DC | HEALTH
GOVERNMENT OF THE DISTRICT OF COLUMBIA

District of Columbia
Patient Safety Reporting Program

Annual Report
Fiscal Year 2018

FOR THE REPORTING PERIOD OF:

OCTOBER 1, 2017, through SEPTEMBER 30, 2018

DC | HEALTH
GOVERNMENT OF THE DISTRICT OF COLUMBIA

ECRI Institute

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EXECUTIVE SUMMARY

I. Background

In December 2006, the District of Columbia passed the Medical Malpractice Amendment Act of 2006. The Act requires that all licensed healthcare providers or medical facilities report adverse events, which include the 29 serious reportable events defined by the National Quality Forum (NQF) as events that are unambiguous (identifiable and measurable), serious (resulting in death or significant injury), and usually preventable.

In 2009, the Act was amended to require that adverse events be reported within 60 days of their occurrence. In January 2010, the web-based DC Health - Health Regulation and Licensing Administration Patient Safety Reporting System, hosted by ECRI Institute's patient safety organization (PSO), was implemented as part of the ongoing effort to improve healthcare delivery.

Current users of the web-based adverse event reporting system include acute care and long-term acute care hospitals, rehabilitation facilities, and ambulatory surgical facilities.

Adverse event reports are submitted to DC Health through its subcontractor, ECRI Institute. These reports are confidential.

The web-based reports are analyzed to identify patterns, trends, and to recommend methods to reduce systematic adverse events, and they serve as the basis for the information disseminated to ensure best practices. In addition, technical assistance is provided to healthcare providers and medical facilities. All other facilities and providers can submit adverse event reports using the original paper-based form.

Starting in 2010, District facilities were required to report central-line-associated bloodstream infections (CLABSIs) in intensive care units (ICUs) through the National Healthcare Safety Network (NHSN) system, allowing epidemiologists at DC Health to monitor and validate infection rates for District facilities and contribute District information to the Centers for Disease Control and Prevention’s (CDC) national database.

The DC Health Center for Policy, Planning and Evaluation’s Division of Epidemiology Disease Surveillance and Investigation (CPPE DE-DSI) provides CLABSI data from CDC’s NHSN to ECRI Institute to include in the annual report.

This 11th annual report provides an update on the District of Columbia Patient Safety Reporting System. The report presents an overview of the program’s offerings, analysis of adverse event reports, and descriptions of the most significant findings from events submitted between October 1, 2017, and September 30, 2018, as well as comparisons with data from previous years.

II. Data Collection—Patterns and Trends in Adverse Event Reports

Collecting and analyzing reports of adverse events is a vital component of the District's goal to improve the quality of healthcare delivery. During the reporting period of fiscal year 2018 (FY 2018), the District's healthcare providers and medical facilities submitted a total of 228 events to DC Health (DC Health, 2018; ECRI Institute PSO).

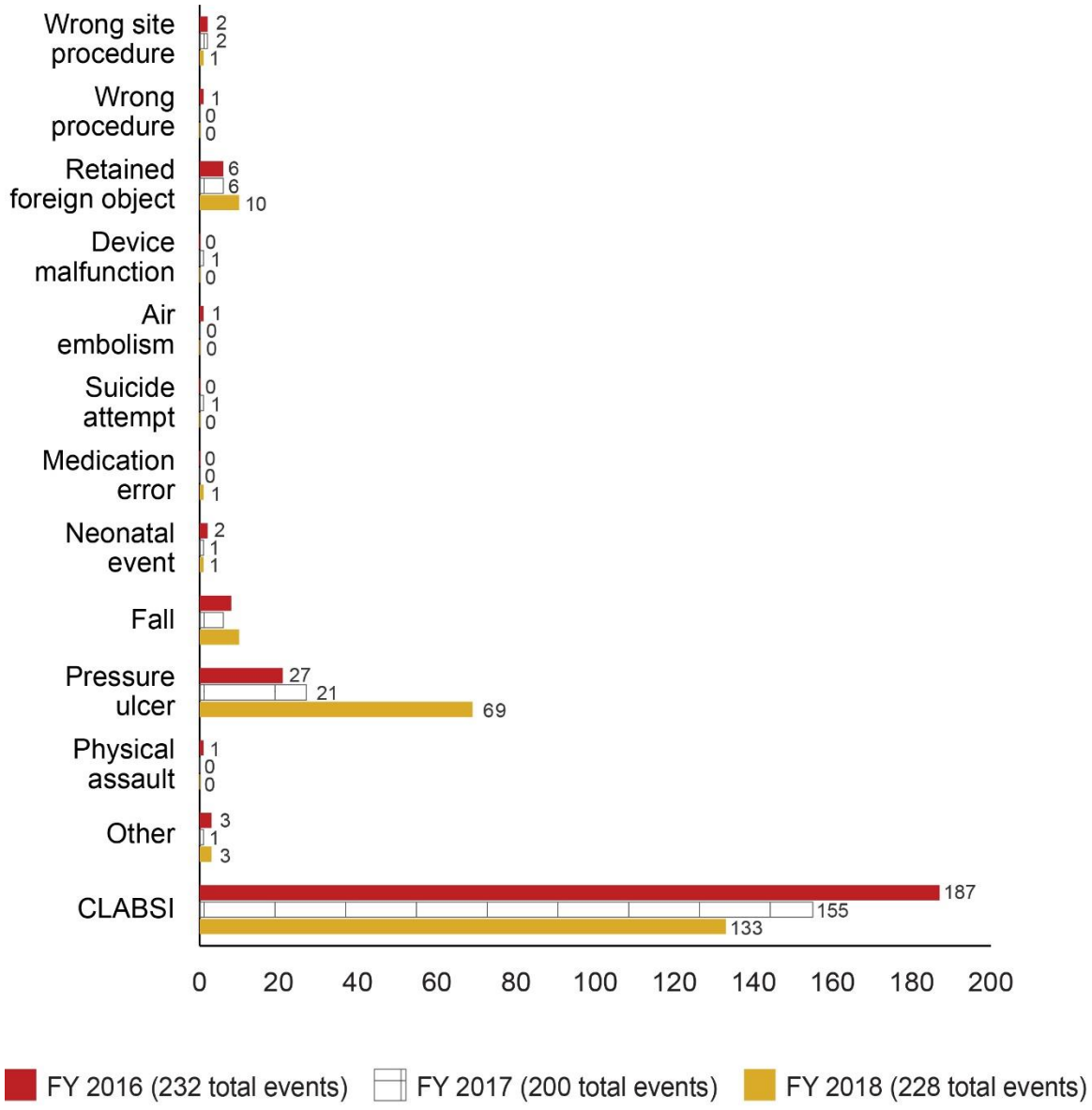
Ninety-five (95) adverse event reports were submitted to the District of Columbia Patient Safety Reporting System, and 133 CLABSI reports (DC Health, 2018) were submitted to CDC's NHSN. These events are reported to and validated by DC Health's CPPE DE-DSI.

