety may choose, with consideration of state mandates, federal quality measurement reporting programs, and prevention initiatives, to collect data on central line-associated bloodstream infections (CLABSI), ventilator-associated pneumonias in pediatric patients (pedVAP), or urinary catheter-associated urinary tract infections

(CAUTI) that occur in patients staying in a patient care location such as a critical or intensive care unit (ICU), oncology unit, or inpatient ward. These data are collected and reported for specific patient care locations, as defined by NHSN. In NHSN, locations are further stratified according to patient population: adults, children, or neonates (in tables, pediatric and neonatal locations are so noted). In neonatal intensive care unit (NICU) locations, data are collected on CLABSI or pedVAP that occur in patients in each of five birth-weight categories (≤750 g, 751-1000 g, 1001 - 1500 g, 1501 - 2500 g, and >2500 g); data on CAUTI are not collected in any NICU location as part of the NHSN protocols. Corresponding location-specific denominator data consisting of patient-days and specific device-days are also collected by infection preventionists (IPs) or other trained personnel.

In non-NICU locations, the device-day counts consist of the total number of central line-days, urinary catheter-days, or ventilator-days. For specialty care areas and oncology units, such as hematology/oncology and hematopoietic stem cell transplant units, central line-day counts are split into those with only a permanent central line vs. those with temporary central lines (with or without a permanent central line). In NICU locations, the device-day counts consist of the total number of central line-days (inclusive of umbilical catheters), or ventilator-days for each birth-weight category.

Data Analysis Methods

Data analysis for this report included events occurring from January through December 2013 and reported to CDC by June 1, 2014. Compared to the previous report, six new locations – adult mixed acuity unit, pediatric mixed acuity unit, mixed age mixed acuity unit, oncology step-down unit, oncology critical care unit, and leukemia and lymphoma ward– had sufficient data to be included in this report.[1]

Data from LTACHs and IRFs were stratified by facility type, location type, unit bedsize, and/or facility setting to determine if pooled mean rates, medians, and empirical distributions significantly differed between the identified strata for each DA infection type; if differences were evident, the strata were retained in this report. Comparisons of pooled mean rates for the selected location types were performed using negative binomial regression. These comparisons could be influenced by potential outlier rates from locations with disproportionately large denominators. Therefore, consideration was also given to the results of nonparametric tests comparing the medians for location shift and empirical distributions for assessing differences across the range of reported rates. These nonparametric comparisons by definition require no validity assumptions and provide test results that are not subject to the potential weighting influence of high or low rates with large denominators. Comparisons of the pooled mean, median and percentile distribution were made if there were at least 50 locations contributing to one or more strata and at least 20 locations contributing to the percentile distribution in both strata.

Locations within LTACHs were compared using various strata in order to assess significant factors that would account for the difference in rates among this population. Such strata included facility bedsize, physical setting of the LTACH (i.e., freestanding, or within an acute care hospital), and variations of the acuity level of LTACH beds based on the CDC location type and/or type of beds indicated on the LTACH annual survey. The only factor

found to be significant was the LTACH location type (i.e., critical care or ward) and therefore, CLABSI and CAUTI data from LTACHs will continue to be stratified on this factor, as with the previous report[1].

IRFs and IRF units within acute care hospitals were also evaluated for facility- and location-level factors that may impact CLABSI and CAUTI incidence, including the proportion of IRF admissions within each defined primary diagnosis category. The proportion of admissions within diagnostic categories was not found to be statistically significant. There were no significant risk factors for CLABSI in IRFs and IRF units and therefore, CLABSI data are provided for all IRFs and IRF units combined. CAUTI data, however, were found to be best stratified first by IRF setting (i.e., freestanding or within an acute care hospital), and, for freestanding IRFs, by unit bedsize.

Adult hematology/oncology locations were also evaluated to assess importance of status as an oncology hospital compared to a general acute care hospital, but differences were not significant and no new strata for this population were retained.

Strata defined in the previous report were retained for adult combined medical/surgical ICUs, medical ICUs, surgical ICUs, and critical access hospitals.[1] The data for adult combined medical/surgical ICUs were split by medical school affiliation and unit bedsize, resulting in three groups: “major teaching,” “all others” with unit bedsize ≤15 beds, and “all others” with unit bedsize >15. The data for adult medical ICUs and adult surgical ICUs were split into two groups by teaching status. Hospitals self-identified their teaching hospital status through the annual NHSN facility survey. A major teaching hospital was defined as a hospital that has a program for medical students and post-graduate medical training.

Device utilization (DU) was calculated as a ratio of device-days to patient-days for each location type. As such, the DU of a location measures the use of invasive devices and constitutes an extrinsic risk factor for healthcare-associated infection.[9] DU may also serve as a marker for severity of illness of patients (i.e. severely ill patients are more likely to require an invasive device) which is an intrinsic risk for infection.

Data from at least 5 different reporting units of a given location type were used to determine pooled mean DA infection rates and DU ratios. Percentile distributions were presented if data from at least 20 different locations were submitted to NHSN, excluding rates or DU ratios for locations that did not report at least 50 device-days or patient-days. Because of these requirements, the number of locations contributing data may vary among the tables. The percentile distributions are based on annual rates and DU ratios for each individual reporting location, for the reporting year.

Results

In 2013, 4,567 enrolled facilities reported at least one month of DA denominator data for some patient cohorts under surveillance. These 4,567 facilities were located in 53 states, territories, and the District of Columbia and were predominantly identified as general acute care hospitals (Table 1); 28% of all facilities that reported data were smaller organizations of 50 beds or less (Table 2). Among LTACHs, 61% were categorized as physically free-

standing from a hospital setting. Where data volume was sufficient for this report, DA infection rates and DU ratios were tabulated for January through December 2013 (Tables 3-13). Data on the specific criteria used to report DA infections are provided by major location type in Tables 14-19.

Tables 3-6 update previously published DA rates and DU ratios by type of non-NICU locations within acute care hospitals; these tables incorporate data from new location types not included in the previous report.[1] Mixed acuity units are included in this report for the first time, due to the increase in reporting from these unit types. Data from LTACHs, IRFs, and CAHs are reported separately from all other hospitals and are provided in Tables 11-13.

Tables 7-10 update the previously published DA rates and DU ratios by birth-weight category for NICU locations.[1] CLABSI rates and DU ratios for NICUs are inclusive of both umbilical and non-umbilical central lines.

Tables 11-13 update previously published DA rates and DU ratios for LTACHs, IRFs, and CAHs. LTACH data continue to be stratified by critical care and ward location designation. CLABSI data for IRFs are not stratified by any additional factors, however CAUTI data for IRFs are stratified by setting and, if the IRF is freestanding, by unit bedsize category. Rates and DU ratios in CAHs continue to be stratified into combined critical care units and combined non-critical care units.

Tables 14-19 provide data on select attributes of the DA infections for each major location type. For example, Table 14 shows the frequency and percent distribution of the specific criteria used for identifying CLABSI. Note that for this table, criteria 2 and 3, which involve common commensals only, have been combined.

Supplemental tables, available on the NHSN website, provide data on specific criteria used to meet the DA infection definitions for each specific location type (e.g., burn critical care).

Discussion

This report summarizes the HAI data reported to the DA module of NHSN during 2013. Compared to the healthcare facility types for which HAI data were summarized in the last published report, there is a slight increase in the number of CAHs reporting to NHSN such that CAHs now represent nearly 9% of all hospitals contributing data to this report.[1] Overall participation in the DA module by all facility types increased by 2.3% from the last report.[1] This is a small increase compared to previous years, when many healthcare facilities first enrolled in NHSN and began reporting HAI data as required by CMS's Quality Reporting Programs. For acute care hospitals their initial requirement was reporting CLABSIs from all adult, pediatric, and neonatal ICUs beginning in January 2011. For all LTACH locations, the CLABSI reporting requirements began in October 2012. CMS's Quality Reporting Programs have also required the reporting of CAUTI data from all acute care hospital adult and pediatric ICUs since January 2012, and all LTACH and IRF locations since October 2012.[6,7] Beginning in January 2013, PPS-exempt cancer hospitals were also required to report CLABSI and CAUTI data from all inpatient locations as part of CMS's PPS-Exempt Cancer Hospital Quality Reporting Program.[8] While the overall number of facilities reporting DA

data to NHSN has plateaued, there is evidence of increased reporting from non-critical care locations for CLABSI and CAUTI surveillance in acute care hospitals, with a 14% and 25% increase, respectively, in the number of non-critical care units reporting compared to the previous report.[1] As reporting increases in these units, a better understanding of the incidence of DA infections and device use may be possible.

This report introduces pooled mean rates and DU ratios for mixed acuity units. Mixed acuity units are defined by NHSN as units that provide care to patients that are of varying acuity levels, e.g., both intensive care level patients and medical ward level patients. Such units may also include acuity-adaptable beds in which the patient resides in the same bed during a hospital stay, regardless of the patient's changing acuity level status.[10] Anecdotal evidence suggests that some hospitals may report DA data for mixed acuity units that provide care to a more homogenous patient population (e.g., cardiothoracic), while other hospitals may utilize the mixed acuity location designation for patients that receive care for a variety of specialties and acuity levels. Therefore, caution should be used when interpreting the pooled means for mixed acuity units, as the patient population in these units is not as clearly defined as with other units included in this report.

CDC's intended use of the LTACH and IRF data in this report as the baseline for new standardized infection ratios for these facilities provided the impetus for extensive analyses of the impact of facility- and location-level factors on CLABSI and CAUTI data. Feedback from external partners was considered when determining the various strata to assess for potential risk-adjustment. While the results of these analyses leave the strata for LTACHs unchanged from the previous report, NHSN will collect additional information from LTACHs on the 2014 NHSN annual LTACH survey to determine if such data can be used for future risk-adjustment, as well as to describe this patient population. Similarly, IRF data were carefully analyzed to determine if the proportion of admissions within each diagnostic category, per the NHSN Annual IRF Survey, contributed to any differences in rates for this setting. The specific diagnostic categories included: traumatic and non-traumatic spinal cord dysfunction, stroke, brain dysfunction, other neurologic conditions, and orthopedic conditions. Few IRFs indicated a primary diagnosis category that accounted for the majority of admissions, indicating a high level of heterogeneity in the patient primary diagnoses. For example, 90% of IRFs indicated that less than 10% of admissions were patients with spinal cord dysfunction. The statistical evidence indicated that there was not a correlation between facility-level admission diagnosis proportions and CLABSI or CAUTI rates in the IRF population. NHSN will continue to assess the significance of these factors for future measures. The factors on which IRF CAUTI rates and DU ratios were stratified include the physical setting of the IRF and/or IRF unit (i.e., freestanding or within an acute care hospital) and, for freestanding IRFs, the unit bedsize. Unit bedsize was split into three categories, based on a modification of bedsize quartiles: small (25 beds or less), medium (26-40 beds), and large (more than 40 beds). While the CAUTI pooled means and percentile distributions are significantly different among all IRF strata, the DU ratios are similar. In addition, IRFs reported lower DU ratios than nearly all other location types reporting CAUTI data to NHSN; this may be due to the lower acuity level of patients receiving care in this setting compared to acute care hospitals or more successful prevention efforts.

