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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EXECUTIVE SUMMARY

Under the current event definitions, the most common adverse events among 1,637 reports are: (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, and (4) retention of foreign objects in patients after surgery. In 2011, facility-level counts and rates are reported for the first time, in accordance with Public Act 10-122.

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.

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 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

[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 "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.

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 replaces the Connecticut-specific category (7B) that previously existed.

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, *An Act Concerning the Reporting of Adverse Events at Hospitals and Outpatient Surgical Facilities and Access to Information Related to Pending Complaints Filed with the Department of Public Health* was signed into law June 8, 2010. Passages relevant to the Quality in Health Care program are:

> For annual reports submitted on or 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. On and after July 1, 2011, any report submitted by the commissioner pursuant to this subsection shall include any informational comments received concerning an adverse event that is included in the report.
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> The advisory committee shall establish methods for informing the public regarding access to the department's consumer and regulatory services.

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

[4] Category 4H is "Artificial insemination with the wrong donor sperm or wrong egg."

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, 2011 DPH report on Connecticut's Quality of Care Program[5]).

During the fall of 2010, DPH staff participated in the National Quality Forum /Agency for Healthcare Research and Quality sponsored *Improving Patient Safety through State Based Reporting in Healthcare* initiative. Periodic conference calls provided state-operated reporting programs a forum for staff to exchange ideas, discuss best practices and share the challenges faced in operating the reporting programs.

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. 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. DPH also thanks the Patient Safety Organizations for providing summaries of their activities over the past year.

ADVERSE EVENT DATA

The new reporting system that came into effect on July 1, 2004 uses categories roughly equivalent to the more serious events under the old system. Volume of annual reporting under the new system has been comparable to the annual volume of the most serious events under the old system.

As of May 11, 2011, the DPH electronic database contained 1,637 reports received using the reporting system that came into effect on July 1, 2004. 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.[6] Consequently, clear conclusions about

[5] Quality of Health Care Reports are available at www.ct.gov/dph under "Health Care Quality".

[6] 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

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.[7]

The Connecticut adverse event reporting system is by design focused on serious, partly or mostly preventable events.

Between July 2004 and May 2011, acute care or children's hospitals submitted 1,436 (88%) of the 1,637 adverse event reports; chronic disease hospitals, 92; hospitals for the mentally ill, 56; and outpatient surgical facilities (if not owned by a hospital), 53. Forty-five percent of reported adverse events occurred in males and 55% in females. The majority of reports concerned patients over the age of 65 years. Reported events occurred at all hours of the day and night, though less so between 1 pm and midnight. The most common location of occurrence was reported to be the adult medical ward. One hundred fifty-seven deaths were reported in connection with an adverse event.

Detailed event tabulations can be found in the appendices. Appendix A lists the leading adverse event in the following categories: facility type, patient age, and location of event in the facility. Most events at location "Outpatient Services" were at facilities operated by acute care hospitals. The short adverse event identifiers in the right-most column of Appendix A correspond to the longer adverse event descriptions in Appendices B and C.

Appendix B presents the number of adverse events reported by half 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 time.

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. Six hundred fifty-five falls comprised 40% of all 1,637 adverse events reported. The second most commonly reported events were perforations during open, laparoscopic, and/or endoscopic procedures, with 319 reports (20%).[8] Falls and perforations were also the categories associated with the largest number of patient deaths. The third and fourth most commonly reported events overall in Connecticut were Stage 3 or 4 pressure ulcers acquired after admission to a healthcare facility, and retention of foreign objects in patients after surgery or other procedures. These four categories constitute 83.7% of reports overall.

The number of pressure ulcer reports increased starting in 2008, but declined in 2010 compared to the previous two years. See the 2009 adverse event annual report for further details.

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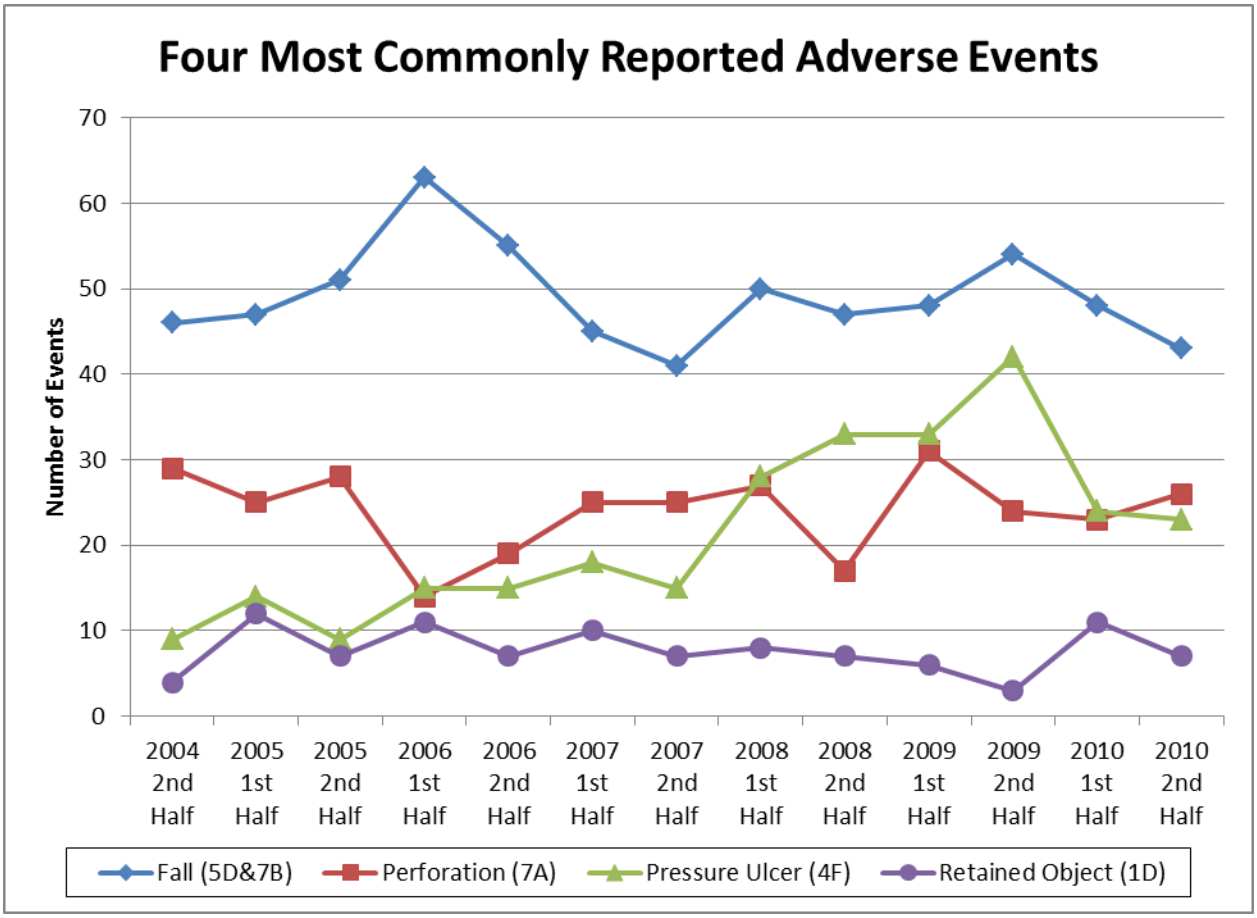
surgical or medical procedure. The clustering of preventable adverse events in hospital departments was more than twice that found in hospitals, implying that "there is more room for improvement in patient safety at the hospital department level than at the hospital level."

[7] 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.

[8] 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).

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."[9] 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.



Among 24 reports of obstetric events with harm to the neonate (7C), vaginal birth was mentioned on 13 and C-section on 11. Two vaginal births after cesarean (VBAC) were planned; one was converted to C-section. The distribution by mother's age was not different than expected: 18 years (1), 20-29 (6), 30-34 (6), 35-36 (4), and 40 (1).

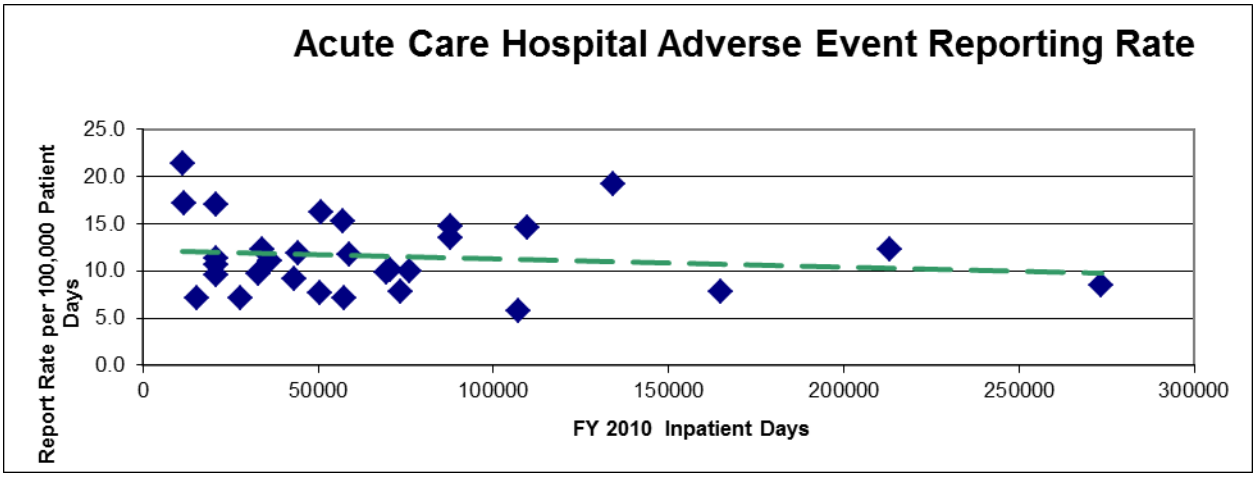
Reporting of category 7G, patient death or serious disability as a result of surgery, increased during the second half of the year (2010) that it was introduced. This category includes serious surgical events not reportable under a different category, potentially a diverse group. Of the 17

[9] 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.

