LEGISLATIVE REPORT TO THE GENERAL ASSEMBLY
Adverse Event Reporting

General Statutes of Connecticut
Section 19a-127l-n

QUALITY IN HEALTH CARE PROGRAM

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Legislative Report to the General Assembly
Adverse Event Reporting

Quality in Health Care Program

Table of Contents

EXECUTIVE SUMMARY

For 2011 the number of adverse events reports (n=271) was about the same as each of the three prior years. The most common adverse events among reports were: (1) falls resulting in serious disability or death, (2) perforations during open, laparoscopic, and/or endoscopic procedures, (3) stage 3-4 pressure ulcers acquired after admission to a healthcare facility, (4) patient death or serious disability as a result of surgery, and (5) retention of foreign objects in patients after surgery. These five categories accounted for 83% of reports for events occurring in 2011.

After examining an adverse event report, which includes a Corrective Action Plan, the Department of Public Health (DPH) determines whether to initiate an investigation. In addition to adverse event monitoring by DPH, Patient Safety Organizations disseminate information to improve patient care.

In January 2013 Connecticut's list of reportable events will be modified to reflect changes to the National Quality Forum list of Serious Reportable Events, including 4 new categories.

BACKGROUND

Connecticut General Statutes §19a-127l required the Department of Public Health (DPH) to establish a Quality in Health Care program for health care facilities. The program is operated through general DPH resources. An Advisory Committee, chaired by the DPH Commissioner or designee, advises the program. Mandatory adverse event[1] reporting began October 1, 2002. After evaluating the program for more than a year, the Advisory Committee recommended adoption of the National Quality Forum (NQF) list of Serious Reportable Events, plus five or six Connecticut-specific events.

Adverse events are reported to DPH by telephone and fax machine. Reporting forms and definitions are located at the DPH website under "Forms."[2] After the department has decided whether to launch in investigation, paper-based data are entered into an electronic database.

The Adverse Event reporting requirements were amended when CGS 19a-127n became effective July 1, 2004. The statute replaced the previous adverse event classification system with a list of reportable events identified by the NQF. Additionally, DPH added six Connecticut-specific adverse event definitions to supplement the NQF list, as allowed by the law. (The list appears in Appendix B.) Items on the list are of concern to both the public and healthcare professionals, are clearly identifiable and measurable, and are often preventable.[3] DPH completed development of

[1] As discussed in Connecticut's March 2004 Adverse Events report, adverse events are not the same as medical errors. While there is overlap between the categories, some adverse events do not result from medical errors, and some medical errors do not result in adverse events. Adverse Events Reports are available at www.ct.gov/dph under Statistics & Research, then choose "Health Care Quality."

[2] http://www.ct.gov/dph/cwp/view.asp?a=3115&q=390100&dphNav_GID=1601

[3] More fully explained in Kenneth W. Kizer, "Clearing the Confusion about Connecticut's New Adverse Event Reporting Law," which appears as appendix B of Connecticut's October 2004 Adverse Events report.

the mandated regulations for reporting of adverse events, and these became effective November 1, 2007.

In May 2007, hospitals and ambulatory surgical centers were provided with the updated NQF List of Serious Reportable Events and the revised list compiled by the Commissioner of Public Health. A new category was included in the NQF list related to fertility clinics (4H).[4] The NQF category "patient death associated with a fall" (5D) was expanded to include "serious injury associated with a fall." Reporting for this expanded category replaced the Connecticut-specific category (7B) that previously existed. The numbering for these and several other events changed with the *Serious Reportable Events in Healthcare-2011 Update* described below.

On January 1, 2010, an additional adverse event category (7G) entitled "Patient death or serious disability associated with surgery" specific to Connecticut was added to the list of reportable adverse events. This category includes significant hemorrhage and/or unanticipated death in an American Society of Anesthesiologists (ASA) Class 2 patient.

Public Act 10-122 required that for all annual reports submitted after July 1, 2011:

> the commissioner shall include hospital and outpatient surgical facility adverse event information for each facility identified (1) by the National Quality Forum's List of Serious Reportable Events category, and (2) in accordance with any list compiled by the commissioner and adopted as regulations pursuant to subsection (c) of this section. Such reports shall be prepared in a format that uses relevant contextual information. For purposes of this subsection "contextual information" includes, but is not limited to, (A) the relationship between the number of adverse events and a hospital's total number of patient days or an outpatient surgical facility's total number of surgical encounters expressed as a fraction in which the numerator is the aggregate number of adverse events reported by each hospital or outpatient surgical facility by category as specified in this subsection and the denominator is the total of the hospital's patient days or the outpatient surgical facility's total number of surgical encounters, and (B) information concerning the patient population served by the hospital or outpatient surgical facility, including such hospital's or outpatient surgical facility's payor or case mix. In addition, a hospital or outpatient surgical facility may provide informational comments relating to any adverse event reported to the commissioner pursuant to this section.

The NQF document *Serious Reportable Events in Healthcare-2011 Update*[5] added four items, retired three items, and revised definitions, specifications, and sometimes the numbering for the remaining 25 items. The updated NQF list includes 29 serious reportable events. The new items are: (1) Death or serious injury of a neonate associated with labor or delivery in a low-risk pregnancy; (2) patient death or serious injury resulting from the irretrievable loss of an irreplaceable biological specimen; (3) patient death or serious injury from failure to follow up or communicate laboratory, pathology, or radiology test results; (4) death or serious injury of a patient associated with the introduction of a metallic object into the MRI area. Some of these

[4] Prior to *Serious Reportable Events in Healthcare-2011 Update*, category 4H was "Artificial insemination with the wrong donor sperm or wrong egg." In 2013 the Connecticut category will change to NQF 4G.
[5] http://www.qualityforum.org/Topics/SREs/Serious_Reportable_Events.aspx

new NQF items closely resemble items on the current Connecticut-specific list of adverse events. A summary of NQF changes appears in Appendix J below, and the revised Connecticut adverse event list in Appendix K. DPH is promulgating guidance related to these changes during 2012 and expects to implement the revised list in January 2013.

CGS Section 19a-127o identifies the primary activity of a Patient Safety Organization (PSO), which is to improve patient safety and the quality of care delivered to patients through the collection, aggregation, analysis, or processing of medical or health-related information submitted to the PSO by the health care provider. This "patient work product" may include reports, records, analyses, policies, procedures or root cause analyses prepared exclusively for the purpose of disclosure to the PSO. The patient safety work product is confidential and not subject to use or access except to the PSO and the health care provider. PSOs disseminate appropriate information or recommendations on best clinical practices or potential system changes to improve patient care to the health care providers, DPH, the Quality of Care Advisory Committee and the public. DPH has designated three PSOs, including Qualidigm, the Connecticut Healthcare Research & Education Foundation (CHREF) and the Ambulatory Surgical Center Patient Safety Organization (ASC PSO) (see the June 30, 2012 DPH report on Connecticut's Quality of Care Program[6]).

The content and data gathering for this annual adverse event report were discussed at meetings of the Best Practices and Adverse Events subcommittee of the Quality in Healthcare Advisory Committee over the past year. Adverse event data were obtained from the electronic database at DPH. Inpatient days and primary payer information for acute care hospitals was obtained from hospital discharge data routinely gathered by the Office of Healthcare Access (OHCA) at DPH. Similar information for outpatient childbirth centers, hospice, chronic disease hospitals, and hospitals for the mentally ill was obtained by DPH from those facilities. The Department thanks the Ambulatory Surgical Care Patient Safety Organization for assistance in gathering information from outpatient surgical centers.

ADVERSE EVENT DATA

As of November 21, 2012, the DPH electronic database contained 271 reports of adverse events occurring during 2011, even if reported in 2012. Demographic information is shown in Appendix A. This reported information is influenced by several factors: varying rates of adverse events across facilities, patient case mix, quality of care, number of patients served, knowledge or interpretation of event definitions and reporting requirements, willingness to report events, as well as the effectiveness of the institutional system to convey information from event participants to the designated reporter, and other factors.[7] Consequently, clear conclusions about

[6] Quality of Health Care reports are available at www.ct.gov/dph under Statistics & Research, then choose "Health Care Quality."

[7] Marieke Zegers et al, "Variation in the Rates of Adverse Events between Hospitals and Hospital Departments," *International Journal for Quality in Health Care* 2011:1-8, identified during a study of 21 Dutch hospitals and 300 hospital departments that increased risk of suffering a preventable adverse event was associated with surgical admission, more co-morbidity, higher age, longer length of hospital stay, elective admission, and complication of a surgical or medical procedure. The clustering of preventable adverse events in hospital departments was more than

the causes of observed event fluctuations and differences across facilities cannot be derived simply from the number of reports or fluctuations in the number of reports.[8]

Acute care or children's hospitals submitted 237 (88%) of the 271 adverse event reports; chronic disease hospitals, 14; hospitals for the mentally ill, 1; and outpatient surgical facilities (if not owned by a hospital), 19. Forty-nine percent of reported adverse events occurred in males and 51% in females. The majority of reports concerned patients over the age of 65 years. The most common location of occurrence was reported to be the adult medical ward (Appendix A).

Appendix B presents the number of adverse events reported by year, according to the list of NQF events (1A-6D) and Connecticut-specific events (7A-G). The volume of events has been fairly stable over years, and also on a monthly basis, shown below.

Adverse Event Reports in Acute Care Hospitals

Month	Year of Event								Report	Days in	Reports
of Event	2004	2005	2006	2007	2008	2009	2010	2011	Totals	Month	per Day
Jan		13	17	11	20	22	15	19	117	31.00	0.54
Feb		16	15	11	29	14	18	16	119	28.14	0.60
Mar		22	13	22	14	25	20	17	133	31.00	0.61
April		14	26	18	13	18	18	13	120	30.00	0.57
May		21	23	23	17	17	19	20	140	31.00	0.65
June		10	15	20	21	22	18	15	121	30.00	0.58
July	21	13	9	11	18	24	20		116	31.00	0.53
Aug	9	22	15	19	19	15	22		121	31.00	0.56
Sept	14	13	16	11	18	20	18		110	30.00	0.52
Oct	20	24	21	17	15	21	19		137	31.00	0.63
Nov	16	15	29	19	16	21	22		138	30.00	0.66
Dec	14	15	14	13	24	21	20		121	31.00	0.56
Totals	94	198	213	195	224	240	229	100	1493	365.14	0.58

February had 29 days in 2008.

As shown in the chart below and Appendix C, the most commonly reported events were falls that resulted in serious disability or death. The NQF expanded the fall definition for category 5D in May 2007 so that events formerly reportable under the Connecticut specific category 7B became reportable as category 5D. Ninety-six falls comprised 36% of all 271 adverse events reported. The second most commonly reported events were perforations during open, laparoscopic, and/or endoscopic procedures, with 49 reports (18%).[9] The next most commonly reported, 39 events, were stage 3 or 4 pressure ulcers acquired after admission to a healthcare facility (15%). Next, with 8% each were death or serious injury following surgery (21 reports), and retention of foreign objects in patients after surgery or other procedures (20 reports).

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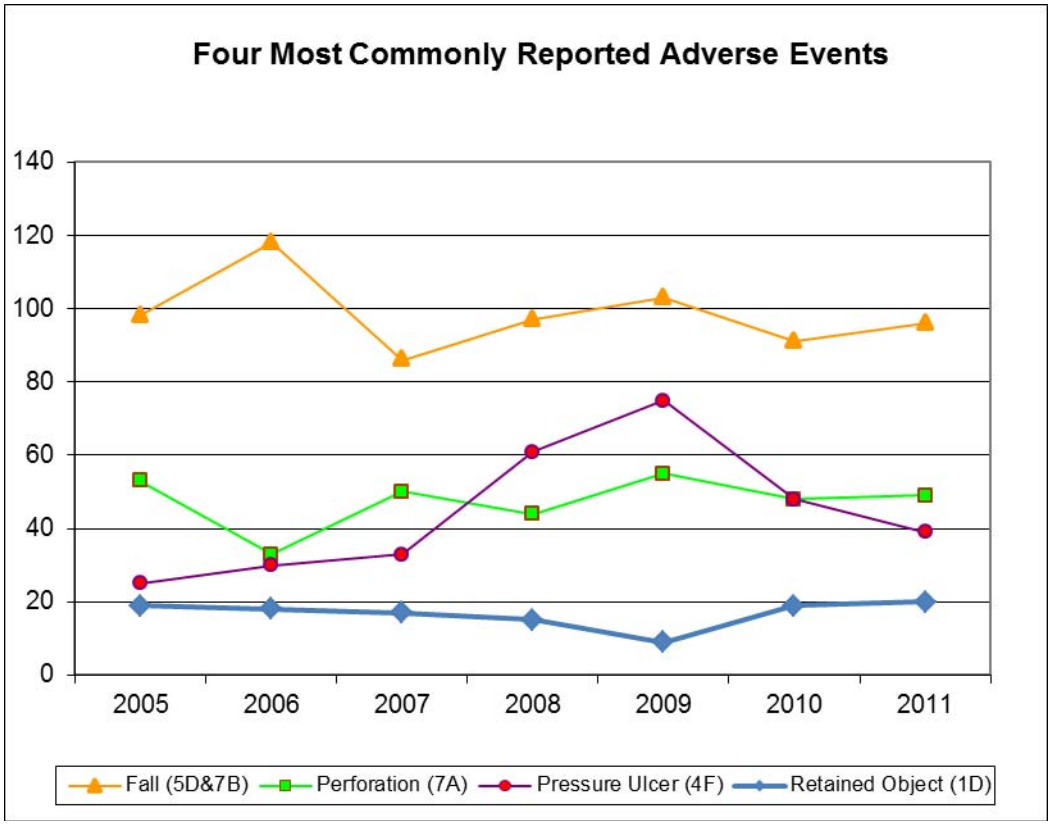
twice that found in hospitals, implying that "there is more room for improvement in patient safety at the hospital department level than at the hospital level."

[8] For additional discussion of the limitations of passive incident reporting, see the Patient Safety section of the September 2011 issue of the Agency for Healthcare Research and Quality (AHRQ), Morbidity and Mortality Rounds at http://webmm.ahrq.gov/; Kaveh G. Shojania, "The Elephant of Patient Safety: What You See Depends Upon How You Look," *Joint Commission Journal on Quality and Patient Safety, 36(9);* September 2010, 399.

[9] For more details about these adverse events, see the "Six Month Summary of Adverse Event Reports" (Appendix A of the June 30, 2005 DPH report on the Quality in Health Care Program).

The number of pressure ulcer reports increased in 2008 and 2009, but declined in 2010 and 2011. Counts in 2008 and 2009 are significantly higher ($p<0.01$) compared to the other years. See the 2009 adverse event annual report for further details.



Adverse event reporting and rate by facility and event type are shown in appendices for, respectively, acute care hospitals (D), chronic care hospitals and hospices (E), hospitals for the mentally ill (F), and ambulatory surgical centers, pain medicine centers, fertility centers, and outpatient childbirth centers (G). Not all adverse event categories are relevant to all facilities. For example, surgical adverse events are not applicable in a facility that performs no surgery. Patient populations differ considerably between types of facilities.