Among all oncology locations used for reporting DA data to NHSN in 2013, only 25% of these locations were identified from oncology hospitals. The statistical evidence did not show a significant difference in CLABSI and CAUTI rates in hematology/oncology locations based on facility type and therefore, these locations were not further stratified. While other oncology locations are included in this report, there were insufficient data with which to stratify further. In addition, there were insufficient data to publish pooled means and percentile distributions from specific types of oncology critical care units (e.g., oncology medical critical care), as well as from leukemia, lymphoma, and leukemia/lymphoma wards. After careful consideration and with the support of statistical evidence, data from all oncology critical care locations were combined into a single stratum for this report. Similarly, data from all leukemia, lymphoma, and leukemia/lymphoma wards were combined into a single stratum.

CLABSI rates continue to decline, with a higher percentage of non-oncology critical care location types experiencing decreases than non-oncology wards (84% and 44%, respectively). However, overall there has been little change in central line DU ratios compared to the previous report.[1] All DA infection rate and DU ratio pooled means in this report continue to be higher in those locations stratified as major teaching compared to their non-major teaching counterparts. This suggests that there may be room for targeted prevention efforts in these settings that care for higher complexity patients.

To improve the reliability of data reported to NHSN, several protocol changes were introduced in January 2013. The majority of these changes were made with respect to timing and implementation of two-day rules, which define a set period of time that must be used to more objectively identify infections as healthcare-associated, device-associated, and attributed to a specific inpatient location after transfer or to a hospital after discharge.[4] In addition, NHSN identified criteria to differentiate bloodstream infections that may be due to mucosal barrier injury (i.e., mucosal barrier injury laboratory-confirmed bloodstream infections [MBI-LCBI]) from other BSIs. This new category of BSIs does not increase the CLABSI rate, since they represent a subset of BSIs. Therefore, MBI-LCBIs have not been removed or accounted for separately in this report. CDC plans to analyze data reported in 2015 such that MBI-LCBI data will be analyzed separately from CLABSIs in preparation for updated standardized infection ratios (SIRs). Finally, the VAP definition no longer applies to adult patients (i.e., ≥ 18 years of age) and has been replaced by ventilator-associated events (VAEs) in this population.[4] This was later modified to adult location-based surveillance in January 2014, therefore, the previous report contained the final reporting of VAP rates and ventilator utilization ratios in adult locations.[1] Because VAE was introduced in 2013, pooled mean rates have not been produced for this event type. Once the VAE surveillance definition is considered to be stable and there is at least a full year of VAE data reported, we can determine if the volume is sufficient with which to produce aggregate reports.

CDC recognized the need for a new approach for VAP surveillance in mechanically ventilated neonates and children, and so in September 2012, convened a group of professionals from several pediatric and neonatal, critical and respiratory care, and healthcare epidemiology/infectious disease organizations in order to explore the feasibility

of modifying the adult Ventilator-Associated Event (VAE) surveillance definitions for use in pediatric and neonatal critical care locations. The Neonatal and Pediatric VAE Working Group continues to explore options in the development of a Pediatric Ventilator Associated Condition (PVAC) definition. The Working Group recommended that, until the new definition is developed and available for use, VAP surveillance should continue to be made available in NHSN for pediatric critical care locations (pedVAP). Additionally, the Working Group recommended that beginning in 2014 VAP surveillance be withdrawn as an in-plan surveillance option for neonatal critical care locations based on recognition that the current VAP surveillance definition is of questionable utility and meaning in the neonatal population. As a result, this report will be the last report to include VAP rates and ventilator utilization ratios for NICU locations. VAP rates and ventilator utilization ratios for pediatric locations will continue to be provided.

In producing this report, there were several areas identified for which prevention activities and further investigation may be needed, both at the national and local levels. For example, the CLABSI pooled mean rate for LTACH critical care units is higher than most critical care unit types in other facility types (Tables 3 and 11). Similarly, the CAUTI pooled mean rate for LTACH wards is higher than CAUTI pooled mean rates in many ward-level locations in acute care hospitals (Tables 5 and 11). Further, when compared to the previous report, CAUTI rates have increased in most of the critical care units (Table 5).[1] Additional key findings from this report can be found in Figure 1.

Tables 14-19 were included to aid the reader in interpreting the DA infection rates data. One important use of data in these tables is to better understand the national distribution of DA infections by type of reporting criterion used. For example, nearly 85% of the CLABSIs from adult and pediatric ICUs and inpatient wards were identified using criterion (1) which attributes the CLABSI to a recognized pathogen; however, for NICUs and oncology units, only 75% used this criterion, resulting in a greater percentage of CLABSIs in this population that were identified with common commensals.

The need for careful scrutiny of the data increases as diverse types of facilities continue to participate in NHSN, either voluntarily or by mandate. NHSN will continue to assess how the changing facility composition and changes in the proportion of data contributed by facility and location types impact HAI rates and distributions so that the best possible risk-adjusted comparative data may be provided in future reports.

For those who do not report to NHSN but would like to use these data for comparison, the information must first be collected from your hospital in accordance with the methods described for NHSN.[3,4] Refer to Appendices A and B for further instructions. Appendix A discusses the calculation of infection rates and DU ratios for the DA Module. Appendix B gives a step-by-step method for interpretation of percentiles of infection rates or DU ratios. Although a high rate or ratio (>90th percentile) does not necessarily define a problem, it does suggest an area for further investigation. Similarly, a low rate or ratio (<10th percentile) may be the result of inadequate surveillance.

Facilities should use the data in this report and their own data to guide local prevention strategies and other quality improvement efforts to reduce the occurrence of infections as much as possible. The data presented in this report can be used to prioritize prevention efforts in those patient care areas that are shown to have the highest incidence of DA infections and/or high device utilization. Facilities may also wish to set targets based on the percentile distributions provided in this report in an effort to strive for lower rates and greater prevention success.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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NHSN Development Team

NHSN Methods and Analytics Team

NHSN Protocol and Training Team

NHSN Statistics Team

NHSN User Support Team

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- The number of Critical Access Hospitals (CAHs) reporting device-associated data to NHSN continued to increase, and in 2013, CAHs represented nearly 9% of all hospitals reporting device-associated data to NHSN (Table 1).
- Central line device utilization ratios decreased only slightly, while central line-associated bloodstream infection (CLABSI) rates continue to decrease in critical care units (Table 3).
- When compared to the previous report, urinary catheter-associated urinary tract infection (CAUTI) rates have increased in the majority of critical care location types, while decreasing in the majority of non-critical care locations (Tables 5, 11-13).
- In reviewing the percentile distributions for each event type, CAUTI rates have the widest distributions, and nearly all of the 90th percentiles are > 3.0/1,000 urinary catheter days (Table 5).
- This report includes ventilator-associated pneumonia (VAP) rates for pediatric units and neonatal intensive care units (NICUs) only (Tables 6-8); adult patient VAP rates for 2013 are not included because ventilator-associated event (VAE) surveillance was introduced in that year.
- The Long Term Acute Care Hospital (LTACH) and Inpatient Rehabilitation Facility (IRF) data in this report will serve as the baseline for new standardized infection ratios (SIRs) for these facility types. In addition, this report introduces new stratification for IRFs and those units within the acute care hospital setting that are defined as CMS IRF units (Tables 11 and 12).
- Compared to all other inpatient unit types, NICUs and oncology units reported a higher proportion of CLABSIs identified with a common commensal. (Table 14).

Figure 1.
Highlights from this report

Table 1

Enrolled NHSN hospitals contributing data used in this report

Hospital type	**N (%)**
Children's	72 (1.6)
Critical access	404 (8.9)
General, including acute, trauma, and teaching	3,181 (69.6)
Long-term acute care	493 (10.8)
Military	34 (0.7)
Oncology	15 (0.3)
Orthopedic	19 (0.4)
Psychiatric	8 (0.2)
Rehabilitation	259 (5.7)
Surgical	54 (1.2)
Veterans' Affairs	12 (0.3)
Women's	6 (0.1)
Women's and Children's	10 (0.2)
Total	**4,567**

Table 2

Enrolled NHSN facilities contributing data used in this report, by facility type and bedsize

Facility type	Bed size category				Total N (%)
	≤ 50	51-200	201-500	> 500	
	N (%)	N (%)	N (%)	N (%)	
Acute care hospitals*	**885 (19.4)**	**1,581 (34.6)**	**1,091 (23.9)**	**258 (5.6)**	**3,815 (83.5)**
Major teaching	19 (0.4)	102 (2.2)	231 (5.1)	162 (3.5)	514 (11.2)
Graduate teaching	40 (0.9)	205 (4.5)	253 (5.5)	48 (1.0)	546 (12.0)
Undergraduate teaching	21 (0.5)	66 (1.4)	36 (0.8)	3 (0.1)	126 (2.8)
Nonteaching	805 (17.6)	1,208 (26.4)	571 (12.5)	45 (1.0)	2,629 (57.6)
Long term acute care hospitals	**289 (6.3)**	**193 (4.2)**	**11 (2.2)**	**0 (0.0)**	**493 (10.8)**
Free-standing	118 (2.6)	171 (3.7)	11 (2.2)	0 (0.0)	300 (6.6)
Within a hospital	171 (3.7)	22 (0.5)	0 (0.0)	0 (0.0)	193 (4.2)
Inpatient rehabilitation facilities	**120 (2.6)**	**136 (3.0)**	**3 (0.1)**	**0 (0.0)**	**259 (5.7)**
Free-standing	101 (2.2)	125 (2.7)	3 (0.1)	0 (0.0)	229 (5.0)
Within a healthcare facility†	19 (0.4)	11 (0.2)	0 (0.0)	0 (0.0)	30 (0.7)
Total	1,294 (28.3)	1,910 (41.8)	1,105 (24.2)	258 (5.6)	4,567

Major: Facility has a program for medical students and post-graduate medical training.

