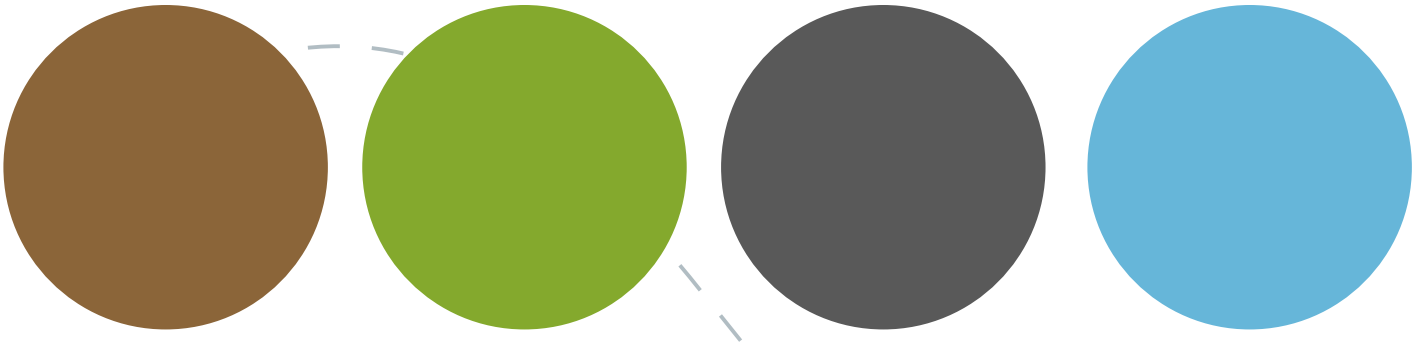
CENTER FOR PATIENT SAFETY

2013

PSO REPORT



MISSION: A safe environment for all patients & healthcare providers, in all processes, all the time.

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ABOUT THE CENTER FOR PATIENT SAFETY

The Center for Patient Safety (CPS) is certified as a federally-designated Patient Safety Organization (PSO) in compliance with provisions of the federal Patient Safety and Quality Improvement Act of 2005 (PSQIA). PSOs support the collection, analysis, sharing and learning about what medical errors occur, why and how to prevent them. By reinforcing a safety culture that encourages and allows healthcare providers to safely report and share information about vulnerabilities within the healthcare system, PSOs are pivotal in the crusade to prevent medical errors and patient harm.

The Center is positioned to assist new and current participants in gaining this invaluable learning, and obtaining the federal protections that are available within the PSQIA – but, most importantly, to prevent patient harm.

IMPORTANT NOTE ABOUT THE DATA

The data contained in this report is from the Center for Patient Safety's PSO database. Licensed healthcare providers may participate in a PSO in order to share information, learn from the sharing, gain federal protection and ultimately reduce mistakes and patient harm. PSO participation is voluntary and organizations may choose to submit only the more severe adverse events to share lessons learned. The event types and their severities, along with additional information, contained in this report are deidentified as required by the PSQIA.

The goal of this report is to present an overview of the findings within all of the events reported to the Center's PSO, to learn how and why events are occurring, and inform providers and others about how to prevent future occurrences.

SIX REASONS TO PARTICIPATE IN A PSO

1. Participate in sharing and learning aimed at preventing medical errors and patient harm.
2. Collaborate with other providers to identify medical error prevention strategies.
3. Gain the support and expertise of PSOs to enhance quality and safety processes and practices.
4. Gain federal protections that fill the gaps left from peer review and attorney-client privilege protections.
5. Meet the pending Accountable Care Act requirement.
6. PSO participation as a hedge against onerous state-mandated reporting legislation.

CASE LAW BRIEFING

The last year saw few legal developments regarding the application or interpretation of the Patient Safety and Quality Improvement Act and its regulation. Older case law (from 2011 and 2012) supported the protections in the Act and emphasized the need to define a Patient Safety Evaluation System and to report. There were no reported legal cases in 2013 actually applying the law, but one court held that a healthcare provider could not use the PSQIA protections when it neither had a contract with a PSO nor reported to one. A summary of the reported cases with citations is available here. ▶

LONG-TERM CARE PSO

In addition to providing PSO services for health systems, ambulatory surgery centers and ambulance agencies, the Center provides Long-term care PSO services for Missouri homes to improve the quality and safety of care. Services are currently being performed under a grant from the Missouri Foundation for Health to assess and train on safety culture as well as recruitment into the PSO occurring in 2014. For more information about LTC culture and PSO activity within or outside of Missouri contact the Center at info@mocps.org.

"Get involved with your PSO if you aren't already. PSO are the wave of the future, they are part of the future, clinically, electronically and as part of quality and safety improvements."

Dr. William Munier
DIRECTOR OF THE CENTER FOR QUALITY IMPROVEMENT AND PATIENT SAFETY, AHRQ

PSO SERVICES AND BENEFITS

The Center offers PSO services for hospitals, ambulatory surgery centers, ambulance agencies, physician offices and long-term care facilities. Services and benefits include:

- Access to the Center's customized online data platform, Share*Suite*:
  - A secure, confidential data platform to enter and analyze data (with optional electronic upload of data from internal event reporting systems), and report adverse events, near misses and unsafe conditions
  - Secure collaboration and communication between the CPS and PSO participants
- Access to CPS exclusive PSO resources (education and training, password-protected web site with PSO resources, a Share*Suite* User Guide, PSO Toolkit containing PowerPoint and other templates to assist in PSO implementation at your organization and more)
- An Annual PSO Participant Day for networking, sharing and learning among PSO participants
- One-on-one consultation from experts in patient safety for PSO reporting and other patient safety topics
- Access to national patient safety sharing and networking opportunities, including regional and statewide data collection and learning
- Integration of PSO and patient safety activities with a network of providers across the continuum of care, including ambulatory surgery centers, ambulance services and nursing homes
- Discount on automated, enhanced Survey on Patient Safety services and reports to meet your annual safety culture requirements and improvement needs
- Gaining federal legal and confidentiality protections for designated quality and safety improvement work not otherwise protected by attorney-client privilege or peer review protections
- Option to submit de-identified data to a national patient safety database for utilization in national quality and safety reports

CALL TO ACTION Interested in learning more about the Center? Contact us at info@mocps.org and visit our website regularly to stay current with activities, find resources, toolkits, and much more! ▶

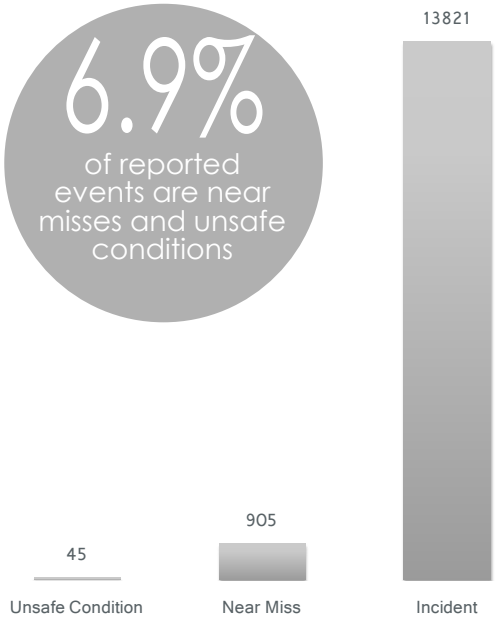
Summary of All Events

Events reported in the Center for Patient Safety's PSO database account for only a small fraction of the total care that is provided to patients by organizations that participate in the Center PSO.