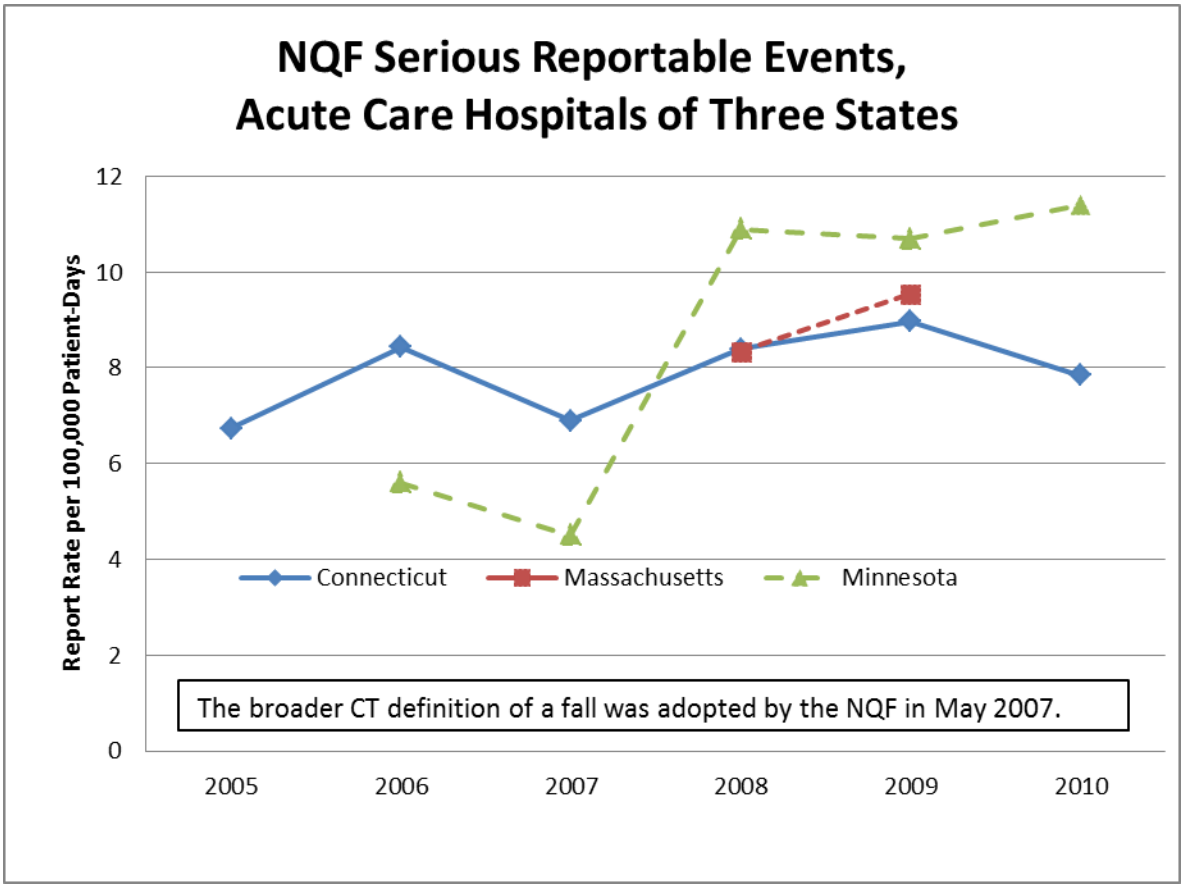
reports, 15 mentioned large blood loss, which is part of the category 7G inclusion criteria. The most common diagnosis (3) mentioned was abdominal aortic aneurysm. The most common procedure (3) mentioned was colonoscopy; two of these appeared to involve blood loss that occurred prior to the hospitalization in which the adverse event was reported. Three procedures were removal of three different cancers, two others were organ transplants.

In accordance with PA 10-122, facility-level adverse event data are presented for the first time. Adverse event reporting by facility, event type, and year 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.

Adverse event reporting rates for acute care hospitals are shown in appendix H. The rate varied among hospitals, both in individual years, and over the period 2004-2010, but there was little relationship between the size of the hospital and the reporting rate per 100,000 inpatient days during 2010 (chart below) or 2004-2010, as shown by the nearly flat dotted line. The rate was 11.2 (2010) and 10.5 (2004-2010) adverse events reported per 100,000 patient-days. No conclusion can be drawn about 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.



The adverse event reporting rate among acute care hospitals in Connecticut, for NQF-defined events, was compared with acute care hospitals in other states that use the NQF list. As shown below, the reported rate in Connecticut was very close to the rates for Massachusetts during 2008-2009 and lower than Minnesota during 2008-2010. The Connecticut rate shown during 2005-2010 is for a uniform definition of falls. The Minnesota rate for 2007 reflects in part the more restricted NQF definition of falls, which changed in May 2007 to the broader definition used by Connecticut. Using the more restricted definition of falls, Connecticut's overall report rate for 2006 was 3.58 (rather than 8.43) per 100,000 inpatient days. During 2008, Minnesota began reporting unstageable pressure ulcers along with stages 3-4. This practice is not mandated in Connecticut. For data sources, see appendix N.



In appendix H, the calculated rates are based on adverse events that occurred in the emergency department, inpatient, or an outpatient setting of an acute care hospital (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 above chart, 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" (see appendix A, second page) 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.

In appendices I and J, adverse event report rates are given for chronic disease hospitals and hospices, and hospitals for mentally ill persons, respectively, in 2010. (Patient visits or patient days information was not collected by DPH for earlier years.) These patient populations differ considerably, both from acute care hospitals, and from other hospitals in the same category. No conclusion can be drawn about whether a high reporting rate indicates better quality care, worse quality care, or neither better nor worse quality care.

Appendix K shows the adverse event reporting rate for ambulatory (or outpatient) surgical facilities, pain medicine centers, fertility centers, and outpatient childbirth centers in 2010. (Information on numbers of patients seen was not collected by DPH for earlier years. Some facilities may not yet have been in existence during earlier years.) Most outpatient surgical

facilities specialize in one type of surgery, such as colonoscopy, orthopedic surgery, or eye procedures, which vary greatly in relation to risks for reportable adverse events from one another, and their patient populations differ greatly from hospital inpatients. Again, it is not possible to identify what causes the differences in the reported rates. In addition, the number of events reported is too small for statistical significance testing of differences.

Emergency Department (ED) adverse event reports and rates, by facility and year, appear in appendix L. These 61 reports are also included among the reports from hospitals in appendix H, where a different denominator is used for rate calculation. ED visit data were not available for 2010 for this analysis. Including the reports in early 2011, as shown in appendix A, 35 of 62 ED reports (56%) were falls.

Appendix M, based on billing data, shows the primary payer for patients seen at each facility. Some ASCs provided case mix instead of the requested 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 (note 6) 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.[10] 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 0.26 (it was -0.06 for the 2010 rate). The correlation between average patient age (not shown) and reported event rate in 2004-2010 was 0.43. No attempt was made here to risk adjust the rates based upon the average age of the population served or other contextual factors. In the present context, quantitative risk adjustment could give misleading support for the premise of comparing facilities based on reported rate in the absence of data validation.

Appendix O provides analysis of reports of wrong site, wrong patient and wrong procedure surgery in Connecticut, with summary of related work in other states and nationally. The majority of reports in Connecticut were of procedures performed on the wrong side of the body, or the wrong level of the spine. Appendix P presents analysis of reports of retained foreign object after surgery or other procedure. The most common retained objects were guide wire tips. Instrument and sponge counts are important but are not the sole means of preventing this adverse event.

Appendix Q examines the DPH criteria currently used to screen death records for possibly unreported adverse events. The criteria were found to be well-chosen from among the cause of death codes but rather insensitive at detecting events. No unreported events have been identified through these screening criteria.

[10] 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]

The proportion of adverse event reports that led to a DPH investigation are shown in appendix R, according to event type. Prior to February 2007 this information was not reliably recorded in the electronic database. Among the more commonly reported events, investigation rates were lower for falls and for perforations during surgery, and higher for wrong patient/site/procedure surgery, obstetric events harming the neonate, sexual assault, and attempted suicide. The decision to launch an investigation is influenced by how often the type of event has been investigated previously and whether DPH is satisfied with the Corrective Action Plan submitted by the facility.

Appendix S contains facility comments, as per PA 10-122, that had been received by the publication date.

CURRENT ACTIVITIES AND FUTURE PLANS

The National Quality Forum Board has recently approved for endorsement a list of 29 serious reportable events (SREs) in healthcare as outlined in the report *Serious Reportable Events in Healthcare–2011 Update: A Consensus Report*. Of the events submitted, 25 were updated from their earlier endorsement in 2006, and 4 new events were added to the list. The full list of events was available for a 30-day public appeals process closing July 12, 2011. The Connecticut DPH will undertake to modify Connecticut's list of reportable adverse events to incorporate the latest NQF list, after the latter is released.

DPH regularly screens mortality data for cause of death codes that might be related to an adverse event (appendix O). 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.

During the collection of data from ASCs in order to calculate report rates, DPH learned that at a small number of ASCs, personnel were not aware that their facility was required to report adverse events, nor had the ASC participated in a Patient Safety Organization other than by paying dues. The Department notified these ASCs of the law and of how to report events.

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 Systems Branch (whose name changes to Healthcare Quality and Safety in 2012) 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 results of completed investigations are public, and may be obtained upon request, under the Freedom of Information (FOI) Act.

Sharing of Lessons

Results from the adverse events program are shared with the Quality in Health Care Advisory Committee.

Connecticut General Statutes and national legislation encourage sharing of patient safety information between healthcare facilities and Patient Safety Organizations,[11] which are completely separate from regulatory entities. Through the Quality in Health Care Advisory Committee, DPH cooperates with PSOs to promote the adoption and development of best practices. The independence of the PSOs, and the confidentiality of their data, are ensured under the law.

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

[11] Other information about PSOs can be found in the June 30, 2009 Quality in Health Care Report to the General Assembly.

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. The following information covers activities since June 30, 2010.

Qualidigm PSO

The Qualidigm PSO membership continues to include providers from long term care, acute care, specialty and behavioral health facilities, and ambulatory surgical centers. This diverse group of health care organizations provides a unique opportunity to acknowledge and address the distinctiveness and commonalities of patient safety issues across settings of care. Patient safety and quality issues in health care are of national concern, and the solutions need to be evidence-based and easily adaptable to each unique setting. Following the principles of adult learning, the Qualidigm PSO continues to offer inter-active programs with information that can be utilized to meet the participant's unique organizational environments.

In 2010-2011, the Qualidigm PSO offered four full-day educational programs and one half-day program to its members. Each program had a specific patient safety agenda and targeted practical strategies that could be implemented at each facility.

The first day long program occurred in the fall of 2010. This interactive program was designed to engage the participants in developing practical, usable, and supportable approaches to prevent falls while avoiding the use of physical restraints and alarms. Also in the fall, Qualidigm provided a half-day workshop on preventing pressure ulcers focusing on the non-Caucasian patient. In this workshop, a national expert discussed skin and wound considerations in the non-Caucasian patient as well as signs and symptoms of skin breakdown in this population. As winter faded into spring, the Qualidigm PSO continued its active "partnering relationship" with the Connecticut Hospital Association PSO, co-sponsoring the Heart Failure Readmissions Collaborative, the annual full day-long Falls Symposium, and the Annual Patient Safety Summit. Partnering with the CHA and other health care providers enables the Qualidigm PSO to provide a broader range of resources and activities focused on improving and protecting the safety of patients.

In 2010, Qualidigm also partnered with the DPH to provide a full day-long program with three nationally known experts focusing on strategies for reducing and preventing *Clostridium difficile* infections. This was combined with an intensive educational session on strategies used to promote a culture change to sustain the improvements that are made. These experts also provided a panel discussion regarding *Clostridium difficile* infection trends, challenges, and mitigation strategies. This final program was attended by health care professionals from across the health care continuum and was sponsored in part by a grant from the DPH.

An electronic newsletter, the *PSO News Flash,* is distributed to PSO participants on a monthly basis. These news flashes contain information and links to recent patient safety related articles, tools, reminders, and upcoming events. Past issues of the *PSO News Flash,* as well as materials from education programs and national initiatives, are available on a password protected PSO page on the Qualidigm website (www.Qualidigm.org).