DC Health continued to use NQF's updated 2011 list of 29 serious reportable events as a classification system for reportable events during FY 2018. The NQF events analysis is based on events submitted from October 2017 through September 2018, regardless of event occurrence date. The lag time in reporting is due to the time lag established within the reporting requirement.

Similar to past years, the most commonly reported event types, representing 222 (97.4%) of reports submitted, were CLABSIs (58.3%), pressure ulcers (30.3%), retained foreign objects (4.4%) and falls (4.4%).

Figure 1 provides an overview of the number of serious reportable events, by event type, that have been reported over the past three fiscal years (ECRI Institute PSO). The adverse event reports submitted by healthcare providers and medical facilities in the 11th year of the District's reporting program represent a continued effort by the District to contribute to the Patient Safety Reporting System.

FIGURE 1. NUMBER OF EVENTS BY TYPE, FY 2016-2018



FY, fiscal year; CLABSI, central-line associated bloodstream infection

INTRODUCTION

I. The District's Patient Safety Reporting System

Goals of the District's Patient Safety Reporting System are to:

- Promote patient safety
- Improve the culture of safety
- Learn from and prevent the reoccurrence of similar adverse events
- Provide feedback and information on best practices to District facilities

Aggregation of adverse event data gathered from facilities and providers throughout the District is a powerful tool for identifying trends in reported events that challenge safe and effective healthcare. Aggregation helps achieve the primary goal of the reporting program, which is to prevent the reoccurrence of similar adverse events. The web-based adverse event reporting system provides access to aggregate data at the District level and, through ECRI Institute PSO, at the national level. Analysis of the information received through the District's reporting program serves as the basis for meaningful insights, lessons learned, and the development of best practices that can improve patient safety.

For three event categories—retained foreign objects, pressure ulcers and CLABSIs—this report provides an overview of data from the fiscal year and presents guidance and recommendations to help look further into the practices surrounding these adverse events.

Aside from the annual report, in FY 2018, the District's Patient Safety Reporting System offered facilities the following resources:

- Webinars (Table 1, p. 7) are offered at least quarterly on patient safety topics.
- Patient safety advisory articles (Table 2, p. 7) are offered quarterly in the publications *National Navigator* and *District Navigator.*
- *Patient Safety Membership Update* is a twice-monthly electronic newsletter that compiles updated patient safety news.

If a thorough corrective action plan (CAP) is submitted along with an event, it is analyzed through ECRI Institute PSO's root-cause analysis (RCA) review process. The facility can then be provided with a report to further assist providers and staff in improving their processes. See "Corrective Action Plans in Reports" (p. 19) for details.

Custom feedback (Table 3, p. 8) on adverse events or topics provides resources and best practice information directly to facilities. Research responses (Table 3, p. 8) are summaries of research requests received at a national level on various topics. *Patient Safety Compass Points and E-lerts* (Table 4, p. 9) are unscheduled special notices on major patient safety issues that have occurred at a national level.

TABLE 1. EDUCATIONAL WEBINARS (NUMBER OF LINES PARTICIPATING)

Date	Title	Lines
October 2017	Antibiotic Stewardship: Solutions to Turn the Tide Against the Threat of Antibiotic Resistant Bacteria	0
November 2017	Improving Physician Office Reporting: A Collaborative Approach to Learning from Our Mistakes	0
January 2018	The Joint Commission's Tracer Methodology: A Tool for Continuous Improvement	4
February 2018	Retained Surgical Items: What the Data is Telling Us	2
March 2018	Product Substitutions: Who is Asking the "Safety Question" in the Decision Making?	4
April 2018	Health IT Safe Practices – Embedding HIT into Your Safety Program	0
May 2018	New ISMP Guidelines – Getting to the Sweet Spot of Safe Insulin Practices	0
June 2018	ECRI Institute Top 10 Patient Safety Concerns	8
July 2018	Discharge Documents – How Well Do They Support Care Coordination?	1
September 2018	Keeping Staff Safe in Acute Care and in the Community	0

TABLE 2. NAVIGATOR OR PATIENT SAFETY ADVISORY ARTICLES

National	ECRI Institute PSO Fourth Annual Meeting: Insights into Patient Safety
	Not If, But When: Disaster Preparation Is a Necessity
	Vaccine Safety: Strategies to Inoculate against Errors
	Preparing for the Unexpected with Mechanical Ventilators
District	Human Factors and Patient Fall Prevention: Problem Solving and Solution Sharing
	My Parent's Not Here: When Minors Present to the ED for Care
	Managing Patient Information in Physician Practices: Quick Action Reduces Risk of Breach
	Ventilators in Standby Mode: A Final Check Ensures Patient Safety

TABLE 3. CUSTOM FEEDBACK AND RESEARCH RESPONSES

Custom Feedback	Drug Shortages
	Retained Surgical Items
	Risk Management Plan
	Fall Prevention
	Pressure Ulcer Prevention
	Sentinel Event Policy
	Wrong Site Surgery
Research Responses	Clostridium difficile, Methicillin-Resistant Staphylococcus Aureus, and Vancomycin-Resistant Enterococci Infections
	CPOE Hard Stops for Medication Ordering
	Nasogastric Tube Placement Confirmation Technologies
	Post-Partum Hemorrhage: Incidence, Risks, and Prevention
	Antibiotic Stewardship: Engaging Physician Compliance
	Reducing Hospital Mortality Rates: Evaluating ICU versus Non-ICU Admission Level of Care

TABLE 4. PATIENT SAFETY COMPASS POINTS AND E-LERTS

Drug Allergy Alerts: Don’t Ignore Clinical Decision Support
Naloxone in the ED: Temporary Fix or Long-Term Solution?
Don’t Fall Behind in Falls Prevention: Reducing Falls Risk in the Emergency Department
"But We Don’t Have Any": When Medication Shortages Hinder Patient Care
Every Patient Deserves a Clean Room: Preventing Clostridium difficile Transmission
Falls Prevention Focus: Obstetrics Patients Fall, Too
Epinephrine Used in Error: Dosing Complications Cause Harm
From the ED to the Floor: Stay Hands-On for Successful Handoffs
Acetaminophen Overdose: No Matter the Med, It Adds Up
Wait for the Beep: When BCMA Fails
Say It Ain’t So: Limit Verbal Orders and Ensure Their Safe Use When Needed
Too Many Cooks: Clarify Vancomycin Monitoring Workflows
Results Pending: Home Care Laboratory Results Held Up By Poor Communication
Hear Ye, Hear Ye: Heparin Infusions Require Accurate Measurement of Patient Weight
Help Medical Assistants Help You: Effective Training and Procedures
Venous Thromboembolism: Delay in Prophylaxis
Discharge Communication: Don’t Just Phone It In
Take Your Best Shot: Errors in Vaccine Management
Telemedicine: The Future Is Here, When It Works
CPOE and Duplicate Orders
A Pound of Prevention Is Worth 0.45 Kilograms of Cure
Close the Loop and Look Down the Line: How Communicating Test Results Affects Medication Administration
Pediatric Falls: Handle the Noggin with Care
Subcutaneous Insulin Pumps: Safer at Home than in the Hospital
Reconcile Your Differences: Build Med Rec into the Patient Care Process

DATA COLLECTION AND ANALYSIS

I. Reportable Events

The District has mandated the reporting of adverse events by a broad range of healthcare providers and medical facilities. Adverse events that must be reported include the 29 NQF serious reportable events listed in 2011. During this past fiscal year, CLABSI events reported to CDC's NHSN were validated by DC of Health's CPPE DE-DSI.