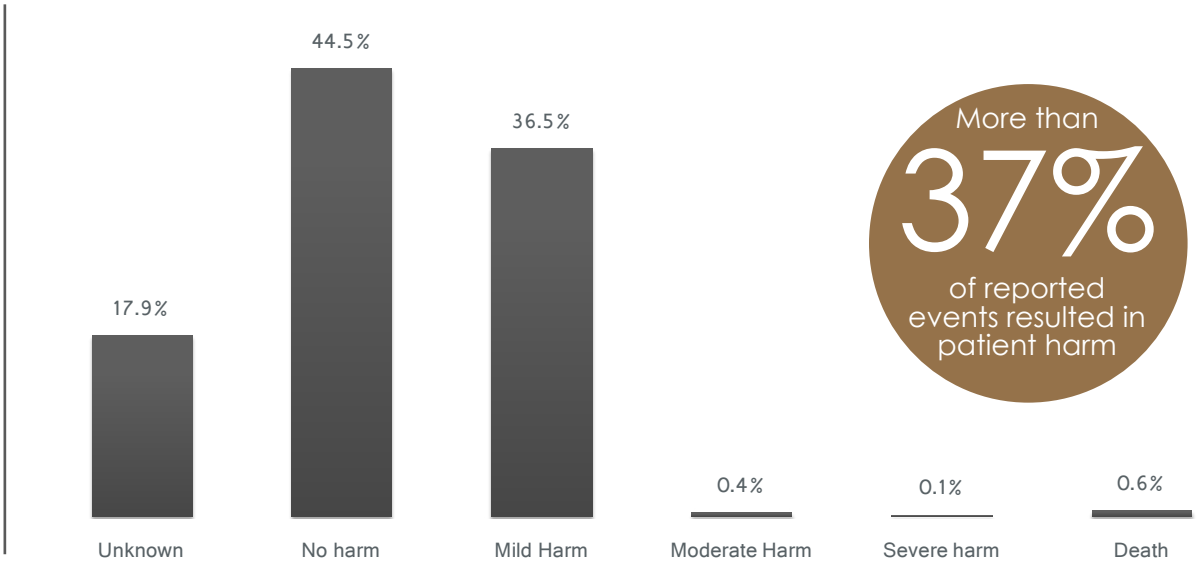
More than 90 healthcare organizations have entered almost 15,000 events into the PSO database.

Almost 7% of reported cases are near-misses and unsafe conditions, in which a mistake or error was about to occur, or could have occurred, but was caught before it reached the patient. These cases are excellent stories to learn more about preventing patient harm. Fortunately many more near misses occur than events that reach the patient.

PSOs provide an opportunity to report and encourages reporting of near misses and unsafe conditions, differentiating our work from most regulatory and mandatory reporting programs. This provides the PSO with additional information to analyze, share and use to prevent future mistakes,



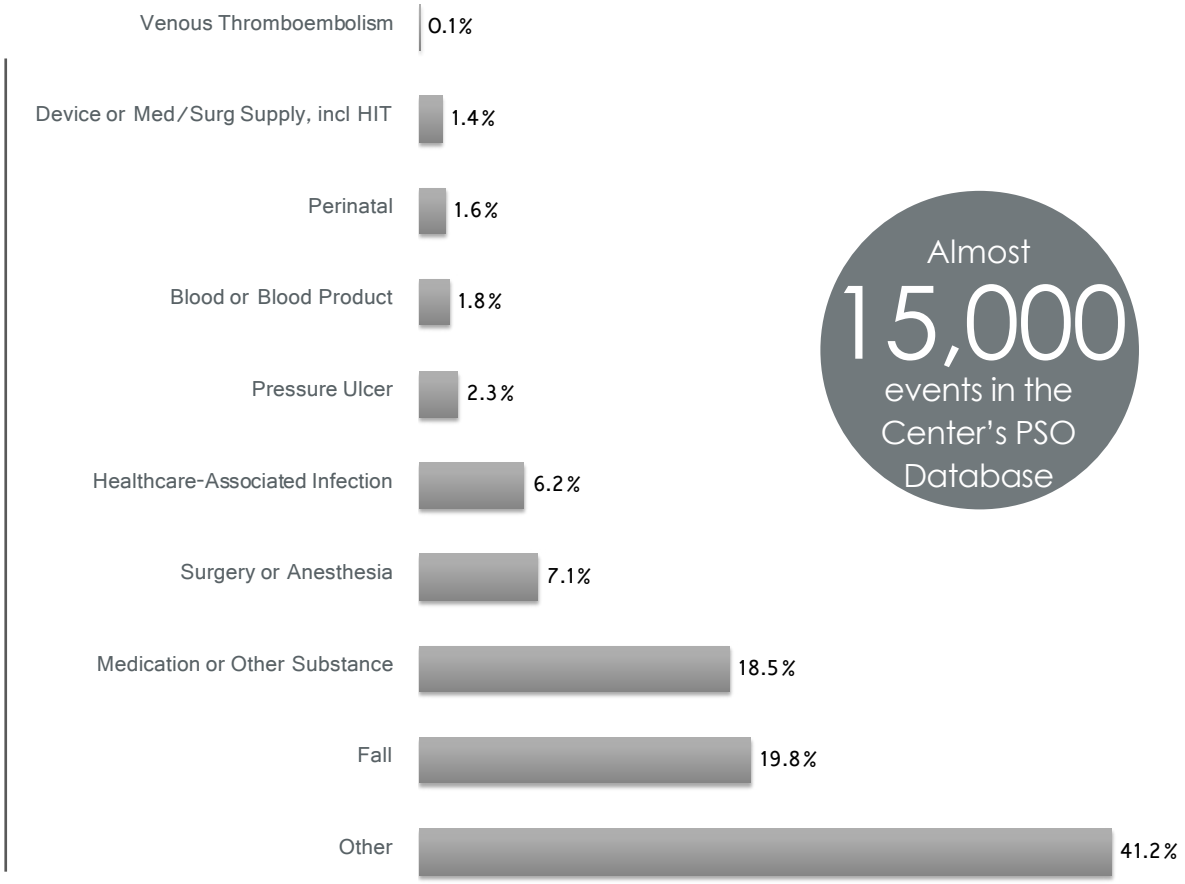
All Events by Harm Level



The most commonly reported factors contributing to an adverse event are:

- Communication among staff or team members
- Competence (qualifications, experience)
- Accuracy
- Clarity of policies
- Managerial supervision

All Events by Type of Event



Almost **15,000** events in the Center's PSO Database

Falls

A fall is a sudden, unintended, uncontrolled, downward displacement of a patient's body to the ground or other object (e.g., onto a bed, chair, or bedside mat). This definition includes unassisted falls and assisted falls (i.e., when a patient begins to fall and is assisted to the ground by another person). This definition excludes near falls (loss of balance that does not result in a fall) and falls resulting from a purposeful action or violent blow (e.g., a patient pushes another patient).

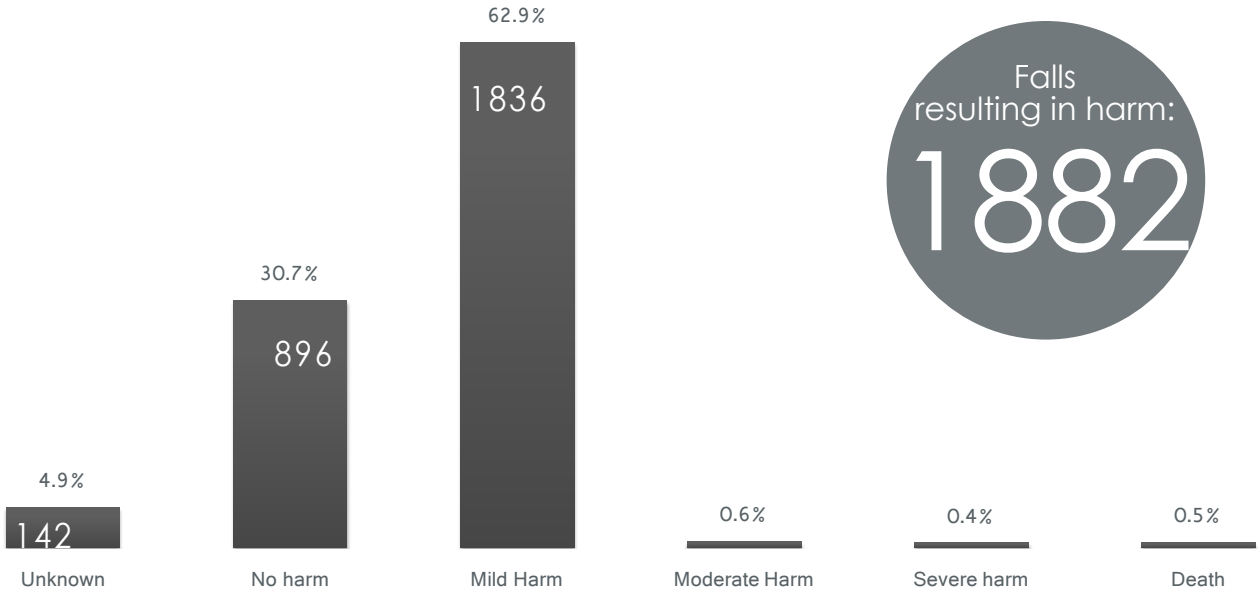
Falls account for **20%** of reported events

One in five events reported the Center's PSO is a fall.