Graduate: Facility has a program for post-graduate medical training (i.e., residency and/or fellowships).

Undergraduate: Facility has a program for medical students only.

Free-standing/within a hospital or healthcare facility: Describes physical placement of LTACH or IRF and does not define financial or administrative relationship with other healthcare facility types.

*851 Acute care hospitals also report for locations identified as inpatient rehabilitation facilities.

†does not include inpatient rehabilitation facilities reporting to NHSN as locations within enrolled acute care hospitals.

Table 3

Pooled means and key percentiles of the distribution of laboratory-confirmed central line-associated BSI rates and central line utilization ratios, by type of location, Acute Care Hospitals, DA module, 2013

	Central line-associated BSI rate*				Percentile				
Type of Acute Care Hospital Location	**No. of locations†**	**No. of CLABSI**	**Central line-days**	**Pooled mean**	**10%**	**25%**	**50% (median)**	**75%**	**90%**
Critical Care									
Burn	71 (69)	219	74,949	2.9	0.0	0.0	2.2	4.4	7.3
Medical -Major teaching	251 (250)	812	669,976	1.2	0.0	0.4	1.0	1.8	2.8
Medical -All other	452 (432)	660	611,514	1.1	0.0	0.0	0.5	1.4	2.5
Medical cardiac	387 (381)	565	557,944	1.0	0.0	0.0	0.8	1.6	2.6
Medical/surgical -Major teaching	358 (354)	908	800,019	1.1	0.0	0.0	0.9	1.6	2.4
Medical/surgical -All other ≤15 beds	1,647 (1,510)	1,032	1,260,781	0.8	0.0	0.0	0.0	1.0	2.4
Medical/surgical -All other > 15 beds	807 (804)	1,752	2,132,226	0.8	0.0	0.0	0.6	1.2	2.0
Neurologic	59 (58)	91	80,894	1.1	0.0	0.0	0.9	1.6	2.8
Neurosurgical	181 (178)	300	317,745	0.9	0.0	0.0	0.7	1.4	2.2
Pediatric cardiothoracic	43	185	146,328	1.3	0.0	0.5	1.2	2.0	2.7
Pediatric medical	31 (26)	19	23,719	0.8	0.0	0.0	0.0	0.6	2.0
Pediatric medical/surgical	315 (288)	479	389,069	1.2	0.0	0.0	0.7	1.7	3.2
Pediatric surgical	6 (5)	1	3,105	0.3					
Prenatal	8 (1)	0	710	0.0					
Respiratory	6	10	9,842	1.0					
Surgical -Major teaching	197 (196)	535	470,884	1.1	0.0	0.0	0.9	1.5	2.4
Surgical -All other	190 (186)	295	345,261	0.9	0.0	0.0	0.7	1.4	2.5
Surgical cardiothoracic	455 (454)	777	955,534	0.8	0.0	0.0	0.5	1.2	2.1
Trauma	147	470	329,688	1.4	0.0	0.5	1.2	2.1	3.4
Step-Down Units									
Adult step-down (post-critical care)	700 (687)	705	818,478	0.9	0.0	0.0	0.0	1.3	2.5
Step-down NICU (level II)	47 (21)	3	4,886	0.6	0.0	0.0	0.0	0.0	0.0
Pediatric step-down (post-critical care)	17	25	17,416	1.4					
Mixed Acuity Units‡									
Adult mixed acuity	83 (72)	56	83,286	0.7	0.0	0.0	0.0	1.1	2.1
Mixed age mixed acuity	49 (42)	19	28,758	0.7	0.0	0.0	0.0	0.9	1.7

	Central line-associated BSI rate*				Percentile				
Type of Acute Care Hospital Location	**No. of locations†**	**No. of CLABSI**	**Central line-days**	**Pooled mean**	**10%**	**25%**	**50% (median)**	**75%**	**90%**
Pediatric mixed acuity	16 (11)	33	29,140	1.1					
Inpatient Wards									
Acute stroke	20 (19)	12	14,081	0.9					
Antenatal	21 (11)	2	2,089	1.0					
Behavioral health/psychiatry	116 (36)	6	9,884	0.6	0.0	0.0	0.0	0.0	0.0
Burn	17	6	8,442	0.7					
Gastrointestinal	6	12	13,382	0.9					
Genitourinary	14 (13)	12	19,597	0.6					
Geronotology	13 (11)	5	8,176	0.6					
Gynecology	56 (28)	7	15,505	0.5	0.0	0.0	0.0	0.0	1.1
Jail	14	13	11,834	1.1					
Labor and delivery	83 (11)	0	1,834	0.0					
Labor, delivery, recovery, postpartum suite	143 (20)	4	4,357	0.9	0.0	0.0	0.0	0.0	0.0
Medical	1,082 (1,036)	1,114	1,266,236	0.9	0.0	0.0	0.3	1.4	2.4
Medical/surgical	2,292 (2,155)	1,672	2,140,703	0.8	0.0	0.0	0.0	1.1	2.3
Neurologic	89 (83)	64	80,265	0.8	0.0	0.0	0.0	1.2	2.4
Neurosurgical	68 (67)	41	65,626	0.6	0.0	0.0	0.0	0.9	1.9
Orthopedic	330 (385)	67	186,839	0.4	0.0	0.0	0.0	0.0	1.3
Orthopedic trauma	24 (22)	31	25,298	1.2	0.0	0.0	0.5	1.9	3.2
Pediatric medical	70 (55)	59	54,538	1.1	0.0	0.0	0.0	1.5	3.0
Pediatric medical/surgical	320 (229)	218	234,827	0.9	0.0	0.0	0.0	1.4	2.5
Pediatric orthopedic	11 (6)	1	1,992	0.5					
Pediatric rehabilitation - non-IRF§	7 (6)	4	4,836	0.8					
Pediatric surgical	12 (11)	13	11,529	1.1					
Postpartum	205 (25)	3	4,794	0.6	0.0	0.0	0.0	0.0	0.0
Pulmonary	46	48	75,934	0.6	0.0	0.0	0.5	1.1	1.7
Rehabilitation - non-IRF§	28 (27)	5	21,254	0.2	0.0	0.0	0.0	0.0	0.9
Surgical	610 (574)	450	643,255	0.7	0.0	0.0	0.0	1.0	2.1
Telemetry	388 (381)	263	358,115	0.7	0.0	0.0	0.0	1.2	2.3
Vascular Surgery	28 (27)	24	42,163	0.6	0.0	0.0	0.1	0.9	1.5
Well-Baby Nursery	13 (4)	0	537	0.0					
Chronic Care Units‖									
Chronic care	25 (23)	21	26,682	0.8	0.0	0.0	0.0	0.9	1.6
Chronic rehabilitation unit	7	0	3,320	0.0					
Inpatient hospice	6	0	4,588	0.0					
Ventilator dependent unit	7	23	13,398	1.7					

Type of Acute Care Hospital Location	No. of locations†	Central line utilization ratio¶			Percentile				
		Central line-days	Patient-days	Pooled mean	10%	25%	50% (median)	75%	90%
Critical Care									
Burn	71	74,949	160,109	0.47	0.16	0.31	0.44	0.61	0.74
Medical									
-Major teaching	251	669,976	1,177,549	0.57	0.36	0.48	0.57	0.67	0.75
Medical									
-All other	452 (449)	611,514	1,361,826	0.45	0.12	0.24	0.44	0.58	0.68
Medical cardiac	387	557,944	1,284,855	0.43	0.18	0.33	0.44	0.56	0.67
Medical/surgical									
-Major teaching	358 (356)	800,019	1,482,658	0.54	0.28	0.39	0.53	0.65	0.71
Medical/surgical									
-All other ≤15 beds	1,647 (1,627)	1,260,781	3,453,458	0.37	0.11	0.19	0.34	0.50	0.62
Medical Surgical									
-All other > 15 beds	807	2,132,226	4,391,341	0.49	0.30	0.40	0.51	0.60	0.69
Neurologic	59 (58)	80,894	171,989	0.47	0.22	0.32	0.46	0.55	0.67
Neurosurgical	181	317,745	731,728	0.43	0.24	0.34	0.43	0.54	0.60
Pediatric cardiothoracic	43	146,328	202,899	0.72	0.49	0.59	0.75	0.86	0.91
Pediatric medical	31 (29)	23,719	63,391	0.37	0.10	0.14	0.25	0.34	0.47
Pediatric medical/surgical	315 (307)	389,069	866,418	0.45	0.14	0.22	0.35	0.50	0.62
Pediatric surgical	6	3,105	9,609	0.32					
Prenatal	8	710	9,153	0.08					
Respiratory	6	9,842	26,288	0.37					
Surgical									
-Major teaching	197	470,884	819,943	0.57	0.38	0.46	0.57	0.67	0.75
Surgical									
-All other	190 (188)	345,261	631,281	0.55	0.32	0.43	0.55	0.66	0.76
Surgical cardiothoracic	455 (454)	955,534	1,449,549	0.66	0.38	0.52	0.67	0.80	0.89
Trauma	147	329,688	616,514	0.53	0.37	0.45	0.53	0.62	0.70
Step-Down Units									
Adult step-down (post-critical care)	700 (699)	818,478	3,903,448	0.21	0.09	0.13	0.19	0.29	0.39
Step-down NICU (level II)	47 (44)	4,886	83,342	0.06	0.01	0.02	0.04	0.07	0.11
Pediatric step-down (post-critical care)	17	17,416	57,086	0.31					
Mixed Acuity Units‡									
Adult mixed acuity	83 (82)	83,286	336,340	0.25	0.04	0.10	0.19	0.35	0.49
Mixed age mixed acuity	49	28,758	204,837	0.14	0.03	0.06	0.10	0.20	0.32
Pediatric mixed acuity	16	29,140	125,440	0.23					
Inpatient Wards									
Acute stroke	20	14,081	107,664	0.13	0.07	0.08	0.11	0.13	0.17
Antenatal	21	2,089	42,243	0.05	0.01	0.02	0.02	0.06	0.10
Behavioral health/psychiatry	116	9,884	285,679	0.03	0.00	0.01	0.02	0.03	0.05