Since 2010, hospitals and ambulatory surgical centers have been required to report adverse events and CAPs using the web-based reporting system. A standardized adverse event reporting form is available to all other medical facilities and healthcare providers for this purpose. Reports must be submitted within 60 days of the occurrence of an adverse event (33% of events reported met this requirement and 18% did not provide an event date). DC Health collects and analyzes the reports, providing an annual report that includes summary data and recommendations. The Medical Malpractice Amendment Act contains well-defined confidentiality provisions related to reporters and information provided to the system administrator. This annual report compiles and provides analysis on both the CLABSI data from NHSN and the NQF events submitted to the web-based reporting system.

II. Reports by Event Type

In the 11th reporting period (October 1, 2017, to September 30, 2018), District medical facilities and healthcare providers submitted 228 reports to DC Health. The most frequently reported types of NQF events were CLABSIs (58.3%), pressure ulcers (30.3%), retained foreign objects (4.4%) and falls (4.4%) representing 222 (97.4%) of the reports submitted. Table 5 (p. 11) summarizes the reports submitted by event type (DC Health, 2018; ECRI Institute PSO; National Quality Forum, 2011). Figure 2 (p. 14) provides a graphic version.

TABLE 5. NUMBER AND PERCENTAGE OF NQF REPORTS BY EVENT TYPE, FY 2018

Category	Event Type	Reports	%
Surgical or invasive procedure events	1A - Surgery or other invasive procedure performed on the wrong site	1	0.4%
	1B - Surgery or other invasive procedure performed on the wrong patient	0	0%
	1C - Wrong surgical or other invasive procedure performed on a patient	0	0%
	1D - Unintended retention of a foreign object in a patient after surgery or other invasive procedure	10	4.4%
	1E - Intraoperative or immediately postoperative/postprocedure death in an ASA class 1 patient	0	0%
Product or device events	2A - Patient death or serious injury associated with the use of contaminated drugs, devices, or biologics provided by the healthcare setting	0	0%
	2B - Patient death or serious injury associated with the use or function of a device in patient care, in which the device is used or functions other than as intended	0	0%
	2C - Patient death or serious injury associated with intravascular air embolism that occurs while being cared for in a healthcare setting	0	0%
Patient protection events	3A - Discharge or release of a patient/resident of any age, who is unable to make decisions, to other than an authorized person	0	0%
	3B - Patient death or serious injury associated with patient elopement	0	0%
	3C - Patient suicide, attempted suicide, or self-harm that results in serious injury, while being cared for in a healthcare setting	0	0%

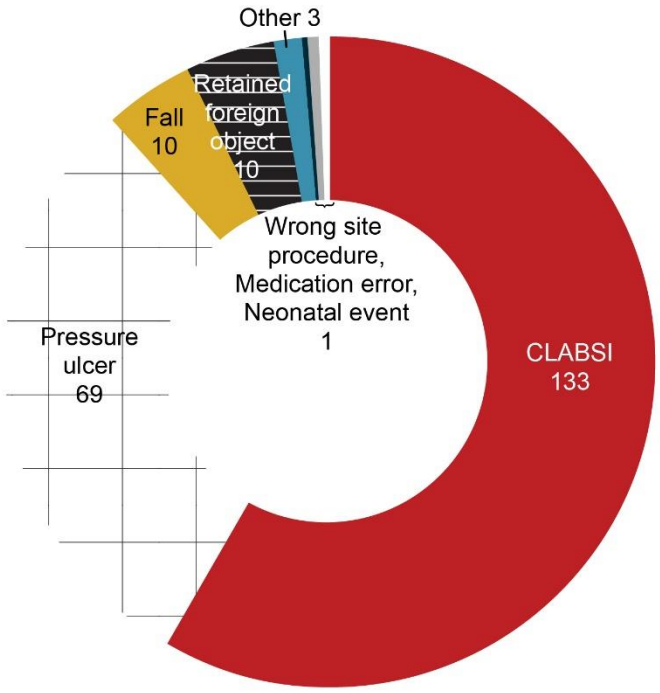
Care management events	4A - Patient death or serious injury associated with a medication error	1	0.4%
	4B - Patient death or serious injury associated with unsafe administration of blood products	0	0%
	4C - Maternal death or serious injury associated with labor or delivery in a low-risk pregnancy while being cared for in a healthcare setting	0	0%
	4D - Death or serious injury of a neonate associated with labor or delivery in a low-risk pregnancy	1	0.4%
	4E - Patient death or serious injury associated with a fall while being cared for in a healthcare setting	10	4.4%
	4F - Any stage 3, stage 4, and unstageable pressure ulcers acquired after admission/presentation to a healthcare setting	69	30.3%
	4G - Artificial insemination with the wrong donor sperm or wrong egg	0	0%
	4H - Patient death or serious injury resulting from the irretrievable loss of an irreplaceable biological specimen	0	0%
	4I - Patient death or serious injury resulting from failure to follow up or communicate laboratory, pathology, or radiology test results	0	0%
Environmental events	5A - Patient or staff death or serious injury associated with an electric shock in the course of a patient care process in a healthcare setting	0	0%
	5B - Any incident in which systems designated for oxygen or other gas to be delivered to a patient contain no gas, the wrong gas, or are contaminated by toxic substances	0	0%
	5C - Patient or staff death or serious injury associated with a burn incurred from any source in the course of a patient care process in a healthcare setting	0	0%

	5D - Patient death or serious injury associated with the use of physical restraints or bedrails while being cared for in a healthcare setting	0	0%
Radiologic events	6A - Death or serious injury of a patient or staff associated with the introduction of a metallic object into the MRI area	0	0%
Potential criminal events	7A - Any instance of care ordered by or provided by someone impersonating a physician, nurse, pharmacist, or other licensed healthcare provider	0	0%
	7B - Abduction of a patient/resident of any age	0	0%
	7C - Sexual abuse/assault on a patient or staff member within or on the grounds of a healthcare setting	0	0%
	7D - Death or serious injury of a patient or staff member resulting from a physical assault that occurs within or on the grounds of a healthcare setting	0	0%
CLABSIs	8 - Central-line-associated bloodstream infection (DC Health, 2018)	133	58.3%
"Other" event type reported	X - "Other" non-NQF type of event reported	3	1.3%
Total		**228**	**99.9%**

Note: Total does not equal 100% because of rounding.
ASA: American Society of Anesthesiologists
MRI: magnetic resonance imaging
NQF: National Quality Forum

Figure 2 (p. 14) details the event types for which one or more events were reported during the FY 2018 reporting period; 133 CLABSIs and 92 total NQF event types were reported plus 3 "Other" events (ECRI Institute PSO).