FALLS OFTEN RESULT IN HARM:

- 262 falls resulted in fractures
- 67 falls resulted in intracranial injuries
- 29 resulted in a laceration requiring sutures
- 10 resulted in skin tear, avulsion, hematoma or significant bruising
- 9 resulted in dislocations

Falls by Harm Level



Falls resulting in harm: **1882**

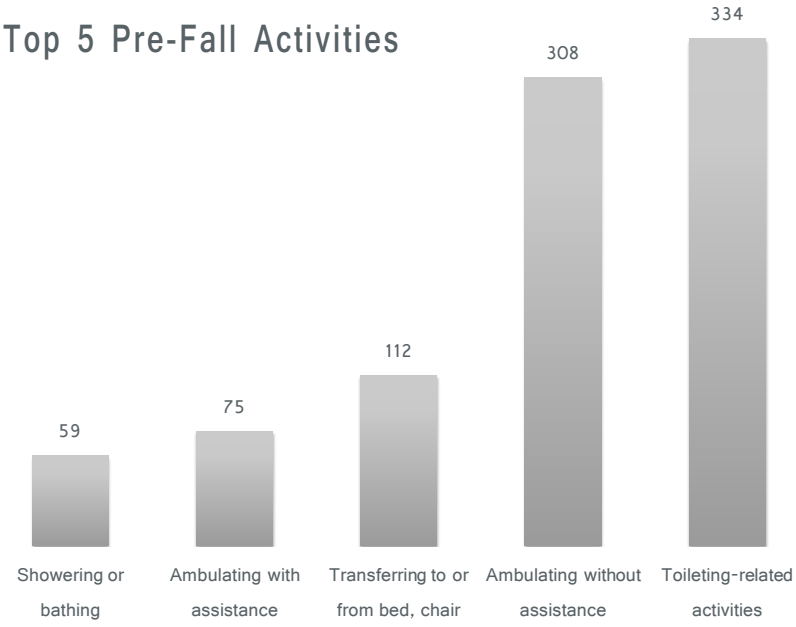
*HARM: a level of injury incurred by a patient resulting in mild-, moderate- or severe-harm or death.

When pre-fall activity was known,

34%

of falls were a result of toileting-related activities

Top 5 Pre-Fall Activities



Toileting activities and ambulating without assistance are leading pre-fall activities that result in fractures and intracranial injuries. Reported events indicated patients that sustain intracranial injuries, most often resulted in patient death. Twenty percent of intracranial injuries sustained from toileting activities resulted in severe harm or death.

The most severe harm injuries are incurred from intracranial injuries. In most cases, the patient was identified as a Fall Risk during a fall risk assessment.

Causal factors of falls include common situations such as a lack of communication among staff or team members, environmental impact (trip hazards, such as IV tubing), and lack of communication between the patient's family members and the hospital staff.

Less common causal factors include a patient that slipped in their own urine, several cases of combative patients that fell during abusive behavior directed at staff, and several cases involving falls during and after physical therapy.

Resources

- National Center for Patient Safety Falls Toolkit ▶
- Practicing Physician Education in Geriatric Medicine Falls Toolkit ▶

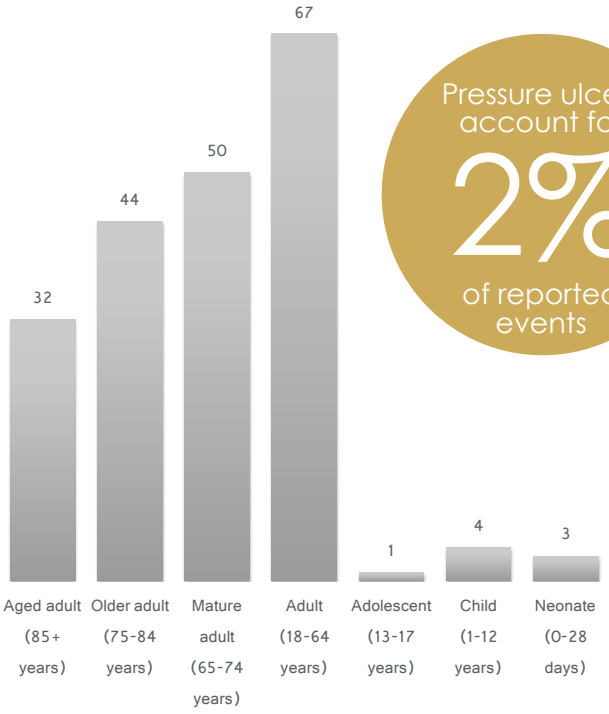
Pressure Ulcer

A pressure ulcer event is a pressure ulcer or suspected deep tissue injury that was 1) not present on admission (i.e., newly-developed) or 2) worsened during the patient's stay. This data excludes mucosal, arterial, or venous ulcers, diabetic foot ulcers, and ulcers in patients receiving palliative care.

Of 42 pressure ulcers reported and not present at the time of admission, 25 were assessed to be at risk for pressure ulcers. Even with proper interventions, such as nutritional support, pressure redistribution devices and repositioning, more than half developed Stage III and Stage IV pressure ulcers.

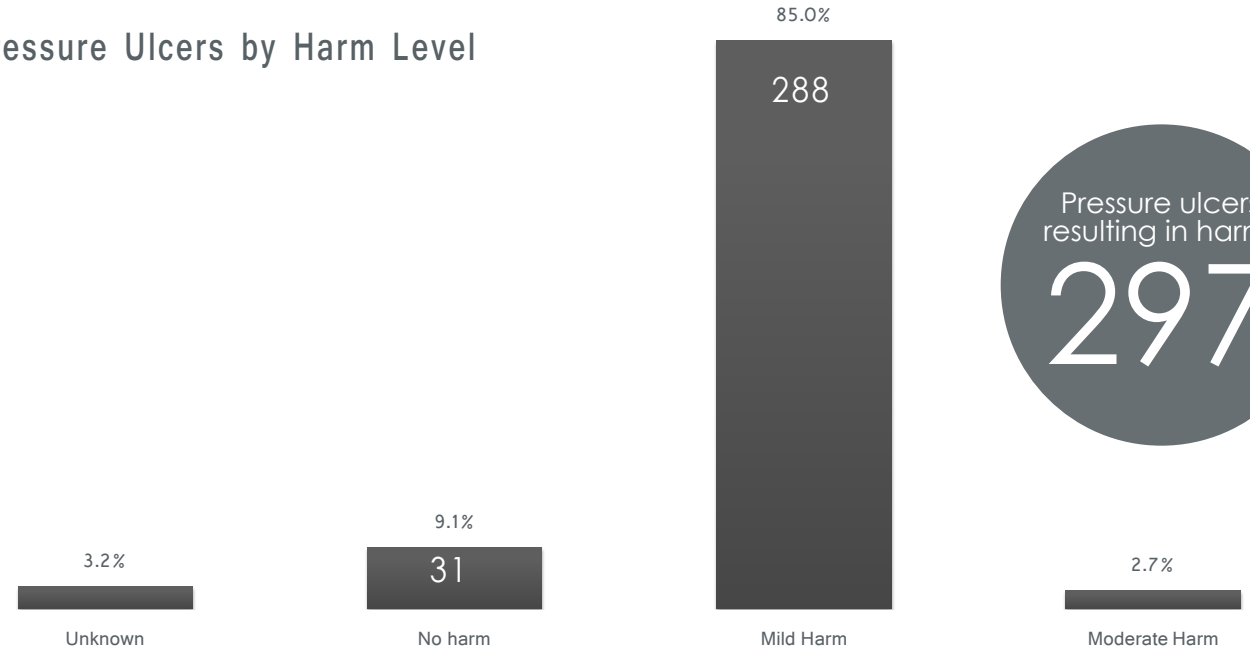
Resources

- Guide to Prevent Pressure Ulcers – IHI ▶
- Pressure Ulcer Toolkit – Primaris ▶
- AHRQ Toolkit: Prevention of Hospital-Acquired Pressure Ulcers – toolkit with links to interventions to improve patient skin integrity ▶