As the Qualidigm PSO and its participants grow more comfortable with the PSO concepts and functions, the programs and offerings continue to mature. These activities include more in-depth one-to-one needs assessments with each PSO member and our quality improvement expert, plus the sharing of best practices by the participating organizations.

Qualidigm actively solicits and welcomes feedback and suggestions to improve and strengthen the PSO to best meet the expectations of participants.

Ambulatory Surgical Center (ASC) PSO

Creating a culture of compliance for infection control remained the focus of the ASC PSO in 2010-2011. With the assistance of a Certified Infection Control (CIC) specialist, the PSO developed an on-going study involving monthly reporting of hand hygiene (HH) compliance among facilities. In-service training was provided to each facility to ensure effective observation and reporting. An observation tool was developed, based on Centers for Disease Control (CDC) guidelines, and reporting began in September 2010. Observation anonymity was encouraged in order to effectively gauge compliance. Random site visits will provide another layer of review and further opportunity for facility education.

The HH study results were compiled into a dataset that maintains the confidentiality of each facility but allows for benchmarking within each specialty and across the spectrum of ASCs in Connecticut. National statistics maybe incorporated into the dataset at a later date.

Facilities have been provided tools to encourage staff compliance, including new posters and staff pledge materials. An innovative HH compliance improvement grid provides monthly staff intervention tools, and an action checklist encourages quality reporting. Patient education materials have been developed, and the ASC PSO staff is completing a Spanish hand-washing flyer to accommodate an even greater patient base.

Safe injection practices became another focus of the PSO this year. The “One and Only Campaign” video was presented to the membership, along with a pre and post study to gauge knowledge and improvement. Copies of the video were secured from the CDC and made available to each facility for staff programming. Extensive programs were also provided on Surgical Care Improvement Project (SCIP) measures, other areas of infection control, and quality improvement programs.

The ASC PSO is exploring specialty topics relative to safety and quality and adverse event reporting. In the coming months, the organization will be completing the process for national PSO listing with the Department of Health and Human Services.

Membership in the ASC PSO has continued to grow, with 60 ASCs actively participating in mandatory membership meetings and data gathering initiatives. In addition to various resource materials developed by the PSO, the PSO also provided quarterly newsletters and email alerts on important patient safety topics.

Connecticut Hospital Association (CHA) PSO

The CHA PSO, offered through CHA's research and education affiliate, the Connecticut Healthcare Research and Education Foundation, was designated by DPH in 2004, and achieved federal PSO status in December 2009. All but two of Connecticut's not-for-profit hospitals participate in the PSO, which helps hospitals improve patient safety and quality of care through clinical collaboratives, learning communities, education, and resource sharing.

Statewide Clinical Collaboratives

Since 2007, CHA has launched four statewide clinical collaboratives. Through a dedicated website, data collection, educational conferences, conference calls, onsite visits, and ListServs, staff from hospitals across the state rapidly share information on successes and best practices. The collaboratives are:

- **Pressure Ulcer Prevention Collaborative:** This was CHA's first clinical collaborative, launched in late 2007. While the 25 participating teams have completed the active data collection and reporting phase, they continue to focus on consistent implementation of proven prevention strategies. Hospital-acquired pressure ulcers (bed sores) have been dramatically reduced as a result of the pressure ulcer collaborative.
- **Multiple Drug-Resistant Organisms Collaborative:** CHA partnered with Qualidigm, which has taken the lead on this collaborative. Multiple drug-resistant organism (MDRO) healthcare-acquired infections, such as Methicillin-resistant *Staphylococcus aureus* (commonly called MRSA) have been reduced at hospitals participating in the MDRO collaborative.
- **Patient Falls with Injury Collaborative:** The collaborative, which began in 2009, has resulted in enhanced hospital-wide fall prevention programs. Reducing patient falls is a complex problem that requires a multi-disciplinary approach and standardizing fall prevention strategies hospital-wide. Rigorous data collection and a process to identify the common causal factors are necessary to sustain successful fall prevention programs. This year, in an adjunct session, collaborative teams came together to hear about fall prevention programs in six communities that reach across the continuum of care. Presentations by hospitals and healthcare organizations and a keynote address by the

director of the Division of Unintentional Injury Prevention, Centers for Disease Control, were featured.

- **Reducing Heart Failure Readmissions Collaborative:** In February 2010, CHA, in partnership with Qualidigm, began a two-year collaborative aimed at reducing heart failure readmissions. Strategies include standardizing the processes related to the care of the heart failure patient from admission to discharge, and to the next level of care. Millions of people annually are diagnosed with heart failure, and many will be readmitted to the hospital unnecessarily. This collaborative focuses on helping hospitals implement best-practice guidelines proven to reduce preventable readmissions. Now in its second year, the collaborative teams are conducting trial interventions and continuing to share and learn from each other and national subject experts through webinars and learning sessions.

CHA PSO Learning Communities

For the third year, through CHA's PSO, hospitals are participating in a national project aimed at preventing central line-associated blood stream infections (CLABSI). The Stop BSI project has 44 states currently participating. In Connecticut, the STOP BSI project was launched in January 2009 with 17 intensive care unit (ICU) teams participating from 14 hospitals. The Connecticut hospitals currently participating in the project have committed their ICU teams to work collaboratively to prevent CLABSIs by standardizing processes related to the insertion, maintenance, and removal of central-lines, and measurably improving the culture of safety in the ICU. In this final year of the project, teams are continuing to spread their successful interventions hospital-wide and will attend a final session to celebrate their collective achievement.

In the fall of 2011 CHA is expanding the Stop BSI project to encompass the Stop CAUTI project, a national initiative aimed at reducing catheter-associated urinary tract infections (CAUTI). The goal of the project is to reduce CAUTIs by 25 percent through the implementation of best practices for the appropriate placement, continuance, and timely removal of urinary tract catheters, and improve the culture of safety in the hospital by utilizing the Comprehensive Unit Based Safety Program. For more information see http://www.safercare.net/otcsbsi/hopkins_direct/entries/2009/9/29_connecticut.html.

This project's objectives align with those of the Department of Health and Human Services' *Action Plan to Prevent Healthcare-Associated Infections* national goal to prevent CAUTIs.

Another PSO learning community is participating in the National Surgical Quality Improvement Project, the first nationally-validated, risk-adjusted, outcomes-based program to measure and improve the quality of surgical care, while another is involved in a campaign to improve surgical safety by piloting a checklist developed by the World Health Organization.

Patient Safety Summit

Since 2003, CHA has been proud to offer an annual educational summit for healthcare leaders focused on the topic of quality and patient safety. The summit brings experts from around the globe to share the science and improvement strategies known to enhance quality and patient safety. This year, CHA sponsored the ninth Patient Safety Summit, in partnership with Qualidigm and the Connecticut Association of Healthcare Executives, and hosted more than 125 clinicians and healthcare executives, who heard from national experts on safety and quality.

CHA Quality Institute

CHA's Quality Institute offers a broad series of education curricula to provide Connecticut's hospitals with the skills needed to drive quality and patient safety improvements throughout their organizations. Designed for a variety of audiences, from senior leaders to front-line caregivers, Quality Institute programs this year focused on the basics of quality care, quality and patient safety for senior leaders, process improvement tools, and communications tools.

Resources for Patients and Their Families

Connecticut's hospitals have a long-standing commitment to measuring and publicly reporting hospital quality and safety information. Connecticut was the first state in the nation to have 100 percent of its hospitals voluntarily reporting quality data to the Centers for Medicare and Medicaid Services; and Connecticut's hospitals, through CHA, were among the first in the country to develop a quality performance reporting system that provides information directly to patients and consumers.

To be effective and useful, reporting systems must clearly explain in consumer-friendly language what aspects of hospital quality and safety are being measured and how consumers can use the information. In 2009, the CHA Hospital Quality Reporting website was redesigned to be patient-friendly, clear, and easy-to-use. A section on CHA's website (www.chime.org), *A Patient's Guide to Participating in Quality Hospital Care*, was developed to provide patients and families with the information and tools they need to ensure a high quality, safe hospital experience.

Success Stories

An example of a success story is given below.

"In Connecticut: Improving Patient Medication Management in Primary Care," *Health Affairs*, April 2011. Authors: Marie Smith, School of Pharmacy, University of Connecticut; Margherita R. Giuliano, Connecticut Pharmacists Association; Michael P. Starkowski, Connecticut Department of Social Services. Abstract.

Medications are a cornerstone of the management of most chronic conditions. However, medication discrepancies and medication-related problems—some of which can cause serious harm—are common. Pharmacists have the expertise to identify, resolve, monitor, and prevent

these problems. We present findings from a Centers for Medicare and Medicaid Services demonstration project in Connecticut, in which nine pharmacists worked closely with eighty-eight Medicaid patients from July 2009 through May 2010. The pharmacists identified 917 drug therapy problems and resolved nearly 80 percent of them after four encounters. The result was an estimated annual saving of $1,123 per patient on medication claims and $472 per patient on medical, hospital, and emergency department expenses—more than enough to pay for the contracted pharmacist services. We recommend that the Center for Medicare and Medicaid Innovation support the evaluation of pharmacist-provided medication management services in primary care medical homes, accountable care organizations, and community health and care transition teams, as well as research to explore how to enhance team-based care.

Healthcare Associated Infections

The Healthcare Associated Infections (HAI) Committee, established by legislation, is separate from the Quality in Health Care Advisory Committee. The March 2011 report shows facility-specific counts and rates for Central-Line Associated Bloodstream Infections (CLABSI), how to read the data, a patient guide to preventing CLABSI, and hospital comments. The Connecticut CLABSI rate was 29% lower than all facilities that reported to the CDC's National Healthcare Safety Network (NHSN). http://www.ct.gov/dph/cwp/view.asp?a=3136&q=474086

On May 27, 2010, the Centers for Disease Control and Prevention released the first state-specific Healthcare Associated Infections summary data report, comparing CLABSI infection rates during 2009 with rates during 2006-2008 among hospitals that follow the NHSN protocols. Connecticut data are included. http://www.cdc.gov/hai/pdfs/stateplans/SIR_05_25_2010.pdf. A second progress report on the national *On the CUSP: Stop BSI Project* was released in September 2011. http://www.ahrq.gov/qual/clabsiupdate/index.html#contents

CMS will 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 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 above.

Hospital Acquired Conditions (including infections)

On April 12, 2011, CMS announced funding to support demonstration projects related to reducing hospital-acquired conditions as part of the Partnership for Patients (www.healthcare.gov). The Partnership for Patients 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 HAC data on Hospital Compare in October 2011.