Type of Acute Care Hospital Location	No. of locations[†]	Central line-days	Patient-days	Central line utilization ratio[¶] Pooled mean	Percentile 10%	25%	50% (median)	75%	90%
Burn	17	8,442	44,748	0.19					
Gastrointestinal	6	13,382	47,960	0.28					
Genitourinary	14	19,597	82,531	0.24					
Geronotology	13	8,176	73,359	0.11					
Gynecology	56	15,505	144,421	0.11	0.01	0.02	0.04	0.13	0.23
Jail	14	11,834	61,564	0.19					
Labor and delivery	83 (77)	1,834	82,772	0.02	0.00	0.01	0.01	0.02	0.06
Labor, delivery, recovery, postpartum suite	143 (141)	4,357	188,169	0.02	0.00	0.01	0.01	0.02	0.06
Medical	1,082 (1,079)	1,266,236	7,550,620	0.17	0.06	0.10	0.14	0.21	0.29
Medical/surgical	2,292 (2,284)	2,140,703	14,411,414	0.15	0.05	0.08	0.12	0.18	0.26
Neurologic	89 (88)	80,265	603,841	0.13	0.06	0.08	0.12	0.16	0.20
Neurosurgical	68	65,626	469,446	0.14	0.06	0.08	0.14	0.18	0.23
Orthopedic	330 (327)	186,839	1,845,108	0.10	0.02	0.04	0.08	0.12	0.17
Orthopedic Trauma	24	25,298	171,318	0.15	0.05	0.09	0.12	0.18	0.21
Pediatric medical	70 (68)	54,538	271,432	0.20	0.02	0.06	0.14	0.25	0.34
Pediatric medical/surgical	320 (314)	234,827	1,236,887	0.19	0.03	0.05	0.10	0.22	0.30
Pediatric orthopedic	11	1,992	15,891	0.13					
Pediatric rehabilitation - non-IRF[§]	7	4,836	25,491	0.19					
Pediatric surgical	12	11,529	53,953	0.21					
Postpartum	205	4,794	376,105	0.01	0.00	0.00	0.01	0.02	0.03
Pulmonary	46	75,934	313,598	0.24	0.10	0.15	0.25	0.32	0.44
Rehabilitation - non-IRF[§]	28	21,254	138,196	0.15	0.04	0.06	0.10	0.17	0.39
Surgical	610 (607)	643,255	3,803,154	0.17	0.05	0.09	0.14	0.21	0.28
Telemetry	388	358,115	2,608,136	0.14	0.06	0.09	0.13	0.18	0.23
Vascular surgery	28	42,163	199,193	0.21	0.09	0.12	0.16	0.29	0.33
Well-Baby Nursery	13	537	12,360	0.04					
Chronic Care Units[‖]									
Chronic care unit	25	26,682	163,688	0.16	0.02	0.07	0.14	0.28	0.52
Chronic rehabilitation unit	7	3,320	26,036	0.13					
Inpatient hospice	6	4,588	19,468	0.24					
Ventilator dependent unit	7	13,398	40,262	0.33					

BSI, bloodstream infection; *CLABSI*, central line-associated BSI; *NICU*, neonatal intensive care unit.

[*] $\frac{\text{Number of CLABSI}}{\text{Number of central line- days}} \times 1000$

[†] The number in parentheses is the number of locations meeting minimum requirements for percentile distributions (i.e., ≥50 device days for rate distributions, ≥50 patient days for device utilization ratios) if less than total number of locations. If this number is <20, percentile distributions are not calculated.

[‡] Mixed acuity units are defined as those units that provide care to patients of varying acuity levels and can include units that operate with acuity-adaptable beds. Such units may be comprised of patients from different specialty services (e.g., cardiac, neurology).

§Includes only in-hospital rehabilitation wards that are not defined as inpatient rehabilitation facilities (IRF) per the CMS Inpatient Rehabilitation Facility Quality Reporting Program.

//Includes chronic care locations within the general acute care hospital setting.

¶$\frac{\text{Number of central line- days}}{\text{Number of patient- days}}$

Table 4

Pooled means and key percentiles of the distribution of laboratory-confirmed permanent and temporary central line-associated BSI rates and central line utilization ratios, by type of speciality care area/oncology location, DA module, 2013

	Permanent Central line-associated BSI rate*				Percentile				
Type of Location	**No. of locations†**	**No. of PCLABSI**	**Permanent Central line-days**	**Pooled mean**	**10%**	**25%**	**50% (median)**	**75%**	**90%**
Oncology									
Oncology critical care‡	17 (5)	8	7,104	1.1					
Oncology step-down	5	5	8,981	0.6					
General hematology/oncology ward	213 (211)	503	355,195	1.4	0	0	0.9	1.8	3.3
Hematopoietic stem cell transplant ward	65 (63)	351	137,523	2.6	0	0.6	2	3.4	5.2
Leukemia and/or lymphoma ward	18	61	31,208	2.0					
Pediatric general hematology/oncology ward	55 (54)	362	171,135	2.1	0	0.7	1.8	2.6	3.9
Pediatric hematopoietic stem cell transplant ward	17	62	26,068	2.4					
Solid tumor ward	22	17	39,592	0.4	0	0	0	0.5	1.2
Specialty Care Area									
Solid organ transplant	20 (18)	19	10,580	1.8					

	Temporary Central line-associated BSI rate§				Percentile				
Type of Location	**No. of locations†**	**No. of TCLABSI**	**Temporary Central line-days**	**Pooled mean**	**10%**	**25%**	**50% (median)**	**75%**	**90%**
Oncology									
Oncology critical care‡	18	42	28,078	1.5					
Oncology step-down	5	9	9,548	0.9					
General hematology/oncology ward	225 (221)	670	331,236	2.0	0.0	0.0	1.3	2.9	5.0
Hematopoietic stem cell transplant ward	67 (66)	506	168,184	3.0	0.0	1.3	2.8	4.0	7.1
Leukemia and/or lymphoma ward	18	178	79,859	2.2					
Pediatric general hematology/oncology ward	49 (48)	109	53,105	2.1	0.0	0.0	0.7	3.1	4.1
Pediatric hematopoietic stem cell transplant ward	16 (12)	33	15,126	2.2					
Solid tumor ward	22	23	34,564	0.7	0.0	0.0	0.6	0.9	1.6

Temporary Central line-associated BSI rate[§]					Percentile				
Type of Location	**No. of locations[†]**	**No. of TCLABSI**	**Temporary Central line-days**	**Pooled mean**	**10%**	**25%**	**50% (median)**	**75%**	**90%**
Specialty Care Area									
Solid organ transplant	24	59	52,307	1.1	0.0	0.0	0.5	1.2	2.3

Permanent Central line utilization ratio[//]					Percentile				
Type of location	**No. of locations[†]**	**Permanent Central line-days**	**Patient-days**	**Pooled mean**	**10%**	**25%**	**50% (median)**	**75%**	**90%**
Oncology									
Oncology critical care[‡]	17	7,104	40,989	0.17					
Oncology step-down	5	8,981	37,787	0.24					
General hematology/oncology ward	213	355,195	1,247,229	0.28	0.11	0.18	0.25	0.39	0.51
Hematopoietic stem cell transplant ward	65	137,523	313,877	0.44	0.09	0.27	0.44	0.64	0.81
Leukemia and/or lymphoma ward	18	31,208	144,547	0.22					
Pediatric general hematology/oncology ward	55 (54)	171,135	293,585	0.58	0.24	0.42	0.59	0.73	0.80
Pediatric hematopoietic stem cell transplant ward	17	26,068	45,706	0.57					
Solid tumor ward	22	39,592	187,166	0.21	0.06	0.10	0.17	0.26	0.35
Specialty Care Area									
Solid organ transplant	20	10,580	115,262	0.09	0.02	0.04	0.07	0.09	0.21

Temporary Central line utilization ratio[¶]					Percentile				
Type of location	**No. of locations[†]**	**Temporary Central line-days**	**Patient-days**	**Pooled mean**	**10%**	**25%**	**50% (median)**	**75%**	**90%**
Oncology									
Oncology critical care[‡]	18	28,078	48,807	0.58					
Oncology step-down	5	9,548	38,141	0.25					
General hematology/oncology ward	225	331,236	1,326,620	0.25	0.09	0.13	0.21	0.34	0.44
Hematopoietic stem cell transplant ward	67	168,184	344,263	0.49	0.14	0.23	0.42	0.67	0.87
Leukemia and/or lymphoma ward	18	79,859	148,063	0.54					
Pediatric general hematology/oncology ward	49	53,105	269,275	0.20	0.04	0.09	0.14	0.23	0.39
Pediatric hematopoietic stem cell transplant ward	16 (15)	15,126	45,592	0.33					

		Temporary Central line utilization ratio[¶]			Percentile				
Type of location	**No. of locations[†]**	**Temporary Central line-days**	**Patient-days**	**Pooled mean**	**10%**	**25%**	**50% (median)**	**75%**	**90%**
Solid tumor ward	22	34,564	188,102	0.18	0.09	0.12	0.16	0.23	0.31
Specialty Care Area									
Solid organ transplant	24	52,307	142,777	0.37	0.18	0.25	0.32	0.53	0.67

BSI, bloodstream infection; *PCLABSI*, permanent central line-associated BSI; TCLABSI, temporary central line-associated BSI

[*] $\frac{\text{Number of PCLABSI}}{\text{Number of permanent central line-days}} \times 1000$

[†] The number in parentheses is the number of locations meeting minimum requirements for percentile distributions (i.e., ≥50 device days for rate distributions, ≥50 patient days for device utilization ratios) if less than total number of locations. If this number is <20, percentile distributions are not calculated.

[‡] Includes all oncology critical care unit types.