Pressure ulcers account for **2%** of reported events

Pressure Ulcers by Harm Level



Pressure ulcers resulting in harm: **297**

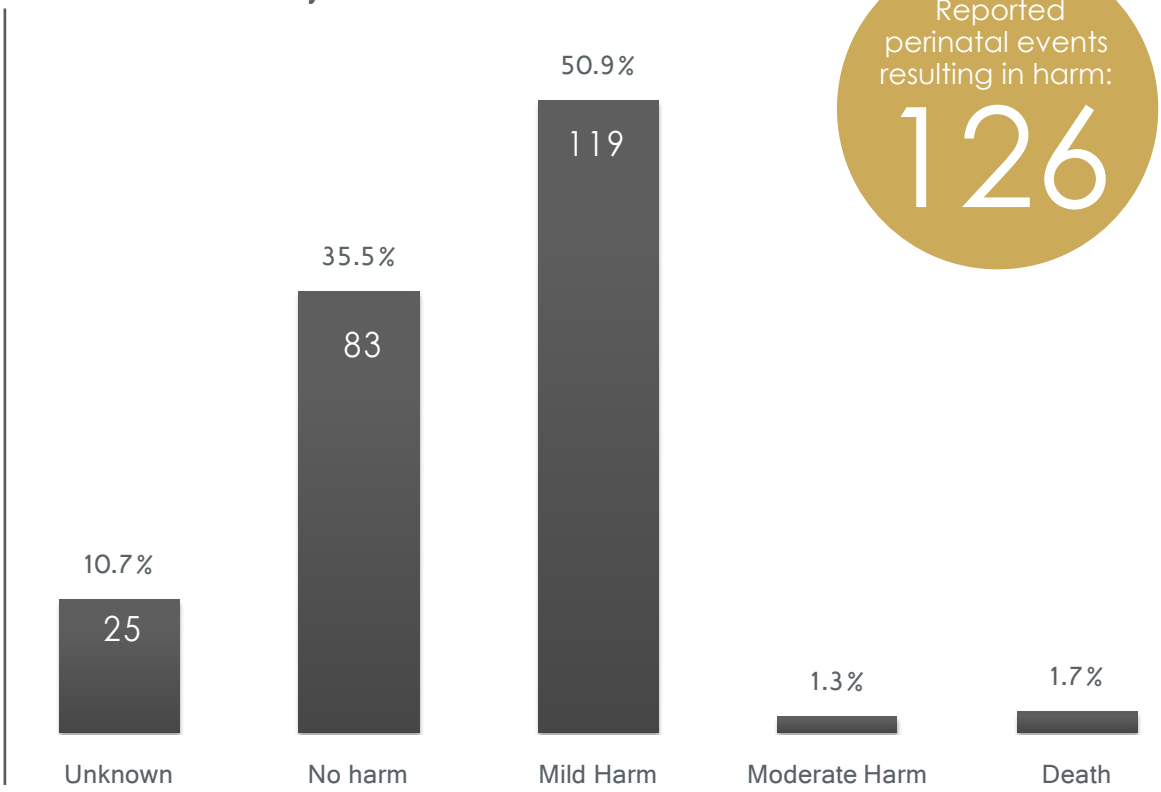
Perinatal

A perinatal event is a patient safety event associated with the birthing process or intrauterine procedures that occur during the perinatal period to the mother, fetus(es), or neonate(s). The perinatal period extends from the 20th week of gestation through 4 weeks (28 days) postpartum.

Perinatal events account for **1.6%** of reported events

> PSO reporting has identified a number of events occurring in relation to newborn transfers, including events occurring during transfers to tertiary facilities as well as issues surrounding the timeliness of care.

Perinatal Events by Harm Level



Reported perinatal events resulting in harm: **126**

Surgery- or Anesthesia-related

A surgery- or anesthesia-related event is a patient safety event involving a surgical or other invasive procedure (e.g., colonoscopy), or the administration of anesthesia. Data does not include information about events involving the removal of organs from brain-dead patients (ASA Class 6) or handling an organ after procurement.

Surgery-related events account for **7.1%** of reported events

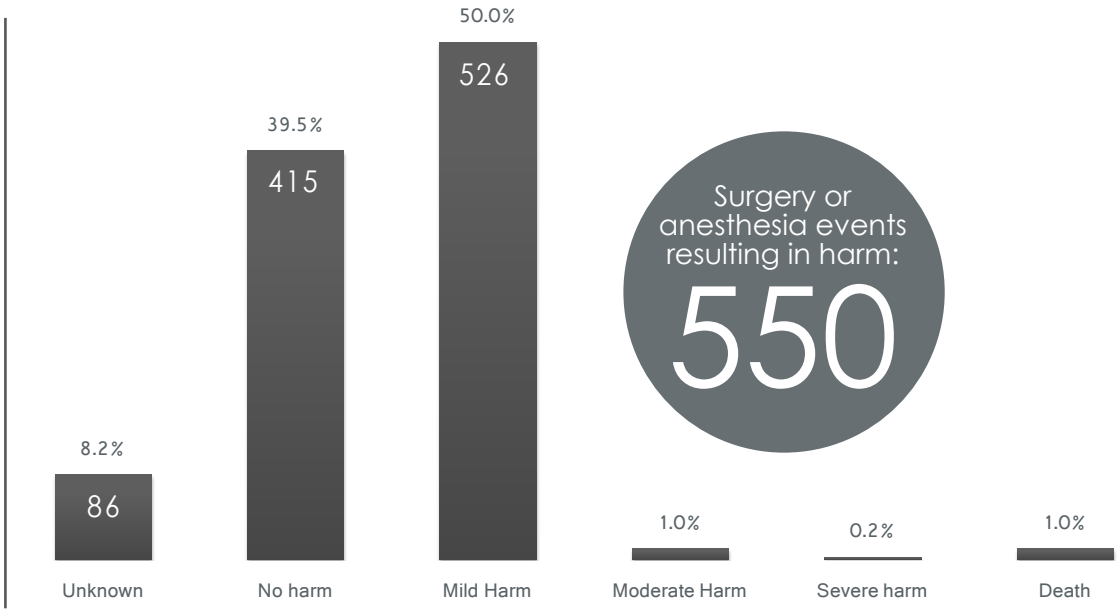
Surgical and anesthesia-related events include multiple dental injuries, retained objects and injuries sustained from perforations (colon, esophagus, bladder, ureter, etc).

Retained objects most often include sponges, however, other retained objects include needles, whole instruments, and instrument fragments (see graph on next page).

Resources

- Surgical Fire Safety Prevention (FDA) ▶
- Nothing Left Behind ▶ and Left Behind... Surgical Bits and Pieces ▶

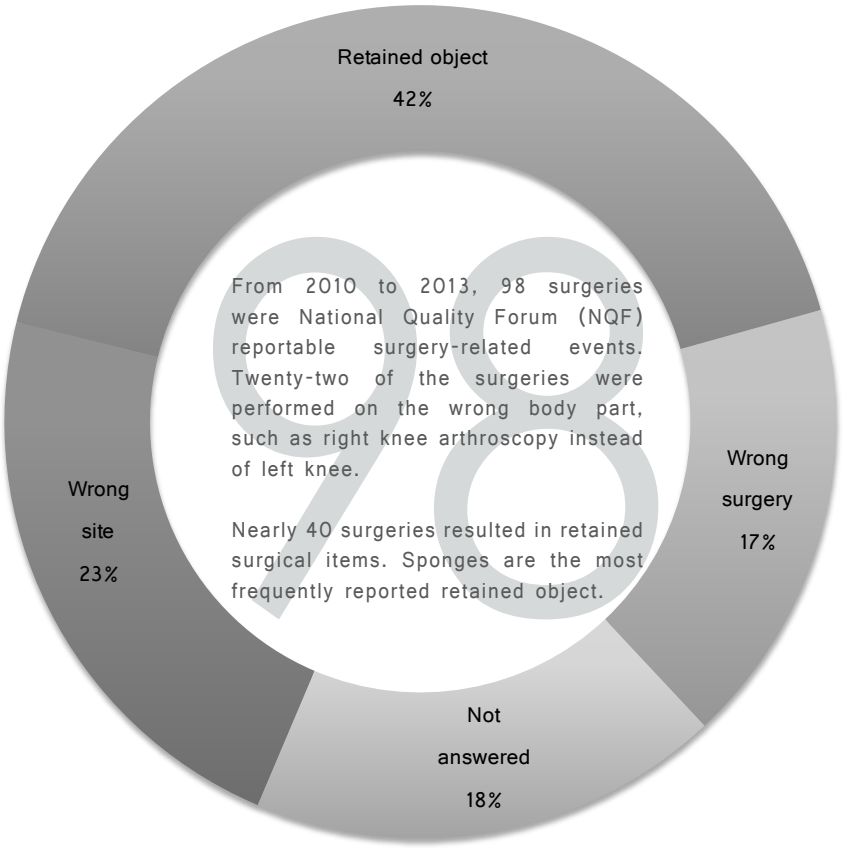
Surgery or Anesthesia-related Events by Harm Level