National and International Perspectives on Patient Safety

The addition of facility-level data to this annual report, while increasing transparency, may disappoint people who hoped or expected that the data would be more useful for individuals making choices between healthcare providers, for accountability, and for improving patient safety and healthcare quality. Similar disappointment is not uncommon even among experts in the patient safety field. For example, an 18-month ethnographic study of the process of incident investigation, reporting, and translation of the results into practice at two hospitals in the United Kingdom found both strengths and problems in the use of Root Cause Analysis (RCA). The study authors suggested that while RCA was originally conceived as an organizational learning technique, it is also used as a governance tool and a way to re-establish organizational legitimacy in the aftermath of incidents. "Failure to understand these inner contradictions, together with unreflective policy interventions, may produce counterintuitive negative effects which hamper, instead of further, the cause of patient safety."[12]

On the tenth anniversary of the Institute of Medicine report on medical errors, *To Err is Human*, a review article gave an overall grade of B- for progress in patient safety. On the subject of reporting systems, a key development has been a shift from reporting "everything" to reporting a manageable list of serious, at least partly preventable adverse events.[13] How difficult is it to distinguish under-reporting of events from an absence of adverse events? What about random medical chart audits? The Health and Human Services Office of the Inspector General (OIG) report *Adverse Events in Hospitals: National Incidence among Medicare Beneficiaries*, using chart audit of 838 hospital stays, found only 5 NQF-defined events.[14]

Two researchers report the "deeply disappointing" news that three recent studies, including that of the OIG, question whether the United States has made any progress on patient safety in the decade since *To Err is Human*. The primary reason, assert Jha and Classen, is the lack of a robust measurement program. "Although there is a shortage of good patient-safety metrics, poor-quality measures are plentiful."[15]

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[12] Nicolini D, Waring J, Mengis J, "Policy and practice in the use of root cause analysis to investigate clinical adverse events: Mind the gap," *Social Science and Medicine* 73 (2011): 217-225.
[13] Robert M. Wachter, "Patient Safety at Ten: Unmistakable Progress, Troubling Gaps," *Health Affairs* 29:1; January 2010.
[14] http://oig.hhs.gov/oei/reports/oei-06-09-00090.pdf (issued November 2010; data are from 2008).
[15] Jha AK, Classen DC. Getting moving on patient safety—harnessing electronic data for safer care. *New England Journal of Medicine* 2011; 365: 1756-1758. November 10.

Dr. Teryl Nuckols asserts that the highest priorities for incident reporting systems should be ensuring that those people reporting adverse events know that reporting has led to improvements in safety, making the best possible use of the information that is reported, involving physicians in reporting, and leveraging the advantages of Patient Safety Organizations.[16]

Many of the resources for adverse event reporting have gone to healthcare associated infections reporting (see above on efforts in the state and nation). This is appropriate, given that a clear case for preventability has been made for Central-Line Associated Bloodstream Infections, and extraordinary reductions in CLABSI rates have been achieved.

Measurement is essential to quality improvement, but not only adverse outcomes should be measured. The NQF has endorsed more than 600 quality measures, hospitals provide data to the Joint Commission, to CMS (including patient satisfaction survey results), and for internal use. The Minnesota Department of Health worked with Minnesota's Quality Improvement Organization (QIO) to develop a measurement guide for adverse health events to help facilities that struggle with developing strong measurement plans.[17]

Four criteria for process measures of care have been proposed: (1) there is a strong evidence base showing that the care process leads to improved outcomes; (2) the measure accurately captures whether the evidence-based process has, in fact, been provided; (3) the measure addresses a process that has few intervening care processes that must occur before the improved outcome is realized; (4) implementing the measure has little or no chance of inducing unintended adverse consequences.[18]

Researchers from a patient safety center in the Netherlands identify the four challenges of patient safety as low visibility, ambiguity of cause and effect relationships, complexity in medicine, and professional autonomy in medicine. Patient safety initiatives should respect the four challenges.[19]

[16] http://webmm.ahrq.gov/perspective.aspx?perspectiveId=108 (September 2011 Perspective, "Incident Reporting: More Attention to the Safety Action Feedback Loop, Please")
[17] http://www.stratishealth.org/documents/MN_AE_Health_Events_Measurement_Guide.pdf
[18] Chassin MR, Loeb JM, Schmaltz SP, Wachter RM, "Accountability measures—using measurement to promote quality improvement," *New England Journal of Medicine* July 1, 2010.
[19] Leistikow IP, Kalkman CJ, de Bruijn H, "Why patient safety is such a tough nut to crack," *BMJ* 2011;342:d3447.

A recent review, "What Have We Learned about Interventions to Reduce Medical Errors?" made a number of key points concisely, while covering a range of perspectives, from policy-makers to patients. The following are recommendations to improve patient safety, and summary points:[20]

RECOMMENDATIONS

For policy makers

1. Create higher-level groups to drive changes in safety.
2. Support the creation and running of reporting systems. Reporting system data and trends should be reviewed to identify possible areas of concern and best practice, to be investigated further.
3. Focus on patient safety but understand that behavioral change will be slow.
4. Apply principles of social change to the problem of medical error.
5. Support the implementation of disclosure policies.

For managers

1. Recognize the value of standardization of practice and establish standard operating procedures.
2. Evaluate patient safety initiatives using patient outcomes.
3. Give visible support to patient safety initiatives.
4. Acknowledge that information technology (IT) is an investment; savings will accrue in the long-term.
5. Implement disclosure policies.
6. Understand that staff buy-in to safety initiatives is essential and avoid overly didactic approaches.

For clinicians

1. Reduce the individualistic approach to clinical care; seek to work effectively within teams and across divisions of care.
2. Hand hygiene is a good way to start.
3. Acknowledge IT not as a threat but as an aid.
4. Be aware of the dangers of workarounds.
5. Be open about errors.

For patients

1. Confirm own identity to health care providers.
2. Carry information about allergies, medications, and existing health conditions and share them with all health care providers.
3. Request clear information about medication dose, indication, interaction, and side effects.
4. Find out how and when test results will be received, and keep copies where appropriate.
5. Play an increased role in detecting and reporting error, challenging unsafe practice, and actively taking part in standard procedures, such as checklists.

[20] Woodward HI, Mytton OT, Lemer C et al., "What Have We Learned about Interventions to Reduce Medical Errors?" *Annual Review of Public Health* 2010; 31: 479-97.

SUMMARY POINTS

- Medical errors and adverse events remain common across all health care systems.
- Interventions can be directed at multiple levels in the health care system, from the level of the patient through to changes at the national and international level.
- Many desirable outcomes, e.g., hand hygiene, require interventions at multiple levels.
- In general, the strongest interventions build forcing functions into tools and procedures that make it difficult for errors to occur. Intermediate strategies include standardizing work processes. The weakest strategies focus on education to change individual behavior.
- These principles about strong, intermediate, and weak interventions or strategies, and multiple levels, can be used to guide priorities for action.
- The evidence base for error prevention and harm reduction is weak for most proposed interventions, with significant potential for study bias. This is due, in part, to the nature of quality-improvement strategies and measured outcomes.
- Solutions that are effective in one setting may not be universally beneficial or applicable.
- Promising interventions include redesign of devices accounting for human factors, computerized prescriber order-entry with decision support, checklists, standardized handoffs, and simulation training.
- Interventions to reduce medical errors may have unintended and potentially harmful consequences for patient safety.
- Error-reduction strategies should be accompanied by evaluation, beginning with demonstrating the absence of harm, and results should be published to share lessons learned.

These and other national recommendations will be part of future discussions at DPH as the Department considers how to improve the adverse event reporting program, and the broader Quality in Healthcare program. The Department encourages citizens, using this report, to ask their hospital or physician what is being done to prevent these types of events from occurring.

APPENDICES

Appendix A:
Demographic Data from 1,637 Adverse Event Reports

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

Appendix C:
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Appendix D:
Acute Care Hospital
Adverse Event Reports by Facility, Event Type, and Date

Appendix E:
Chronic Disease Hospital and Hospice
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Appendix F:
Hospital for the Mentally Ill
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Appendix G:
Ambulatory Surgical Center, Pain Medicine Center,
Fertility Center, and Outpatient Childbirth Center
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Appendix H:
Acute Care Hospital Report Rates
per 100,000 Inpatient Days, by Facility

Appendix I:
Chronic Disease Hospital and Hospice Report Rates
per 100,000 Inpatient Days, by Facility

Appendix J:
Hospital for Mentally Ill Persons Report Rates
per 100,000 Inpatient Days, by Facility

Appendix K:
Ambulatory Surgical Center, Pain Medicine Center,
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Appendix L:
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Appendix M:
Primary Payer Source, 2010, by Facility

Appendix N:
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Appendix O:
Wrong Site, Wrong Patient, and Wrong Procedure Surgery

Appendix P:
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Appendix Q:
Screening of Death Records for Possible Unreported Adverse Events

Appendix R:
Adverse Event Reports by Event Type, Year of Occurrence,
and Whether Investigated by DPH

Appendix S:
Facility Comments

Appendix A. Demographic Data from 1,637 Adverse Event Reports in the Electronic Database, July 1, 2004-May 11, 2011

Measure	Frequency	Percent	Most Common Event
Facility Type (n=1,637)			*Facility's Leading Event (n)*
Acute Care or Children's Hospital	1,436	87.7	Fall (553)
Chronic Disease Hospital	92	5.6	Fall (68)
Hospital for Mentally Ill Persons	56	3.4	Fall (32)
Outpatient Surgical Facility	53	3.2	Perforation (37)
Patient Gender (n=1,610)			
Male	720	44.7	
Female	890	55.3	
Patient Age (n=1,637)			*Age Group's Leading Event (n)*
0-14	70	4.3	Fall (15)
15-44	242	14.8	Perforation (45)
45-64	371	22.7	Stage 3-4 Ulcer (99)
65 and older	954	58.3	Fall (522)
Event Hour (n=1,601)			
Midnight-3:59 am	500	31.2	
4 am-7:59 am	270	16.9	
8 am-11:59 am	436	27.2	
12 noon-3:59 pm	219	13.7	
4 pm-7:59 pm	119	7.4	
8 pm-11:59 pm	57	3.6	
Location of Event (n=1,616)			*Location's Leading Event (n)*
Adult Medical	441	27.3	Fall (314)
Adult Surgical	119	7.4	Fall (63)
Ambulatory Surgical	33	2.0	Perforation (19)
Cardiac Care	60	3.7	Fall (39)
Cardiac Cath Lab	10	0.6	Retained Object (4)
Diagnostic Services	53	3.3	Perforation (33)
Dialysis	3	0.2	--
Emergency Department	62	3.8	Fall (35)
Medical ICU	106	6.6	Stage 3-4 Ulcer (71)
Neonatal ICU	2	0.1	--
Obstetrical/Gynecological	53	3.3	Obstetric Event (23)
Operating Room	175	10.8	Perforation (83)
Other	180	11.1	Perforation (73)
Outpatient Services	80	5.0	Perforation (59)
Pediatrics	5	0.3	--
Psychiatric	144	8.9	Fall (103)
Rehabilitative Services	27	1.7	Fall (15)
Surgical ICU	63	3.9	Stage 3-4 Ulcer (45)
Patient Expired (N=1,500)	157	10.5	

Appendix A Continued. Demographic Data from 1,637 Adverse Event Reports in the Electronic Database, July 1, 2004-May 11, 2011