[§] $\frac{\text{Number of TCLABSI}}{\text{Number of temporary central line-days}} \times 1000$

[//] $\frac{\text{Number of permanent central line-days}}{\text{Number of patient-days}}$

[¶] $\frac{\text{Number of temporary central line-days}}{\text{Number of patient-days}}$

Table 5

Pooled means and key percentiles of the distribution of urinary catheter-associated UTI rates and urinary catheter utilization ratios, by type of location, Acute Care Hospitals, DA module, 2013

	Urinary catheter-associated UTI rate*				Percentile				
Type of Acute Care Hospital Location	**No. of locations†**	**No. of CAUTI**	**Urinary catheter-days**	**Pooled mean**	**10%**	**25%**	**50% (median)**	**75%**	**90%**
Critical care units									
Burn	70 (69)	369	76,619	4.8	0.0	1.8	3.6	7.3	10.4
Medical									
-Major teaching	248	2,696	775,684	3.5	0.9	1.7	2.9	4.8	6.0
Medical									
-All other	453 (449)	1,703	833,658	2.0	0.0	0.0	1.2	2.6	3.9
Medical cardiac	384 (382)	1,494	658,345	2.3	0.0	0.7	1.9	3.4	4.9
Medical/Surgical									
-Major teaching	358 (356)	2,577	967,282	2.7	0.0	1.0	2.2	3.5	5.1
Medical/Surgical									
-All other, ≤15 beds	1,645 (1,619)	2,429	1,910,118	1.3	0.0	0.0	0.4	1.7	3.1
Medical/Surgical									
-All other, >15 beds	804	4,666	2,758,180	1.7	0.0	0.6	1.4	2.3	3.4
Neurologic	58 (57)	530	117,424	4.5	0.0	1.7	4.0	6.0	7.8
Neurosurgical	180 (178)	2,482	470,403	5.3	1.8	3.1	4.4	6.7	9.1
Pediatric cardiothoracic	38 (36)	39	33,545	1.2	0.0	0.0	0.5	1.6	2.3
Pediatric medical	30 (21)	30	8,891	3.4	0.0	0.0	0.0	5.0	9.8
Pediatric medical/surgical	297 (261)	402	162,875	2.5	0.0	0.0	1.4	3.6	5.7
Pediatric surgical	5 (4)	0	1,475	0.0					
Prenatal	6 (5)	0	1,150	0.0					
Respiratory	6	34	15,836	2.1					
Surgical									
-Major teaching	192	1,989	580,420	3.4	0.7	1.6	3.0	4.6	5.9
Surgical									
-All other	189	912	445,830	2.0	0.0	0.5	1.6	3.0	4.4
Surgical cardiothoracic	453 (452)	1,715	942,852	1.8	0.0	0.7	1.5	2.4	3.4
Trauma	147	1,996	460,280	4.3	0.9	2.4	4.1	5.6	7.1
Oncology Units									
Oncology critical care‡	18	57	34,198	1.7					
Oncology step-down	5	33	12,453	2.6					
General hematology/oncology ward	199 (195)	338	161,366	2.1	0.0	0.0	1.5	3.1	5.6
Hematopoietic stem cell transplant ward	58 (50)	59	26,765	2.2	0.0	0.0	0.0	2.3	7.1
Leukemia and/or lymphoma ward	16 (15)	49	15,103	3.2					
Pediatric general hematology/ oncology ward	30 (22)	13	4,319	3.0	0.0	0.0	0.0	6.1	10.7

	Urinary catheter-associated UTI rate*				Percentile				
Type of Acute Care Hospital Location	**No. of locations†**	**No. of CAUTI**	**Urinary catheter-days**	**Pooled mean**	**10%**	**25%**	**50% (median)**	**75%**	**90%**
Pediatric hematopoietic stem cell transplant ward	5 (0)	0	149	0.0					
Solid tumor ward	21	86	50,200	1.7	0.0	0.8	1.7	2.5	4.1
Specialty Care Area									
Solid organ transplant	22	50	27,535	1.8	0.0	0.0	1.1	2.2	4.7
Step-down Units									
Adult step-down (post-critical care)	632 (624)	1,403	813,481	1.7	0.0	0.0	1.2	2.5	4.3
Pediatric step-down (post-critical care)	13 (10)	1	1,275	0.8					
Mixed Acuity Units§									
Adult mixed acuity	91 (87)	144	92,702	1.6	0.0	0.0	0.7	2.4	3.9
Mixed age mixed acuity	51 (45)	21	37,529	0.6	0.0	0.0	0.0	0.3	2.3
Pediatric mixed acuity	14 (4)	2	1,327	1.5					
Inpatient Wards									
Acute stroke	15	28	15,029	1.9					
Antenatal	21 (15)	0	3,524	0.0					
Behavioral health/psychiatry	132 (47)	17	10,537	1.6	0.0	0.0	0.0	0.3	7.6
Burn	18 (17)	21	6,716	3.1					
Genitourinary	12	20	16,653	1.2					
Gerontology	13 (11)	15	9,532	1.6					
Gynecology	61 (57)	23	29,463	0.8	0.0	0.0	0.0	0.0	1.8
Jail	13 (9)	12	4,305	2.8					
Labor and delivery	132 (110)	6	43,291	0.1	0.0	0.0	0.0	0.0	0.0
Labor, delivery, recovery, postpartum suite	218 (188)	13	84,990	0.2	0.0	0.0	0.0	0.0	0.0
Medical	1,019 (989)	1,571	1,025,180	1.5	0.0	0.0	1.0	2.4	4.0
Medical/Surgical	2,148 (2,092)	2,837	2,263,306	1.3	0.0	0.0	0.6	1.9	3.3
Neurologic	77 (73)	200	89,548	2.2	0.0	0.9	1.8	3.9	6.1
Neurosurgical	56	202	68,925	2.9	0.0	0.7	2.7	4.2	5.7
Orthopedic	312 (300)	433	401,723	1.1	0.0	0.0	0.6	1.8	3.2
Orthopedic trauma	21	84	30,375	2.8	0.0	0.9	2.6	4.3	5.9
Pediatric medical	52 (19)	8	5,912	1.4					
Pediatric medical/surgical	254 (136)	57	41,258	1.4	0.0	0.0	0.0	0.0	4.6
Pediatric orthopedic	6	2	3,001	0.7					
Pediatric rehabilitation - non-IRF‖	5 (2)	1	509	2.0					
Pediatric surgical	10 (8)	9	7,356	1.2					
Postpartum	277 (257)	22	145,610	0.2	0.0	0.0	0.0	0.0	0.0
Pulmonary	37 (36)	123	50,569	2.4	0.0	0.9	1.5	4.0	5.6
Rehabilitation - non-IRF‖	25 (24)	29	15,749	1.8	0.0	0.0	0.0	2.3	4.3
Surgical	577 (565)	1,005	753,071	1.3	0.0	0.0	1.0	2.1	3.4

	Urinary catheter-associated UTI rate*				Percentile				
Type of Acute Care Hospital Location	**No. of locations†**	**No. of CAUTI**	**Urinary catheter-days**	**Pooled mean**	**10%**	**25%**	**50% (median)**	**75%**	**90%**
Telemetry	320 (317)	495	393,318	1.3	0.0	0.0	0.8	2.0	3.6
Vascular surgery	23 (22)	43	25,640	1.7	0.0	0.0	1.9	2.9	3.9
Well-baby nursery	7 (1)	0	96	0.0					
Chronic Care Units¶									
Chronic care	27 (24)	21	13,995	1.5	0.0	0.0	0.0	2.4	3.5
Chronic behavioral health/psych	9 (4)	1	625	1.6					
Chronic care rehabilitation unit	8 (7)	7	3,475	2.0					
Inpatient hospice	7	7	7,122	1.0					
Ventilator dependent unit	6	29	8,846	3.3					

	Urinary catheter utilization ratio#				Percentile				
Type of Acute Care Hospital Location	**No. of locations†**	**Urinary catheter-days**	**Patient days**	**Pooled mean**	**10%**	**25%**	**50% (median)**	**75%**	**90%**
Critical care units									
Burn	70	76,619	158,863	0.48	0.22	0.33	0.45	0.60	0.76
Medical									
-Major teaching	248	775,684	1,165,272	0.67	0.49	0.60	0.69	0.77	0.83
Medical									
-All other	453 (451)	833,658	1,366,503	0.61	0.34	0.51	0.64	0.74	0.80
Medical cardiac	384	658,345	1,277,315	0.52	0.29	0.42	0.54	0.67	0.76
Medical/Surgical									
-Major teaching	358 (357)	967,282	1,482,847	0.65	0.42	0.55	0.67	0.75	0.81
Medical/Surgical									
-All other, ≤15 beds	1,645 (1,630)	1,910,118	3,508,198	0.54	0.32	0.46	0.60	0.70	0.79
Medical/Surgical									
-All other, >15 beds	804	2,758,180	4,373,157	0.63	0.46	0.59	0.68	0.76	0.81
Neurologic	58	117,424	169,140	0.69	0.40	0.59	0.70	0.78	0.84
Neurosurgical	180	470,403	724,923	0.65	0.45	0.56	0.68	0.77	0.83
Pediatric cardiothoracic	38	33,545	161,234	0.21	0.11	0.15	0.20	0.28	0.33
Pediatric medical	30 (27)	8,891	55,048	0.16	0.03	0.07	0.12	0.17	0.22
Pediatric medical/surgical	297 (294)	162,875	786,229	0.21	0.07	0.11	0.18	0.25	0.31
Pediatric surgical	5	1,475	4,634	0.32					
Prenatal	6	1,150	11,490	0.10					
Respiratory	6	15,836	26,288	0.60					
Surgical									
-Major teaching	192	580,420	805,135	0.72	0.53	0.65	0.74	0.80	0.86
Surgical									
-All other	189 (187)	445,830	631,337	0.71	0.52	0.65	0.75	0.83	0.86
Surgical cardiothoracic	453 (452)	942,852	1,441,951	0.65	0.42	0.54	0.68	0.79	0.87