Center Collaborates to Learn from Retained Surgical Items

The Center has joined other PSOs to evaluate retained surgical item (RSI) events. Evaluating reported events can identify the most common types of RSIs and provide learning. RSIs are items such as micro-needles, broken drill bit fragments and guide wires that are inadvertently left in patients after surgery in ambulatory, outpatient and inpatient settings. These PSOs continue diligence to evaluate these events and share learning with PSO participants. ▶

1. Nix the term "counts" and replace it with "accounting," even in casual conversation. Account for every single surgical item before the patient leaves the OR. Counting is not enough.
2. Respect and assign roles within the surgical team. Circulators count sponges while surgeons are expected to complete methodical wound exam before closure to be sure nothing is left behind.
3. Tighten policy language with concise, directive language which outlines a specific accounting practice. Ambiguity opens the door for judgment, which sets the OR team up for failure.
4. Use miscounts to evaluate areas for improvement. Complete a near miss report so miscounts can be tracked and analyzed by a multidisciplinary team to seek creative solutions.



Healthcare-Associated Infection (HAI)

A healthcare-associated infection event is a localized or systemic condition resulting from an adverse reaction to the presence of an infectious agent(s) or its toxin(s). It is acquired during the course of receiving treatment for other conditions within a healthcare setting, with no evidence that the infection was present or incubating at the time of admission (except surgical site infection (SSI)).

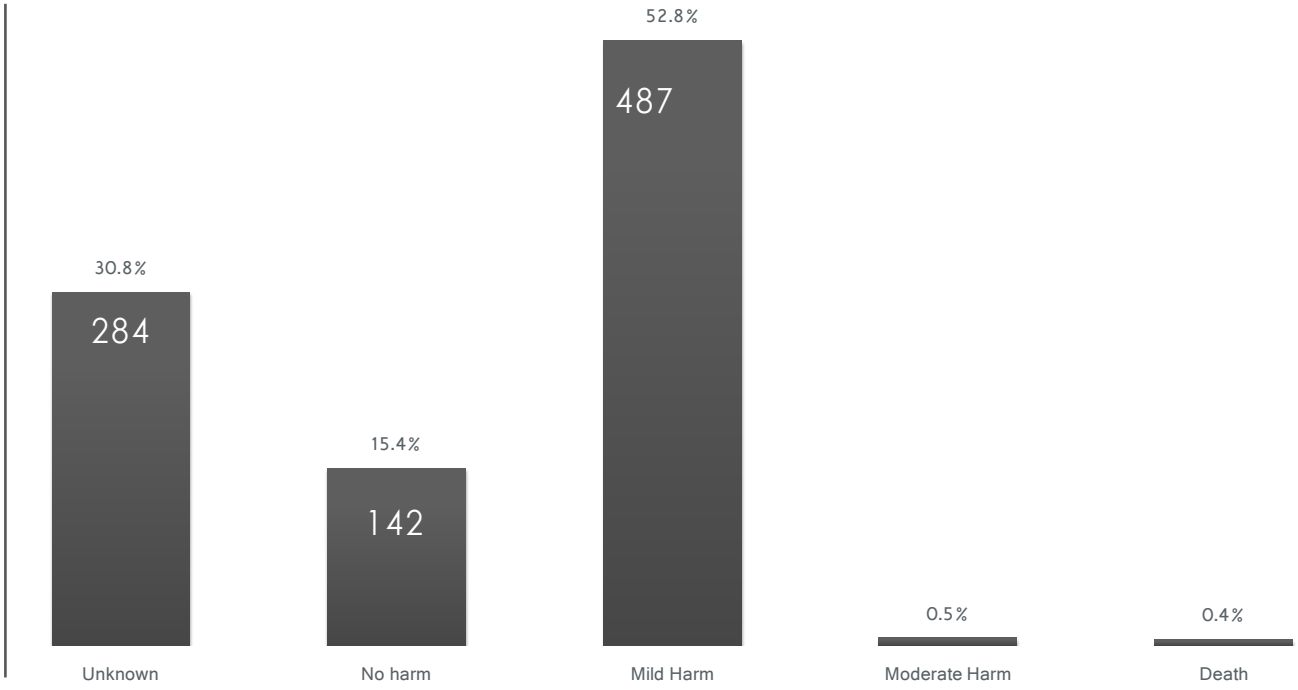
HAIs account for **6.2%** of reported events

Three percent of reported infections resulted in readmissions with the largest occurring due to surgical site infections (64%).

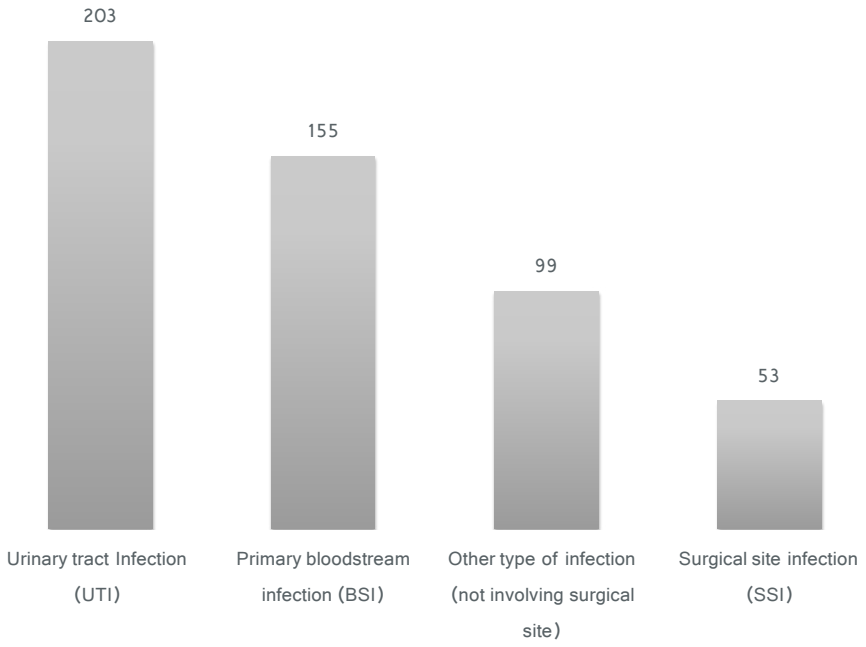
Six percent of reported infections resulted in an extended length of stay with 45% due to surgical site infections and 32% due to urinary tract infections.

HAIs resulting in harm: **496**

Healthcare-Associated Infections by Harm Level



The majority of reported Healthcare-Associated Infections are urinary tract infections, followed by primary blood stream infections.



Fifty-seven percent of reported urinary tract infections (UTIs) are classified as symptomatic with 50% resulting in harm to the patient. Asymptomatic bacteremic classified UTIs account for 18% of urinary tract infections, but result in harm in more than 78% of reported events.

More than 77% of reported surgical site infections (SSI) resulted in harm to the patient. The majority of SSIs are classified as superficial incisional primary infections and deep incisional primary infections.

Resources

- Partnering to Heal ▶
- Hand Hygiene Toolkit from ASC Collaborative ▶
- "Partnering to Heal: Teaming Up Against Healthcare-Associated ▶ Infections" – HHS Online Patient Safety Training Resources to Reduce HAIs ▶
- WHO Hand Hygiene Campaign – "SAVE LIVES: Clean Your Hands" – tools, resources and evidence on hand hygiene ▶

Venous Thromboembolism (VTE)

A venous thromboembolism (VTE) event is a deep vein thrombosis (DVT) or a pulmonary embolism (PE) that (1) had onset during a patient's stay; (2) was present on admission but that occurred or developed within 30 days of a prior discharge from a facility; or (3) had onset within 30 days of discharge from a facility.