For acute care hospitals, the calculated rates are based on adverse events that occurred in the emergency department, inpatient, or an outpatient setting (in the numerator), but only inpatient days contribute to the denominator of the rate. There are several reasons for this presentation. First, it defines Connecticut acute care hospital rates in the same way as some other states, making state comparisons, including the chart in the 2011 report, possible. Second, our database does not permit us to clearly distinguish outpatient and inpatient settings for events, reported by a hospital. Many of the choices for "Location of Event" (appendix A) could be either inpatient or outpatient. Third, the potential benefit of collecting outpatient visit information from hospitals does not seem to justify the extra burden to the hospitals.

Significant variation in facility reporting patterns are a common characteristic of passive surveillance systems (where the responsibility for reporting falls upon the health care provider) and this is not unique to Connecticut's adverse events reporting system. A passive surveillance system "has the advantage of being simple and not burdensome" to administer, "it is limited by variability and incompleteness in reporting."[10] Data validation is a function of an active surveillance strategy that can be used to increase the completeness of reporting, as is being done in the separate Connecticut Healthcare Associated Infections program. However, data validation is often labor intensive and expensive, requiring dedicated resources.
Based on these data alone we cannot derive certain conclusions. We cannot say whether a high reporting rate reflects highly complete reporting in a facility with good quality of care, or perhaps modestly complete reporting in a facility with poor care, or neither better nor worse quality care, as noted earlier.

Appendix H, based on billing data, shows the primary payer for patients seen at each facility. Some ASCs provided case mix instead of the payer mix. This contextual information is required by PA 10-122. Since Medicare pays for most care in patients 65 years and older, there is a positive correlation between the proportion of patients covered by Medicare and the average age of patients seen at a facility. Some studies (Zegers et al, above) have found an association between older age and greater risk of experiencing an adverse event, perhaps because multiple chronic conditions and frailty are more common among the elderly, and because the intensity of interventions is greater among the elderly or those with multiple co-morbidities.[11] We tested this hypothesis for Connecticut. Using the Connecticut data for acute care hospitals but excluding the children's hospital, the Pearson correlation coefficient between percentage of Medicare payers in FY 2010 at a facility and reported rate of adverse events for 2004-2010 was only 0.26, and for percentage Medicare payers in 2010 and event rate in 2010 the correlation was opposite what we expected (r= -0.06). Due to the poor single year correlation in 2010, no calculation was made for 2011. No attempt was made here to risk adjust the rates based upon the average age of the population served or other contextual factors.

Appendix L contains facility comments, as per PA 10-122.

CURRENT ACTIVITIES AND FUTURE PLANS

On November 8, 2012, DPH conducted a webinar for reporting facilities to introduce changes to the list of reportable adverse events and answer questions. Webinar materials were posted to the DPH website. At http://ct.gov/dph/site/default.asp see the Forms Tab, scroll down to "Licensing, Certification and Adverse Events." Adverse Event forms are used to report adverse events,

[10] Steven M. Teutsch, "Considerations in Planning a Surveillance System," in Steven M. Teutsch and R. Elliott Churchill, eds., *Principles and Practice of Public Health Surveillance*, 2nd ed. (New York: Oxford University Press, 2000), 22.
[11] Aranaz-Andres J, et al., "What makes hospitalized patients more vulnerable and increases their risk of experiencing an adverse event?" *International Journal for Quality in Health Care* 2011; Sept 6, 1-8 [Epub ahead of print]

while Reportable Event forms are used by nursing homes for other events and are not part of the adverse event reporting system.

As described above, the Connecticut DPH will modify Connecticut's list of reportable adverse events to incorporate the latest NQF list, and begin using the modified list starting January 2013.

DPH regularly screens mortality data for cause of death codes that might be related to an adverse event. Selected records are reviewed further. The department gathers additional information to determine if reportable fatal adverse events occurred, and whether such events were reported to DPH.

Investigation of Adverse Events

The first responsibility for investigation of an adverse event lies with the facility in which the event occurred. Under Connecticut's Adverse Event reporting law, facilities are required to submit a Corrective Action Plan to DPH for each reported Adverse Event.

An external investigation at a healthcare facility due to an adverse event may begin in several ways: (1) as a result of a complaint to DPH made by any person; (2) following a sentinel event report by the facility to the Joint Commission, a complaint to the Joint Commission by any person (see www.jointcommission.org), or an unannounced, onsite visit to a facility by the Joint Commission during which an adverse event comes to attention; or (3) as a consequence of an adverse event report sent by the healthcare facility to DPH. The last of these routes is discussed here.

After examining an adverse event report, which includes a Corrective Action Plan, the DPH Healthcare Quality and Safety Branch (formerly the Healthcare Systems Branch) determines whether to initiate an investigation. Screening to rule out medical error is based on clinical judgment and/or objective medical criteria. The screening team consists of healthcare clinicians at DPH.

DPH conducts investigations regarding adverse event reports that may indicate a systems issue or issues related to inadequate standards of care. These investigations determine regulatory compliance versus noncompliance and provide additional information that may allow one to distinguish between events that have been due to a medical error or system failure and those that have not. Investigations involving adverse events follow the same process as issues received through the public complaint process. Information is gathered through onsite inspection, review of clinical records, interviews with institutional staff and vested parties as appropriate. Beginning in the summer of 2004, resources for part-time DPH physician consultants were allocated for the specialties of medicine, surgery, pediatrics, anesthesia, obstetrics, gynecology, psychiatry, and orthopedics. As of spring 2010, these resources were no longer available. The Department continues to feel that such specialized medical consultation enhances the comprehensive nature of the investigations and is exploring alternative funding sources to revitalize this part of our process. The results of completed investigations are public, and may be obtained upon request, under the Freedom of Information (FOI) Act.

Patient Safety Organizations

Connecticut General Statutes section 19a-127o allowed DPH to designate "Patient Safety Organizations" (PSOs). The primary activity of a PSO is to improve patient safety and the quality of care delivered to patients through the collection, aggregation, analysis or processing of medical or health care related information submitted to the PSO by the health care provider. This "patient safety work product" may include reports, records, analyses, policies, procedures, or root cause analyses prepared exclusively for the purpose of disclosure to the PSO. The patient safety work product is confidential and not subject to use or access except to the PSO and the health care provider. The PSO will disseminate appropriate information or recommendations on best medical practices or potential system changes to improve patient care to the health care providers, DPH, the Quality of Health Care Advisory Committee, and the public. DPH has designated three PSOs, including the Qualidigm Patient Safety Organization, the Connecticut Hospital Association Patient Safety Organization, and the Ambulatory Surgical Center Patient Safety Organization. PSO activities during the previous year appear in the annual June 30 report concerning the Quality in Health Care program, found on the DPH website.

Healthcare Associated Infections

The Healthcare Associated Infections (HAI) Committee, established by legislation, is separate from the Quality in Health Care Advisory Committee. Reports can be found on the DPH website (http://www.ct.gov/dph/cwp/view.asp?a=3136&q=417318). The HAI Committee makes recommendations to the department on HAI public reporting, and has advised DPH to in general follow the CMS pay for reporting/annual payment update expectations.

CMS began to require the reporting of surgical site infections (SSIs) associated with colon and abdominal hysterectomy procedures, and catheter-associated urinary tract infections (CAUTIs) from Acute Care Hospitals starting in January 2012, and will require the reporting of methicillin-resistant Staphylococcus aureus (MRSA) bacteremia, *C. difficile* laboratory-identified (LabID) events, and health care worker (HCW) Influenza Vaccination from Acute Care Hospitals starting in January 2013. An additional rule makes final the reporting of CAUTIs from Inpatient Rehabilitation Facilities starting in October 2012.

Additional details about HAI prevention are in the Patient Safety Organization summaries in the June 30 report on the Quality in Health Care program at http://www.ct.gov/dph/cwp/view.asp?a=3132&q=388090&dphNav_GID=1601&dphPNavCtr=|#Gen.

Hospital Acquired Conditions (including infections)

The CMS Partnership for Patients (www.healthcare.gov) has set a goal of reducing preventable harm by 40% in US hospitals by the end of 2013. The Partnership will target all forms of harm to patients but will start by asking hospitals to focus on types of medical errors and

complications where the potential for dramatic reductions in harm rates has been demonstrated by pioneering hospitals and systems across the country. Unintended consequences are also of concern. For example, a Partnership goal is to prevent falls *and* immobility. Immobility is an unintended consequence of some efforts to prevent falls. CMS launched new Hospital Acquired Conditions data on Hospital Compare in October 2011.

National and International Perspectives on Patient Safety

Methods for Detecting Adverse Events

Classen and colleagues reviewed 795 medical records and found that the Institute for Healthcare Improvement's Global Trigger Tool identified 90% of adverse events detected by expert chart review, which was higher than the Agency for Healthcare Research and Quality's Patient Safety Indicators (9%) or occurrence reports (1%).[12] See Appendix I below for a table of advantages and limitations of harm detection methods.

Under a grant from the Agency for Healthcare Research and Quality (AHRQ), several institutions participated in beta-testing the Health IT Hazard Manager. The Hazard Manager supports the characterization and communication of hazards and their potential and actual adverse events. While the Federal Government has not yet decided how to implement the Hazard Manager (as of the writing of this adverse event report), one suggested option is to expand the Common Formats to include proactive health IT hazard identification, with aggregation and reporting through the National Patient Safety Database (NPSD). The NPSD is an evidence-based management resource for health care providers, patient safety organizations, researchers, and others interested in patient safety events and quality of care.[13]

In July 2012, the Office of the Inspector General released a memorandum report to CMS. The OIG found that, in a representative sample of 789 Medicare patients, 12% of the adverse events or temporary harms detected on chart review met state requirements to be reported, but only 1% were reported. Most events were not detected by internal hospital reporting systems, suggesting that reporting failure was due to lack of detection rather than neglect to report a known event. Hospital administrators indicated that staff often did not report events because they considered them expected side effects.[14]

[12] Classen DC, Resar R, Griffin F, et al, 'Global Trigger Tool' shows that adverse events in hospitals may be ten times greater than previously measured. Health Affairs (Milwood) 2011; 30:581-89.
[13] http://healthit.ahrq.gov/portal/server.pt/community/ahrq-funded_projects/654/projectdetails?pubURL=http://wci-pubcontent/publish/communities/a_e/ahrq_funded_projects/projects/health_it_hazard_manager.html; http://www.ahrq.gov/qual/psoact.htm.
[14] http://oig.hhs.gov/oei/reports/oei-06-09-00092.pdf. Three events were reported out of 35 eligible. Of the remaining 32 unreported, one was detected by an internal hospital incidence reporting system. Connecticut was not among the states in which the 35 events occurred.

Disclosure of Adverse Events to Patients

Following a successful experience at the University of Michigan Health Care System, the Massachusetts Medical Society and Beth Israel Deaconess Medical Center received a planning grant from AHRQ for developing responses following a medical adverse event. Based on the planning, a statewide alliance is participating in a pilot study of "A Roadmap for Removing Barriers to Disclosure, Apology, and Offer in Massachusetts."

Under the model, healthcare professionals and institutions and their insurers disclose to patient and families when unanticipated adverse outcomes occur; investigate and explain what happened; establish systems to improve patient safety and prevent the recurrence of such incidents; and, where appropriate, apologize and offer fair financial compensation without the patient resorting to legal action. Such a system will not deny patients the right to bring legal action, but would make tort claims a last resort. Adverse events in which the provider or institution is deemed to have met the standard of care would be firmly defended.[15]

Public Reporting of Adverse Events

Under the ASC Quality Reporting Program, beginning October 1, 2012, outpatient surgical facilities are required to report data on patient burns, patient falls, wrong side surgery, wrong procedure surgery, hospital admissions and transfers, and prophylactic intravenous antibiotic timing to the Centers for Medicare and Medicaid Services. Beginning in 2013, ambulatory surgical centers will report to CMS their use of a safe surgery checklist during 2012.

Medication Adverse Events Reports to the Food and Drug Administration (FDA)

The FDA maintains the Adverse Event Reporting System (AERS) of serious adverse events (different from the NQF list) due to prescribed medications. Reports are voluntary; 88% come from manufacturers. An analysis of almost 180,000 reports to the FDA database by the Institute for Safe Medication Practices estimated that less than 1% of serious events are reported to the FDA, and that in 2011, prescription drugs were associated with 2-4 million serious, disabling adverse events and 128,000 deaths. The drugs most commonly associated with adverse events were the anticoagulants dabigatran and warfarin, the antibiotic levofloxacin, the cancer drug carboplatin, and the antihypertensive lisinopril.[16]

[15] http://www.macoalition.org/roadmap-news-release.shtml (April 18, 2012).
[16] Institute for Safe Medication Practices, QuarterWatch , May 31, 2012; http://www.ismp.org/quarterwatch/pdfs/2011Q4.pdf

Federal Funding for Research in Patient Safety

On July 17, 2012 the House Appropriations Committee posted online the proposed fiscal year 2013 spending bill for the Departments of Labor, Health and Human Services, Education and related agencies, available at http://appropriations.house.gov/uploadedfiles/bills-112hr-sc-ap-fy13-laborhhsed.pdf

Among the many cuts to public health programs and policy riders, the bill "terminates" the Agency for Healthcare Research and Quality (Sec. 227), zeroing out its budget entirely. AHRQ funds research and programs at local universities, hospitals, and health departments that improve health care quality, enhance consumer choice, advance patient safety, improve efficiency, reduce medical errors, and broaden access to essential services. For example, the "Keystone Project," supported by AHRQ, has reduced central-line blood stream infections and deaths in hospitals.

The bill also prohibits funding for patient-centered outcomes research (Sec. 217). This research determines what works best, for whom, and under what circumstances by evaluating the relative safety and effectiveness of different health care interventions available to patients. We know that drugs can be as effective as surgery in managing chronic heartburn, for example, and that those who undergo non-emergency angioplasties are no less likely to suffer a heart attack than those who take aspirin and other medications. These findings do not show which choice is right for every patient in every circumstance. But they provide valuable information for patients and doctors evaluating the risks and benefits associated with medical care to find the treatment that is right for them.

The bill eliminates funding for research, demonstrations, and evaluations at the Center for Medicare and Medicaid Services. CMS's health services research portfolio allows the agency to meet its statutory requirements and strengthen public insurance programs, which together cover nearly 100 million Americans and comprise 45 percent of America's total health expenditures.

The bill rescinds the Prevention and Public Health Fund. The funding available through the Prevention Fund affords a unique opportunity to invest in the science of public health delivery. Improving the performance and impact of the public health system—especially in better coordination with the health care delivery system—could help to both slow the growth of health care costs and improve the health of our nation.

The full Congress will not vote upon the proposed spending bill until after the November elections, and perhaps not until the newly elected representatives take office.

"Failure to Rescue" Indicator

Failure to Rescue refers to the death of a patient following complications in the hospital. Various operational definitions are in use as measures for this indicator. The AHRQ definition utilizes administrative (billing) data which is easy to obtain, is not devised for quality improvement purposes, and suffers from the limitations of such data. For example, it is not always possible to distinguish complications that are due to conditions which caused the hospital admission, from complications that resulted from care received in the hospital.