Type of Acute Care Hospital Location	No. of locations[†]	Urinary catheter utilization ratio[#] Urinary catheter-days	Patient days	Pooled mean	Percentile 10%	25%	50% (median)	75%	90%
Trauma	147	460,280	616,514	0.75	0.53	0.67	0.77	0.83	0.90
Oncology Units									
Oncology critical care[‡]	18	34,198	48,807	0.70					
Oncology step-down	5	12,453	38,141	0.33					
General hematology/oncology ward	199	161,366	1,155,708	0.14	0.06	0.08	0.13	0.19	0.25
Hematopoietic stem cell transplant ward	58	26,765	291,494	0.09	0.03	0.04	0.07	0.12	0.20
Leukemia and/or lymphoma ward	16	15,103	135,566	0.11					
Pediatric general hematology/ oncology ward	30	4,319	155,203	0.03	0.01	0.01	0.02	0.03	0.04
Pediatric hematopoietic stem cell transplant ward	5	149	8,523	0.02					
Solid tumor ward	21	50,200	182,494	0.28	0.20	0.22	0.26	0.30	0.36
Specialty Care Area									
Solid organ transplant	22	27,535	120,504	0.23	0.11	0.15	0.19	0.27	0.46
Step-down Units									
Adult step-down (post-critical care)	632 (631)	813,481	3,426,592	0.24	0.12	0.17	0.24	0.35	0.46
Pediatric step-down (post-critical care)	13	1,275	42,173	0.03					
Mixed Acuity Units[§]									
Adult mixed acuity	91	92,702	377,598	0.25	0.09	0.15	0.21	0.33	0.49
Mixed age mixed acuity	51	37,529	187,862	0.20	0.05	0.11	0.17	0.25	0.41
Pediatric mixed acuity	14 (12)	1,327	16,326	0.08					
Inpatient Wards									
Acute stroke	15	15,029	74,845	0.20					
Antenatal	21	3,524	55,065	0.06	0.01	0.02	0.04	0.09	0.16
Behavioral health/psychiatry	132	10,537	326,504	0.03	0.00	0.01	0.02	0.04	0.05
Burn	18	6,716	42,172	0.16					
Genitourinary	12	16,653	76,952	0.22					
Gerontology	13	9,532	70,140	0.14					
Gynecology	61	29,463	187,067	0.16	0.04	0.09	0.15	0.24	0.41
Jail	13	4,305	50,951	0.08					
Labor and delivery	132	43,291	250,056	0.17	0.03	0.08	0.14	0.25	0.36
Labor, delivery, recovery, postpartum suite	218 (216)	84,990	545,286	0.16	0.06	0.09	0.13	0.19	0.27
Medical	1,019 (1,013)	1,025,180	6,926,611	0.15	0.07	0.10	0.14	0.19	0.25
Medical/Surgical	2,148 (2,138)	2,263,306	13,168,940	0.17	0.09	0.12	0.16	0.21	0.28
Neurologic	77 (76)	89,548	531,244	0.17	0.05	0.10	0.15	0.20	0.30
Neurosurgical	56	68,925	378,316	0.18	0.09	0.13	0.18	0.23	0.34
Orthopedic	312 (308)	401,723	1,655,512	0.24	0.10	0.17	0.23	0.31	0.39
Orthopedic trauma	21	30,375	149,949	0.20	0.11	0.15	0.18	0.24	0.31
Pediatric medical	52 (51)	5,912	159,786	0.04	0.01	0.01	0.01	0.03	0.07

Type of Acute Care Hospital Location	No. of locations†	Urinary catheter-days	Patient days	Urinary catheter utilization ratio# Pooled mean	Percentile 10%	25%	50% (median)	75%	90%
Pediatric medical/surgical	254 (253)	41,258	882,237	0.05	0.01	0.01	0.03	0.06	0.10
Pediatric orthopedic	6	3,001	13,943	0.22					
Pediatric rehabilitation - non-IRF//	5	509	11,142	0.05					
Pediatric surgical	10	7,356	44,312	0.17					
Postpartum	277 (276)	145,610	1,134,458	0.13	0.03	0.07	0.12	0.18	0.24
Pulmonary	37	50,569	248,747	0.20	0.05	0.13	0.20	0.26	0.40
Rehabilitation - non-IRF//	25	15,749	107,171	0.15	0.04	0.07	0.11	0.17	0.25
Surgical	577 (575)	753,071	3,480,801	0.22	0.11	0.16	0.21	0.28	0.37
Telemetry	320	393,318	2,114,023	0.19	0.09	0.13	0.17	0.23	0.29
Vascular surgery	23	25,640	160,663	0.16	0.04	0.08	0.15	0.20	0.23
Well-baby nursery	7 (5)	96	3,590	0.03					
Chronic Care Units¶									
Chronic care	27	13,995	108,999	0.13	0.04	0.08	0.10	0.18	0.26
Chronic behavioral health/psych	9	625	21,401	0.03					
Chronic care rehabilitation unit	8	3,475	32,181	0.11					
Inpatient hospice	7	7,122	19,564	0.36					
Ventilator dependent unit	6	8,846	36,886	0.24					

UTI, urinary tract infection; *CAUTI*, catheter-associated UTI.

*$\frac{\text{Number of CAUTI}}{\text{Number of urinary catheter-days}} \times 1000$

†The number in parentheses is the number of locations meeting minimum requirements for percentile distributions (i.e., ≥50 device days for rate distributions, ≥50 patient days for device utilization ratios) if less than total number of locations. If this number is <20, percentile distributions are not calculated.

‡Includes all oncology critical care unit types.

§Mixed acuity units are defined as those units that provide care to patients of varying acuity levels and can include units that operate with acuity-adaptable beds. Such units may be comprised of patients from different specialty services (e.g., cardiac, neurology).

//Includes only in-hospital rehabilitation wards that are not defined as inpatient rehabilitation facilities (IRF) per the CMS Inpatient Rehabilitation Facility Quality Reporting Program.

¶Includes chronic care locations within the general acute care hospital setting.

#$\frac{\text{Number of urinary catheter-days}}{\text{Number of patient-days}}$

Table 6

Pooled means and key percentiles of the distribution of pediatric ventilator-associated PNEU rates and ventilator utilization ratios, by type of pediatric location, Acute Care Hospitals, DA module, 2013

Pediatric Ventilator-associated PNEU rate*					Percentile				
Type of Location	**No. of locations†**	**No. of Ped VAP**	**Ventilator-days**	**Pooled mean**	**10%**	**25%**	**50% (median)**	**75%**	**90%**
Critical Care Units									
Pediatric cardiothoracic	14	11	24,996	0.4					
Pediatric medical	10 (8)	4	5,259	0.8					
Pediatric medical/surgical	110 (93)	67	100,643	0.7	0.0	0.0	0.0	0.8	1.3

Pediatric Ventilator utilization ratio‡					Percentile				
Type of location	**No. of locations†**	**Ventilator-days**	**Patient-days**	**Pooled mean**	**10%**	**25%**	**50% (median)**	**75%**	**90%**
Critical Care Units									
Pediatric cardiothoracic	14	24,996	64,795	0.39					
Pediatric medical	10 (9)	5,259	15,821	0.33					
Pediatric medical/surgical	110 (108)	100,643	271,458	0.37	0.07	0.16	0.28	0.42	0.51

PNEU, pneumonia; VAP, ventilator-associated PNEU.

*$\frac{\text{Number of pediatric VAP}}{\text{Number of ventilator-days}} \times 1000$

†The number in parentheses is the number of locations meeting minimum requirements for percentile distributions (i.e., ≥50 device days for rate distributions, ≥50 patient days for device utilization ratios) if less than total number of locations. If this number is <20, percentile distributions are not calculated.

‡$\frac{\text{Number of ventilator-days}}{\text{Number of patient-days}}$

Table 7

Pooled means and key percentiles of the distribution of central line-associated BSI rates and central line utilization ratios for level III NICUs, DA module, 2013

Central line-associated BSI rate*					Percentile				
Birth-weight category	**No. of locations†**	**No. of CLABSI**	**Central line-days**	**Pooled mean**	**10%**	**25%**	**50% (median)**	**75%**	**90%**
≤ 750 grams	389 (345)	403	191,246	2.1	0.0	0.0	1.0	3.5	6.3
751-1000 grams	411 (354)	210	156,909	1.3	0.0	0.0	0.0	1.9	4.4
1001-1500 grams	429 (385)	136	173,835	0.8	0.0	0.0	0.0	0.9	3.2
1501-2500 grams	433 (349)	91	161,626	0.6	0.0	0.0	0.0	0.0	1.5
> 2500 grams	432 (334)	134	182,144	0.7	0.0	0.0	0.0	0.0	1.6

Central line utilization ratio‡					Percentile				
Birth-weight category	**No. of locations†**	**Central line-days**	**Patient-days**	**Pooled Mean**	**10%**	**25%**	**50% (median)**	**75%**	**90%**
≤ 750 grams	389 (367)	191,246	494,632	0.39	0.25	0.32	0.41	0.52	0.67
751-1000 grams	411 (385)	156,909	481,082	0.33	0.19	0.26	0.34	0.45	0.57
1001-1500 grams	429 (414)	173,835	677,929	0.26	0.12	0.17	0.26	0.34	0.46
1501-2500 grams	433 (422)	161,626	959,228	0.17	0.04	0.07	0.11	0.20	0.36
> 2500 grams	432 (425)	182,144	803,047	0.23	0.05	0.08	0.14	0.25	0.40

BSI, bloodstream infection; *CLABSI*, central line-associated BSI; *NICU*, neonatal intensive care unit.

*$\frac{\text{Number of CLABSI}}{\text{Number of central line-days}} \times 1000$

†The number in parentheses is the number of locations meeting minimum requirements for percentile distributions (i.e., ≥50 device days for rate distributions, ≥50 patient days for device utilization ratios) if less than total number of locations. If this number is <20, percentile distributions are not calculated.

‡$\frac{\text{Number of central line-days}}{\text{Number of patient-days}}$

Table 8

Pooled means and key percentiles of the distribution of central line-associated BSI rates and central line utilization ratios for level II/III NICUs, DA module, 2013

Central line-associated BSI rate*					Percentile				
Birth-weight category	**No. of locations†**	**No. of CLABSI**	**Central line-days**	**Pooled mean**	**10%**	**25%**	**50% (median)**	**75%**	**90 (%)**
≤ 750 grams	381 (278)	249	114,217	2.2	0.0	0.0	0.0	3.9	9.3
751-1000 grams	434 (298)	178	95,788	1.9	0.0	0.0	0.0	2.8	6.4
1001-1500 grams	518 (366)	118	123,492	1.0	0.0	0.0	0.0	0.0	3.9
1501-2500 grams	545 (341)	68	109,074	0.6	0.0	0.0	0.0	0.0	1.9
> 2500 grams	556 (316)	58	106,737	0.5	0.0	0.0	0.0	0.0	1.4

Central line utilization ratio‡					Percentile				
Birth-weight category	**No. of locations†**	**Central line-days**	**Patient-days**	**Pooled mean**	**10%**	**25%**	**50% (median)**	**75%**	**90 (%)**
≤ 750 grams	381 (295)	114,217	293,964	0.39	0.27	0.34	0.44	0.59	0.75
751-1000 grams	434 (358)	95,788	294,983	0.32	0.18	0.26	0.36	0.48	0.63
1001-1500 grams	518 (465)	123,492	501,274	0.25	0.11	0.18	0.25	0.33	0.46
1501-2500 grams	545 (515)	109,074	772,120	0.14	0.04	0.06	0.10	0.16	0.26
> 2500 grams	556 (519)	106,737	643,247	0.17	0.04	0.07	0.11	0.17	0.28

BSI, bloodstream infection; *CLABSI*, central line-associated BSI; *NICU*, neonatal intensive care unit.