Measure	Frequency	Percent of Reports within the Facility Type
Location of Event		
Acute Care Hospital or Children's Hospital		
Adult Medical	401	28.1
Adult Surgical	112	7.8
Ambulatory Surgical	20	1.4
Cardiac Care	60	4.2
Cardiac Cath Lab	10	0.7
Diagnostic Services	53	3.7
Dialysis	3	0.2
Emergency Department	62	4.3
Medical ICU	101	7.1
Neonatal ICU	2	0.1
Obstetrical/Gynecological	53	3.7
Operating Room	174	12.2
Other (GI/endoscopy, telemetry, etc.)	146	10.2
Outpatient Services	76	5.3
Pediatrics	5	3.5
Psychiatric	69	4.8
Rehabilitative Services	18	1.3
Surgical ICU	63	4.4
Missing	8	--
Chronic Disease Hospital		
Adult Medical	28	30.4
Medical ICU	1	1.1
Other (respiratory, dementia, etc.)	33	35.9
Psychiatric	21	22.8
Rehabilitative Services	9	9.8
Hospital for Mentally Ill Persons		
Outpatient Services	2	3.6
Psychiatric	54	96.4
Outpatient Surgical Facility, if not hospital owned		
Adult Medical	12	30.0
Adult Surgical	7	17.5
Ambulatory Surgical	13	32.5
Medical ICU	4	10.0
Operating Room	1	2.5
Other (endoscopy)	1	2.5
Outpatient Services	2	5.0
Missing	13	--

Appendix B. Connecticut Adverse Events Reports in Electronic Database
May 11, 2011, by Event Code and Half Year of Occurrence
NQF List (1A-6D) and Connecticut-Specific List (7A-7G)

		Time - Period													
Event	Description	2004	2005		2006		2007		2008		2009		2010		Total
Code		2nd half	1st half	2nd half	1st half	2nd half	1st half	2nd half	1st half	2nd half	1st half	2nd half	1st half	2nd half	
1A	Surgery performed on the wrong body part	1	2	2	0	3	1	2	1	4	1	1	2	5	25
1B	Surgery performed on the wrong patient	0	0	0	0	1	1	0	0	0	0	0	0	0	2
1C	Wrong surgical procedure performed on a patient	0	1	1	0	0	2	2	1	0	0	0	1	3	11
1D	Retention of a foreign object in a patient after surgery or other procedure	4	12	7	11	7	10	7	8	7	6	3	11	7	100
1E	Intraoperative or immediate post-operative death in an ASA class I patient	0	0	0	0	0	1	1	0	0	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	0	1	0	0	0	0	0	1	0	0	0	0	0	2
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	2	4	3	3	1	2	0	1	1	0	2	0	1	20
2C	Patient death or serious disability associated with intravascular air embolism that occurs while being cared for in a healthcare facility	0	2	1	0	0	0	0	1	0	1	1	0	0	6
3A	Infant discharged to the wrong person	0	0	0	0	0	0	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	0	0	0	0	0	0
3C	Patient suicide, or attempted suicide resulting in serious disability, while being cared for in a healthcare facility	0	2	1	1	2	2	2	1	3	0	0	0	2	16
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	2	2	5	0	0	1	2	1	0	3	0	1	21

Appendix B continued

Event Code	Description	Time - Period													Total
		2004	2005		2006		2007		2008		2009		2010		
		2nd half	1st half	2nd half	1st half	2nd half	1st half	2nd half	1st half	2nd half	1st half	2nd half	1st half	2nd half	
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	0	0	0	0	0	1	0	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	1	0	2	1	0	0	0	0	2	0	0	1	1	8
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	0	1	0	0	1	2	0	0	0	0	0	0	0	4
4E	Death or serious disability (kernicterus) associated with failure to identify and treat hyperbilirubinemia in neonates	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4F	Stage 3 or 4 pressure ulcers acquired after admission to a healthcare facility	9	14	9	15	15	18	15	28	33	33	42	25	23	279
4G	Patient death or serious disability due to spinal manipulative therapy	0	1	0	0	0	0	0	0	0	0	0	0	0	1
4H	Artificial insemination with the wrong donor sperm or wrong egg	NA	NA	NA	NA	NA	NA	0	0	0	1	0	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	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	0	0	0	1	0	0	0	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	0	0	1	2	1	0	0	0	1	0	0	0	5
5D & 7B	Patient death or serious injury associated with a fall while being cared for in a healthcare facility	46	47	51	63	55	45	41	50	47	49	54	48	43	639

Appendix B continued

		Time - Period													
Event	Description	2004	2005		2006		2007		2008		2009		2010		Total
Code		2nd half	1st half	2nd half	1st half	2nd half	1st half	2nd half	1st half	2nd half	1st half	2nd half	1st half	2nd half	
5E	Patient death or serious disability associated with the use of restraints or bedrails	0	0	0	1	0	0	1	0	0	1	1	1	0	5
6A	Any instance of care ordered by or provided by someone impersonating a physician, nurse, pharmacist, or other licensed healthcare provider	0	0	0	0	1	0	0	0	0	0	0	0	0	1
6B	Abduction of a patient of any age	0	0	0	0	0	0	0	0	0	1	0	0	0	1
6C	Sexual assault on a patient within or on the grounds of a healthcare facility	2	3	2	7	5	5	2	5	0	1	1	1	2	36
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	1	1	0	0	1	0	2	0	0	1	1	1	10
7A	Perforations during open, laparoscopic and/or endoscopic procedures resulting in death or serious disability	29	25	28	14	19	25	25	27	17	31	24	22	26	312
7B	See event code 5D & 7B*														
7C	Obstetrical events resulting in death or serious disability to the neonate	3	2	4	3	1	3	2	1	0	1	1	3	2	26
7D	Significant medication reactions resulting in death or serious disability	0	1	2	0	1	2	1	1	3	0	1	0	3	15
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	0	0	0	1	0	0	0	0	0	0	1	1	3
7F	Nosocomial infections resulting in death or serious injury	3	1	1	2	1	1	2	3	3	2	0	1	2	22
7G	Patient death or serious disability as a result of surgery	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1	5	11	17
Total		**106**	**122**	**117**	**127**	**116**	**123**	**104**	**133**	**122**	**129**	**136**	**123**	**134**	**1,592**

Adverse events reported using the older classification system, Oct 2002-June 2004 are not included.

Events reported using the NQF classification system but occurring prior to July 1, 2004 or after December 31, 2010 are not included.

Category 4H was added to the list of reportable adverse events in May 2007. Table cells prior to this date are marked "NA," not applicable.

Category 7G was added to the list of reportable adverse events in January 2010. Table cells prior to this date are marked "NA," not applicable.

*Prior to May 2007 category 5D included only death associated with a fall. Events formerly classified as 7B are reportable as 5D starting May 2007.

Appendix C. Connecticut Adverse Event Reports in Electronic Database
May 11, 2011, by Frequency of Occurrence and Fatality
NQF List (1A-6D) and Connecticut-Specific List (7A-7G)

Event	Description	Frequency	Percent of All Events	Number Expired
5D & 7B*	Patient death or serious injury associated with a fall while being cared for in a healthcare facility	655	40.0%	33
7A	Perforations during open, laparoscopic and/or endoscopic procedures resulting in death or serious disability	319	19.5%	32
4F	Stage 3 or 4 pressure ulcers acquired after admission to a healthcare facility	291	17.8%	16
1D	Retention of a foreign object in a patient after surgery or other procedure	105	6.4%	1
6C	Sexual assault on a patient within or on the grounds of a healthcare facility	36	2.2%	0
7C	Obstetrical events resulting in death or serious disability to the neonate	26	1.6%	5
1A	Surgery performed on the wrong body part	26	1.6%	0
7F	Nosocomial infections resulting in death or serious injury	22	1.3%	19
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)	22	1.3%	6
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	20	1.2%	7
7G	Death or serious injury associated with surgery	17	1.0%	9
3C	Patient suicide, or attempted suicide resulting in serious disability, while being cared for in a healthcare facility	16	1.0%	7
7D	Significant medication reactions resulting in death or serious disability	15	0.9%	8
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	13	0.8%	0
1C	Wrong surgical procedure performed on a patient	11	0.7%	0
4C	Maternal death or serious disability associated with labor or delivery in a low-risk pregnancy while being cared for in a healthcare facility	8	0.5%	3
2C	Patient death or serious disability associated with intravascular air embolism that occurs while being cared for in a healthcare facility	6	0.4%	4
5C	Patient death or serious disability associated with a burn incurred from any source while being cared for in a healthcare facility	5	0.3%	0
5E	Patient death or serious disability associated with the use of restraints or bedrails while being cared for in a healthcare facility	5	0.3%	2

Appendix C continued

Event	Description	Frequency	Percent of All Events	Number Expired
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	4	0.2%	1
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	3	0.2%	1
2A	Patient death or serious disability associated with the use of contaminated drugs, devices, or biologics provided by the healthcare facility	2	0.1%	1
1B	Surgery performed on the wrong patient	2	0.1%	0
1E	Intraoperative or immediate post-operative death in an ASA class I patient	2	0.1%	2
4B	Patient death or serious disability associated with a hemolytic reaction due to the administration of ABO-incompatible blood or blood products	1	0.1%	0
4G	Patient death or serious disability due to spinal manipulative therapy	1	0.1%	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	1	0.1%	0
4H	Artificial insemination with the wrong donor sperm or wrong egg	1	0.1%	0
6A	Any instance of care ordered by or provided by someone impersonating a physician, nurse, pharmacist, or other licensed healthcare provider	1	0.1%	0
6B	Abduction of a patient of any age	1	0.1%	0
3A	Infant discharged to the wrong person	0	0.0%	0
3B	Patient death or serious disability associated with patient elopement (disappearance) for more than four hours	0	0.0%	0
4E	Death or serious disability (kernicterus) associated with failure to identify and treat hyperbilirubinemia in neonates	0	0.0%	0
5A	Patient death or serious disability associated with an electric shock while being cared for in a healthcare facility	0	0.0%	0
Total		**1,637**	**100.0%**	**157**

*Prior to May 2007 category 5D included only death associated with a fall, while 7B included falls resulting in serious injury. Events formerly classified as 7B are reportable as 5D starting May 2007.