FIGURE 2. NUMBER OF NQF EVENTS BY EVENT TYPE, FY 2018



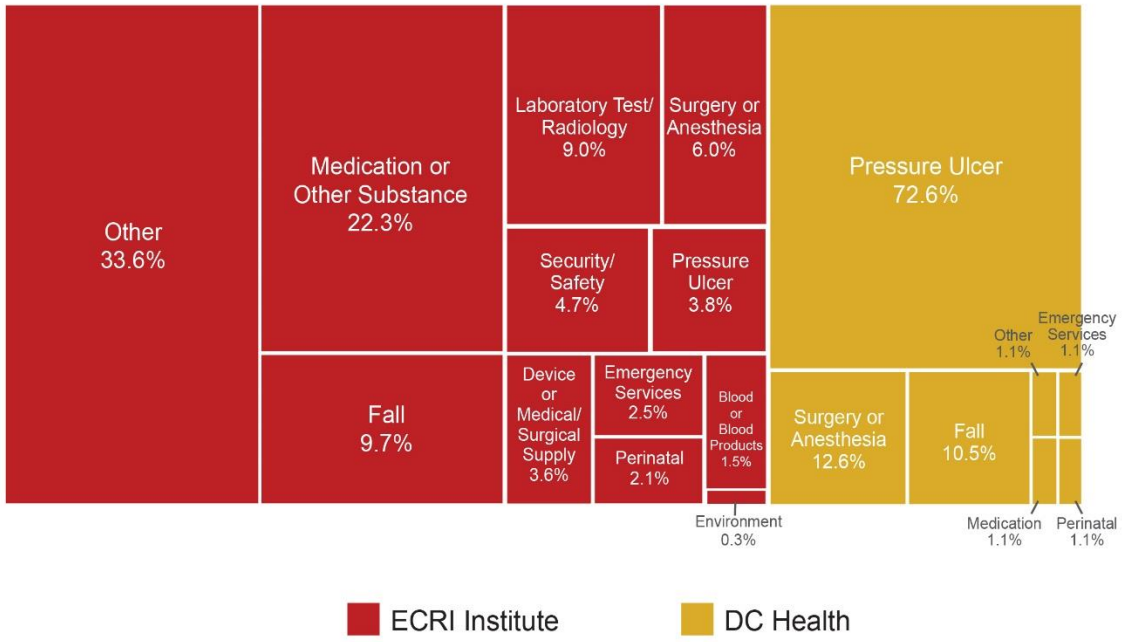
NQF, National Quality Forum; FY, fiscal year;
CLABSI, central-line-associated bloodstream infection

Figure 3 (p. 15) compares event categories reported by District facilities between October 1, 2017, and September 30, 2018, with those in the ECRI Institute PSO system overall aggregate, however not including CLABSI events.

It should be noted that this graphic cannot be considered a benchmark because the ECRI Institute PSO system is a voluntary national event reporting database, whereas the District of Columbia Patient Safety Reporting System mandates reporting of adverse events.

For Figure 3 (p. 15), the event types are categorized according to the Agency for Healthcare Research and Quality's (AHRQ) Common Formats and ECRI Institute's enhanced event types rather than as NQF event types (ECRI Institute PSO).

FIGURE 3. COMPARISON OF AHRQ EVENT TYPE FREQUENCY



HIT, Health information technology; VTE, Venous Thromboembolism;
HAI, Healthcare-associated infection

When viewed using this definition, the District's most frequently reported event categories were pressure ulcers, surgery or anesthesia events, and falls.

The most frequently reported events in the ECRI Institute PSO database were medication events and the category "Other events."

Also, similar to FY 2017, medication errors were apparent 22.3% of the time in the reports to ECRI Institute PSO but make up only 0.4% of the District's reports. However, data from DC Health's mandatory reporting program are not comparable to data from ECRI Institute PSO's voluntary reporting program. The District's best benchmark is comparing its own data trends over time (see Figure 1, p. 5).

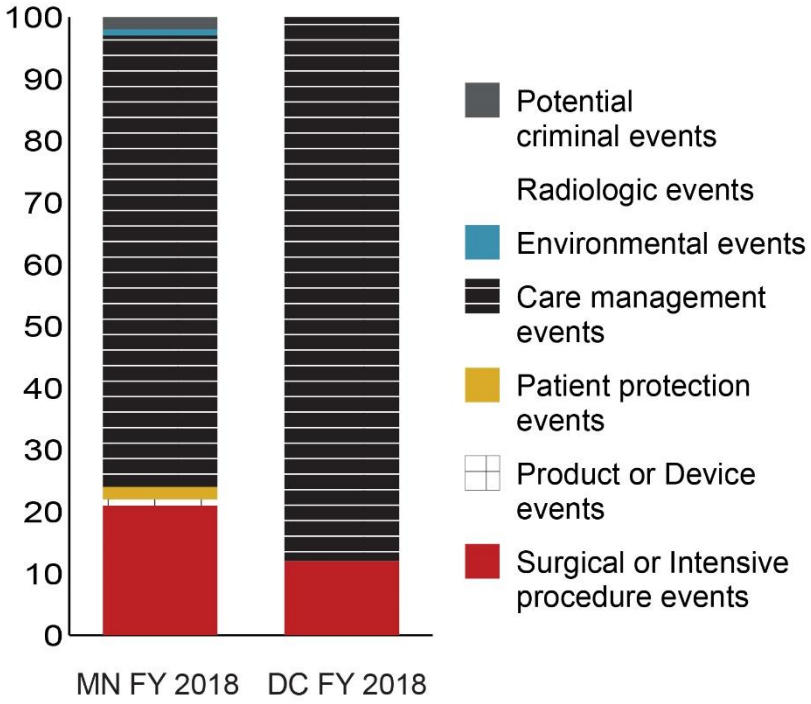
Comparison with other mandatory reporting systems may also be valuable (Figure 4, p. 16) (ECRI Institute PSO; Minnesota Department of Health, 2019; National Quality Forum, 2011). For example, the Minnesota Department of Health's 2019 *Adverse Health Events in Minnesota* report noted 384 NQF events reported.