*$\frac{\text{Number of CLABSI}}{\text{Number of central line-days}} \times 1000$

†The number in parentheses is the number of locations meeting minimum requirements for percentile distributions (i.e., ≥50 device days for rate distributions, ≥50 patient days for device utilization ratios) if less than total number of locations. If this number is <20, percentile distributions are not calculated.

‡$\frac{\text{Number of central line-days}}{\text{Number of patient-days}}$

Table 9

Pooled means and key percentiles of the distribution of pediatric ventilator-associated PNEU rates and ventilator utilization ratios for level III NICUs, DA module, 2013

Pediatric Ventilator-associated PNEU rate*					Percentile				
Birth-weight category	**No. of locations†**	**No. of Ped VAP**	**Ventilator-days**	**Pooled mean**	**10%**	**25%**	**50% (median)**	**75%**	**90%**
≤ 750 grams	114 (106)	56	54,201	1.0	0.0	0.0	0.0	1.5	4.2
751-1000 grams	119 (91)	29	25,356	1.1	0.0	0.0	0.0	0.0	4.8
1001-1500 grams	123 (70)	11	16,264	0.7	0.0	0.0	0.0	0.0	2.1
1501-2500 grams	125 (64)	8	14,719	0.5	0.0	0.0	0.0	0.0	1.3
> 2500 grams	124 (60)	3	20,906	0.1	0.0	0.0	0.0	0.0	0.0

Ventilator utilization ratio‡					Percentile				
Birth-weight category	**No. of locations†**	**Ventilator-days**	**Patient-days**	**Pooled mean**	**10%**	**25%**	**50% (median)**	**75%**	**90%**
≤ 750 grams	114 (110)	54,201	141,750	0.38	0.21	0.30	0.39	0.50	0.68
751-1000 grams	119 (111)	25,356	116,371	0.22	0.07	0.12	0.20	0.31	0.40
1001-1500 grams	123 (116)	16,264	165,757	0.10	0.02	0.04	0.08	0.15	0.25
1501-2500 grams	125 (123)	14,719	235,384	0.06	0.01	0.02	0.03	0.07	0.18
> 2500 grams	124 (123)	20,906	206,619	0.10	0.02	0.03	0.05	0.11	0.20

PNEU, pneumonia; *VAP*, ventilator-associated PNEU; *NICU*, neonatal intensive care unit.

*$\frac{\text{Number of VAP}}{\text{Number of ventilator-days}} \times 1000$

†The number in parentheses is the number of locations meeting minimum requirements for percentile distributions (i.e., ≥50 device days for rate distributions, ≥50 patient days for device utilization ratios) if less than total number of locations. If this number is <20, percentile distributions are not calculated.

‡$\frac{\text{Number of ventilator-days}}{\text{Number of patient-days}}$

Table 10

Pooled means and key percentiles of the distribution of pediatric ventilator-associated PNEU rates and ventilator utilization ratios for level II/III NICUs, DA module, 2013

Pediatric Ventilator-associated PNEU rate*					Percentile				
Birth-weight category	**No. of locations†**	**No. of Ped VAP**	**Ventilator-days**	**Pooled mean**	**10%**	**25%**	**50% (median)**	**75%**	**90%**
≤ 750 grams	118 (86)	53	33,351	1.6	0.0	0.0	0.0	1.6	7.7
751-1000 grams	133 (80)	25	17,568	1.4	0.0	0.0	0.0	0.0	4.1
1001-1500 grams	150 (58)	12	10,163	1.2	0.0	0.0	0.0	0.0	6.7
1501-2500 grams	156 (43)	2	8,910	0.2	0.0	0.0	0.0	0.0	0.0
> 2500 grams	154 (48)	4	11,616	0.3	0.0	0.0	0.0	0.0	0.0

Ventilator utilization ratio‡					Percentile				
Birth-weight category	**No. of locations†**	**Ventilator-days**	**Patient-days**	**Pooled mean**	**10%**	**25%**	**50% (median)**	**75%**	**90%**
≤ 750 grams	118 (100)	33,351	88,286	0.38	0.21	0.33	0.42	0.56	0.70
751-1000 grams	133 (108)	17,568	83,413	0.21	0.08	0.14	0.21	0.36	0.53
1001-1500 grams	150 (129)	10,163	123,588	0.08	0.03	0.04	0.07	0.12	0.24
1501-2500 grams	156 (146)	8,910	180,985	0.05	0.01	0.02	0.03	0.06	0.11
> 2500 grams	154 (145)	11,616	146,385	0.08	0.02	0.03	0.04	0.08	0.15

PNEU, pneumonia; *VAP*, ventilator-associated PNEU; *NICU*, neonatal intensive care unit.

*$\frac{\text{Number of VAP}}{\text{Number of ventilator-days}} \times 1000$

†The number in parentheses is the number of locations meeting minimum requirements for percentile distributions (i.e., ≥50 device days for rate distributions, ≥50 patient days for device utilization ratios) if less than total number of locations. If this number is <20, percentile distributions are not calculated.

‡$\frac{\text{Number of ventilator-days}}{\text{Number of patient-days}}$

Table 11

Pooled means and key percentiles of the distribution of device-associated infection rates and device utilization ratios by type of location, Long Term Acute Care Hospitals, 2013

	Central line-associated BSI rate*				Percentile				
Type of LTACH Location†	No. of locations‡	No. of CLABSI	Central line-days	Pooled mean	10%	25%	50% (median)	75%	90%
Critical Care	68	204	162,510	1.3	0.0	0.2	1.0	2.4	3.1
Ward	626 (615)	3,157	3,331,832	0.9	0.0	0.2	0.7	1.3	2.1

	Central line utilization ratio§				Percentile				
Type of LTACH Location†	No. of locations‡	Central line-days	Patient-days	Pooled mean	10%	25%	50% (median)	75%	90%
Critical Care	68	162,510	253,606	0.64	0.37	0.54	0.74	0.85	0.90
Ward	626 (624)	3,331,832	5,692,373	0.59	0.25	0.48	0.63	0.74	0.82

	Urinary catheter-associated UTI rate‖				Percentile				
Type of LTACH Location†	No. of locations‡	No. of CAUTI	Urinary catheter-days	Pooled mean	10%	25%	50% (median)	75%	90%
Critical Care	68	330	129,931	2.5	0.0	0.7	2.2	4.1	6.5
Ward	628 (625)	4,830	2,461,736	2.0	0.0	0.6	1.6	2.8	4.2

	Urinary catheter utilization ratio¶				Percentile				
Type of LTACH Location†	No. of locations‡	Urinary catheter-days	Patient days	Pooled mean	10%	25%	50% (median)	75%	90%
Critical Care	68	129,931	255,240	0.51	0.26	0.43	0.64	0.78	0.86
Ward	628 (626)	2,461,736	5,763,103	0.43	0.18	0.33	0.44	0.54	0.64

BSI, bloodstream infection; *CLABSI*, central line-associated BSI; *UTI*, urinary tract infection; *CAUTI*, urinary catheter-associated UTI

*$\frac{\text{Number of CLABSI}}{\text{Number of central line- days}} \times 1000$

†Includes free-standing long term-acute care hospitals and long-term acute care locations within the general acute care hospital setting.

‡The number in parentheses is the number of locations meeting minimum requirements for percentile distributions (i.e., ≥50 device days for rate distributions, ≥50 patient days for device utilization ratios) if less than total number of locations. If this number is <20, percentile distributions are not calculated.

§$\frac{\text{Number of central line- days}}{\text{Number of patient- days}}$

‖$\frac{\text{Number of CAUTI}}{\text{Number of urinary catheter- days}} \times 1000$

¶$\frac{\text{Number of urinary catheter- days}}{\text{Number of patient- days}}$

Table 12

Pooled means and key percentiles of the distribution of device-associated infection rates and device utilization ratios, Inpatient Rehabilitation Facilities, 2013

	Central line-associated BSI rate*				Percentile				
Type of IRF Location†	No. of locations‡	No. of CLABSI	Central line-days	Pooled mean	10%	25%	50% (median)	75%	90%
All IRF units combined	482 (446)	94	222,083	0.4	0.0	0.0	0.0	0.0	1.5

	Central line utilization ratio§				Percentile				
Type of IRF Location†	No. of locations‡	Central line-days	Patient-days	Pooled mean	10%	25%	50% (median)	75%	90%
All IRF units combined	482 (481)	222,083	2,476,347	0.09	0.03	0.06	0.09	0.12	0.16

	Urinary catheter-associated UTI rate‖				Percentile				
Type of IRF Location†	No. of locations‡	No. of CAUTI	Urinary catheter-days	Pooled mean	10%	25%	50% (median)	75%	90%
Within Hospital Freestanding	973 (901)	910	352,251	2.6	0.0	0.0	0.0	4.3	7.9
Small (≤25 location beds)	71 (63)	106	22,356	4.7	0.0	0.0	1.5	5.3	10.2
Medium (26-40 location beds)	95 (94)	200	65,415	3.1	0.0	0.0	2.1	5.3	8.8
Large (>40 location beds)	145 (144)	395	189,879	2.1	0.0	0.0	1.4	2.9	5.1

	Urinary catheter utilization ratio¶				Percentile				
Type of IRF Location†	No. of locations‡	Urinary catheter-days	Patient days	Pooled mean	10%	25%	50% (median)	75%	90%
Within Hospital Freestanding	973 (971)	352,251	4,366,249	0.08	0.03	0.05	0.08	0.11	0.14
Small (≤25 location beds)	71	22,356	313,764	0.07	0.02	0.03	0.06	0.08	0.11
Medium (26-40 location beds)	95	65,415	762,912	0.09	0.04	0.05	0.07	0.10	0.12
Large (>40 location beds)	145	189,879	2,333,441	0.08	0.04	0.06	0.07	0.10	0.13

BSI, bloodstream infection; *CLABSI*, central line-associated BSI; *UTI*, urinary tract infection; *CAUTI*, catheter-associated *UTI*

* $\frac{\text{Number of CLABSI}}{\text{Number of central line-days}} \times 1000$

† Includes free-standing inpatient rehabilitation facilities and inpatient rehabilitation facilities within the acute care hospital setting, as defined by the CMS Inpatient Rehabilitation Facility Quality Reporting Program.