DVT and PE are two presentations of the same disease: venous thromboembolism (VTE). DVT refers to partial or total thrombotic occlusion of a deep vein of the lower extremity or pelvis (e.g., inferior vena cava, iliac, femoral, popliteal, tibial, gastrocnemial, soleal, or peroneal vein) or a deep vein of the upper extremity or upper thorax (e.g., internal jugular, brachiocephalic, superior vena cava, axillary, brachial, or subclavian). Symptomatic DVT is an objectively confirmed DVT that results in symptoms including pain and/or swelling of the affected limb.

PE refers to a partial or total thromboembolic occlusion of one or more pulmonary arteries that causes symptoms or death. Symptomatic PE is an objectively confirmed PE that results in symptoms or signs such as shortness of breath, pleuritic chest pain, hemoptysis, oxygen desaturation, or death.

Reported VTEs resulting in harm:

8

VTEs Resulting in Harm

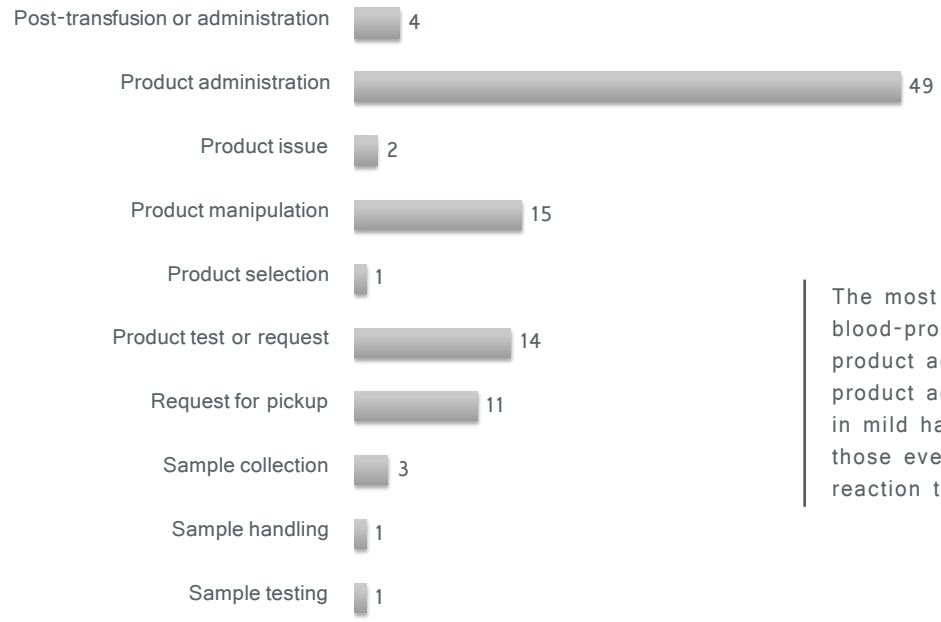
Only recently, the Agency for Healthcare Research and Quality finalized new formats for reporting of VTE events to PSOs, limiting the amount of data currently available for analysis. Common Formats are the common definitions and reporting formats developed for reporting to PSOs that allow healthcare providers to collect and submit standardized information on patient safety events.

All reported VTE events occurred following orthopedic procedures including total knee replacements, arthroscopic knee procedures, and total hip replacement. Of the eight (8) reported VTEs, one-half involved life threatening pulmonary emboli.

Blood or Bood-Product

A blood or blood-product event is any patient safety event or unsafe condition involving the processing and/or administration of blood or a blood product. This data does not include information on blood or blood product collection and other processes prior to receipt of the product by the blood bank.

Blood or Blood-Product events account for **1.8%** of reported events

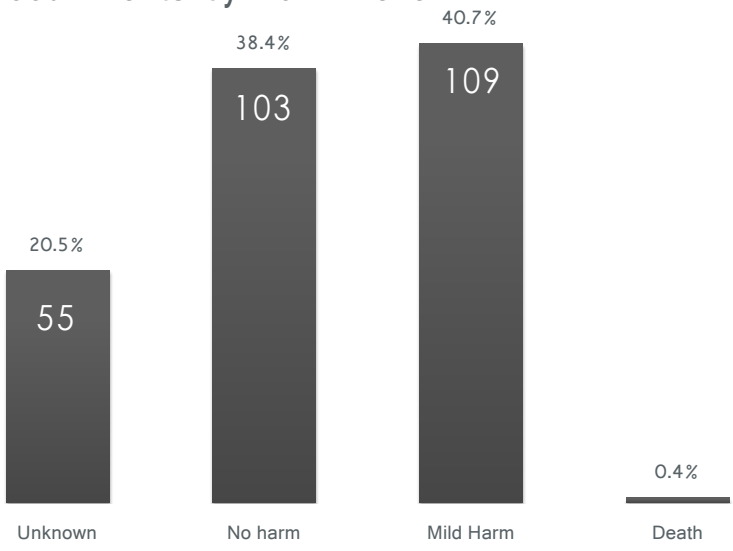


The most frequently reported blood or blood-product event occurred during product administration. Nearly 50% of product administration events resulted in mild harm and the majority of those events were a result of patient reaction to the transfusion.

Blood or Blood-Product events resulting in harm: **110**

268 events were reported to the Center's PSO database. The majority resulted in mild harm.

Blood Events by Harm Level



Medication or Other Substance

A medication or substance event is a patient safety event or unsafe condition involving a substance such as a medications, biological products, nutritional products, expressed human breast milk, medical gases, or contrast media.

Medication or other substance events account for **18.5%** of reported events

Medication events include giving a medication to the wrong patient, giving the incorrect medication to a patient, or giving a patient an incorrect dosage.

Most often, as indicated by reported events, medication errors result in no harm to the patient.

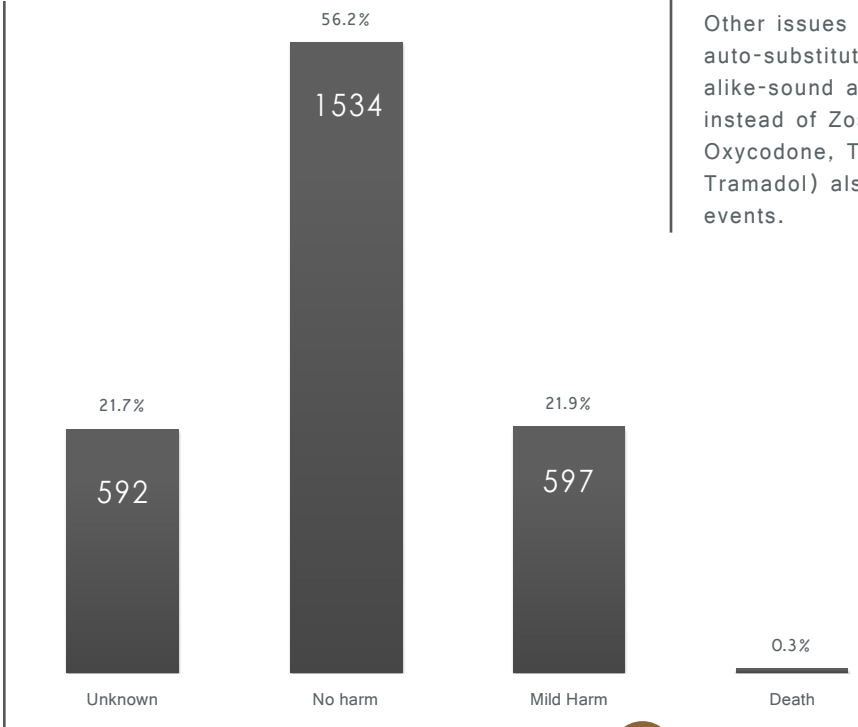
Incorrect medication actions most often occur as a result of documentation errors or overdoses.

Potential causes of medical events include dispensing errors that result from incorrect medications retrieved from unit-based dispensing systems such as Pyxis and pharmacy dispensing the wrong dose.

Order entry errors include the wrong medication with the CPOE system and orders not transferring to the electronic MAR.