A high ratio of registered nurses to patients is associated with lower (better) failure to rescue rates. Conversely, the more patients a nurse is responsible to care for, the fewer times the nurse can check on each patient during the day, and the more likely is failure to rescue. At present, the United States suffers from a nursing shortage. In addition, a major cost to hospitals is in staffing, and cost pressures often make facilities reluctant to hire more nurses.[17]

High volume surgical centers have similar post surgical complication rates to low volume centers, but they achieve lower post-surgical mortality rates through better response to and care of patients who develop complications. Simulation training may be of benefit for reducing failure to rescue, as it is also beneficial for developing surgical skills.[18]

Many hospitals have created Rapid Response Systems in order to prevent deaths due to failure to rescue. The greatest value of special teams is from the rapidity of response—which relates to the monitoring that causes the team to be summoned.[19]

Innovative research involves continuous monitoring of physiologic signs such as blood pressure, pulse, and breathing.[20] However, alarm fatigue among hospital staff (non-responses to alarms that are frequently inaccurate) is a serious problem. Research has shown that patient alarms in intensive care units are accurate less than 10% of the time—while 90% are false alarms.[21] The trade-off between alarm sensitivity and specificity means that, in order to reduce false alarms, there will be an increased risk of failing to detect some real alarms.

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[17] McCue M, Mark BA, Harless DW. Nurse staffing, quality, and financial performance. *Journal of Health Care Finance* 2003; 29(4): 54-76.
[18] Taenzer AH, Pyke JB, McGrath, SP. A review of current and emerging approaches to address failure-to-rescue. *Anesthesiology* 2011; 115(2):421-431. http://journals.lww.com/anesthesiology/toc/2011/08000 (Open Access).
[19] Ibid., 422.
[20] Bellomo R, Ackerman M, Bailey M, et al. A controlled trial of electronic advisory vital signs monitoring in general hospital wards. *Crit Care Med* 2012; 40:2349–2361.
[21] Taenzer et al, A review of current and emerging approaches to address failure-to-rescue, 426.

APPENDICES

Appendix A:
Demographic Data from Adverse Event Reports

Appendix B:
Adverse Events Reports by Event Type and Year of Occurrence

Appendix C:
Adverse Event Reports by Frequency of Occurrence

Appendix D:
Acute Care Hospital
Adverse Event Reports and Rates by Facility and Event Type

Appendix E:
Chronic Disease Hospital and Hospice
Adverse Event Reports and Rates by Facility and Event Type

Appendix F:
Hospital for the Mentally Ill
Adverse Event Reports and Rates by Facility and Event Type

Appendix G:
Ambulatory Surgical Center, Pain Medicine Center,
Fertility Center, and Outpatient Childbirth Center
Adverse Event Reports and Rates by Facility and Event Type

Appendix H:
Primary Payer Source, by Facility

Appendix I:
Advantages and Limitations of Harm Detection Methods

Appendix J:
Revisions to the National Quality Forum list
Of Serious Reportable Events

Appendix K:
Connecticut Reportable Events Starting 2013

Appendix L:
Facility Comments

Appendix A. Demographic Data from Reports, Adverse Events in 2011		
Measure	Frequency	Percent
Facility Type (n=271)		
Acute Care or Children's Hospital	237	87.5%
Chronic Disease Hospital	14	5.2%
Hospital for Mentall Ill Persons	1	0.4%
Outpatient Surgical Facility	19	7.0%
Patient Gender (n=266)		
Male	130	48.9%
Female	136	51.1%
Patient Age (n=271)		
0-14	11	4.1%
15-44	39	14.4%
46-64	69	25.5%
65 and older	152	56.1%
Location of Event (n=263)		
Adult Medical	69	26.2%
Adult Surgical	15	5.7%
Ambulatory Surgical	6	2.3%
Cardiac Care	5	1.9%
Cardiac Cath Lab	2	0.8%
Diagnostic Services	5	1.9%
Dialysis	0	0.0%
Emergency Department	12	4.6%
Medical ICU	15	5.7%
Neonatal ICU	1	0.4%
Obstetrical/Gynecological	5	1.9%
Operating Room	55	20.9%
Other	23	8.7%
Outpatient Services	19	7.2%
Pediatrics	2	0.8%
Psychiatric	21	8.0%
Rehabilitative Services	5	1.9%
Surgical ICU	4	1.5%

Appendix B. Connecticut Adverse Events Reports in Electronic Database 2005-2011, by Event Code and Year of Occurrence NQF List (1A-6D) and Connecticut-Specific List (7A-7G)

Event Code	Description	Year of Adverse Event							7 yr Total
		2005	2006	2007	2008	2009	2010	2011	
1A	Surgery performed on the wrong body part	4	3	3	5	2	8	13	38
1B	Surgery performed on the wrong patient	0	1	1	0	0	0	0	2
1C	Wrong surgical procedure performed on a patient	2	0	4	1	0	5	4	16
1D	Retention of a foreign object in a patient after surgery or other procedure	19	18	17	15	9	19	20	117
1E	Intraoperative or immediate post-operative death in an ASA class I patient	0	0	2	0	0	0	0	2
2A	Patient death or serious disability associated with the use of contaminated drugs, devices, or biologics provided by the healthcare facility	1	0	0	1	0	0	1	3
2B	Patient death or serious disability associated with the use or function of a device in patient care in which the device is used or functions other than as intended	7	4	2	2	2	1	2	20
2C	Patient death or serious disability associated with intravascular air embolism that occurs while being cared for in a healthcare facility	3	0	0	1	2	0	0	6
3A	Infant discharged to the wrong person	0	0	0	0	0	0	0	0
3B	Patient death or serious disability associated with patient elopement (disappearance) for more than four hours	0	0	0	0	0	0	0	0
3C	Patient suicide, or attempted suicide resulting in serious disability, while being cared for in a healthcare facility	3	3	4	4	0	2	2	18
4A	Patient death or serious disability associated with a medication error (e.g., errors involving the wrong drug, wrong dose, wrong patient, wrong time, wrong rate, wrong preparation or wrong route of administration)	4	5	1	3	3	1	3	20

Appendix B continued

Event Code	Description	Year of Adverse Event							7 yr Total
		2005	2006	2007	2008	2009	2010	2011	
4B	Patient death or serious disability associated with a hemolytic reaction due to the administration of ABO-incompatible blood or blood products	0	0	0	1	0	0	0	1
4C	Maternal death or serious disability associated with labor or delivery in a low-risk pregnancy while being cared for in a healthcare facility	2	1	0	2	0	2	0	7
4D	Patient death or serious disability associated with hypoglycemia, the onset of which occurs while the patient is being cared for in a healthcare facility	1	1	2	0	0	0	1	5
4E	Death or serious disability (kernicterus) associated with failure to identify and treat hyperbilirubinemia in neonates	0	0	0	0	0	0	0	0
4F	Stage 3 or 4 pressure ulcers acquired after admission to a healthcare facility	23	30	33	61	75	48	39	309
4G	Patient death or serious disability due to spinal manipulative therapy	1	0	0	0	0	0	0	1
4H	Artificial insemination with the wrong donor sperm or wrong egg	NA	NA	0	0	1	0	0	1
5A	Patient death or serious disability associated with an electric shock while being cared for in a healthcare facility	0	0	0	0	0	0	0	0
5B	Any incident in which a line designated for oxygen or other gas to be delivered to a patient contains the wrong gas or is contaminated by toxic substances	0	0	1	0	0	0	0	1
5C	Patient death or serious disability associated with a burn incurred from any source while being cared for in a healthcare facility	0	3	1	0	1	0	2	7
5D & 7B	Patient death or serious injury associated with a fall while being cared for in a healthcare facility	98	118	86	97	103	91	96	689

Appendix B continued

Event Code	Description	Year of Adverse Event							7 yr Total
		2005	2006	2007	2008	2009	2010	2011	
5E	Patient death or serious disability associated with the use of restraints or bedrails	0	1	1	0	2	1	1	6
6A	Any instance of care ordered by or provided by someone impersonating a physician, nurse, pharmacist, or other licensed healthcare provider	0	1	0	0	0	0	0	1
6B	Abduction of a patient of any age	0	0	0	0	1	0	0	1
6C	Sexual assault on a patient within or on the grounds of a healthcare facility	5	12	7	5	2	3	4	38
6D	Death or significant injury of a patient or staff member resulting from a physical assault (i.e.battery) that occurs within or on the grounds of a healthcare facility	2	0	1	2	1	2	4	12
7A	Perforations during open, laparoscopic and/or endoscopic procedures resulting in death or serious disability	53	33	50	44	55	48	49	332
7B	See event code 5D & 7B*								
7C	Obstetrical events resulting in death or serious disability to the neonate	6	4	5	1	2	5	2	25
7D	Significant medication reactions resulting in death or serious disability	3	1	3	4	1	3	2	17
7E	Laboratory or radiologic test results not reported to the treating practitioner or reported incorrectly which result in death or serious disability due to incorrect or missed diagnosis in the emergency department	0	1	0	0	0	2	0	3
7F	Nosocomial infections resulting in death or serious injury	2	3	3	6	2	3	5	24
7G	Patient death or serious disability as a result of surgery	NA	NA	NA	NA	1	16	21	38
Total		**239**	**243**	**227**	**255**	**265**	**260**	**271**	**1,760**

Adverse events occurring prior to 2005 or after 2011 are not included.

Category 4H was added to the reportable events list in 2007. Prior years are marked "NA," not applicable.

Category 7G was added to the reportable events list in 2010. Prior years are marked "NA," not applicable.

*Events formerly classified as 7B are reportable as 5D starting May 2007.

Appendix C. Connecticut Adverse Events in 2011
Most Frequently Reported Events
NQF List (1A-6D) and Connecticut-Specific List (7A-7G)

Event	Description	Frequency	Percent of All Events
5D & 7B*	Patient death or serious injury associated with a fall while being cared for in a healthcare facility	96	36.0%
7A	Perforations during open, laparoscopic and/or endoscopic procedures resulting in death or serious disability	49	18.4%
4F	Stage 3 or 4 pressure ulcers acquired after admission to a healthcare facility	39	14.6%
7G	Death or serious injury associated with surgery	21	7.9%
1D	Retention of a foreign object in a patient after surgery or other procedure	20	7.5%
1A	Surgery performed on the wrong body part	13	4.9%
	All other reported adverse events	33	12.4%
Total		**271**	**100.0%**

*Both fatal and non-fatal falls are reportable as 5D since 2007, but sometimes are reported as 7B.

Appendix D. Adverse Event Reports by Event Type
Acute Care Hospitals. Connecticut, 2011.

	Adverse Event Reports by Event Type																																				
Hospital	1A	1B	1C	1D	1E	2A	2B	2C	3A	3B	3C	4A	4B	4C	4D	4E	4F	4G	4H	5A	5B	5C	5D	5E	6A	6B	6C	6D	7A	7C	7D	7E	7F	7G
Backus	1																																	1
Bridgeport				3													3												6					1
Bristol				2																			1					1	1						
CCMC																																	2	
Danbury	2			2													5						5						2					
Day Kimball																													2					
Dempsey				2																			1						1					
Greenwich	2																						3											
Griffin																													2					
Hartford	2			1							1						3						3						6					
Hungerford																	5						9											
HOCC			1	1																		1	5					1	5					2
Johnson																							3											
L & M			1									1											2						1					
Manchester																	2						3						2					
Middlesex											1																			1				5
Milford				1																			1							1				
MidState				1																			4						2					
New Milford			1														1						1											
Norwalk	1			1													1						1						1					1
Rockville																													1					1
St Francis																	2						5						1					
St Mary's				1																			2						3		1			1
St Raphael	2			3													1						11						3					1
St Vincent's												2					5						3	1			1	2						3
Sharon																							3											
Stamford				1													3						9										2	
Waterbury																							3											
Windham																							1											
Yale-NH	1			1		1									1		3						8				3		3					
All Acute Care	11	0	3	20	0	1	0	0	0	0	2	3	0	0	1	0	34	0	0	0	0	1	87	1	0	0	4	4	42	2	1	0	4	16

Appendix D continued.
Adverse Event Reports and Rates
Acute Care Hospitals. Connecticut, 2011.

Hospital	Reports Total	Days 2011	Rate per 100,000
William W. Backus Hospital	2	50,315	4.0
Bridgeport Hospital	13	104,527	12.4
Bristol Hospital	5	30,010	16.7
Connecticut Children's Medical Center	2	35,113	5.7
Danbury Hospital	16	96,318	16.6
Day Kimball Healthcare	2	18,586	10.8
John Dempsey Hospital	4	51,405	7.8
Greenwich Hospital	5	54,223	9.2
Griffin Hospital	2	32,521	6.1
Hartford Hospital	16	221,699	7.2
Charlotte Hungerford Hospital	14	28,463	49.2
Hospital of Central Connecticut	16	83,066	19.3
Johnson Memoral Hospital	3	16,992	17.7
Lawrence and Memorial Hospital	5	71,937	7.0
Manchester Memorial Hospital	7	43,963	15.9
Middlesex Hospital	7	56,164	12.5
Milford Hospital	3	17,798	16.9
MidState Medical Center	7	42,834	16.3
New Milford Hospital	3	9,125	32.9
Norwalk Hospital	6	69,223	8.7
Rockville General Hospital	2	13,601	14.7
Saint Francis Hospital	8	155,337	5.2
Saint Mary's Hospital	8	53,396	15.0
Hospital of Saint Raphael	21	123,149	17.1
Saint Vincent's Medical Center	17	122,381	13.9
Sharon Hospital	3	8,468	35.4
Stamford Hospital	15	76,147	19.7
Waterbury Hospital	3	59,733	5.0
Windham Community Memorial Hospita	1	20,563	4.9
Yale-New Haven Hospital	21	288,414	7.3
All Acute Care Hospitals	237	2,055,471	11.5

Appendix E. Adverse Event Reports by Event Type and Rates per 100,000 Inpatient Days, Chronic Disease Hospitals and Hospice. Connecticut, 2011.

	Adverse Event Reports by Event Type																																						
Facility	1A	1B	1C	1D	1E	2A	2B	2C	3A	3B	3C	4A	4B	4C	4D	4E	4F	4G	4H	5A	5B	5C	5D	5E	6A	6B	6C	6D	7A	7C	7D	7E	7F	7G					
Ct Hospice																																							
Gaylord																	1																1						
Special Care																	2						1								1								
Masonicare																																							
Mount Sinai																																							
Veterans																	1						3																
Hebrew Home																							4																
Chronic Disease	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	8	0	0	0	0	0	0	0	1	0	1	0					

Facility	Reports Total	Days 2011	Rate per 100,000
The Connecticut Hospice	0	12,500	0.0
Gaylord Hospital	2	39,362	5.1
The Hospital for Special Care	4	72,660	5.5
Masonicare Health Center	0	3,678	0.0
Mount Sinai Rehabilitation Hospital	0	9,429	0.0
Levitow Veterans Health Center	4	39,785	10.1
Hebrew Home and Hospital	4	10,185	39.3
All Chronic Disease Hospitals	14	187,599	7.5

Appendix F. Adverse Event Reports by Event Type and Rates per 100,000 Inpatient Days
Hospitals for Mentally Ill Persons. Connecticut, 2011.