‡ The number in parentheses is the number of locations meeting minimum requirements for percentile distributions (i.e., ≥50 device days for rate distributions, ≥50 patient days for device utilization ratios) if less than total number of locations. If this number is <20, percentile distributions are not calculated.

§ $\frac{\text{Number of central line-days}}{\text{Number of patient-days}}$

‖ $\frac{\text{Number of CAUTI}}{\text{Number of urinary catheter-days}} \times 1000$

¶ $\frac{\text{Number of urinary catheter-days}}{\text{Number of patient-days}}$

Table 13

Pooled means and key percentiles of the distribution of device-associated infection rates and device utilization ratios by type of location, Critical Access Hospitals, 2013

	Central line-associated BSI rate*				Percentile				
Type of CAH Location	No. of locations†	No. of CLABSI	Central line-days	Pooled mean	10%	25%	50% (median)	75%	90%
Critical care units‡	159 (81)	6	12,628	0.5	0.0	0.0	0.0	0.0	0.0
Non-critical care units§	261 (169)	15	38,864	0.4	0.0	0.0	0.0	0.0	0.0

	Central line utilization ratio//				Percentile				
Type of CAH Location	No. of locations†	Central line-days	Patient-days	Pooled mean	10%	25%	50% (median)	75%	90%
Critical care units‡	159 (138)	12,628	87,704	0.14	0.05	0.08	0.15	0.23	0.33
Non-critical care units§	261 (253)	38,864	455,371	0.09	0.02	0.04	0.07	0.11	0.17

	Urinary catheter-associated UTI rate¶				Percentile				
Type of CAH Location	No. of locations†	No. of CAUTI	Urinary catheter-days	Pooled mean	10%	25%	50% (median)	75%	90%
Critical care units‡	157 (126)	22	29,797	0.7	0.0	0.0	0.0	0.0	3.4
Non-critical care units§	349 (296)	114	98,703	1.2	0.0	0.0	0.0	1.1	4.0

	Urinary catheter utilization ratio#				Percentile				
Type of CAH location	No. of locations†	Urinary catheter-days	Patient days	Pooled mean	10%	25%	50% (median)	75%	90%
Critical care units‡	157 (143)	29,797	98,925	0.30	0.17	0.27	0.36	0.51	0.61
Non-critical care units§	349 (343)	98,703	669,924	0.15	0.07	0.10	0.14	0.19	0.26

BSI, bloodstream infection; *CLABSI*, central line-associated BSI; *UTI*, urinary tract infection; *CAUTI*, urinary catheter-associated UTI

*$\frac{\text{Number of CLABSI}}{\text{Number of central line-days}} \times 1000$

†The number in parentheses is the number of locations meeting minimum requirements for percentile distributions (i.e., ≥50 device days for rate distributions, ≥50 patient days for device utilization ratios) if less than total number of locations. If this number is <20, percentile distributions are not calculated.

‡Combines all critical care unit types within critical access hospitals.

§Combines all units not identified as critical care (eg, inpatient wards, step-down units) within critical access hospitals.

//$\frac{\text{Number of central line-days}}{\text{Number of patient-days}}$

¶$\frac{\text{Number of CAUTI}}{\text{Number of urinary catheter-days}} \times 1000$

#$\frac{\text{Number of urinary catheter-days}}{\text{Number of patient-days}}$

Table 14

Distribution of criteria for central line-associated laboratory-confirmed BSI by major location type, 2013

	LCBI				
Type of Location	**Criterion 1 n (%)**		**Criterion 2/3 n (%)**		**Total**
Acute Care Hospitals	**15,540**	**82.6%**	**3,273**	**17.4%**	**18,813**
Critical Care Units	7,645	83.9%	1,465	16.1%	9,110
Step-Down Units	630	85.9%	103	14.1%	733
Mixed Acuity	92	85.2%	16	14.8%	108
Wards	3,569	85.9%	587	14.1%	4,156
Chronic Care Units	38	86.4%	6	13.6%	44
Neonatal Intensive Care Units (NICUs)	1,237	75.2%	408	24.8%	1,645
Oncology/Specialty Care Area	2,329	77.2%	688	22.8%	3,017
Long Term Acute Care Hospitals*	2,963	88.2%	398	11.8%	3,361
Inpatient Rehabilitation Facilities†	80	85.1%	14	14.9%	94
Critical Access Hospitals	17	81.0%	4	19.0%	21
Total	18,600	83.4%	3,689	16.6%	22,289

BSI, bloodstream infection; *LCBI*, laboratory-confirmed BSI (includes MBI-LCBI)[4]

*Includes free-standing long term-acute care hospitals and long-term acute care locations within the general acute care hospital setting.

†Includes free-standing inpatient rehabilitation facilities and inpatient rehabilitation facilities within the acute care hospital setting, as defined by the CMS Inpatient Rehabilitation Facility Quality Reporting Program.

Table 15

Distribution of criteria for urinary catheter-associated UTI, by major location type, 2013

Type of Location	SUTI n (%)		ABUTI n (%)		Total
Acute Care Hospitals	**35,306**	**99.0%**	**354**	**1.0%**	**35,660**
Critical Care Units	25,820	99.1%	243	0.9%	26,063
Step-Down Units	1,385	98.6%	19	1.4%	1,404
Mixed Acuity	165	98.8%	2	1.2%	167
Wards	7,210	99.1%	66	0.9%	7,276
Chronic Care Units	62	95.4%	3	4.6%	65
Oncology/Specialty Care Area	664	96.9%	21	3.1%	685
Long Term Acute Care Hospitals*	**5,063**	**98.1%**	**96**	**1.9%**	**5,159**
Inpatient Rehabilitation Facilities†	**1,593**	**99.1%**	**15**	**0.9%**	**1,608**
Critical Access Hospitals	**133**	**98.5%**	**2**	**1.5%**	**135**
TOTAL	42,095	98.9%	467	1.1%	42,562

UTI, urinary tract infection; *SUTI*, symptomatic UTI; *ABUTI*, asymptomatic bacteremic UTI.[4]

* Includes free-standing long term-acute care hospitals and long-term acute care locations within the general acute care hospital setting.

† Includes free-standing inpatient rehabilitation facilities and inpatient rehabilitation facilities within the acute care hospital setting, as defined by the CMS Inpatient Rehabilitation Facility Quality Reporting Program.

Table 16

Distribution of criteria for pediatric ventilator-associated PNEU, by major location type, 2013

Type of Location	PNU1 n (%)		PNU2 n (%)		PNU3 n (%)		Total
Pediatric critical care units	39	47.6%	41	50.0%	2	2.4%	82
Neonatal intensive care units	137	67.5%	59	29.1%	7	3.4%	203
TOTAL	176	61.8%	100	35.1%	9	3.2%	285

PNU1, clinically defined pneumonia; *PNU2*, pneumonia with specific laboratory findings; *PNU3*, pneumonia in immunocompromised patients.[4]

Table 17

Distribution of criteria for device-associated infections by location, Long Term Acute Care Hospitals, 2013

	CLABSI				
Type of LTACH Location	**LCBI Criterion 1 n (%)**		**LCBI Criterion 2/3 n (%)**		**Total**
Critical Care	192	94.1%	12	5.9%	204
Ward	2,771	87.8%	386	12.2%	3,157
CLABSI Total	2,963	88.2%	398	11.8%	3,361

	CAUTI				
Type of LTACH Location	**SUTI n (%)**		**ABUTI n (%)**		**Total**
Critical Care	318	96.4%	12	3.6%	330
Ward	4,745	98.3%	84	1.7%	4,829
CAUTI Total	5,063	98.1%	96	1.9%	5,159

BSI, bloodstream infection; *LCBI*, laboratory-confirmed BSI (includes MBI-LCBI)[4]

UTI, urinary tract infection; *SUTI*, symptomatic UTI; *ABUTI*, asymptomatic bacteremic UTI.[4]

Table 18

Distribution of criteria for device-associated infections by setting location, Inpatient Rehabilitation Facilities, 2013

	CLABSI				
Type of IRF Location	**LCBI Criterion 1 n (%)**		**LCBI Criterion 2/3 n (%)**		**Total**
All IRF units combined	80	85.1%	14	14.9%	94

	CAUTI				
Type of IRF Location	**SUTI n (%)**		**ABUTI n (%)**		**Total**
Within Hospital	902	99.2%	7	0.8%	909
Freestanding					
Small (≤25 location beds)	103	99.0%	1	1.0%	104
Medium (26-40 location beds)	196	98.0%	4	2.0%	200
Large (>40 location beds)	392	99.2%	3	0.8%	395
CAUTI Total	1,593	99.1%	15	0.9%	1,608

BSI, bloodstream infection; *LCBI*, laboratory-confirmed BSI (includes MBI-LCBI)[4]

UTI, urinary tract infection; *SUTI*, symptomatic UTI; *ABUTI*, asymptomatic bacteremic UTI.[4]

Table 19

Distribution of criteria for device-associated infections by location type, Critical Access Hospitals, 2013

	CLABSI				
Type of Location	**LCBI Criterion 1 n (%)**		**LCBI Criterion 2/3 n (%)**		**Total**
Critical Care	4	66.7%	2	33.3%	6
Non-critical care	13	86.7%	2	13.3%	15
CLABSI Total	17	81.0%	4	19.0%	21

	CAUTI				
Type of Location	**SUTI n (%)**		**ABUTI n (%)**		**Total**
Critical Care	22	100.0%	0	0.0%	22
Non-critical care	111	98.2%	2	1.8%	113
CAUTI Total	133	98.5%	2	1.5%	135

BSI, bloodstream infection; *LCBI*, laboratory-confirmed BSI (includes MBI-LCBI)[4]

UTI, urinary tract infection; *SUTI*, symptomatic UTI; *ABUTI*, asymptomatic bacteremic UTI.[4]