Appendix D. Connecticut Adverse Event Reports in Electronic Database
by Facility, Event Code, and Year of Occurrence
NQF List (1A-6D) and Connecticut-Specific List (7A-7G)
Acute Care Hospitals

Only Categories with Reported Events are Displayed

BRIDGEPORT HOSPITAL

	2004	2005	2006	2007	2008	2009	2010	Total
1A- Surgery performed on the wrong body part	0	1	0	0	1	0	0	2
1D- Retention of a foreign object in a patient	0	3	0	2	1	0	1	7
1E- Intra or post-op death in an ASA class I patient	0	0	0	1	0	0	0	1
3C- Attempted suicide resulting in serious disability	0	1	0	0	1	0	0	2
4F- Stage 3-4 pressure ulcers post-admission	1	0	0	0	6	2	1	10
5D, 7B- Injury from a fall post-admission	3	4	8	4	1	1	2	23
6C- Sexual assault within or on the grounds	1	1	0	0	0	0	0	2
6D- Injury of a patient or staff member from assault	0	1	0	0	0	0	0	1
7A- Perforations resulting in disability	1	3	1	1	0	2	2	10
7C- Obstetrical events harming the neonate	0	0	0	1	0	1	0	2
Total	6	14	9	9	10	6	6	60

BRISTOL HOSPITAL

	2004	2005	2006	2007	2008	2009	2010	Total
5D, 7B- Injury from a fall post-admission	0	0	1	0	1	0	1	3
6B- Abduction of a patient of any age	0	0	0	0	0	1	0	1
7A- Perforations resulting in disability	0	0	0	1	1	0	1	3
7D- Significant medication reactions	0	0	0	0	0	0	1	1
Total	0	0	1	1	2	1	3	8

CHARLOTTE HUNGERFORD HOSPITAL

	2004	2005	2006	2007	2008	2009	2010	Total
4C- Maternal disability in a low-risk pregnancy	0	1	0	0	0	0	0	1
4F- Stage 3-4 pressure ulcers post-admission	0	0	0	1	0	1	0	2
5D, 7B- Injury from a fall post-admission	0	1	3	0	2	1	2	9
7F- Nosocomial infections resulting in injury	0	0	0	1	0	0	0	1
Total	0	2	3	2	2	2	2	13

CONNECTICUT CHILDREN`S MEDICAL CENTER

	2004	2005	2006	2007	2008	2009	2010	Total
1A- Surgery performed on the wrong body part	0	0	0	0	0	0	1	1
1C- Wrong surgical procedure performed on a patient	0	0	0	0	0	0	1	1
1D- Retention of a foreign object in a patient	0	1	1	3	2	0	1	8
2B- Device is used or functions other than as intended	0	1	0	0	0	0	0	1
2C- Intravascular air embolism	0	1	0	0	0	0	0	1
4F- Stage 3-4 pressure ulcers post-admission	0	1	1	0	1	0	1	4
4G- Disability due to spinal manipulation	0	1	0	0	0	0	0	1
5D, 7B- Injury from a fall post-admission	0	1	0	0	0	0	0	1
7A- Perforations resulting in disability	0	1	1	0	0	0	0	2
7F- Nosocomial infections resulting in injury	0	1	0	0	0	0	0	1
Total	0	8	3	3	3	0	4	21

DANBURY HOSPITAL

	2004	2005	2006	2007	2008	2009	2010	Total
1A- Surgery performed on the wrong body part	0	0	0	1	0	0	1	2
1B- Surgery performed on the wrong patient	0	0	0	1	0	0	0	1
1C- Wrong surgical procedure performed on a patient	0	0	0	1	0	0	0	1
1D- Retention of a foreign object in a patient	0	0	2	1	0	0	0	3
4F- Stage 3-4 pressure ulcers post-admission	0	2	5	4	4	3	5	23
5D, 7B- Injury from a fall post-admission	2	3	5	1	4	6	5	26
6D- Injury of a patient or staff member from assault	0	0	0	0	0	1	1	2
7A- Perforations resulting in disability	2	5	2	1	5	4	1	20
7C- Obstetrical events harming the neonate	0	1	2	0	0	0	1	4
7D- Significant medication reactions	0	1	0	0	0	0	0	1
Total	4	12	16	10	13	14	14	83

DAY KIMBALL HEALTHCARE

	2004	2005	2006	2007	2008	2009	2010	Total
1D- Retention of a foreign object in a patient	0	0	2	0	0	0	0	2
5D, 7B- Injury from a fall post-admission	0	3	2	1	1	1	2	10
7A- Perforations resulting in disability	0	3	1	0	1	1	0	6
7C- Obstetrical events harming the neonate	0	0	2	0	0	0	0	2
7F- Nosocomial infections resulting in injury	0	0	0	0	1	1	0	2
Total	0	6	7	1	3	3	2	22

Appendix D. Acute Care Hospitals continued

GREENWICH HOSPITAL

	2004	2005	2006	2007	2008	2009	2010	Total
1A- Surgery performed on the wrong body part	0	1	0	0	0	0	1	2
1C- Wrong surgical procedure performed on a patient	0	0	0	1	0	0	0	1
1D- Retention of a foreign object in a patient	1	2	1	0	0	0	0	4
2C- Intravascular air embolism	0	1	0	0	0	0	0	1
5D, 7B- Injury from a fall post-admission	1	0	1	1	2	1	3	9
7A- Perforations resulting in disability	1	0	0	0	0	0	0	1
Total	3	4	2	2	2	1	4	18

GRIFFIN HOSPITAL

	2004	2005	2006	2007	2008	2009	2010	Total
1D- Retention of a foreign object in a patient	0	0	0	1	0	0	0	1
4A- Disability associated with a medication error	0	0	1	0	0	0	0	1
4F- Stage 3-4 pressure ulcers post-admission	0	1	0	0	1	1	0	3
5D, 7B- Injury from a fall post-admission	0	2	2	1	1	3	1	10
6C- Sexual assault within or on the grounds	0	0	1	0	0	0	0	1
7A- Perforations resulting in disability	0	0	1	2	6	2	2	13
7G- Death or serious injury due to surgery	0	0	0	0	0	0	1	1
Total	0	3	5	4	8	6	4	30

HARTFORD HOSPITAL

	2004	2005	2006	2007	2008	2009	2010	Total
1B- Surgery performed on the wrong patient	0	0	1	0	0	0	0	1
1D- Retention of a foreign object in a patient	0	2	0	2	1	1	3	9
2B- Device is used or functions other than as intended	2	2	0	0	1	0	0	5
2C- Intravascular air embolism	0	0	0	0	0	1	0	1
3C- Attempted suicide resulting in serious disability	0	0	3	1	0	0	0	4
4A- Disability associated with a medication error	1	0	1	0	0	0	0	2
4C- Maternal disability in a low-risk pregnancy	0	1	1	0	0	0	1	3
4D- Disability from hypoglycemia onset in facility	0	0	1	1	0	0	0	2
4F- Stage 3-4 pressure ulcers post-admission	0	0	0	0	5	20	8	33
5C- Disability associated with a burn post-admission	0	0	1	0	0	0	0	1
5D, 7B- Injury from a fall post-admission	6	7	11	4	3	9	5	45
6A- Impersonating a physician, nurse, pharmacist	0	0	1	0	0	0	0	1
6C- Sexual assault within or on the grounds	0	0	1	0	0	0	1	2
6D- Injury of a patient or staff member from assault	1	0	0	0	0	0	0	1
7A- Perforations resulting in disability	6	7	2	4	4	1	6	30
7C- Obstetrical events harming the neonate	1	0	0	1	0	0	0	2
7G- Death or serious injury due to surgery	0	0	0	0	0	0	3	3
Total	17	19	23	13	14	32	27	145

Appendix D. Acute Care Hospitals continued

HOSPITAL OF CENTRAL CONNECTICUT

	2004	2005	2006	2007	2008	2009	2010	Total
1A- Surgery performed on the wrong body part	0	0	0	0	0	1	0	1
1C- Wrong surgical procedure performed on a patient	0	0	0	0	0	0	1	1
1D- Retention of a foreign object in a patient	0	1	2	1	1	1	2	8
2B- Device is used or functions other than as intended	0	2	0	0	0	1	0	3
2C- Intravascular air embolism	0	0	0	0	1	0	0	1
4A- Disability associated with a medication error	1	0	1	0	0	0	0	2
4F- Stage 3-4 pressure ulcers post-admission	0	2	0	3	3	4	1	13
5C- Disability associated with a burn post-admission	0	0	0	1	0	0	0	1
5D, 7B- Injury from a fall post-admission	1	5	6	7	10	5	4	38
6D- Injury of a patient or staff member from assault	0	1	0	0	0	0	0	1
7A- Perforations resulting in disability	3	3	3	3	3	8	1	24
7C- Obstetrical events harming the neonate	0	1	0	0	0	0	0	1
7D- Significant medication reactions	0	0	0	2	2	0	1	5
7F- Nosocomial infections resulting in injury	0	0	1	1	1	1	1	5
Total	5	15	13	18	21	21	11	104

HOSPITAL OF SAINT RAPHAEL

	2004	2005	2006	2007	2008	2009	2010	Total
1C- Wrong surgical procedure performed on a patient	0	1	0	1	0	0	0	2
1D- Retention of a foreign object in a patient	0	1	0	0	0	1	3	5
3C- Attempted suicide resulting in serious disability	0	0	0	0	0	0	1	1
4A- Disability associated with a medication error	0	2	0	0	0	0	1	3
4F- Stage 3-4 pressure ulcers post-admission	0	0	0	3	5	0	1	9
5D, 7B- Injury from a fall post-admission	3	5	6	6	4	5	13	42
5E- Disability associated with restraints or bedrails	0	0	0	0	0	1	0	1
6C- Sexual assault within or on the grounds	0	0	1	0	0	0	0	1
7A- Perforations resulting in disability	2	5	0	4	5	2	2	20
7E- Test results reported incorrectly in ER	0	0	0	0	0	0	2	2
7F- Nosocomial infections resulting in injury	2	0	0	0	0	0	0	2
7G- Death or serious injury due to surgery	0	0	0	0	0	0	1	1
Total	7	14	7	14	14	9	24	89

JOHN DEMPSEY HOSPITAL OF THE UNIVERSITY OF CONNECTICUT HEALTH CENTER

	2004	2005	2006	2007	2008	2009	2010	Total
1A- Surgery performed on the wrong body part	0	0	0	0	0	0	2	2
1D- Retention of a foreign object in a patient	0	0	1	0	3	2	1	7
2B- Device is used or functions other than as intended	0	1	0	0	0	0	0	1
3C- Attempted suicide resulting in serious disability	0	0	0	1	1	0	0	2
5D, 7B- Injury from a fall post-admission	0	3	0	4	3	9	1	20
7A- Perforations resulting in disability	1	0	0	1	0	1	2	5
7C- Obstetrical events harming the neonate	0	0	0	0	1	0	0	1
7D- Significant medication reactions	0	0	0	0	1	0	0	1
Total	1	4	1	6	9	12	6	39

Appendix D. Acute Care Hospitals continued

JOHNSON MEMORIAL HOSPITAL

	2004	2005	2006	2007	2008	2009	2010	Total
1D- Retention of a foreign object in a patient	0	0	1	0	0	1	0	2
4F- Stage 3-4 pressure ulcers post-admission	0	2	0	1	0	0	0	3
5D, 7B- Injury from a fall post-admission	0	1	1	0	3	4	1	10
7A- Perforations resulting in disability	0	1	1	0	0	0	0	2
7C- Obstetrical events harming the neonate	0	0	0	0	0	0	1	1
7D- Significant medication reactions	0	1	0	1	0	0	1	3
7F- Nosocomial infections resulting in injury	0	0	1	0	0	0	0	1
Total	0	5	4	2	3	5	3	22

LAWRENCE AND MEMORIAL HOSPITAL

	2004	2005	2006	2007	2008	2009	2010	Total
1D- Retention of a foreign object in a patient	0	0	2	0	0	0	0	2
4F- Stage 3-4 pressure ulcers post-admission	0	0	1	0	2	1	2	6
5D, 7B- Injury from a fall post-admission	1	0	2	2	0	2	3	10
6D- Injury of a patient or staff member from assault	0	0	0	0	0	0	1	1
7A- Perforations resulting in disability	0	2	1	0	0	0	0	3
7C- Obstetrical events harming the neonate	1	1	0	1	0	0	1	4
7D- Significant medication reactions	0	0	1	0	0	0	0	1
Total	2	3	7	3	2	3	7	27