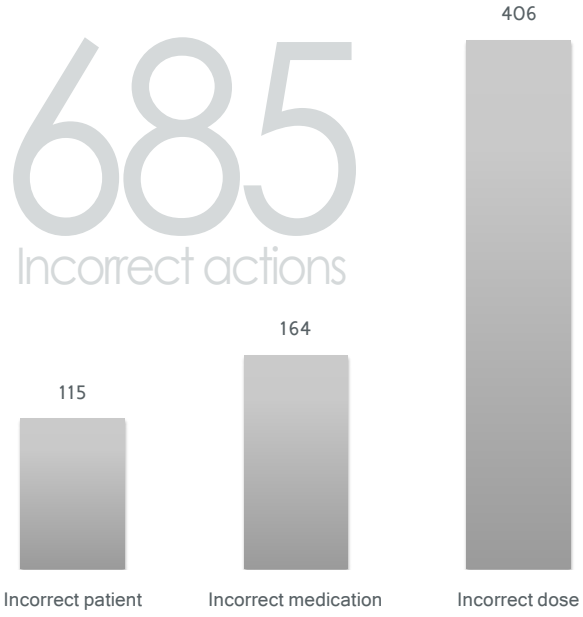
Other issues such as auto-stop and auto-substitution features and look alike-sound alike medications (Zyvox instead of Zosyn, Hydrocodone in Oxycodone, Trazodone instead of Tramadol) also contribute to medication events.

Med Events by Harm Level



Med events resulting in harm **605**

685
Incorrect actions



17% of reported prescribing errors result in patient harm

The most frequently reported stage in the process which led to the medication event, was administration of the medication, transcribing of the medication, and the prescribing or ordering process. Although, fortunately, no harm level was designated, one event involved a neonate who received 4x the prescribed dose of Gentamicin which was administered for 6 consecutive doses.

Overdoses occur most often. 193 overdoses have been reported. 37% of reported overdoses resulted in harm to the patient. Several overdose events resulted in patient death including one opioid overdose of patient who was opioid tolerant and a dobutamine overdose when IV tubing was switched between pumps.
Underdoses most often result in no harm.
Extra doses are less frequently reported (50 events reported) but 38% resulted in mild harm to the patient.

Resources

- Institute for Safe Medication Practices ▶
- CPS Medication Safety Resources – Poster, Brochure and My Medicine List ▶
- Medications at Transitions and Clinical Handoffs (MATCH) Toolkit for Medication Reconciliation ▶
- Medication Reconciliation to Prevent Adverse Drug Events from IHI ▶
- Medication Reconciliation and Health Literacy from Indiana Patient Safety Center ▶
- Medication Safety from the Massachusetts Coalition for the Prevention of Medical Errors ▶
- Safety of Verbal/Telephone Orders - Pennsylvania Patient Safety Authority ▶
- Stop Use of Ambiguous Medical Abbreviations – Food and Drug Administration and Institute for Safe Medication Practices ▶

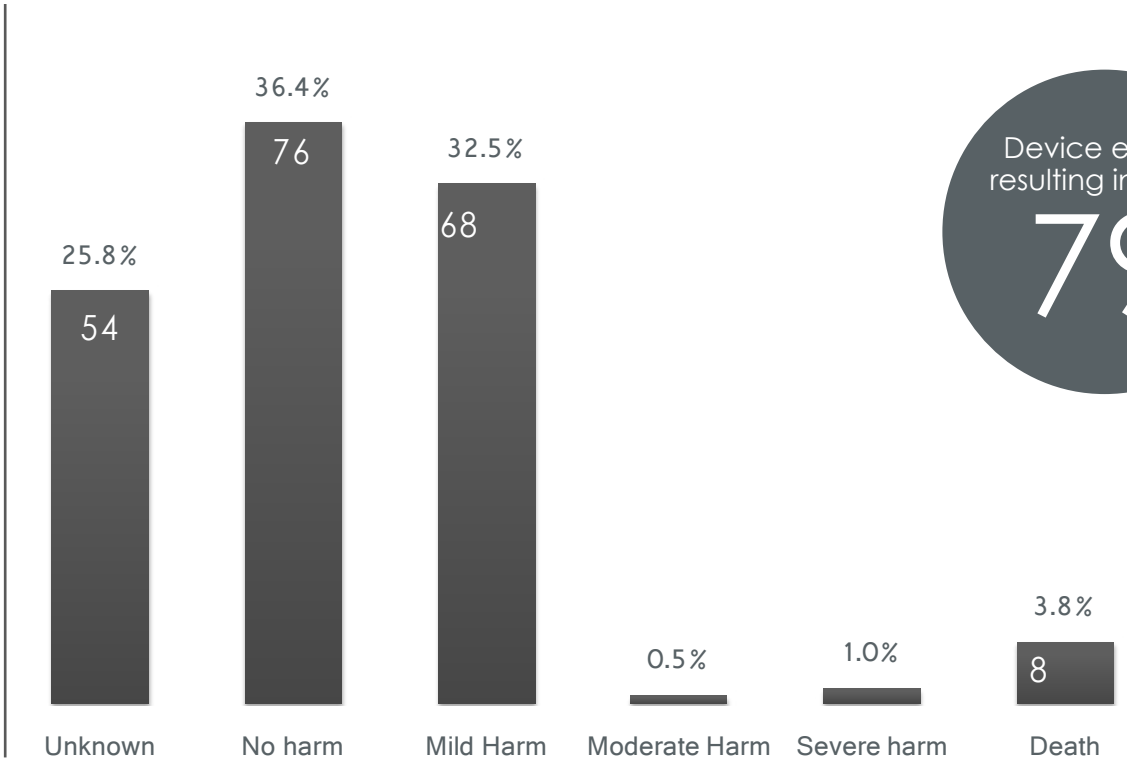
37% of reported overdoses resulted in harm to a patient

Device or Medical/Surgical Supply, Including Health Information Technology

A device or medical/surgical supply, including health information technology (HIT) event is a patient safety event or unsafe condition involving a defect, failure, or incorrect use of a device, including an HIT device. A device includes an implant, medical equipment, or medical/surgical supply (including disposable product). An HIT device includes hardware or software that is used to electronically create, maintain, analyze, store, or receive information to aid in the diagnosis, cure, mitigation, treatment, or prevention of disease and that is not an integral part of (1) an implantable device or (2) an item of medical equipment.

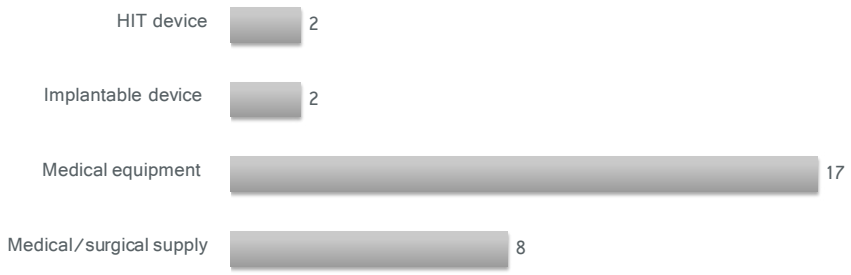
Device or supply/HIT events account for **1.4%** of reported events

Device/MedSurg/HIT Events by Harm Level



Device events resulting in harm **79**

HIT devices are reported if a device is related to a defect, failure, or incorrect use.
Implantable devices include devices intended to be inserted, and remain permanently in, tissue.
Medical equipment includes non-implantable devices.
Medical/surgical supplies include disposable products.



Reported equipment malfunctions include IV alarm failure, glucose machine reading high resulting in treatment delay, and radiology images not transferred resulting in treatment delay.

PSOs Collaborate on HIT

The Center and several other PSOs are focusing efforts on the impact of health information technology on patient safety. These PSOs are working with the federal Office of the National Coordinator (ONC) to encourage reporting on HIT-related events and prevention of related errors as defined in the ONC's HIT Safety Policy Framework. These efforts include:

- Addressing the difficulty identifying medical errors caused by health IT, including the lack of consistent reporting methods and failure to identify an adverse event resulting from HIT.
- Enhancing the role PSOs can play in collecting and analyzing health IT-related events.
- Encouraging providers to report HIT related adverse events, near misses and unsafe conditions to their PSO.
- Encouraging providers, vendors and PSOs to increase their involvement in ONC related activities to achieve higher reliability for HIT.