	Adverse Event Reports by Event Type																																		
Facility	1A	1B	1C	1D	1E	2A	2B	2C	3A	3B	3C	4A	4B	4C	4D	4E	4F	4G	4H	5A	5B	5C	5D	5E	6A	6B	6C	6D	7A	7C	7D	7E	7F	7G
Natchaug																																			
Silver Hill																																			
Masonicare																							1												
Mentally Ill	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0

Facility	Reports Total	Days 2011	Rate per 100,000
Natchaug Hospital	0	17,448	0.0
Silver Hill Hospital	0	14,190	0.0
Masonicare Behavioral Health	1	10,275	9.7
All Hospitals for Mentally Ill Persons	1	41,913	2.4

Appendix G. Adverse Event Reports by Event Type for Ambulatory Surgical Centers, Pain Medicine Centers, Fertility Centers, and Childbirth Centers. Connecticut, 2011.

	Adverse Event Reports by Event Type																																		
Facility	1A	1B	1C	1D	1E	2A	2B	2C	3A	3B	3C	4A	4B	4C	4D	4E	4F	4G	4H	5A	5B	5C	5D	5E	6A	6B	6C	6D	7A	7C	7D	7E	7F	7G
Advanced Reproductive																																		
Aesthetic Surg Center																																		
Brucato Plastic Surgery																																		
Center for Aesthet Surg																																		
Center for Ambul Surg																																		
Central Ct Endoscopy																																		
Coastal Digestive Care																													1					2
Connecticut Fertility																																		
Connecticut Foot																																		
Constitution Eye, East			1																															
Ct Center for Plast Surg																																		
Ct Childbirth & Women																																		
Ct Eye, South	1																																	
Ct GI Endoscopy																													1					
Ct Orthopaedic																																		
Ct Surgery																																		
Ct Surgical Arts																																		
Danbury Surgical	1																												1					
Diagnostic Endoscopy																																		
Digestive Dis Endosc																													1					
Dr. Felice Youth Images																																		
Eastern Ct Endoscopy																																		
Endoscopy, Fairfield																																		
Endoscopy, Northwest																																		
Endoscopy Center of Ct																																		1
Evergreen Endoscopy																																		
Eye Surgery Center																																		
Fairfield County Surgical																																		
Fairfield Endoscopy																																		
Fairfield Surgery																																		
Glastonbury Endoscopy																													1					
Glastonbury Surgery																																		
Hand Center of West Ct																																		
Hartford Hospital Eye																																		
Hartford Surgical																																		1
John J. Borkowski, M.D.																																		
Laser and Vision Surg																																		
Leif O. Nordberg, M.D.																																		1
Litchfield Hills Surgery							2																											
Middlesex Orthopedic																																		
Middlesex Endoscopy																	1																	
Naugatuck Endoscopy																																		
New England Fertility																																		
New Vision Cataract																																		
North Haven Pain Med																																		
Norwalk Surgery																																		
Orchard Medical Center																																		
Orthopedic Associates																																		
Plast Surg of South Ct																																		
Reproductive Medicine																																		
Robbins Eye																																		
Shoreline Colonoscopy																																		
Shoreline Surgery																																		
Split Rock Surgical																																		
SSC II																																		
St Francis GI Endosc																													2					
Summer St Ambulatory																																		
Surg Center Fairfield																																		
Surg Center-Ct Hand																																		
Waterbury Outpatient																						1												
Wilton Surgery																																		
Yale Health Services																																		
All Ambulatory Facilities	2	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	7	0	0	0	0	5

Appendix G Continued. Adverse Event Reports and Rates, Outpatient Visits for Ambulatory Surgical Centers, Pain Medicine Centers, Fertility Centers, and Childbirth Centers, Connecticut, 2011.

Facility	Location	Reports Total	Patients 2011	per 100,000 visits Rate 2011
Aesthetic Surgery Center	New Haven	0	25	0.0
Center for Advanced Reproductive Services	Farmington	0	898	0.0
Center for Ambulatory Surgery	Westport	0	992	0.0
Central Connecticut Endoscopy Center	Plainville	0	5,079	0.0
Coastal Digestive Care Center	New London	3	6,230	48.2
Connecticut Center for Plastic Surgery	Guilford	0	68	0.0
Connecticut Childbirth & Women's Center	Danbury	0	125	0.0
Connecticut Eye Surgery Center South	Milford	1	7,194	13.9
Connecticut Fertility	Bridgeport	0	301	0.0
Connecticut Foot Surgery Center	Milford	0	521	0.0
Connecticut Orthopaedic Specialist	Hamden	0		
Connecticut Surgery Center LP	Hartford	0	1,437	0.0
Connecticut Surgical Arts	Norwich	0	110	0.0
Constitution Eye Surgery Center East	Waterford	1	3,000	33.3
CT GI Endoscopy Center	Bloomfield	1	5,128	19.5
Danbury Surgical Center	Danbury	2	8,556	23.4
Diagnostic Endoscopy	Stamford	0	9,062	0.0
Digestive Disease Associates Endoscopy Suite	Branford	1	2,049	48.8
Dr. Felice's Youthful Images	Bloomfield	0	98	0.0
Eastern Connecticut Endoscopy Center	Norwich	0	3,550	0.0
Endoscopy Center of Connecticut	Guilford/Hamden	1	8,296	12.1
Endoscopy Center of Fairfield, The	Fairfield	0	7,183	0.0
Endoscopy Center of Northwest Connecticut	Torrington	0	3,536	0.0
Evergreen Endoscopy Center	South Windsor	0	5,033	0.0
Eye Surgery Center, The	Bloomfield	0	1,252	0.0
Fairfield County Endoscopy Center	Trumbull	0	5,504	0.0
Fairfield County Surgical Center	Norwalk	0		
Fairfield Surgery Center	Fairfield	0	1,228	0.0
Gary J. Price, M.D., Center for Aesthetic Surgery	Guilford	0	187	0.0
Glastonbury Endoscopy Center, LLC	Glastonbury	1	3,954	25.3
Glastonbury Surgery Center	Glastonbury	0	2,080	0.0
Gregory Brucato, M.D./Brucato Plastic Surgery	Ridgefield	0	61	0.0
Hand Center of Western Connecticut, The	Danbury	0	675	0.0
Hartford Hospital Eye Surgery Center	Newingtown	0	6,648	0.0
Hartford Surgical Center	Hartford	1	1,478	67.7
John J. Borkowski, M.D.	Middletown	0	32	0.0
Laser and Vision Surgery Center	Manchester	0	2,842	0.0
Leif O. Nordberg, M.D.	Stamford	1	34	2941.2
Litchfield Hills Surgery Center	Torrington	2	2,046	97.8
Middlesex Center for Advanced Orthopedic Surgery	Middletown	0	3,027	0.0
Middlesex Endoscopy Center	Middletown	1	5,934	16.9
Naugatuck Valley Endoscopy Center	Waterbury	0	2,879	0.0
New England Fertility Institute	Stamford	0	827	0.0
New Vision Cataract Center	Norwalk	0	1,418	0.0
North Haven Pain Medicine Center	North Haven	0	2,813	0.0
Norwalk Surgery Center	Norwalk	0	110	0.0
Orchard Medical Center	New Haven	0	25	0.0
Orthopedic Associates Surgery Center	Rocky Hill	0	7,838	0.0
Plastic Surgery of Southern Connecticut	Westport	0	37	0.0
Reproductive Medicine Associates of Connecticut	Norwalk	0	780	0.0
Robbins Eye Center	Bridgeport	0	761	0.0
Saint Francis GI Endoscopy	Windsor	2	5,433	36.8
Shoreline Colonoscopy Suites	Old Saybrook	0		
Shoreline Surgery Center	Guilford	0	6,276	0.0
Split Rock Surgical Associates	Wilton	0	186	0.0
SSC II	Guilford	0	3,594	0.0
Summer Street Ambulatory Surgery Center	Stamford	0	46	0.0
Surgery Center of Fairfield County	Bridgeport	0	4,538	0.0
Surgical Center of CT-CT Hand	Bridgeport	0	750	0.0
Waterbury Outpatient Surgical Center	Waterbury	1	2,156	46.4
Wilton Surgery Center	Wilton	0	4,797	0.0
Yale University Health Services ASC	New Haven	0	1,014	0.0
All Facilities		19		

Shaded box indicates that data had not been received from the facility at the time of this report.

Appendix H.
Primary Payer (%) of Inpatient Hospital Bills
Acute Care Hospitals. Connecticut, 2011.

Hospital	Self Pay	Medicare	Medicaid	Blue Cross and Commercial	No Charge	HMO	PPO	Other
William W. Backus Hospital	2.1	41.6	18.6	18.7	0.0	12.5	0.0	6.5
Bridgeport Hospital	1.3	25.9	29.8	16.3	0.0	12.5	2.1	12.0
Bristol Hospital	1.3	37.8	21.3	16.0	0.0	15.2	0.0	8.4
Connecticut Children's Medical Center	1.4	0.1	52.8	15.3	0.2	25.6	4.1	0.6
Danbury Hospital	1.4	40.6	14.7	36.8	0.0	4.2	0.1	2.3
Day Kimball Healthcare	0.9	38.4	22.8	22.2	0.0	6.5	0.0	9.2
John Dempsey Hospital	5.6	36.0	19.0	20.2	0.0	11.7	0.2	7.5
Greenwich Hospital	2.3	34.7	5.9	18.1	0.0	22.0	12.4	4.6
Griffin Hospital	0.9	35.3	17.9	13.8	0.0	18.0	0.0	14.1
Hartford Hospital	2.2	32.5	21.4	13.6	0.0	19.4	3.4	7.6
Charlotte Hungerford Hospital	1.9	49.6	18.3	16.7	0.0	8.5	0.2	4.9
Hospital of Central Connecticut	1.9	36.7	23.7	14.5	0.0	13.7	0.1	9.4
Johnson Memoral Hospital	2.1	42.1	15.7	18.3	0.0	8.0	4.8	9.1
Lawrence and Memorial Hospital	1.0	40.7	20.6	16.8	0.0	4.7	4.7	11.5
Manchester Memorial Hospital	3.0	33.8	17.7	9.7	0.0	20.7	8.0	7.2
Middlesex Hospital	0.2	45.2	15.6	17.5	0.0	11.3	3.0	7.3
Milford Hospital	1.8	38.8	9.6	17.6	0.0	15.9	2.3	14.1
MidState Medical Center	2.5	39.2	19.2	11.5	0.0	15.8	2.7	9.1
New Milford Hospital	2.2	44.1	11.0	16.0	0.0	12.6	8.9	5.2
Norwalk Hospital	3.9	35.3	18.3	20.7	0.0	16.7	1.1	3.8
Rockville General Hospital	2.4	41.3	17.8	8.4	0.0	16.1	5.0	9.1
Saint Francis Hospital	0.8	34.2	21.7	16.7	0.0	14.5	2.6	9.4
Saint Mary's Hospital	2.3	37.6	23.2	19.9	0.0	7.3	0.2	9.6
Hospital of Saint Raphael	1.1	43.4	16.2	15.9	0.0	10.8	0.0	12.7
Saint Vincent's Medical Center	5.3	32.1	18.2	15.3	0.0	11.9	3.2	14.0
Sharon Hospital	0.3	48.3	6.1	14.3	0.0	14.2	0.0	16.7
Stamford Hospital	1.5	30.8	21.3	22.2	0.0	19.0	0.0	5.2
Waterbury Hospital	2.4	39.9	23.4	14.2	0.0	10.4	2.4	7.3
Windham Community Memorial Hospital	2.2	44.7	18.0	20.0	0.0	4.3	0.0	10.8
Yale-New Haven Hospital	1.2	26.1	27.4	22.6	0.4	11.3	5.0	6.2
Total	1.9	34.8	20.9	18.2	0.1	13.2	2.7	8.2

Data Source: DPH Office of Health Care Access.

Appendix H continued.

Primary Payer (%) of Bills,

Hospices, Chronic Disease Hospitals, and Hospitals for Mentally Ill Persons.

Connecticut, 2011.

Facility	Self Pay	Medicare	Medicaid	Blue Cross and Commercial	Other
The Connecticut Hospice	0.0	100.0	0.0	0.0	0.0
Gaylord Hospital	0.2	50.3	13.1	35.2	1.1
The Hospital for Special Care	1.0	12.0	74.0	5.0	8.0
Masonicare Health Center, Chronic Disease Hospital	7.4	87.1	0.0	5.3	0.3
Mount Sinai Rehabilitation Hospital	0.8	54.3	11.0	11.5	22.4
Levitow Veterans Health Center	0.9	20.2	66.1	0.9	11.9
Hebrew Home and Hospital	0.0	83.3	6.0	0.0	10.6
Natchaug Hospital	0.0	0.0	80.0	15.0	5.0
Silver Hill Hospital	4.0	5.0	0.0	91.0	0.0
Masonicare Behavioral Health	0.0	85.0	0.0	13.6	1.5

The Hospital for Special Care and Natchaug Hospital data are fiscal year 2011. All others are calendar year.

Appendix H continued. Case Mix or Primary Payer (%) of Bills
Ambulatory Surgical Centers, Pain Medicine Centers, Fertility Centers, and Outpatient Childbirth Centers.
Connecticut, 2011.