Minnesota Department of Health adverse health events are also based on NQF's list of serious reportable events updated in 2011. Although the Minnesota system includes many more facilities that are required to report, when broken down by event type percentages, Minnesota's most frequently reported events were similar to those reported by DC Health in that they included pressure ulcers (38%), falls (20%) and retained foreign objects (9%). The Minnesota system also includes 14 additional event categories for

which the District did not receive reports (e.g., loss of an irreplaceable specimen, device malfunction, suicide, lack of test result follow up, burn, restraint injury, sexual and physical assault).

Figure 4 shows the NQF event-report type frequency from the District of Columbia for FY 2018 and from the Minnesota Department of Health's 2018 reporting year; the percentages are based on the total number of NQF and "Other" events (ECRI Institute PSO; Minnesota Department of Health, 2019).

FIGURE 4. COMPARISON OF NQF EVENT TYPE FREQUENCY (MINNESOTA AND DISTRICT OF COLUMBIA)



III. Reports by Level of Harm

The 2011 list of NQF serious reportable events changed the language from "serious disability" to "serious injury" in applicable event types (National Quality Forum, 2011). Not all reportable events imply the same degree of harm, and it is often useful to distinguish among degrees of harm. To this end, the harm scale developed by the National Coordinating Council for Medication Error Reporting and Prevention continues to be applied to the event reporting system, and the 95 NQF events could be categorized based on the information provided.

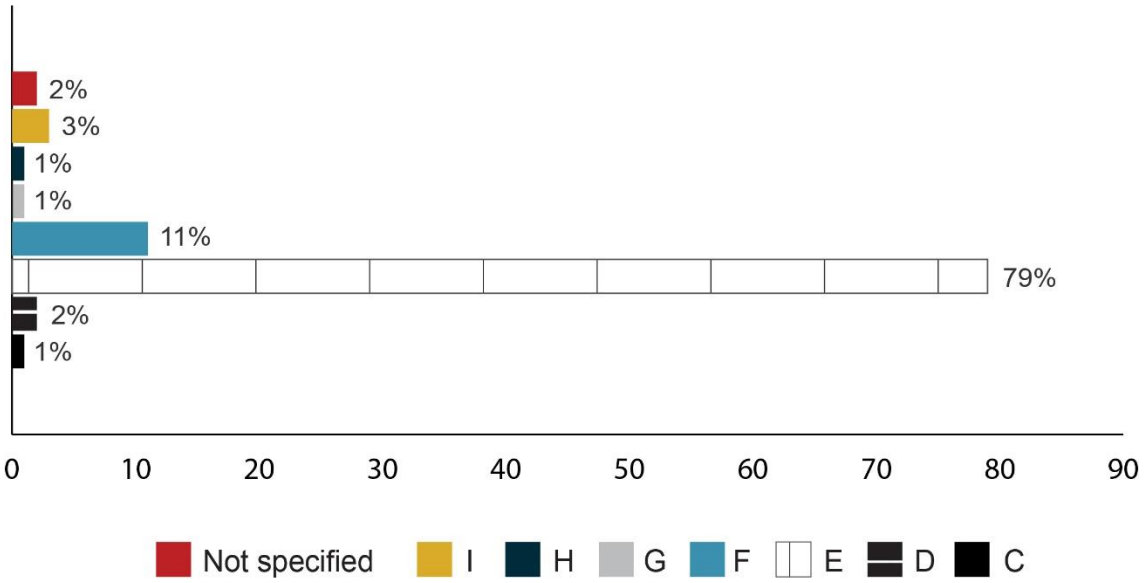
Table 6 (p. 17) summarizes the level of harm among the 95 reports, and Figure 5 (p. 18) shows the percentages of the levels of harm identified (ECRI Institute PSO).

TABLE 6. NUMBER AND PERCENTAGE OF NQF REPORTS BY LEVEL OF HARM, FY 2018

Harm Score	Description	Reports	%
A	Circumstances that could cause adverse events (e.g., look-alike medications, confusing equipment)	0	0%
B1	An event occurred but did not reach the individual (“near miss” or “close call”) because of chance alone	0	0%
B2	An event occurred but did not reach the individual (“near miss” or “close call”) because of active recovery efforts by caregivers	0	0%
C	An event occurred that reached the individual but did not cause harm and did not require increased monitoring (an error of omission, such as a missed medication dose, does reach the individual)	1	1%
D	An event occurred that required monitoring to confirm that it resulted in no harm and/or required intervention to prevent harm	2	2%
E	An event occurred that contributed to or resulted in temporary harm and required treatment or intervention	75	79%
F	An event occurred that contributed to or resulted in temporary harm and required initial or prolonged hospitalization	10	11%
G	An event occurred that contributed to or resulted in permanent harm	1	1%
H	An event occurred that resulted in a near-death event (e.g., required ICU care or other intervention necessary to sustain life)	1	1%
I	An event occurred that contributed to or resulted in death	3	3%
	Harm score not provided	2	2%
Total		**95**	**100%**

ICU, intensive care unit
NQF, National Quality Forum

FIGURE 5. PERCENTAGE OF NQF REPORTS BY HARM SCORE, FY 2018



Harm scores classified by the reporting facility and associated with the reports submitted ranged from C ("An event occurred that reached the individual but did not cause harm and did not require increased monitoring"), 1 event (1%); to I ("An event occurred that contributed to or resulted in death"), 3 (3%). When investigating these events of serious harm or death, an organization may benefit from submitting an RCA with CAP for review and analysis, see section V.

The majority of the events (75, or 79%), were categorized as having a harm score of E ("An event occurred that contributed to or resulted in temporary harm and required treatment or intervention"), which is consistent with the minimal harm score severity level described in the NQF events.

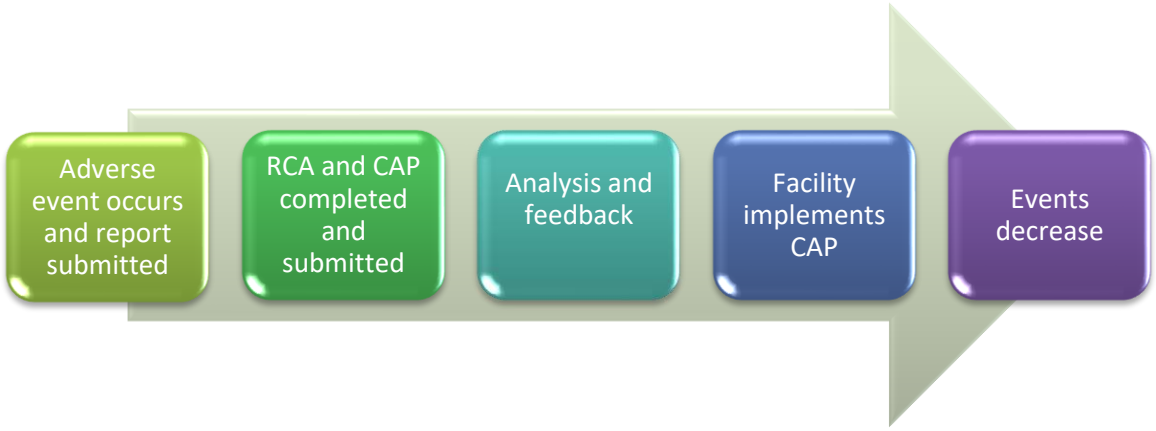
Near-miss reporting can be valuable in providing lessons learned from "good catches". District facilities continue to voluntarily report events that did not cause patient harm. Harm scores reported during FY 2018 included harm score C; NQF serious reportable events typically have a harm score of E or higher.