MANCHESTER MEMORIAL HOSPITAL

	2004	2005	2006	2007	2008	2009	2010	Total
1A- Surgery performed on the wrong body part	0	0	0	1	1	0	0	2
4A- Disability associated with a medication error	0	0	0	0	0	1	0	1
4F- Stage 3-4 pressure ulcers post-admission	0	0	1	2	3	1	0	7
5D, 7B- Injury from a fall post-admission	1	1	1	1	4	4	1	13
6C- Sexual assault within or on the grounds	0	1	0	0	0	0	0	1
7A- Perforations resulting in disability	0	1	4	1	1	0	2	9
7F- Nosocomial infections resulting in injury	0	0	0	0	0	0	1	1
Total	1	3	6	5	9	6	4	34

Appendix D. Acute Care Hospitals continued

MIDDLESEX HOSPITAL

	2004	2005	2006	2007	2008	2009	2010	Total
1A- Surgery performed on the wrong body part	0	0	1	1	0	0	0	2
1D- Retention of a foreign object in a patient	0	0	1	1	1	0	0	3
2A- Contaminated drugs, devices, or biologics	0	1	0	0	0	0	0	1
4A- Disability associated with a medication error	0	0	1	0	0	0	0	1
4F- Stage 3-4 pressure ulcers post-admission	0	0	0	0	1	1	0	2
5D, 7B- Injury from a fall post-admission	1	1	6	2	2	3	4	19
6C- Sexual assault within or on the grounds	0	0	1	0	0	1	0	2
7A- Perforations resulting in disability	0	0	0	0	0	1	0	1
7F- Nosocomial infections resulting in injury	0	0	0	0	1	0	0	1
Total	1	2	10	4	5	6	4	32

MIDSTATE MEDICAL CENTER

	2004	2005	2006	2007	2008	2009	2010	Total
5D, 7B- Injury from a fall post-admission	1	3	2	3	3	2	3	17
7A- Perforations resulting in disability	0	1	3	1	3	2	2	12
Total	1	4	5	4	6	4	5	29

MILFORD HOSPITAL

	2004	2005	2006	2007	2008	2009	2010	Total
4F- Stage 3-4 pressure ulcers post-admission	0	0	1	1	0	1	0	3
5D, 7B- Injury from a fall post-admission	3	1	2	0	0	0	1	7
7A- Perforations resulting in disability	3	1	1	0	0	0	0	5
7C- Obstetrical events harming the neonate	0	0	0	0	0	1	0	1
7G- Death or serious injury due to surgery	0	0	0	0	0	0	1	1
Total	6	2	4	1	0	2	2	17

NEW MILFORD HOSPITAL

	2004	2005	2006	2007	2008	2009	2010	Total
4F- Stage 3-4 pressure ulcers post-admission	0	1	0	0	0	0	0	1
7A- Perforations resulting in disability	0	1	0	0	0	2	0	3
7C- Obstetrical events harming the neonate	0	0	0	0	0	0	1	1
7G- Death or serious injury due to surgery	0	0	0	0	0	0	1	1
Total	0	2	0	0	0	2	2	6

Appendix D. Acute Care Hospitals continued

NORWALK HOSPITAL

	2004	2005	2006	2007	2008	2009	2010	Total
1D- Retention of a foreign object in a patient	0	0	1	0	1	0	0	2
4A- Disability associated with a medication error	2	0	0	0	0	0	0	2
4F- Stage 3-4 pressure ulcers post-admission	3	1	3	0	7	4	3	21
5C- Disability associated with a burn post-admission	0	0	0	0	0	1	0	1
5D, 7B- Injury from a fall post-admission	2	4	3	1	3	1	1	15
5E- Disability associated with restraints or bedrails	0	0	0	0	0	1	0	1
7A- Perforations resulting in disability	5	3	0	4	1	9	1	23
7C- Obstetrical events harming the neonate	0	0	0	0	0	0	1	1
7G- Death or serious injury due to surgery	0	0	0	0	0	0	1	1
Total	12	8	7	5	12	16	7	67

ROCKVILLE GENERAL HOSPITAL

	2004	2005	2006	2007	2008	2009	2010	Total
4C- Maternal disability in a low-risk pregnancy	0	0	0	0	1	0	0	1
5D, 7B- Injury from a fall post-admission	0	1	0	0	0	0	0	1
7A- Perforations resulting in disability	1	0	0	1	0	0	1	3
Total	1	1	0	1	1	0	1	5

SAINT FRANCIS HOSPITAL AND MEDICAL CENTER

	2004	2005	2006	2007	2008	2009	2010	Total
1D- Retention of a foreign object in a patient	2	4	1	1	0	1	2	11
2B- Device is used or functions other than as intended	0	1	2	1	1	0	0	5
4A- Disability associated with a medication error	0	1	0	0	0	0	0	1
4C- Maternal disability in a low-risk pregnancy	1	0	0	0	0	0	0	1
4F- Stage 3-4 pressure ulcers post-admission	2	3	2	2	4	2	1	16
5C- Disability associated with a burn post-admission	0	0	1	0	0	0	0	1
5D, 7B- Injury from a fall post-admission	0	6	10	1	2	4	6	29
6C- Sexual assault within or on the grounds	0	0	0	0	2	0	0	2
7A- Perforations resulting in disability	1	9	7	13	3	4	3	40
7F- Nosocomial infections resulting in injury	0	1	0	0	0	0	0	1
Total	6	25	23	18	12	11	12	107

Appendix D. Acute Care Hospitals continued

SAINT MARY`S HOSPITAL

	2004	2005	2006	2007	2008	2009	2010	Total
1D- Retention of a foreign object in a patient	0	0	1	0	0	1	1	3
4A- Disability associated with a medication error	0	0	0	1	0	0	0	1
4F- Stage 3-4 pressure ulcers post-admission	1	0	3	1	0	0	0	5
5D, 7B- Injury from a fall post-admission	0	1	6	1	0	4	2	14
7A- Perforations resulting in disability	1	1	2	1	0	3	4	12
7C- Obstetrical events harming the neonate	0	1	0	1	0	0	0	2
7E- Test results reported incorrectly in ER	0	0	1	0	0	0	0	1
7G- Death or serious injury due to surgery	0	0	0	0	0	0	1	1
Total	2	3	13	5	0	8	8	39

SAINT VINCENT`S MEDICAL CENTER

	2004	2005	2006	2007	2008	2009	2010	Total
1C- Wrong surgical procedure performed on a patient	0	0	0	0	0	0	1	1
1D- Retention of a foreign object in a patient	0	2	1	0	0	0	1	4
2A- Contaminated drugs, devices, or biologics	0	0	0	0	1	0	0	1
2B- Device is used or functions other than as intended	0	0	1	1	0	1	1	4
2C- Intravascular air embolism	0	0	0	0	0	1	0	1
4A- Disability associated with a medication error	1	1	0	0	1	0	0	3
4F- Stage 3-4 pressure ulcers post-admission	1	2	3	4	7	15	7	39
5D, 7B- Injury from a fall post-admission	3	3	8	6	9	8	4	41
5E- Disability associated with restraints or bedrails	0	0	1	0	0	0	0	1
6C- Sexual assault within or on the grounds	0	0	0	0	0	1	2	3
7A- Perforations resulting in disability	0	0	1	1	1	0	1	4
7D- Significant medication reactions	0	0	0	0	1	0	0	1
7F- Nosocomial infections resulting in injury	0	0	1	0	0	0	0	1
7G- Death or serious injury due to surgery	0	0	0	0	0	0	1	1
Total	5	8	16	12	20	26	18	105

SHARON HOSPITAL

	2004	2005	2006	2007	2008	2009	2010	Total
4A- Disability associated with a medication error	0	0	1	0	0	1	0	2
5D, 7B- Injury from a fall post-admission	1	2	2	2	3	1	1	12
7A- Perforations resulting in disability	0	0	0	0	0	3	1	4
Total	1	2	3	2	3	5	2	18

Appendix D. Acute Care Hospitals continued

STAMFORD HOSPITAL

	2004	2005	2006	2007	2008	2009	2010	Total
1A- Surgery performed on the wrong body part	0	0	0	0	1	0	0	1
1D- Retention of a foreign object in a patient	1	0	1	1	0	0	0	3
3C- Attempted suicide resulting in serious disability	0	0	0	0	1	0	0	1
4F- Stage 3-4 pressure ulcers post-admission	0	0	0	1	2	1	2	6
5B- Wrong gas or contaminated	0	0	0	1	0	0	0	1
5D, 7B- Injury from a fall post-admission	3	3	3	5	5	3	3	25
6C- Sexual assault within or on the grounds	0	0	0	2	0	0	0	2
6D- Injury of a patient or staff member from assault	1	0	0	0	0	0	0	1
7A- Perforations resulting in disability	1	0	0	0	0	0	1	2
7F- Nosocomial infections resulting in injury	0	0	0	1	0	0	0	1
Total	6	3	4	11	9	4	6	43

WATERBURY HOSPITAL

	2004	2005	2006	2007	2008	2009	2010	Total
1D- Retention of a foreign object in a patient	1	0	0	1	0	0	0	2
3C- Attempted suicide resulting in serious disability	0	0	0	0	0	0	1	1
4B- Hemolytic reaction, ABO-incompatible blood	0	0	0	0	1	0	0	1
4C- Maternal disability in a low-risk pregnancy	0	0	0	0	0	0	1	1
4F- Stage 3-4 pressure ulcers post-admission	0	0	1	1	0	1	0	3
5C- Disability associated with a burn post-admission	0	0	1	0	0	0	0	1
5D, 7B- Injury from a fall post-admission	1	2	5	2	7	5	3	25
7A- Perforations resulting in disability	3	0	0	0	2	1	1	7
7C- Obstetrical events harming the neonate	0	0	0	1	0	0	0	1
Total	5	2	7	5	10	7	6	42

WILLIAM W. BACKUS HOSPITAL

	2004	2005	2006	2007	2008	2009	2010	Total
1A- Surgery performed on the wrong body part	1	0	0	0	0	0	0	1
1C- Wrong surgical procedure performed on a patient	0	0	0	1	1	0	0	2
1D- Retention of a foreign object in a patient	0	0	0	0	0	0	1	1
4A- Disability associated with a medication error	0	0	0	0	1	0	0	1
4F- Stage 3-4 pressure ulcers post-admission	0	0	2	0	1	0	1	4
5D, 7B- Injury from a fall post-admission	2	3	3	2	1	0	0	11
5E- Disability associated with restraints or bedrails	0	0	0	0	0	0	1	1
7F- Nosocomial infections resulting in injury	0	0	0	0	2	0	1	3
7G- Death or serious injury due to surgery	0	0	0	0	0	0	4	4
Total	3	3	5	3	6	0	8	28

Appendix D. Acute Care Hospitals continued

WINDHAM COMMUNITY MEMORIAL HOSPITAL

	2004	2005	2006	2007	2008	2009	2010	Total
1A- Surgery performed on the wrong body part	0	1	0	0	0	0	0	1
4F- Stage 3-4 pressure ulcers post-admission	1	1	0	0	0	0	0	2
5D, 7B- Injury from a fall post-admission	0	0	0	2	0	0	1	3
7A- Perforations resulting in disability	0	0	0	0	1	1	1	3
Total	1	2	0	2	1	1	2	9