Facility	Case Mix	Self Pay	Medicare	Medicaid	Blue Cross and Commercial	HMO	PPO	Other
Aesthetic Surgery Center		44.0%			56.0%			
Center for Advanced Reproductive Services					51.6%			48.4%
Center for Ambulatory Surgery		98.0%			2.0%			
Central Connecticut Endoscopy Center	1167 EGD/3912 Colon							
Coastal Digestive Care Center		7.0%	20.0%	11.0%	58.0%	3.0%		2.0%
Connecticut Center for Plastic Surgery		100.0%						
Connecticut Childbirth & Women's Center		5.0%		15.0%	80.0%			
Connecticut Eye Surgery Center South		0.7%	50.0%	1.7%	36.3%	1.1%	0.1%	10.1%
Connecticut Fertility	296 Retrievals, 5 Tesa							
Connecticut Foot Surgery Center	100% podiatry		20.0%		25.0%	21.0%		34.0%
Connecticut Orthopaedic Specialist[1]			10.0%		50.0%	20.0%		20.0%
Connecticut Surgery Center		0.3%	12.9%	13.3%	31.3%	14.2%	1.4%	26.6%
Connecticut Surgical Arts		30.0%	5.0%		65.0%			
Constitution Eye Surgery Center East			85.0%	5.0%	15.0%			
CT GI Endoscopy Center	4089 Colonoscopy/1948 EGD/5 Sig/1 Ileo/ 1 Pouch							
Danbury Surgical Center	39% GI, 14% ophthal, 28% ortho, 18% pain							
Diagnostic Endoscopy	5915 Colon/3147 EGD							
Digestive Disease Associates Endoscopy Suite	not able to calculate payer or case mix							
Dr. Felice's Youthful Images		100.0%						
Eastern Connecticut Endoscopy Center		17.0%	18.0%		81.0%			
Endoscopy Center of Connecticut-Hamden/Guilford	Anthem, Cigna, Aetna, United, Connecticare, Medicare/caid							
Endoscopy Center of Fairfield, The		0.4%	19.3%		70.3%			9.9%
Endoscopy Center of Northwest Connecticut	100% Gastro							
Evergreen Endoscopy Center	1003 EGD/2605 Colon/1425 EGD and Colon							
Eye Surgery Center, The		11.0%	43.0%		40.0%			9.0%
Fairfield County Endoscopy Center		10.0%	22.0%		58.0%			
Fairfield Surgery Center	1228 Surgical/287 Pain							
Gary J. Price, M.D., Center for Aesthetic Surgery		100.0%						
Glastonbury Endoscopy Center, LLC	3070 Colon/1585 EDG/9 Sig							
Glastonbury Surgery Center[3]		2.0%	15.0%			65.0%		18.0%
Gregory Brucato, M.D./Brucato Plastic Surgery	100% Cosmetic							
Hand Center of Western Connecticut, The	100% Ortho							
Hartford Hospital Eye Surgery Center	unable to provide case mix or payer data							
Hartford Surgical Center		4.0%	11.0%	5.0%	37.0%			43.0%[2]
John J. Borkowski, M.D.		100.0%						
Laser and Vision Surgery Center		0.0%	54.0%	4.0%		13.0%		29.0%
Leif O. Nordberg, M.D.		100.0%						
Litchfield Hills Surgery Center			26.7%	0.1%	45.2%	0.1%		27.9%
Middlesex Center for Advanced Orthopedic Surgery	432 pain/2595 surgery							
Middlesex Endoscopy Center		0.1%	24.5%	3.6%	71.5%			
Naugatuck Valley Endoscopy Center			26.0%	2.0%	72.0%			
New England Fertility Institute		60.0%			40.0%			
New Vision Cataract Center			51.9%	1.0%	47.1%			
North Haven Pain Medicine Center		0.3%	23.3%	5.6%	2.7%			68.2%
Orchard Medical Center		28.0%			72.0%			
Orthopedic Associates Surgery Center[1]		2.9%		14.1%	0.0%	65.4%		17.7%
Plastic Surgery of Southern Connecticut	2 BREAST RECON/ALL OTHERS AESTHETIC SURGERY							
Reproductive Medicine Associates of Connecticut[1]		20.0			80.0			
Robbins Eye Center		2.2%	36.7%	19.4%	8.7%			33.1%
Saint Francis GI Endoscopy		0.1%	12.5%	0.4%	86.6%			0.4%
Shoreline Colonoscopy Suites								
Shoreline Surgery Center		0.3%	20.2%	1.5%	56.9%	19.8%		1.4%
Split Rock Surgical Associates		100.0%						
SSC II		0.8%	30.2%		39.1%	20.7%		
Summer Street Ambulatory Surgery Center[1]	100% plastic surgery							
Surgery Center of Fairfield County		1.0%	10.0%	3.0%	75.0%			11.0%
Surgical Center of CT-CT Hand	Carpal tunnel, trigger finger, palmar fasciectomy, contracture releases, mass excisions, fracture and trauma revisions							
Waterbury Outpatient Surgical Center		4.0%	62.0%	9.0%	10.0%	14.0%		2.0%
Wilton Surgery Center	66% OPHTH/34% PAIN							
Yale University Health Services ASC						100.0%		

Gray shading = The data had not been provided by the facility by the time this report was written.
Abbreviations used in case mix descriptions reflect responses received by DPH
[1] Data shown are from 2010 as used in the 2011 adverse event report. 2011 data had not been provided by the time of this report.
[2] Mostly Managed Care which includes HMO and PPO.
[3] Grouped together are commercial/self pay; HMO/PPO; Medicare/Medicaid; other=workman's compensation.

Appendix I. Advantages and Limitations of Harm Detection Methods

Harm Detection Method	Advantages	Limitations
Incident (occurrence) reports	**1.** Well established process in most hospitals **2.** Inexpensive **3.** Easy information to obtain	**1.** Identifies only between 2% and 8% of harmful events **2.** Focus tends to be on error, not harm **3.** Voluntary nature results in vast underreporting **4.** Can be time intensive **5.** Often perceived as punitive by staff
Administrative database algorithms	**1.** Standard definitions **2.** Method allows direct comparision between hospitals **3.** Inexpensive to obtain data	**1.** Identifies less than 10% of all harms **2.** Poor sensitivity and specificity **3.** Focus is on only a few specific harm types (not "all cause" harm) **4.** Harm easily hidden/missed (if not well described in charting) **5.** Dependent on accuracy of chart coding
Retrospective/Concurrent Chart Review (from Harvard Medical Practice Study)	**1.** Active surveillance can identify harms not well articulated in chart (if honest communication occurs) **2.** Measures "all cause" harm **3.** Provides a rate (i.e. harms per 100 admissions or per 1000 patient days)	**1.** Sustantially underreported harm rates **2.** Relies partially on voluntary or verbally solicited identification of harm **3.** Active real time surveillance is quite resource intensive **4.**Unfocused review of charts is also resource intensive **5.** Retrospective review of charts challenging if poor/incomplete documentation
Trigger Tools	**1.** Measures "all cause" harm **2.** Measures total harm burden **3.** Provides a rate (i.e. harms per 100 admissions or per 1000 patient days) **4.** Focuses on harm, but includes errors as well **5.** Allows sampling strategy **6.** Relatively efficient: 20 minutes per chart **7.** Can be population specific (speciality specific trigger tools available for areas such as pediatric and neonatal intensive care units, etc.) **8.** Excellent specificity and very good sensitivity	**1.** Requires training **2.** Resource intensive: IHI recommends 20 charts per month at 20 minutes per chart **3.** Global trigger tools not automated (though major ongoing effort to do so) **4.** Retrospective review of charts challenging if poor/incomplete documentation

Redrawn from Paul J. Sharek, "The Emergence of the Trigger Tool as the Premier Measurement Strategy for Patient Safety,"
AHRQ Web M&M, May 2012; http://webmm.ahrq.gov/perspective.aspx?perspectiveId=120

APPENDIX J: Revisions to National Quality Forum list of Serious Reportable Events

The adverse event report system uses a list of events identified by the National Quality Forum, plus a Connecticut-specific list, as allowed by Connecticut General Statutes 19a-127n. The NQF criteria for inclusion are that an event is unambiguous, largely preventable, indicative of a problem in a healthcare setting's safety systems, and important for public accountability.

The NQF document *Serious Reportable Events in Healthcare-2011 Update*[22] added four items, retired three items, and revised definitions and specifications for the remaining 25 items. The updated NQF list includes 29 serious reportable events. The new items are: (1) Death or serious injury of a neonate associated with labor or delivery in a low-risk pregnancy; (2) patient death or serious injury resulting from the irretrievable loss of an irreplaceable biological specimen; (3) patient death or serious injury from failure to follow up or communicate laboratory, pathology, or radiology test results; (4) death or serious injury of a patient associated with the introduction of a metallic object into the MRI area. Some of these new NQF items closely resemble items on the current Connecticut-specific list of adverse events.

Two retired NQF items, relating to hypoglycemia and kernicterus, remain reportable under the categories of medication management and care management events, respectively. The third retired item, related to spinal manipulation, involves individual behavior rather than facility safety systems. Some definitional changes have the potential to result in an increased number of reports. For example, in addition to the reporting of stage 3 or 4 pressure ulcers, unstageable pressure ulcers acquired after admission to a healthcare setting are reportable. This harmonizes with the National Pressure Ulcer Advisory Panel's position and definitions.

The Department of Public Health plans to issue a revised adverse event list and implementation guidance to reflect the changes made by the NQF, and use the revised list starting January 2013.

New Events:

(1) Death or serious injury of a neonate associated with labor or delivery in a low-risk pregnancy. "Low-risk refers to a woman aged 18-39, with no previous diagnosis of essential hypertension, renal disease, collagen-vascular disease, liver disease, cardiovascular disease, placenta previa, multiple gestation, intrauterine growth retardation, smoking, pregnancy-induced hypertension, premature rupture of membranes, or other previously documented condition that poses a high risk of poor pregnancy outcome."

The corresponding Connecticut-specific event (7C) is "obstetrical events resulting in death or serious disability to the neonate."

(2) Patient death or serious injury resulting from the irretrievable loss of an irreplaceable biological specimen.

(3) Patient death or serious injury from failure to follow up or communicate laboratory, pathology, or radiology test results.

[22] http://www.qualityforum.org/Topics/SREs/Serious_Reportable_Events.aspx

The corresponding Connecticut-specific event (7E) is "Laboratory or radiologic test results not reported to the treating practitioner or reported incorrectly which result in death or serious disability due to incorrect or missed diagnosis in the emergency room."

(4) Death or serious injury of a patient associated with the introduction of a metallic object into the MRI area.

Revisions: All. Change "serious disability" to "serious injury."

Surgical or Invasive Procedure Events. Broaden definition to include events outside the OR. Modify definition of end of surgery so that a standard procedure for discovery of foreign object does not create a reporting requirement.

Use of contaminated drugs. Clarify issue of detectability.

Use of device other than as intended. Add failure to properly clean and maintain a device.

Discharge of patients to other than an authorized person. Broaden from infant to any age patient who lacks decision-making capacity.

Attempted suicide. Additional specifications excluding patient on premises but not yet presented for care.

Medication errors. Additional specifications for use of contraindicated medication or failure to observe safe injection practices.

Blood products. Implementation guidance added to operationalize "unsafe."

Electrical shock, burns, assault. Broaden to include staff injury or death.

Wrong gas. Broaden to include gas not delivered or not delivered as prescribed.

Restraints. Clarify as physical; does not include chemical restraints.

Criminal events. Add "potential" to category title and add implementation guidance.

Appendix K.

National Quality Forum

Serious Reportable Events in Healthcare—2011 Update*

And Connecticut-specific reportable events

List, event definitions, and guidance for use

Adverse Event reporting

to the Connecticut Department of Public Health

Implementation date January 2013

SURGICAL OR INVASIVE PROCEDURE EVENTS

NQF 1A. Surgery or other invasive procedure performed on the wrong site.

Defined as any surgery or other invasive procedure performed on a body part or site that is not consistent with the correctly documented consent for that patient.

Surgery or other invasive procedure includes, but is not limited to, endoscopies, lens implants, lesion removal, and injection into joints.

Excludes emergent situations that occur in the course of surgery or other invasive procedure and/or whose exigency precludes obtaining informed consent.

Implementation Guidance:

A correctly documented informed consent for patients whose procedures will not be carried out in an operating room may not involve a "surgical consent form"; however, it does require informed consent be documented in the patient record.

Although an incorrectly placed surgical mark could result in surgery being performed on the wrong body part, surgery does not begin at the time the surgical mark is made on the patient. Placing a mark on the wrong body part or site does not in itself constitute wrong site surgery.

Wrong site surgery or invasive procedure, corrected during the procedure, is still a wrong site procedure if the surgery/procedure had begun, based on the definition in the NQF glossary.

This event is intended to capture instances of:

- Surgery or other invasive procedure on the right body part but on the wrong location/site on the body; e.g., left/right (appendages, organs), wrong digit, level (spine), stent placed in wrong iliac artery, steroid injection into wrong knee, biopsy of wrong mole, burr hole on wrong side of skull;
- Delivery of fluoroscopy or radiotherapy to the wrong region of the body;
- Use of incorrectly placed vascular catheters;
- Use of incorrectly placed tubes (for example, feeding tubes placed in the lung or ventilation tubes passed into the esophagus).

This event is not intended to capture:

- Changes in plan upon entry into the patient with discovery of pathology in close proximity to the intended place where risk of a second surgery or procedure outweighs benefit of patient consultation, or unusual physical configuration (for example adhesions, spine level/extra vertebrae).

NQF 1B. Surgery or other invasive procedure performed on the wrong patient.

Defined as any surgery or invasive procedure on a patient that is not consistent with the correctly documented informed consent for that patient.

Surgery or other invasive procedure includes, but is not limited to, endoscopies, lens implants, lesion removal, and injection into joints.

Implementation Guidance:

A correctly documented informed consent for patients whose procedures will not be carried out in an operating room may not involve a "surgical consent form"; however, it does require informed consent be documented in the patient record.

This event is intended to capture:

- Surgical procedures (whether or not completed) initiated on one patient intended for a different patient. Use of accepted patient identification procedures is key to avoiding such events.

NQF 1C. Wrong surgical or other procedure performed on a patient.

Defined as any surgery or invasive procedure on a patient that is not consistent with the correctly documented informed consent for that patient.

Surgery or other invasive procedure includes, but is not limited to, endoscopies, lens implants, lesion removal, and injection into joints.

Excludes emergent situations in the course of surgery or other invasive procedure and/or whose exigency precludes obtaining informed consent.

Implementation Guidance:

A correctly documented informed consent for patients whose procedures will not be carried out in an operating room may not involve a "surgical consent form"; however, it does require informed consent be documented in the patient record.

This event is intended to capture:

- Insertion of the wrong medical implant into the correct surgical site.

This event is not intended to capture: changes in plan upon entry into the patient with discovery of pathology in close proximity to the intended place where risk of a second surgery/procedure outweighs benefit of patient consultation, or unusual physical configuration (for example adhesions, spine level/extra vertebrae).

NQF 1D. Unintended retention of a foreign object in a patient after surgery or other invasive procedure.

Includes medical or surgical items intentionally placed by provider(s) that are unintentionally left in place.

Excludes a) objects present prior to surgery or other invasive procedure that are intentionally left in place; b) objects intentionally implanted as part of a planned intervention; and c) objects not present prior to surgery/procedure that are intentionally left in when the risk of removal exceeds the risk of retention (such as microneedles, broken screws).

Implementation Guidance:

This event is intended to capture:

- Occurrences of unintended retention of objects at any point after the surgery/procedure ends regardless of setting (post anesthesia recovery unit, surgical suite, emergency department, patient bedside) and regardless of whether the object is to be removed after discovery.
- Unintentionally retained objects (including such things as wound packing material, sponges, catheter tips, trocars, guide wires) in all applicable settings.

NQF 1E. Intraoperative or immediately postoperative/postprocedure death in an ASA Class 1 patient.

Includes all ASA Class 1 patient deaths in situations where anesthesia was administered; the planned surgical procedure may or may not have been carried out.

Immediately post-operative means within 24 hours after surgery or other invasive procedure was completed or after administration of anesthesia (if surgery/procedure not completed).

Implementation Guidance:

This event is intended to capture:

- ASA Class 1 patient death associated with the administration of anesthesia whether or not the planned surgical procedure was carried out.

PRODUCT OR DEVICE EVENTS

NQF 2A. Patient death or serious injury associated with the use of contaminated drugs, devices, or biologics provided by the healthcare setting.

Includes contaminants in drugs, devices, or biologics regardless of the source of contamination and/or product.

Includes threat of disease that changes patient's risk status for life requiring medical monitoring not needed before the event.

Implementation Guidance:

This event is intended to capture:

- Contaminations that can be seen with the naked eye or with use of detection mechanisms in general use. These contaminations are to be reported at such time as they become known to the provider or healthcare organization. Contaminants may be physical, chemical, or biological in nature. Not all contaminations can be seen with the naked eye (e.g. hepatitis and HIV) or readily detected using generally available or more specialized testing mechanisms (e.g. culture, nucleic acid testing, mass spectrometry, and tests that signal changes in pH or glucose levels). Contamination that is inferred and changes risk status for life (e.g., consider a syringe or needle contaminated once it has been used to

administer medication to a patient by injection or via connection to a patient's intravenous infusion bag or administration set).
- Administration of contaminated vaccine or medication (e.g., intramuscular antibiotic);
- Serious infection from contaminated drug or device used in surgery or an invasive procedure (e.g., a scalpel);
- Occurrences related to use of improperly cleaned or maintained device.