IV. Report Quality

During FY 2018, 56% of the 95 NQF events reported to the District of Columbia Patient Safety Reporting System had thorough event descriptions, and 44% had minimal event descriptions. The "Event Description" field is a free-text field on the web-based form; when reporters complete it, this field can capture the most important details of the event. This area of reporting has remained consistent and coincides with the implementation of the electronic reporting system.

V. Corrective Action Plans in Reports

The District requires the submission of a corrective action plan (CAP) as a follow-up to a reported adverse event. This procedure allows the facility to receive a review of its CAP. The goals of the program include handling an adverse event in the following steps:



A CAP describes how the facility or provider plans to prevent or reduce the risk of similar events in the future and should be based on the findings from the event investigation. The investigation of an event must look beyond the direct patient-care provider to identify system failures. Of the 95 NQF reports submitted in FY 2018, there were a few that alluded to corrective action(s), which is consistent with the previous fiscal year but no official CAP submissions were received for review. Although some reports identified contributing factors or root causes, no complete RCAs were submitted for review during FY 2018.

Some facilities have used an additional field within the reporting system labeled “Supplemental Information” and found it to be an easy way to incorporate their CAPs. This also allows the event details and the action plans to be stored in the same location. Facilities have the ability to update an event report after the event has been submitted if the RCA and CAP have not been completed at the time of the event submission.

Contributing factors were cited 26 times in the reported events. Of those, three of the following buckets were cited 19% of the time: Communication (among staff), Policies and Procedures (clarity and presence), and Staff qualifications (competence and training). The following resources are available to District facilities (access required) on these topics:

- ECRI Institute PSO. Creating and Sustaining Policy and Evidence Based Procedures
- ECRI Institute PSO. Discharge Communication: Don’t Just Phone It In

Facility staff can obtain access to the DC Patient Safety Reporting System web portal by contacting the liaison in their facility.

VI. Central-Line-Associated Bloodstream Infections (CLABSIs)

Facilities in the District of Columbia are required by law to report CLABSIs to CDC’s NHSN. NHSN is an online tracking system that provides a reporting mechanism for the District and eight short-term acute

care and two long-term acute care facilities covered by the mandate. Epidemiologists at DC Health's CPPE DE-DSI perform validation studies on CLABSIs reported to NHSN.

The following data were provided by DC Health's CPPE DE-DSI in advance of publication by CDC, from the reports submitted to CDC's NHSN. During FY 2018, units from all 10 acute care facilities reported a total of 133 CLABSIs and 157,216 central-line-days, for a CLABSI rate of 0.85 infections per 1,000 central-line days. Data viewed in this way represent a different mix of hospitals and units for each year. This raw, unadjusted rate provides the actual number of events over a specified time. This rate is useful in assessing the overall burden of healthcare-associated infections (HAIs) in the healthcare system (DC Health, 2018).

To take these data one step further, a standardized infection ratio (SIR) was calculated for eight of the short-term acute care facilities that submitted data in the District. The SIR is an indirect standardization method that is used to summarize the HAI experience across any number of stratified groups (DC Health, 2018).

The SIR allows for comparison of data across risk groups, procedures, and hospital characteristics to gain a better understanding of the incidence, trends, and patterns of HAIs while adjusting for underlying patient or hospital factors that may affect the occurrence of HAIs (DC Health, 2018).

The SIR is calculated by dividing the number of observed CLABSIs by the number of statistically predicted CLABSIs based on the national baseline data and provides a basis for comparison between how many CLABSIs occurred and how many were expected to occur based on the national experience. A SIR of 1.0 means the observed number of infections is similar, or equal, to the number of predicted infections. A SIR higher than 1.0 means that there were a greater number of infections than predicted, and a SIR of less than 1.0 means that there were fewer infections than predicted. For FY 2018, the overall SIR for the eight short-term acute care facilities was 0.71 (0.59, 0.85) (DC Health, 2018).

Additional Resources

Centers for Disease Control and Prevention (CDC). 2016. Healthcare associated infections progress. D.C. acute care hospitals. https://www.cdc.gov/HAI/pdfs/progress-report/hai-progress-report.pdf

VII. Patient Safety Webinars and Training

Webinars are provided on patient safety topics and are also used to train users of the reporting system. For the 10 webinars offered in FY 2018, and the number of lines that called in for each presentation, see Table 1 (p. 7) (note that information about the number of participants on each line is unavailable). After the presentation, webinar recordings and handouts are posted to the web portal for future viewing.

GUIDANCE AND RECOMMENDATIONS

DC Health is charged with providing facilities and providers with recommended methods to reduce systematic adverse events and with disseminating information and advice on best practices. The following is a summary of three important topic categories and a discussion of lessons learned and strategies to help prevent reoccurrence of these event types.

The three NQF event types are as follows:

I. Retained foreign objects
II. Falls
III. Pressure ulcers

As required by the Medical Malpractice Amendment Act of 2006, the information is deidentified and anonymized with regard to facility, provider, and patient. Root causes, contributing factors, and prevention strategies identified by healthcare facilities and providers are shared, if available. Finally, recommended best practices are provided to further assist facilities and providers in improving healthcare delivery in the District.