Resources

- ONC HIT Patient Safety Action and Surveillance Plan
- SAFERGuides

Other

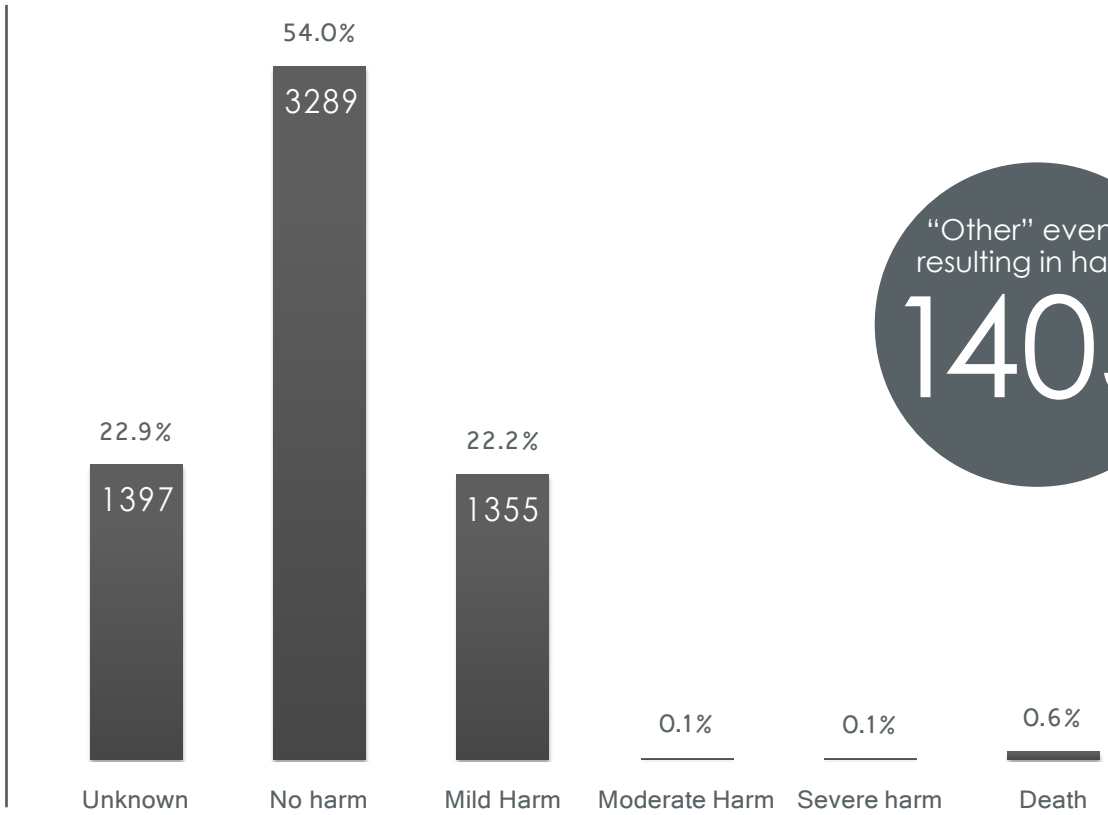
The Other category offers an opportunity for healthcare organizations to enter information beyond the nine main categories indicated. This category includes events such as behavioral events, diagnostic events, patients that left the organization against medical advice (AMA), etc.

Other events account for **41.2%** of reported events

Diagnostic reports indicate trends in treatment delays (respiratory therapy, telemetry, testing results, blood draws, etc), wrong test/wrong procedure ordered, wrong test/wrong procedure performed, and tests not performed as ordered.

An additional concern is IT-related errors such as wrong date on results, wrong patient information entered into computer, etc.

Other Events by Harm Level



"Other" events resulting in harm **1405**

Other reported events include orders not completed, attempted suicides and self-induced injuries (some in hospital and some in outpatient treatment areas), incorrect specimen labels, missed orders, test results/patient labels in wrong charts, registration errors (wrong patient or wrong physician, and wrong patient bracelets).

CASE STUDY

"Near Miss" Learning from an "Other-behavioral" event: Suicide Prevention

PSO participation led to one hospital sharing the following proactive changes made following a "near miss", shared in the Center's PSO Newsletter Summer 2012 ▶.

- Suicide risk is not exclusive to behavior health units. Make awareness training mandatory for all employees and physicians so they can spot subtle clues that might lead to self-harm.
- Use effective suicidal risk screening tools for all patients, teaching staff how to ask the appropriate questions.
- Support the "second victims" among employees and medical staff members.
- Conduct a comprehensive environmental assessment of all patient care areas. Hanging is the number one method of inpatient suicides--most frequently from doors, door hardware, or shower rods.
- Educate family, friends and sitters about suicide risks and warning signs.

EMS Events

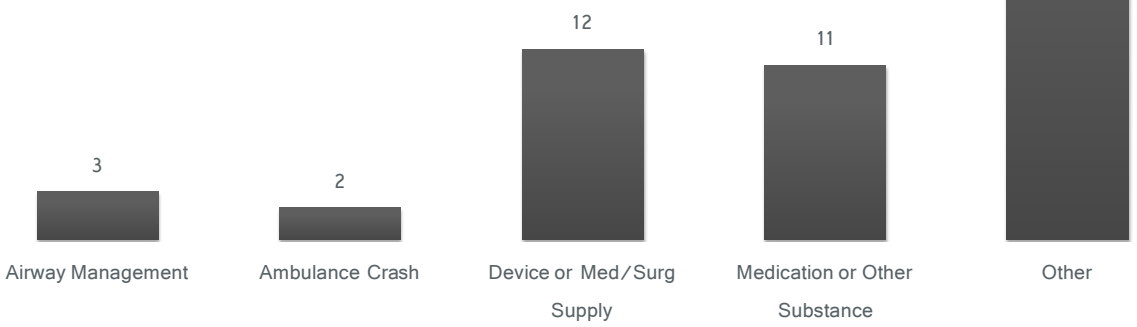
Ambulance agencies are becoming more and more active in quality and patient safety improvement activities, including participation with the Center PSO.

The adverse events, near misses and unsafe conditions reported by ambulance agencies participating in the Center PSO include medication errors and equipment/device issues as well as events more specific to the EMS environment, such as airway management and ambulance crashes. Agencies are also using the Center's Share*Suite* to track, report and analyze response times for stroke and certain heart attack patients. Working with a PSO affords these agencies the ability to carry out an analysis of system and process efficiencies under the protections provided by the Patient Safety Act. Additionally EMS agencies participating with the Center PSO are meeting regionally with other PSO participants, including hospitals, to address broad quality and safety improvement needs.

EMS PSO REPORTING – A BEGINNING

Of the 87 events reported, 67 percent are patient safety events, with the remaining being stroke and heart attack patient response times. Of these patient safety events, 81 percent are considered incidents, where the error did reach the patient.

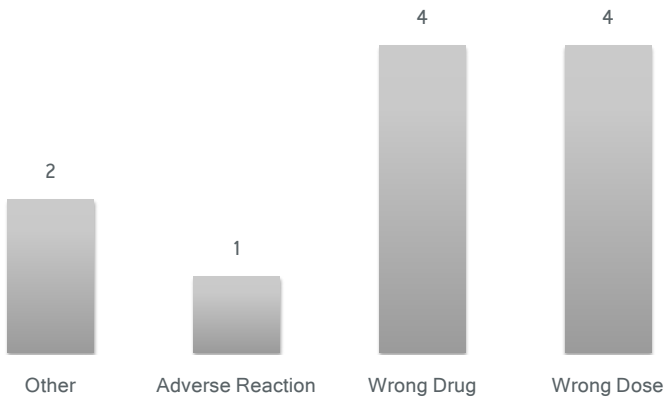
EMS Events by Type of Event



The most commonly reported types of events are device or medical/ surgical supply issues, followed closely by medication errors.

The additional information available from PSO reports is beneficial to learn where to focus safety efforts, made possible through a drill down into reported data reported. Medication errors are one example:

Med Errors by Type of Error



73 percent of medication errors reported by agencies are either wrong dose or wrong drug errors with 55 percent of the events occurring at the time of administration of the medication.

It is of special note that many events reported by EMS agencies – 50 percent - are classified as "other". These events range from communication problems between dispatch and the ambulance and between the ambulance and the receiving facility or medical control; stretcher issues; and mechanical failure with the ambulance itself resulting in delays in response or transport.

The Center is expanding its EMS database to include additional event types to better account for and collect further information on these "other" events, in addition to providing additional assistance to agencies to increase PSO reporting that will lead to additional sharing, learning and prevention of patient harm.

www.centerforpatientsafety.org
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ABOUT THE CENTER FOR PATIENT SAFETY

The Center for Patient Safety was founded by the Missouri Hospital Association, Missouri State Medical Association and Primaris as a private, non-profit corporation to serve as a leader to fulfill its vision of a healthcare environment safe for all patients and healthcare providers, in all processes, all the time.