NQF 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.

Includes, but is not limited to, catheters, drains, and other specialized tubes, infusion pumps, ventilators, and procedural and monitoring equipment.

Implementation Guidance:

This event is intended to capture:

- Occurrences whether or not the use is intended or described by the device manufacturers' literature.

NQF 2C. Patient death or serious injury associated with intravascular air embolism that occurs while being cared for in a healthcare setting.

Excludes death or serious injury associated with neurosurgical procedures known to present a high risk of intravascular air embolism.

Implementation Guidance:

This event is intended to capture:

- High-risk procedures, other than neurosurgical procedures, that include, but are not limited to, procedures involving the head and neck, vaginal delivery an caesarean section, spinal instrumentation procedures, and liver transplantation;
- Low-risk procedures, including those related to lines placed for infusion of fluids in vascular space.

PATIENT PROTECTION EVENTS

NQF 3A. Discharge or release of a patient/resident of any age, who is unable to make decisions, to other than an authorized person.

Implementation Guidance:

The terms "authorized" and "decision-making capacity" are defined in the NQF glossary. Release to "other than an authorized person" includes removing the patient/resident without specific notification and approval by staff, even when the person is otherwise authorized.

Examples of individuals who do not have decision-making capacity include: newborns, minors, adults with Alzheimer's.

Individual healthcare organizations or other relevant jurisdictional authorities may have specific requirements for assessing decision-making capacity.

NQF 3B. Patient death or serious injury associated with patient elopement (disappearance).

Includes events that occur after the individual presents him/herself for care in a healthcare setting.

Excludes events involving competent adults with decision-making capacity who leave against medical advice or voluntarily leave without being seen.

Implementation Guidance:

The terms "elopement" and "competent" adult should be interpreted with prevailing legal standards in applicable jurisdictions.

An assessment that identifies patients at "risk" of elopement or a chief complaint and findings of risk accompanied by organizationally defined measures to be taken when risk is identified could be useful in both prevention and event analysis.

This is not intended to capture:

- Death or serious injury that occurs (after the patient is located) due to circumstances unrelated to the elopement.

NQF 3C. Patient suicide, attempted suicide, or self-harm that results in serious injury, while being cared for in a healthcare setting.

Includes events that result from patient actions after they present themselves for care in a healthcare setting.

Excludes deaths from self-inflicted injuries that were the reason for admission/presentation to the healthcare facility.

Implementation Guidance:

This event is not intended to capture patient suicide or attempted suicide when the patient is not physically present in the "healthcare setting" as defined in the NQF glossary.

CARE MANAGEMENT EVENTS

NQF 4A. Patient death or serious injury associated with a medication error (e.g., errors involving the wrong drug, wrong dose, wrong patient, wrong time, wrong rate, wrong preparation, or wrong route of administration).

Excludes reasonable differences in clinical judgment on drug selection and dose.

Includes, but is not limited to, death or serious injury associated with: a) over- or under-dosing; b) administration of a medication to which a patient has a known allergy or serious contraindication; c) drug-drug interactions for which there is a known potential for death or serious injury, and d) improper use of single-dose/single-use and multi-dose medication vials and containers leading to death or serious injury as a result of dose adjustment problems.

Implementation Guidance:

This event is intended to capture:

- The most serious medication errors including occurrences in which a patient receives a medication for which there is a contraindication, or a patient known to have serious allergies to specific medications/agents, receives those medications/agents, resulting in serious injury or death. These events may occur as a result of failure to collect information about contraindications or allergies, failure to review such information available in information systems, failure of an organization to ensure availability of such information and prominently display such information within information systems, or other system failures that are determined through investigation to be cause of the adverse event;
- Occurrences in which a patient dies or suffers serious injury as a result of failure to administer a prescribed medication;
- Occurrences in which a patient is administered an over- or under-dose of a medication including insulin, heparin, or any other high alert medication including but not limited to medications listed on the Institute for Safe Medication Practices "High Alert Medication List";
- Occurrences in which a patient dies or suffers serious injury as a result of wrong administration technique.

This event is not intended to capture:

- Patient death or serious injury associated with allergies that could not reasonably have been known or discerned in advance of the event.

NQF 4B. Patient death or serious injury associated with unsafe administration of blood products.

Implementation Guidance:

Unsafe administration includes, but is not limited to, hemolytic reactions and administering: a) blood or blood products to the wrong patient; b) the wrong type; or c) blood or blood products that have been improperly stored or handled.

This event is not intended to capture:

- Patient death or serious injury associated with organ rejection other than those attributable to a hyperacute hemolytic reaction;
- Patient death or injury when cause is not detectable by ABO/HLA matching.

NQF 4C. Maternal death or serious injury associated with labor or delivery in a low-risk pregnancy while being cared for in a healthcare setting.

Includes events that occur within 42 days post-delivery.

Excludes deaths from pulmonary or amniotic fluid embolism, acute fatty liver of pregnancy, or cardiomyopathy.

Implementation Guidance:

This event is not intended to create a new obligation. The organization's obligation, under this event, is to report only maternal death or serious injury associated with labor or delivery in a low risk pregnancy when made aware of the maternal death or serious injury either by readmittance or by the patient's family.

NQF 4D. Death or serious injury of a neonate associated with labor or delivery in a low-risk pregnancy.

Includes, for the office-based surgery, birthing center or "home" setting, unplanned admission to an inpatient setting within 24 hours of delivery.

Implementation Guidance:

Unplanned admission to other than the birth setting should be verified with the identified birth setting.

NQF 4E. Patient death or serious injury associated with a fall while being cared for in a healthcare setting.

Includes but is not limited to fractures, head injuries, and intracranial hemorrhage.

Implementation Guidance:

An assessment that identifies patients at "risk" of fall, findings or risk accompanied by organizationally defined measures to be taken when risk is identified could be useful in both prevention and event analysis.

NQF 4F. Any Stage 3, Stage 4, and unstageable pressure ulcers acquired after admission/presentation to a healthcare setting.

Excludes progression from Stage 2 to Stage 3 if Stage 2 was recognized upon admission and excludes pressure ulcers that develop in areas where deep tissue injury is documented as present on admission/presentation.

Implementation Guidance:

Although this event could occur in the ambulatory surgery environment based on patient condition and surgery time, it will be difficult to discern. Pre- and post-skin assessment will be key.

NQF 4G. Artificial insemination with the wrong donor sperm or wrong egg.

Implementation Guidance:

The organization's obligation is to report the event when made aware of the occurrence.

NQF 4H. Patient death or serious injury resulting from the irretrievable loss of an irreplaceable biological specimen.

Includes events where specimens are misidentified, where another procedure cannot be done to produce a specimen.

Includes progression of an undiagnosed disease or threat of disease that changes the patient's status for life, requiring monitoring not needed before the event.

Implementation Guidance:

This event is not intended to capture:

- Procedures where the specimen was properly handled, but the specimen proved to be nondiagnostic.

Inability to secure a replacement for a lost specimen can occur with excisional biopsy as well as in organ removal.

NQF 4I. Patient death or serious injury resulting from failure to follow up or communicate laboratory, pathology, or radiology test results.

Includes events where failure to report increased neonatal bilirubin levels result in kernicterus.

Implementation Guidance:

Examples of serious injury are a new diagnosis, or an advancing stage of an existing diagnosis (e.g., cancer).

Failure to follow up or communicate can be limited to healthcare staff or can involve communication to the patient.

ENVIRONMENTAL EVENTS

NQF 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.

Excludes events involving patients during planned treatments such as electric countershock/elective cardioversion.

Implementation Guidance:

This event is intended to capture:

- Patient death or injury associated with unintended electric shock during the course of care or treatment;
- Staff death or injury associated with unintended electric shock while carrying out duties directly associated with a patient care process, including preparing for care delivery.

This event is not intended to capture:

- Patient death or injury associated with emergency defibrillation in ventricular fibrillation or with electroconvulsive therapies;
- Injury to staff who are not involved in patient care.

NQF 5B. Any incident in which systems designated for oxygen or other gas to be delivered to a patient contains no gas, the wrong gas, or are contaminated by toxic substance.

Implementation Guidance:

This event is intended to capture:

Events in which the line is attached to a reservoir distant from the patient care unit or in a tank near the patient such as E-cylinders, anesthesia machines.

NQF 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.

Implementation Guidance:

This event is intended to capture burns that result from:

- Operating room flash fires, including second-degree burn in these cases:
  - Hot water;
  - Sunburn in the patient with decreased ability to sense pain;
  - Smoking in the patient care environment.

NQF 5D. Patient death or serious injury associated with the use of physical restraints or bedrails while being cared for in a healthcare setting.

Implementation Guidance:

This event is intended to capture:

Instances where physical restraints are implicated in the death, e.g., lead to strangulation/entrapment, etc.

RADIOLOGIC EVENTS

NQF 6A. Death or serious injury of a patient or staff associated with the introduction of a metallic object into the MRI area.

Includes events related to material inside the patient's body or projectiles outside the patient's body.

Implementation Guidance:

This event is intended to capture injury or death as a result of projectiles including:

- Retained foreign object
- External projectiles
- Pacemakers

POTENTIAL CRIMINAL EVENTS

NQF 7A. Any instance of care ordered by or provided by someone impersonating a physician, nurse, pharmacist, or other licensed healthcare provider.

Implementation Guidance:

This event is intended to capture:

- Those without licensure to provide the care given;
- Those with licensure who represent themselves and act beyond the scope of their license.

It is not intended to capture individuals who are practicing within the scope of their license on whom patients or others mistakenly bestow the titles beyond that scope when such is not encouraged by the provider.

NQF 7B. Abduction of a patient/resident of any age.

Implementation Guidance:

This event is intended to capture:

- Removal of a patient/resident, who does not have decision-making capacity, without specific notification and approval by staff even when the person is otherwise authorized to be away from the setting.

Examples of individuals who do not have decision-making capacity include: newborns, minors, adults with Alzheimer's.

NQF 7C. Sexual abuse/assault on a patient or staff member within or on the grounds of a healthcare setting.

Implementation Guidance:

Language and definitions may vary based on state statute; however, the principle and intent remain regardless of language required based on jurisdiction.

NQF 7D. Death or serious injury of a patient or staff member resulting from a physical assault (i.e., battery) that occurs within or on the grounds of a healthcare setting.

Implementation Guidance:

Language and definitions may vary based on state statute (e.g., many states have existing statutes that use the terms "first degree assault" or "second degree assault" or "battery").

Connecticut-Specific Events

CT 1. Perforations during open, laparoscopic and/or endoscopic procedures resulting in death or serious injury.

Includes perforations which require resection.

CT 2. Patient death or serious injury as a result of surgery.

Excludes events reported at NQF 1E and CT 1.

Includes:

- Hemorrhage greater than 30% of circulating blood volume; **and/or**
- Unanticipated death or serious disability in an ASA Class 2 patient intraoperatively, or post-operatively within twenty-four hours of the surgery.

Class III Hemorrhage according to the American College of Surgeons' Advanced Trauma life Support (ATLS) is defined as loss of 30-40% of circulating blood volume.

This is intended to capture:

- ASA Class 2 patient death associated with administration of anesthesia whether or not the planned surgical procedure was carried out.

Please refer to the Cleveland Clinic, ASA Physical Status Classification for guidance.
http://my.clevelandclinic.org/services/anesthesia/hic_asa_physical_classification_system.aspx

NQF Glossary for Serious Reportable Events

Abduction means the taking away of a person by persuasion, by fraud, or by open force or violence. It includes convincing someone, particularly a minor or a woman he/she is better off leaving with the persuader, telling the person he/she is needed, or that the mother or father wants him/her to come with the abductor.

Adverse describes a consequence of care that results in an undesired outcome. It does not address preventability.

Associated with means that it is reasonable to initially assume that the adverse event was due to the referenced course of care; further investigation and/or root cause analysis of the unplanned event may be needed to confirm or refute the presumed relationship.

Authorized means the guardian or other individual(s) having the legally recognized ability to consent on behalf of a minor or incapacitated individual (surrogate), or person designated by the surrogate to release or consent for the patient.

Decision-making capacity is the ability to understand information relevant to a decision and the ability to appreciate the reasonably foreseeable consequences of a decision (or lack of a decision).

Deep tissue injury presents as a purple or maroon localized area of discolored intact skin or blood-filled blister due to damage of underlying soft tissue from pressure and/or shear. The area may be preceded by tissue that is painful, firm, mushy, boggy, warmer or cooler as compared to adjacent tissue.

Elopement refers to a situation where a patient or resident who is cognitively, physically, mentally, emotionally, and/or chemically impaired wanders/walks/runs away, escapes, or otherwise leaves a caregiving institution or setting unsupervised, unnoticed, and/or prior to their scheduled discharge.

Event means a discrete, auditable, and clearly defined occurrence.

Healthcare setting means any facility or office, including a discrete unit of care within such facility, that is organized, maintained, and operated for the diagnosis, prevention, treatment, rehabilitation, convalescence or other care of human illness or injury, physical or mental, including care during and after pregnancy. Healthcare settings include, but are not limited to, hospitals, nursing homes, rehabilitation centers, medical centers, office-based practices, outpatient dialysis centers, reproductive health centers, independent clinical laboratories, hospices, ambulatory surgical centers, and pharmacies. The boundary of a healthcare setting (the "grounds") is the physical area immediately adjacent to the setting's main buildings. It does not include nonmedical businesses such as shops and restaurants located close to the setting.

High alert medications are those medications that have a high risk of causing serious injury or death to a patient if they are misused. Examples of high-alert medications include anticoagulants and IV antithrombotics, insulin, cytotoxic chemotherapy, concentrated electrolytes, IV digoxin, opiate narcotics, neuromuscular blocking agents, and adrenergic agonists. The recommended "High Alert Medication List" is available at the Institute for Safe Medication Practices' website, http://www.ismp.org.

Infant is a child under the age of one year. (SRE 2006; Stedman's online dictionary)

Informed consent involves a process of shared decision-making in which discussion between a person who would receive a treatment, including surgery or invasive procedure, and the caregiver/professional person who explains the treatment, provides information about possible benefits, risks and alternatives, and answers questions that result in the person's authorization or agreement to undergo a specific medical intervention. Documentation of this discussion should result in an accurate and meaningful entry in the patient record, which could include a signed "consent form." Signing a consent form does not constitute informed consent; it provides a record of the discussion.

Injury, as used in this report has a broad meaning. It includes physical or mental damage that substantially limits one or more of the major life activities of an individual in the short term, which may become a disability if extended long term. Further, injury includes a substantial change in the patient's long-term risk status such that care or monitoring, based on accepted national standards, is required that was not required before the event. (Of note, states and other entities may use alternate definitions for the term "disability.")

Largely preventable recognizes that some of the events on the SRE list are not universally avoidable, given the complexity of healthcare and current knowledge.

Low-risk pregnancy refers to a woman aged 18-39, with no previous diagnosis of essential hypertension, renal disease, collagen-vascular disease, liver disease, cardiovascular disease, placenta previa, multiple gestation, intrauterine growth retardation, smoking, pregnancy- induced hypertension, premature rupture of membranes, or other previously documented condition that poses a high risk of poor pregnancy outcome.