I. Retained Foreign Objects

Surgical events reported included the following:

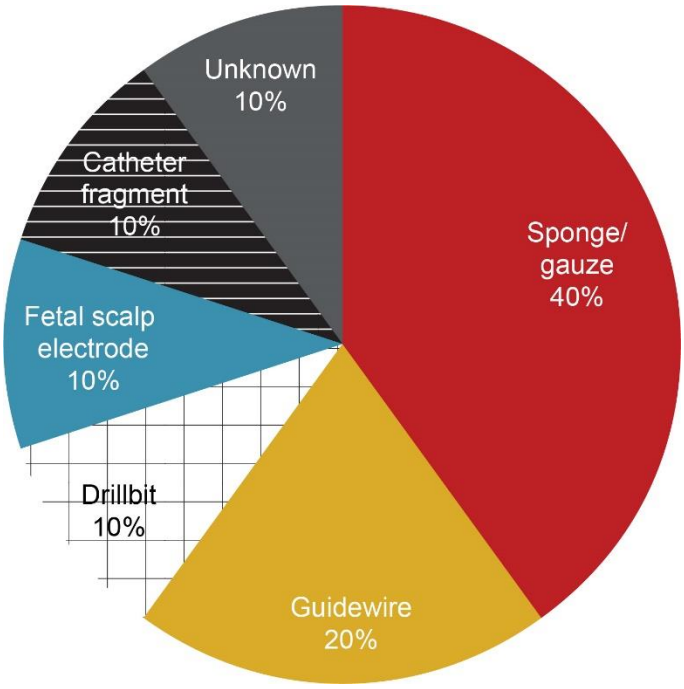
- Unintended retention of a foreign object in a patient after surgery or other procedure

A review of the 10 retained foreign object events submitted over the past fiscal year (Figure 6, p. 22) (ECRI Institute PSO), between October 2017 and September 2018, revealed the following findings:

DC Health Findings

- Forty percent of retained foreign objects were sponges or gauze; 20% were central line guidewires; 10% each for drill bits, fetal scalp electrodes, and epidural catheter fragment. Ten percent of retained foreign objects were unidentified.
  (ECRI Institute PSO).

FIGURE 6. RETAINED FOREIGN OBJECTS, FY2018



Recommendations

- Establish policies and procedures outlining standardized practices to prevent retained surgical items and count discrepancies.
- Report near misses related to retained surgical items or count discrepancies into the facility adverse event reporting system.
- Consider implementation of behavioral and environmental changes aimed at reducing unnecessary distractions.
  (ECRI Institute Guidance: Unintentionally Retained Surgical Items)
- Ensure essential elements of an evidence-based process include standardized systems to evaluate the counting process, managing the surgical team, and improving the culture.
  - Evaluate the system for 1) presence of a multidisciplinary surgical team approach, 2) communication flow, 3) consistency regarding counting process, and 4) a method of reconciling count discrepancies.
  - Focus on a culture of patient safety, teamwork, and effective communication.
  (ECRI Institute PSO Top 10 Patient Safety Concerns for Healthcare Organizations: 2016)

Additional Resources

- Association of periOperative Registered Nurses (AORN):
  - Guideline. Retained Surgical Items. Effective 2016 Jan.
  - Steelman VM. Best Practices for Prevention of Retained Surgical Items.
- ECRI Institute:
  - Adjunct Technologies for Retained Surgical Items. ECRI Institute PSO 2015 Jun.
  - Retained Surgical Items: What the Data is Telling Us. ECRI Institute PSO webinar 2018 Feb.

II. Pressure Ulcers

Pressure ulcer events are defined as follows:

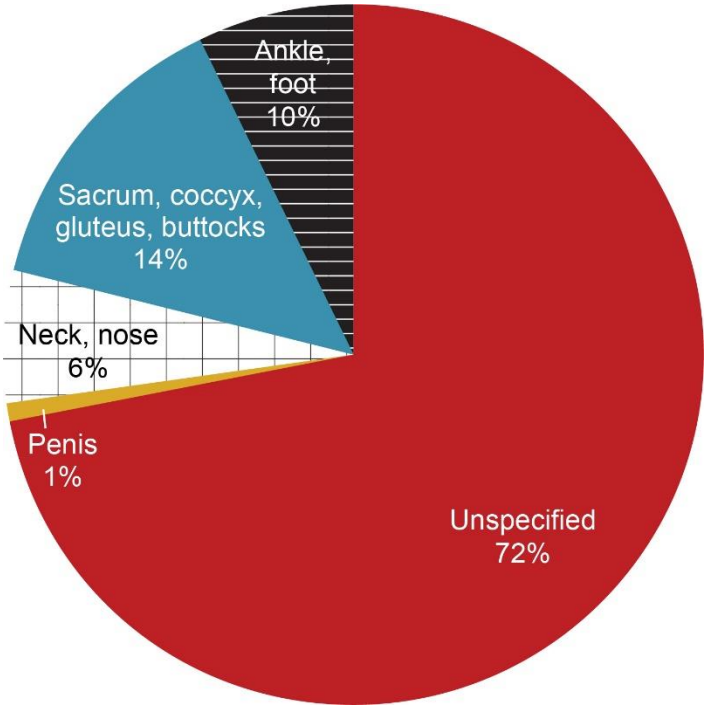
- Any stage 3, stage 4, or unstageable pressure ulcers acquired after admission/presentation to a healthcare setting

A review of 69 pressure ulcer events submitted over the past fiscal year (ECRI Institute PSO), between October 2017 and September 2018, revealed the following findings:

DC Health Findings

- Seven percent (7%) of patients were being treated in specialty care areas (such as ICUs), 17% were in general inpatient care areas, and for the rest, the care location was unreported.
- Twenty-eight percent (28%) of the events reported the pressure ulcer locations on the body. Fourteen percent (14%) were located in the area of the sacrum, coccyx and gluteus; the remaining were at the ankle, foot, neck, nose, and penis body sites (Figure 7). (ECRI Institute PSO)

FIGURE 7. PRESSURE ULCER INJURY LOCATION, FY 2018



Recommendations

- Ensure that policies and guidelines that describe the prevention, identification, and treatment of pressure injuries are consistent with current federal and state regulations, as well as evidence-based standards, guidelines, and appropriate case law.
- Consider organizing an interdisciplinary team to monitor at-risk patients and those with pressure injuries.

- Ensure job-specific information related to pressure injury prevention is provided to all stakeholder staff.
- Use a comprehensive nutritional assessment for each patient 1) upon admission, 2) when a change in condition occurs, and 3) to identify underlying causes of nutrition or hydration problems.
- Assure that each patient assessed to be at risk for pressure injuries has an individualized plan of care.
  (ECRI Institute Guidance: Pressure Injuries)

Additional Resources

- Agency for Healthcare Research and Quality (AHRQ). Preventing Pressure Ulcers in Hospitals: A Toolkit for Improving Care. 2014.