Medical device is an instrument, apparatus, implement, machine, contrivance, implant, in vitro reagent, or other similar or related article, including a component part, or accessory, which is recognized in the official National Formulary, or the United States Pharmacopoeia, or any supplement to them; intended for use in the diagnosis of disease or other conditions, or in the cure, mitigation, treatment, or prevention of disease, in man or other animals; or intended to affect the structure or any function of the body of man or other animals, and which does not achieve any of its primary intended purposes through chemical action within or on the body of man or other

animals and which is not dependent upon being metabolized for the achievement of any of its primary intended purposes.[1]

Medication error means any preventable event that may cause or lead to inappropriate medication use or patient harm while the medication is in the control of the healthcare professional, patient, or consumer. Such events may be related to professional practice, healthcare products, procedures, and systems, including prescribing; order communication; product labeling, packaging and nomenclature; compounding; dispensing; distribution; administration; education; monitoring; and use.[2]

Neonate is a newborn less than 28 days of age.

Patient means a person who is a recipient of healthcare. A person becomes a patient at the point that they are being "cared for" in the facility. Being "cared for" begins when they are first engaged by a member of the care team, e.g. assessment by the triage nurse in the E.D., or walking with the phlebotomist to the lab for a lab draw. A patient is no longer considered a patient at the point that they are no longer under the care of a member of the care team, e.g. the nursing assistant has safely assisted the patient to the car from an inpatient stay; the ambulating patient that does not need assistance leaves the radiology department following an outpatient test.[3]

Pressure Ulcer, Stage 3 is defined as full thickness tissue loss. Subcutaneous fat may be visible, but bone, tendon, or muscle is not exposed. Slough may be present. May include undermining and tunneling. The depth of a Stage 3 pressure ulcer varies by anatomical location. The bridge of the nose, ear, occiput, and malleolus do not have subcutaneous tissue and Stage 3 ulcers can be shallow. In contrast, areas of significant adiposity can develop extremely deep Stage 3 pressure ulcers. Bone/tendon is not visible or directly palpable.[4]

Pressure Ulcer, Stage 4 is defined as full thickness tissue loss with exposed bone, tendon, or muscle. Slough or eschar may be present. Often includes undermining and tunneling. The depth of a Stage 4 pressure ulcer varies by anatomical location. The bridge of the nose, ear, occiput, and malleolus do not have subcutaneous tissue and these ulcers can be shallow. Stage 4 ulcers can extend into muscle and/or supporting structures (e.g., fascia, tendon, or joint capsule) making osteomyelitis or osteitis likely to occur. Exposed bone/tendon is visible or directly palpable.[5]

Pressure Ulcer, Unstageable is defined as full thickness tissue loss in which the actual depth of the ulcer is completely obscured by slough and/or eschar in the wound bed. Until enough slough and/or eschar are removed to expose the base of the wound, the true depth cannot be determined; but it will be either Stage 3 or Stage 4.[6]

Preventable describes an event that could have been anticipated and prepared for, but that occurs because of an error or other system failure.

Restraints is defined by The Joint Commission, the Centers for Medicare & Medicaid Services, and by some states. The appropriate source(s) should be consulted for the definition required by the setting and/or jurisdiction in which a presumptive event occurs. In the event none of those definitions apply to an institution, the following definition, which is intended to capture definitions from the named organizations, is offered: Restraints means any method of restricting a patient's freedom of movement that is not a usual and customary part of a medical diagnostic or treatment procedure to which the patient or his or her legal representative has consented; is not indicated to treat the patient's medical condition or symptoms; or does not promote the patient's independent functioning.

Serious describes an event that can result in death, loss of a body part, disability, loss of bodily function, or require major intervention for correction (e.g., higher level of care, surgery).

Sexual abuse is defined as the forcing of unwanted sexual activity by one person on another, as by the use of threats or coercion or sexual activity that is deemed improper or harmful, as between an adult and a minor or with a person of diminished mental capacity.

Surgery is an invasive operative procedure in which skin or mucous membranes and connective tissue is incised or the procedure is carried out using an instrument that is introduced through a natural body orifice. It includes minimally invasive procedures involving biopsies or placement of probes or catheters requiring the entry into a body cavity through a needle or trocar. Surgeries include a range of procedures from minimally invasive dermatological procedures (biopsy, excision, and deep cryotherapy for malignant lesions) to vaginal birth or Caesarian delivery to extensive multiorgan transplantation. It does not include use of such things as otoscopes and drawing blood. Organizations may choose to adopt a list of surgical procedures to supplement the definition above; one example of such a list in common use is that of the Institute of Clinical Systems Improvement.

Surgery begins, regardless of setting, at point of surgical incision, tissue puncture, or insertion of instrument into tissues, cavities, or organs.

Surgery ends after all incisions or procedural access routes have been closed in their entirety, device(s) such as probes or instruments have been removed, and, if relevant, final surgical counts confirming accuracy of counts and resolving any discrepancies have concluded and the patient has been taken from the operating/procedure room.

Unambiguous refers to an event that is clearly defined and easily identified.

Unintended retention of a foreign object refers to a foreign object introduced into the body during a surgical or other invasive procedure, without removal prior to the end of the surgery or procedure, which the surgeon or other practitioner did not intend to leave in the body.

Notes

1. Food and Drug Administration. Available at http://www.fda.gov/MedicalDevices/DeviceRegulationandGuidance/Overview/ClassifyYourDevice/ucm051512.htm
2. National Coordinating Council for Medication Error Reporting and Prevention. Available at http://www.nccmerp.org/aboutMedErrors.html.
3. Minnesota Department of Health.
4. National Pressure Ulcer Advisory Panel. Available at: http:www.npuap.org/Final_Quick_Treatment_for_web_2010.pdf
5. National Pressure Ulcer Advisory Panel. Available at: http:www.npuap.org/Final_Quick_Treatment_for_web_2010.pdf
6. National Pressure Ulcer Advisory Panel. Available at: http:www.npuap.org/Final_Quick_Treatment_for_web_2010.pdf

Crosswalk of Old Adverse Event Codes to New Adverse Event Codes Starting January 2013

Old Event Code	Old Description	New Event Code	New Description
1A	Surgery performed on the wrong body part	NQF 1A	Surgery performed on the wrong site
1B	Surgery performed on the wrong patient	NQF 1B	Surgery performed on the wrong patient
1C	Wrong surgical procedure performed on a patient	NQF 1C	Wrong surgical procedure performed on a patient
1D	Retention of a foreign object in a patient after surgery or other procedure	NQF 1D	Retention of a foreign object in a patient after surgery or other procedure
1E	Intraoperative or immediate post-operative death in an ASA class I patient	NQF 1E	Intraoperative or immediate postoperative/ postprocedure death in an ASA class I patient
2A	Patient death or serious disability associated with the use of contaminated drugs, devices, or biologics provided by the healthcare facility	NQF 2A	Patient death or serious injury associated with the use of contaminated drugs, devices, or biologics provided by the healthcare setting
2B	Patient death or serious disability associated with the use or function of a device in patient care in which the device is used or functions other than as intended	NQF 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
2C	Patient death or serious disability associated with intravascular air embolism that occurs while being cared for in a healthcare facility	NQF 2C	Patient death or serious injury associated with intravascular air embolism that occurs while being cared for in a healthcare setting
3A	Infant discharged to the wrong person	NQF 3A	Discharge or release of a patient/resident of any age, who is unable to make decisions, to other than an authorized person
3B	Patient death or serious disability associated with patient elopement (disappearance) for more than four hours	NQF 3B	Patient death or serious injury associated with patient elopement (disappearance)
3C	Patient suicide, or attempted suicide resulting in serious disability, while being cared for in a healthcare facility	NQF 3C	Patient suicide, attempted suicide, or self-harm that results in serious injury, while being cared for in a healthcare setting
4A	Patient death or serious disability associated with a medication error (e.g., errors involving the wrong drug, wrong dose, wrong patient, wrong time, wrong rate, wrong preparation or wrong route of administration)	NQF 4A	Patient death or serious injury associated with a medication error (e.g., errors involving the wrong drug, wrong dose, wrong patient, wrong time, wrong rate, wrong preparation or wrong route of administration)
4B	Patient death or serious disability associated with a hemolytic reaction due to the administration of ABO-incompatible blood or blood products	NQF 4B	Patient death or serious injury associated with unsafe administration of blood products
4C	Maternal death or serious disability associated with labor or delivery in a low-risk pregnancy while being cared for in a healthcare facility	NQF 4C	Maternal death or serious injury associated with labor or delivery in a low-risk pregnancy while being cared for in a healthcare setting
4D	Patient death or serious disability associated with hypoglycemia, the onset of which occurs while the patient is being cared for in a healthcare facility		Included in medication error, NQF 4A
4E	Death or serious disability (kernicterus) associated with failure to identify and treat hyperbilirubinemia in neonates		Included in additional specifications of a new event, failure to follow up or communicate clinical information, NQF 4I
4F	Stage 3 or 4 pressure ulcers acquired after admission to a healthcare facility	NQF 4F	Any Stage 3, Stage 4, or unstageable pressure ulcer acquired after admission/ presentation to a healthcare setting
4G	Patient death or serious disability due to spinal manipulative therapy		Retired
4H	Artificial insemination with the wrong donor sperm or wrong egg	NQF 4G	Artificial insemination with the wrong donor sperm or wrong egg

Similar definitions are show in the same color

Old Event Code	Old Description	New Event Code	New Description
5A	Patient death or serious disability associated with an electric shock while being cared for in a healthcare facility	NQF 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
5B	Any incident in which a line designated for oxygen or other gas to be delivered to a patient contains the wrong gas or is contaminated by toxic substances	NQF 5B	Any incident in which systems designated for oxygen or other gas to be delivered to a patient contains no gas, the wrong gas, or are contaminated by toxic substances
5C	Patient death or serious disability associated with a burn incurred from any source while being cared for in a healthcare facility	NQF 5C	Patient death or serious injury associated with a burn incurred from any source in the course of a patient care process in a healthcare setting
5D & 7B	Patient death or serious injury associated with a fall while being cared for in a healthcare facility	NQF 4E	Patient death or serious injury associated with a fall while being cared for in a healthcare setting
5E	Patient death or serious disability associated with the use of restraints or bedrails while being cared for in a healthcare facility	NQF 5D	Patient death or serious injury associated with the use of physical restraints or bedrails while being cared for in a healthcare setting
6A	Any instance of care ordered by or provided by someone impersonating a physician, nurse, pharmacist, or other licensed healthcare provider	NQF 7A	Any instance of care ordered by or provided by someone impersonating a physician, nurse, pharmacist, or other licensed healthcare provider
6B	Abduction of a patient of any age	NQF 7B	Abduction of a patient/resident of any age
6C	Sexual assault on a patient within or on the grounds of a healthcare facility	NQF 7C	Sexual abuse/assault on a patient or staff member within or on the grounds of a healthcare setting
6D	Death or significant injury of a patient or staff member resulting from a physical assault (i.e.battery) that occurs within or on the grounds of a healthcare facility	NQF 7D	Death or serious injury of a patient or staff member resulting from a physical assault (i.e.battery) that occurs within or on the grounds of a healthcare setting
7A	Perforations during open, laparoscopic and/or endoscopic procedures resulting in death or serious disability	CT 1	Perforations during open, laparoscopic and/or endoscopic procedures resulting in death or serious injury.
7B	See event code 5D & 7B*	NQF 4E	
7C	Obstetrical events resulting in death or serious disability to the neonate	NQF 4D	Death or serious injury of a neonate associated with labor or delivery in a low-risk pregnancy
7D	Significant medication reactions resulting in death or serious disability		Retired
7E	Laboratory or radiologic test results not reported to the treating practitioner or reported incorrectly which result in death or serious disability due to incorrect or missed diagnosis in the emergency department		Included in additional specifications of a new event, failure to follow up or communicate clinical information, NQF 4I
7F	Nosocomial infections resulting in death or serious injury		Retired. Many of these are reportable to the HAI program.
7G	Patient death or serious disability as a result of surgery	CT 2	Patient death or serious injury as a result of surgery

Similar definitions are show in the same color

Appendix L: Facility Comments

In accordance with legislation, facilities that are required to report adverse events to the Connecticut DPH may submit comments to DPH for inclusion in the annual report to the legislature. Submitting comments is OPTIONAL, not required. For inclusion, any comments must be received by DPH by November 14, 2012. Comments should be directed to Jon C. Olson at jon.olson@ct.gov, and you may email or call him at 860-509-7889 with any questions. DPH encourages comments describing how a facility used data to measure or track adverse events or quality of care and measurably improve care or decrease adverse events. Do not list awards.

Facilities providing comments:

Hartford Hospital

Hartford Hospital is committed to patient safety. Our values of integrity, caring, and safety support a culture of transparency and accountability. We have engaged in an initiative to eliminate preventable harm by systematically detecting and identifying serious safety events in order to refine processes and to implement best practices. Some of our recent successes have been to reduce the number of serious falls and hospital-acquired pressure ulcers. Hartford Hospital remains committed to applying evidence-based national standards that benefit our patients.

Day Kimball Healthcare

Day Kimball Healthcare is committed to patient safety and employs a multitude of processes to prevent adverse events. We are also steadfast and transparent in addressing events when they do occur. We take every event seriously and work to identify practices and protocols necessary to prevent similar issues in the future. Most importantly, we work diligently to provide the highest level of patient safety possible.

- Day Kimball employees regularly participate in numerous quality improvement/ patient safety committees and collaborate with external organizations to ensure best practices are instituted to prevent adverse events.
- Our quality department proactively educates our staff on patient safety topics, consistently performs reviews of operations and policies, and institutes case reviews as needed.
- Day Kimball conducts a thorough review of each Joint Commission Sentinel Event Alert in order to identify additional strategies and other opportunities for quality improvement initiatives for injuries that seem to be trending across the country.
- To immediately address each adverse event, a taskforce is formed, a root cause analysis is conducted, and all key stakeholders are debriefed.
- In the current DPH Report dated October 2011, Day Kimball Hospital was shown to have had fewer adverse events over the four year period 2007-2010 (9 in total) than in period 2005-2006 (13 in total), demonstrating patient safety improvement.
- Additionally, we were recognized by The Joint Commission during their triennial survey this summer for an impressively low number of findings. Day Kimball has subsequently received full accreditation by The Joint Commission.

Day Kimball Healthcare continues to be proactive in integrating best practices learned through our own experiences and comprehensive analyses as well as through collaborations with Connecticut Hospital Association, VHA, The Joint Commission and others.

We are more intense, pursue complete disclosure, and strive for transparency. We only had two, and both were perforations, the second most commonly reported event in the state.

MidState Medical Center

MidState's mission is to improve the health and healing of the people and communities we serve and our core values of Integrity, Caring, Excellence, and Safety provide a foundation for a culture of safety and performance excellence.

Patient Safety Results

MidState has focused the last several years on reducing the number of preventable patient falls and the number of falls with injuries.

- In FY 11- MidState achieved a 29% reduction in the overall inpatient fall rate and the overall number of inpatient falls dropped 24%.
- In FY12, MidState continued to make considerable progress reducing patient falls and achieved another 10% reduction over the prior year on inpatient falls. Through our performance improvement activities, MidState reduced outpatient falls as well by 33% in FY12.
- The overall number of falls with injury achieved a 47% reduction in FY12.
- The focus at MidState has been to increase the appropriate use of enclosure beds for fall prevention, proactive rounding to identify patients at high risk for falls and reducing sitter observations for patients at risk for falls.
- Identifying that patient observers do not prevent patient falls, MidState has proactively identified strategies to reduce falls and reduce observation use. In FY12, MidState achieved a 78% decrease in sitter use for patients at risk for falls.