III. CLABSIs

CLABSI events are defined as follows:

Definitions specific to bloodstream infection (BSI) / CLABSI Surveillance:

- **Central line-associated BSI (CLABSI)**: A laboratory confirmed bloodstream infection where an eligible BSI organism is identified, and an eligible central line is present on the laboratory confirmed bloodstream infection (LCBI) date of event (DOE) or the day before.
  - Primary BSI: An LCBI that is not secondary to an infection at another body site
  - Secondary BSI: A BSI that is thought to be seeded from a site-specific infection at another body site

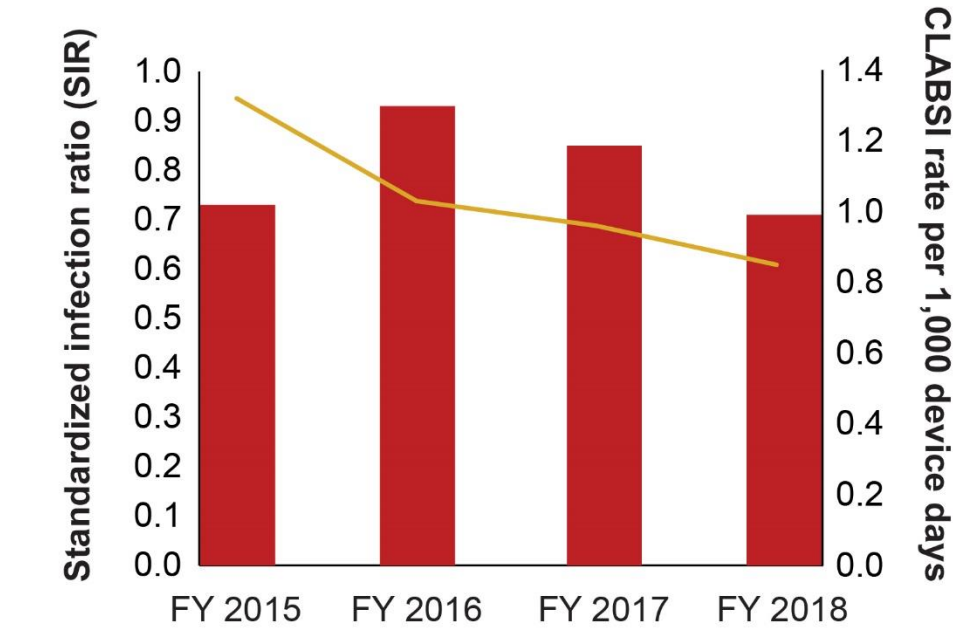
  CDC/NHSN Surveillance Definitions for Specific Types of Infections

DC Health Findings

The following data were provided by DC Health's CPPE DE-DSI in advance of publication by CDC, from the reports submitted to CDC's NHSN.

During FY 2018, units from all 10 acute care facilities reported a total of 133 CLABSIs and 157,216 central-line-days for a CLABSI rate of 0.85 infections per 1,000 central-line days. For FY 2018, the overall SIR for the eight short-term acute care facilities was 0.71 (DC Health, 2018). Over the last four fiscal years, the CLABSI raw numbers, rate, and device utilization have shown improvement.

FIGURE 8. CLABSI TREND BY SIR AND RATE



	FY 2015	FY 2016	FY 2017	FY 2018
SIR	0.73	0.93	0.85	0.71
CLABSI rate	1.32	1.03	0.96	0.85

Recommendations

- Implement evidence-based basic best practices for preventing and monitoring CLABSIs in acute care hospitals before, during, and after insertion.
- Consider special approaches for preventing CLABSIs in locations and/or populations within the hospital with unacceptably high CLABSI rates despite implementation of the basic CLABSI prevention strategies.
- Monitor process measures:
    - Documentation of compliance with central venous catheter (CVC) insertion guidelines on an insertion checklist.
    - Documentation of compliance with daily assessment regarding the need for continuing CVC access.
    - Documentation of compliance with cleaning of catheter hubs and injection ports prior to access.
    - Documentation of compliance with use of antiseptic-containing port protectors. (Marschall and Mermel)
- Track insertion and maintenance performance separately, to better target resources and improvement efforts. (Davis and Finley)

Additional Resources

- Centers for Disease Control and Prevention (CDC):
  - Muto C, Herbert C, Harrison E, et al. Reduction in central line-associated bloodstream infections (CLABSIs) among patients in intensive care units. MMWR Oct. 2005;54(40):1013–16.
  - National and State Healthcare Associated Infections: Progress Report. Based on 2014 data, published in 2016.
  - Checklist for Prevention of Central Line Associated Blood Stream Infections (2011).
  - O'Grady NP, Alexander M, Burns LA, et al. Guidelines for the prevention of intravascular catheter-related infections (2011).
- Kallen A, Patel P. Central Line-Associated Bloodstream Infections (CLABSI) in Non-Intensive Care Unit (non-ICU) Settings Toolkit.

CONCLUSION

Medical facilities and providers in the District of Columbia continue to take important steps to improve patient safety by submitting adverse event reports in accordance with the Medical Malpractice Amendment Act of 2006. The success of the reporting program continues to rely on the willingness of healthcare facilities and providers to disclose NQF events and submit meaningful reports. The focus of the District's Patient Safety Reporting System is to analyze events to better understand how and why adverse events occur and to prevent the reoccurrence of similar events. The vision for the reporting system is to provide a tool for quality improvement and education. Disseminating lessons learned and best practices facilitates system changes that consistently promote the delivery of safe patient care. In 2019, the District will have continued opportunities to benefit from custom feedback to support this objective as well as the ability to submit research requests, with the delivery of safe patient care as the ongoing goal of the program.

Technical Credits

This report was prepared for DC Health by ECRI Institute in collaboration with DC Health. ECRI Institute, a nonprofit organization, dedicates itself to bringing the discipline of applied scientific research in healthcare to uncover the best approaches to improving patient care. As pioneers in this science for more than 50 years, ECRI Institute marries experience and independence with the objectivity of evidence-based research. More than 5,000 healthcare organizations worldwide rely on ECRI Institute's expertise in patient safety improvement, risk and quality management, and healthcare processes, devices, procedures, and drug technology.

Acronyms and Abbreviations

- AHRQ: Agency for Healthcare Research and Quality
- BSI: bloodstream infection
- CAP: corrective action plan
- CDC: Centers for Disease Control and Prevention
- CLABSI: central-line-associated bloodstream infection
- CPPE DE-DSI: Center for Policy, Planning and Evaluation's Division of Epidemiology Disease Surveillance and Investigation
- CVC: central venous catheter
- DC Health: District of Columbia Department of Health
- DOE: date of event
- FY: fiscal year
- HAI: healthcare-associated infection
- ICU: intensive care unit
- NHSN: National Healthcare Safety Network
- NQF: National Quality Forum
- PSO: patient safety organization
- RCA: root-cause analysis
- RSI: retained surgical item
- SIR: standardized infection ratio

Figures

Tables

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ECRI Institute:

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- Unintentionally Retained Objects despite Correct Count. Concern #8 —Top 10 Patient Safety Concerns for Healthcare Organizations: 2016. Healthcare Risk Control 2016 Apr.
- Guidance: Pressure Injuries. Healthcare Risk Control 2018 Mar 30.

Marschall J, Mermel LA, Fakih M, et al. Strategies to Prevent Central Line–Associated Bloodstream Infections in Acute Care Hospitals: 2014 Update. Infect Control Hosp Epidemiol 2014 Jul;35(7):753-71.

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