MidState's Journey to Creating a High Reliability Organization:

- Recognizing that the first step in reducing patient harm is the identification and reporting of actual and near miss events, Midstate set a goal in FY12 to increase the number of internal incident reports by 10%. MidState achieved a 16% increase and promoted the reporting of near misses using a campaign slogan of "See Something, Say Something." Staff reporting near misses were recognized with a small token of appreciation.
- Since 2009, MidState has participated in a national survey to gauge the employee's perception of the "culture of safety" at MidState. The overall percentile ranking improved for MidState nationally from the 54th to the 80th percentile from 2009-2012.The overall score improved from 65.3 to 68.9 over the same time period. Improvement was achieved in all thirteen dimensions of safety for the second year in a row.
- There was a strategic initiative to improve the culture of safety by implementing strategies to achieve an improvement in the percentile rank for the "Communication Openness" section from the 52nd to the 57th percentile.
- The percentile ranking was in the 25th percentile in 2009 and in 2012, MidState achieved the 83rd percentile moving from the 52nd to the 83rd percentile in one year.

Yale-New Haven Hospital, Bridgeport Hospital, and Greenwich Hospital

Yale-New Haven Health System, which consists of Yale-New Haven Hospital (York Street and Saint Raphael's campuses), Bridgeport Hospital and Greenwich Hospital fully supports the transparency this report represents. We continually strive to deliver the highest quality patient care; safety of our patients is our number one priority. To that end, we participate actively in the Connecticut Hospital Association's statewide initiative to eliminate harm based on the principles of "high reliability" and applaud the efforts of our hospital association to tackle some of the most difficult patient safety issues facing healthcare institutions. We believe that our culture of safety, which encourages and standardizes the reporting, analysis, and implementation of requisite improvements in response to all unexpected or adverse outcomes has created a safer and more transparent healthcare environment. We actively share the information in this report throughout the System and utilize the data to guide performance improvement efforts. We are pleased with improvements that have been made with regard to harm reduction in Connecticut's healthcare institutions. The public can be confident that we will continually strive to improve, and in so doing, reduce the number of adverse events and increase patient safety.

Lawrence and Memorial Hospital

Lawrence +Memorial Hospital (L+M) holds patient safety as our number one priority focus, while always striving to deliver high quality care for the patients in our community. We work consistently and persistently to provide evidence-based best practice care to achieve high-quality outcomes for our patients. L+M Hospital's medical staff, leadership and all our employees take a proactive approach to patient safety by identifying potential safety issues, reporting concerns and resolving safety issues. Our culture supports, encourages and expects the reporting of all unexpected or adverse outcomes and shares lessons learned with all departments in an effort to improve safety for all. We have a robust process for reporting and investigating adverse events as well as potentially unsafe conditions. All of our patient safety goals are linked and aligned to our strategic plan. Lawrence +Memorial Hospital has a culture of continuous improvement supported by Process Innovation, Organizational Leadership and Development, and Quality Management. We have a long standing commitment to safety education for our staff and other healthcare professionals in our area; one example is our Annual Quality & Patient Safety Month educational series. Over the past six years we have brought outstanding speakers from all over the country to speak on safety, reliability and culture change.

Additionally, L+M has many improvement initiatives and collaboratives underway to continuously improve patient safety and quality care delivery. We actively participate in the Connecticut Hospital Association's (CHA) statewide clinical quality collaborative; a few examples include: fall prevention, infection prevention, pressure ulcer prevention, equipment safety, and the partnership with CHA and AHA/HRET on reducing readmissions by 20%.

This year, Lawrence + Memorial joined with the other CT hospitals and the Connecticut Hospital Association on a high reliability journey with the goal of eliminating patient harm. L+M is engaged at the highest level in order to achieve this goal and will be educating all of our medical staff and employees on the science of high reliability and the behaviors that support safety all the time. The L+M Board and every member of the hospital family has committed to supporting this journey.

Connecticut Children's Medical Center

Connecticut Children's Medical Center consistently places top priority on our quality improvement and patient safety programs. In the past few years, Connecticut Children's has implemented numerous quality and patient safety initiatives, including:

- New roles dedicated to the improvement of Patient Safety including: Senior Vice President of Quality and Patient Safety, Senior Manager of Patient Safety, Medication Safety Specialist and Director of Operational Excellence;
- Existence of multidisciplinary committees which meet to review quality improvement and patient safety topics. These include: Weekly Quality and Safety Committee, Outpatient Quality Committee, Patient Event Review and Reimbursement Committee and Leadership Safety Huddles;
- Upgraded our electronic occurrence reporting system to increase event reporting, efficiency, and follow through. The system allows for improved tracking and trending;
- Front line staff acting as Infection Control liaisons performing periodic audits related to hand washing and infection control bundle compliance;
- Participation in Child Health Corporation of America collaboratives such as Reduction of Blood Stream Infections;
- Participation as a level III organization in the Connecticut Hospital Association Collaborative with Healthcare Performance Improvement around being a high-reliability organization;
- Mandatory risk management education for clinical staff and hospital leadership on topics such as the electronic health record, informed consent and HIPAA;
- Multidisciplinary team facilitation of root cause analysis on each adverse event or event that results in patient harm. These analyses include the creation and implementation of corrective action plans;
- Quality reviews performed on events that have the potential to cause patient harm;
- Continue to be a leader with the requirement of a mandatory influenza vaccine program for all employees as a condition of employment;
- Sharing quality and patient safety measures with the public through a digital signage system at the Medical Center, with large screen monitors located on each floor. This communication system is part of our goal to be as transparent as possible when it comes to quality and patient safety.

At Connecticut Children's Medical Center, we continue to monitor the effectiveness of our quality and safety initiatives. We actively review new evidence based practice that can benefit all of our patients.

Griffin Hospital

Griffin hospital is committed to the review and investigation of patient safety incidents to identify opportunities for care process and performance improvement. Investigation methods employed include root cause analyses, clinical debriefs and system reviews. All perforations go through an intensive peer review process. Findings are shared at the staff, management and board levels. Corrective action is timely and monitored for effectiveness.

Since 2007, Griffin Hospital has participated in all four CHA PSO statewide clinical improvements collaborative which include Pressure Ulcers, Multiply Drug Resistant Organisms Reduction, Patient Falls with Injury, and Reduction of Heart Failure Readmissions.

Stamford Hospital

Stamford Hospital's approach to quality improvement is comprehensive emphasizing interdisciplinary teamwork and information technology. The organization has utilized progressive approaches to achieve improvements in the effectiveness, safety, and experience of care.

The organization reviews performance results from a number of sources on a continuous basis. This Department of Public Health report is one source of this information, including information related to safety of care. The overall rate of adverse event reporting in the present report should be viewed in the context of the complexity of the patients cared for by the organization.

One area highlighted in the report, patient falls, is an area where we have implemented a number of interventions. These include a comprehensive and regular interdisciplinary rounding program, a more detailed fall risk assessment process, and targeted interventions for specialized patient populations. These interventions are tracked on a continuous basis through our participation in a National Database of Nursing Quality Indicators. As a result, our overall fall rates have dropped continuously and significantly over the last year.

St. Vincent's Medical Center

Patient safety continues to be the highest priority of St. Vincent's Medical Center and St. Vincent's Behavioral Health Services. Our focus on safety is demonstrated in our organization wide daily safety huddles, which encourages staff to speak openly and is an effective way to prioritize safety concerns, initiate improvement and spread lessons learned. Problems are identified promptly and solutions applied for effecting safe and satisfactory patient care experiences. Safety huddles also promote accurate detection and reporting of actual and near miss events. Timely detection and investigation help us identify where improvements can be made for all patients as well as determine which reported events are not preventable. Most important, this system ensures that our culture of high reliability is continuously reinforced and that we quickly prioritize actions based on whether immediate harm is evident. Our high reliability culture values transparency and improvement, rewarding associates for bringing concerns and solutions forward. Our process of disclosure of adverse events to patients and families, associates, physicians, and Board members, enables us to work together to identify and implement process changes to prevent reoccurrences.

St. Vincent's continues to meet the goals of a High Reliability Organization. All of our physicians and staff (including voluntary medical staff) are required to attend High Reliability Safety programs where proven safety behaviors are taught. St. Vincent's has led the way as a High Reliability Organization and is now collaborating with the Connecticut Hospital Association to assist other organizations on their High Reliability journey.
St. Vincent's Medical Center recently achieved Magnet recognition by the American Nurses Credentialing Center (ANCC). The Magnet Recognition Program focuses on advancing three goals: promoting quality of care, identifying excellence in the delivery of nursing services to patients, and disseminating nursing care best practices.

St. Vincent's is actively involved in the Center for Medicare and Medicaid Services (CMS) Hospital Engagement Networks, aggressively working on all 10 of the identified projects including falls, pressure ulcers and adverse drug events. St. Vincent's participates as a member of two federally recognized Patient Safety Organizations (PSO's). As part of the Hospital Inpatient Quality Reporting Program, St. Vincent's also participates in SCIP, a national quality partnership of organizations focused on reducing the incidence of surgical complications, and over the past year has demonstrated a very significant improvement in both composite and appropriate care scores.

St. Vincent's believes that improved technology will enhance patient safety, as a built in "double check" for staff and physicians already trained in and practicing safety behaviors. Intravenous medication pumps were recently upgraded with "smart" technology. This upgrade has significantly reduced potential medication errors. St. Vincent's also utilizes bar coding to prevent errors in dispensing medications. In addition to accurate counts, St. Vincent's utilizes a safe non- invasive tool that provides for wanding the patient and operative field before leaving the operative room, to verify that no surgical sponges are left behind.

St. Vincent's is proud to have implemented a Care Partner/Relationship Based Care model. The Care Partner program is rooted in the philosophy that a "healing partnership" between patients, families and the healthcare team will result in improved outcomes for the patient as well as increased safety and security. Patient's family and friends are invited to partner with us to provide the best care possible.

Saint Francis Hospital and Medical Center

Saint Francis Hospital and Medical Center is committed to delivering the highest quality of care for our patients and strives to empower all members of the organization to speak up for patient safety. The safety of the patient is our number one priority. Our organization has worked hard to establish a non-punitive culture of event reporting and complete transparency when an unintended event occurs. Focusing on the identification of system-based errors through the utilization of many different tools, such as root cause analysis and failure mode and effects analysis, as well as hospital-wide risk assessments, has led to an overall decrease in serious incidents and adverse events. Proactively sharing the lessons learned with all staff members has allowed us to ensure that best practices are followed and system improvements are implemented.

As a result of our patient safety initiatives, we have experienced a decreased rate of ventilator associated pneumonia by 46% in 2011 when compared to 2010, and have no central line associated infections over the past nine months in its intensive care units. In the area of all prevention, we continue to work with CHA in their Falls Collaborative, and have now identified fall champions in all areas. Our multidisciplinary Falls Committee continues to work to identify opportunities for improvement through the institution of best practices, and this has resulted in a 24% decrease in falls in 2011 when compared to 2010 results.

Danbury and New Milford Hospitals

Danbury Hospital and New Milford Hospital, members of Western Connecticut Health Network (WCHN), have long been focused on providing high quality, safe care to the patients in their community. This is driven by a strong culture of accountability and best practice adoption. In 2011, we enhanced our program aimed at elimination of all-cause preventable harm, through a focus on High Reliability Science. High Reliability Organizations (HROs) promote safety through creating a culture and processes that radically reduce failures, and effectively respond when failures do occur. Both hospitals have actively participated in HRO training programs at the local, state, and national level.

All of our Board-driven quality and safety goals are tied to performance targets that represent top 10th percentile national performance. Through participation in multiple voluntary national quality improvement data sharing programs in specialties such as surgery, cardiology, and nursing, we ensure that our outcomes are comparable to the best in the country. We use these national data to judge performance, identify opportunities for increased attention, and measure improvement. For example, through participation in the Nursing Database of National Quality Indicators (NDNQI), we have been able to validate statistically significant improvement in fall and pressure ulcer rates, while confirming positive comparisons to national rates. Through our National Surgical Quality Improvement Program database, we have been able to use patient outcome data, compared to national performance, to target those areas where we are not achieving "exemplary" surgical rating, and then use the same database to verify that any changes in practice moved us in the right direction.

Our internal reporting processes not only focus on capturing patient harm events, but on detecting precursor and near miss events, allowing us to make changes before something unintended occurs. Thankfully, the vast majority of events do not involve harm. In the unfortunate case where a patient harm event occurs, we work with the patient and their family to quickly determine what happened and take all appropriate action to meet their needs. With the recognition that healthcare has become increasingly complex, and our patients often have multiple conditions, we know that we must focus more than ever on system-level and known patient-specific factors that contribute to the risk of undesired outcomes. Lean Six Sigma methodology is utilized organization-wide, with certification for a number of employees in key areas. We take very seriously the trust our community places in us, and commit to continuously partnering with our patients and families in the pursuit of patient-centered quality and safety excellence.

Middlesex Hospital

Our mission at Middlesex Hospital is to provide the people of our community with the safest, highest-quality health care and the best experience possible. We continuously strive to improve our processes and services to achieve this goal so that our patients receive the most effective evidence-based medical care. We also understand that the culture of an organization is the key driving factor in determining how safe that organization is both for patients as well as employees, and are working to constantly make safety and quality always "the way we do things around here."

There are many studies showing that people suffer avoidable harm in hospitals around the world. We believe that is unacceptable and thus take all adverse events extremely seriously. Our goal is zero preventable harm. To get there we focus on best practices and what works well, but when something does not, we carefully investigate in order to learn, so we can prevent it from happening again. This includes the creation of a non-punitive reporting environment so we are able to quickly learn about and correct potentially unsafe circumstances before they result in anyone being harmed.

Middlesex Hospital is taking many steps in the areas of safety and quality to fully achieve our goals. This includes many initiatives and collaborative projects with organizations such as CHA and IHI (the Institute for Healthcare Improvement), a leader in quality and safety. For example, we have signed onto the "Partnership for Patients," a national collaborative focusing on decreasing patient harm and readmissions, and are also instituting practices that will create a high reliability organization at Middlesex Hospital. In addition, in 2012, we have created a new position for a Vice President for Quality and Patient Safety, so a member of our senior management team will be able to have an intense focus on improvement in these areas. Beyond this we have ongoing projects focusing on prevention of infections, falls, and pressure ulcers, to name just a few.

We want the experience of people receiving care at Middlesex Hospital to be the best it can be, the kind of place we would think of as the clear first choice to go for medical care if we needed it for our own loved ones. Some of the efforts we have made towards this include creating a Patient and Family Advisory Council to help us learn what works well in this area and where we have opportunities to improve, as well as having patients tell the stories of their experiences in our health system directly to our staff so we can learn first-hand from the voice of the patient. Our aim is to create an experience of care that is truly focused on the patient and their family.

Through an intense focus that includes leadership, teamwork, science and technology, information, the intelligent use of data, and transparency, we will not stop working towards the safest, highest-quality care and best experience possible for all the members of our community.