YALE-NEW HAVEN HOSPITAL

	2004	2005	2006	2007	2008	2009	2010	Total
1A- Surgery performed on the wrong body part	0	0	0	0	1	0	1	2
1C- Wrong surgical procedure performed on a patient	0	1	0	0	0	0	0	1
1D- Retention of a foreign object in a patient	1	1	0	3	5	1	3	14
1E- Intra or post-op death in an ASA class I patient	0	0	0	1	0	0	0	1
2C- Intravascular air embolism	0	1	0	0	0	0	0	1
3C- Attempted suicide resulting in serious disability	0	1	0	1	0	0	0	2
4C- Maternal disability in a low-risk pregnancy	0	0	0	0	1	0	0	1
4D- Disability from hypoglycemia onset in facility	0	1	0	1	0	0	0	2
4F- Stage 3-4 pressure ulcers post-admission	2	3	5	7	5	13	10	45
5D, 7B- Injury from a fall post-admission	6	7	4	12	9	10	6	54
6C- Sexual assault within or on the grounds	0	1	1	1	1	0	0	4
6D- Injury of a patient or staff member from assault	0	0	0	1	0	0	0	1
7A- Perforations resulting in disability	0	2	0	2	1	3	4	12
7C- Obstetrical events harming the neonate	1	2	0	0	0	0	0	3
7D- Significant medication reactions	0	1	0	0	0	0	0	1
7F- Nosocomial infections resulting in injury	1	0	0	0	1	0	0	2
7G- Death or serious injury due to surgery	0	0	0	0	0	0	1	1
Total	11	21	10	29	24	27	25	147

Adverse events reported using the older classification system, Oct 2002-June 2004 are not included.

Category 4H was added to the list of reportable adverse events in May 2007.

Category 7G was added to the list of reportable events in January 2010.

Hospital of Central Connecticut includes events reported by Bradley and New Britain hospitals prior to their merger.

*Prior to May 2007 category 5D included only death associated with a fall.

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

Appendix E. Connecticut Adverse Event Reports in Electronic Database
by Facility, Event Code, and Year of Occurrence
NQF List (1A-6D) and Connecticut-Specific List (7A-7G)
Chronic Disease Hospitals

Only Categories with Reported Events are Displayed

DEPARTMENT OF VETERANS` AFFAIRS LEVITOW HEALTH CENTER

	2004	2005	2006	2007	2008	2009	2010	Total
4F- Stage 3-4 pressure ulcers post-admission	0	3	1	0	0	0	0	4
5D, 7B- Injury from a fall post-admission	2	10	4	3	3	2	2	26
Total	2	13	5	3	3	2	2	30

GAYLORD HOSPITAL

	2004	2005	2006	2007	2008	2009	2010	Total
4A- Disability associated with a medication error	0	0	0	0	0	1	0	1
4F- Stage 3-4 pressure ulcers post-admission	0	0	0	0	0	0	1	1
5D, 7B- Injury from a fall post-admission	0	2	1	2	2	1	1	9
Total	0	2	1	2	2	2	2	11

HEBREW HOME AND HOSPITAL

	2004	2005	2006	2007	2008	2009	2010	Total
5D, 7B- Injury from a fall post-admission	0	3	0	7	3	5	5	23
Total	0	3	0	7	3	5	5	23

HOSPITAL FOR SPECIAL CARE

	2004	2005	2006	2007	2008	2009	2010	Total
2B- Device is used or functions other than as intended	0	0	1	0	0	0	0	1
4F- Stage 3-4 pressure ulcers post-admission	0	1	0	2	4	4	4	15
5D, 7B- Injury from a fall post-admission	0	1	1	0	1	0	0	3
7D- Significant medication reactions	0	0	0	0	0	1	0	1
Total	0	2	2	2	5	5	4	20

MASONICARE HEALTH CENTER

	2004	2005	2006	2007	2008	2009	2010	Total
5D, 7B- Injury from a fall post-admission	0	2	1	0	1	0	1	5
Total	0	2	1	0	1	0	1	5

MOUNT SINAI REHABILITATION HOSPITAL

	2004	2005	2006	2007	2008	2009	2010	Total
4F- Stage 3-4 pressure ulcers post-admission	0	0	1	0	0	0	0	1
Total	0	0	1	0	0	0	0	1

Adverse events reported using the older classification system, Oct 2002-June 2004 are not included.
Category 4H was added to the list of reportable adverse events in May 2007.
Category 7G was added to the list of reportable events in January 2010.
*Prior to May 2007 category 5D included only death associated with a fall. Events formerly classified as 7B are reportable as 5D starting May 2007.

Appendix F. Connecticut Adverse Event Reports in Electronic Database
by Facility, Event Code, and Year of Occurrence
NQF List (1A-6D) and Connecticut-Specific List (7A-7G)
Hospitals for Mentally Ill Persons

Only Categories with Reported Events are Displayed

MASONICARE BEHAVIORAL HEALTH

	2004	2005	2006	2007	2008	2009	2010	Total
5D, 7B- Injury from a fall post-admission	5	7	8	3	4	3	2	32
5E- Disability associated with restraints or bedrails	0	0	0	1	0	0	0	1
6C- Sexual assault within or on the grounds	0	1	4	0	0	0	0	5
6D- Injury of a patient or staff member from assault	0	0	0	0	1	0	0	1
Total	5	8	12	4	5	3	2	39

NATCHAUG HOSPITAL

	2004	2005	2006	2007	2008	2009	2010	Total
3C- Attempted suicide resulting in serious disability	0	1	0	0	0	0	0	1
6C- Sexual assault within or on the grounds	1	0	3	1	0	0	0	5
Total	1	1	3	1	0	0	0	6

SILVER HILL HOSPITAL

	2004	2005	2006	2007	2008	2009	2010	Total
3C- Attempted suicide resulting in serious disability	0	0	0	1	1	0	0	2
6C- Sexual assault within or on the grounds	0	0	0	0	1	0	0	1
Total	0	0	0	1	2	0	0	3

Adverse events reported using the older classification system, Oct 2002-June 2004 are not included.

Category 4H was added to the list of reportable adverse events in May 2007.

Category 7G was added to the list of reportable events in January 2010.

*Prior to May 2007 category 5D included only death associated with a fall. Events formerly classified as 7B are reportable as 5D starting May 2007.

Appendix G. Connecticut Adverse Event Reports in Electronic Database
by Facility, Event Code, and Year of Occurrence
NQF List (1A-6D) and Connecticut-Specific List (7A-7G)
Ambulatory Surgical Centers and Fertility Centers

Only Categories with Reported Events are Displayed
See appendices I and K for a full list of facilities, including pain centers, childbirth centers, and hospice.
Only facilities that reported any adverse events are shown here.

CENTER FOR ADVANCED REPRODUCTIVE SERVICES

	2004	2005	2006	2007	2008	2009	2010	Total
4H- Artificial insemination with the wrong sperm or egg	0	0	0	0	0	1	0	1
Total	0	0	0	0	0	1	0	1

CONSTITUTION EYE SURGERY CENTER, EAST

	2004	2005	2006	2007	2008	2009	2010	Total
1A- Surgery performed on the wrong body part	0	0	0	0	0	0	1	1
Total	0	0	0	0	0	0	1	1

CT GI ENDOSCOPY CENTER

	2004	2005	2006	2007	2008	2009	2010	Total
7A- Perforations resulting in disability	0	0	0	2	0	1	1	4
Total	0	0	0	2	0	1	1	4

DANBURY SURGICAL CENTER

	2004	2005	2006	2007	2008	2009	2010	Total
1A- Surgery performed on the wrong body part	0	1	0	0	0	0	1	2
1D- Retention of a foreign object in a patient	0	2	0	0	0	0	0	2
7A- Perforations resulting in disability	0	0	1	0	2	0	0	3
7G- Death or serious injury due to surgery	0	0	0	0	0	1	0	1
Total	0	3	1	0	2	1	1	8

DIAGNOSTIC ENDOSCOPY

	2004	2005	2006	2007	2008	2009	2010	Total
7A- Perforations resulting in disability	0	0	0	0	1	1	1	3
Total	0	0	0	0	1	1	1	3

EASTERN CONNECTICUT ENDOSCOPY CENTER

	2004	2005	2006	2007	2008	2009	2010	Total
7A- Perforations resulting in disability	0	0	0	0	1	0	0	1
Total	0	0	0	0	1	0	0	1

Appendix G continued: Ambulatory Surgical Centers and Fertility Centers

ENDOSCOPY CENTER OF NORTHWEST CONNECTICUT

	2004	2005	2006	2007	2008	2009	2010	Total
7A- Perforations resulting in disability	0	3	0	0	0	1	2	6
Total	0	3	0	0	0	1	2	6

FAIRFIELD COUNTY ENDOSCOPY CENTER

	2004	2005	2006	2007	2008	2009	2010	Total
7A- Perforations resulting in disability	0	0	0	0	0	0	1	1
Total	0	0	0	0	0	0	1	1

HARTFORD SURGICAL CENTER

	2004	2005	2006	2007	2008	2009	2010	Total
7A- Perforations resulting in disability	1	0	0	0	0	0	0	1
Total	1	0	0	0	0	0	0	1

MIDDLESEX ENDOSCOPY CENTER

	2004	2005	2006	2007	2008	2009	2010	Total
7A- Perforations resulting in disability	0	0	0	3	1	1	2	7
Total	0	0	0	3	1	1	2	7

NAUGATUCK VALLEY ENDOSCOPY CENTER

	2004	2005	2006	2007	2008	2009	2010	Total
7A- Perforations resulting in disability	0	0	0	1	0	0	0	1
Total	0	0	0	1	0	0	0	1

NAUGATUCK VALLEY SURGICAL CENTER

	2004	2005	2006	2007	2008	2009	2010	Total
1A- Surgery performed on the wrong body part	0	0	1	0	1	0	0	2
7A- Perforations resulting in disability	0	0	0	1	0	0	0	1
7G- Death or serious injury due to surgery	0	0	0	0	0	0	1	1
Total	0	0	1	1	1	0	1	4

Appendix G continued: Ambulatory Surgical Centers and Fertility Centers

ORTHOPEDIC ASSOCIATES SURGERY CENTER

	2004	2005	2006	2007	2008	2009	2010	Total
1C- Wrong surgical procedure performed on a patient	0	0	0	0	0	0	1	1
Total	0	0	0	0	0	0	1	1

SAINT FRANCIS GI ENDOSCOPY

	2004	2005	2006	2007	2008	2009	2010	Total
7A- Perforations resulting in disability	0	0	0	0	0	0	1	1
Total	0	0	0	0	0	0	1	1

SHORELINE SURGERY CENTER

	2004	2005	2006	2007	2008	2009	2010	Total
7A- Perforations resulting in disability	0	0	0	0	0	1	1	2
Total	0	0	0	0	0	1	1	2

SSC II

	2004	2005	2006	2007	2008	2009	2010	Total
1A- Surgery performed on the wrong body part	0	0	0	0	0	1	0	1
Total	0	0	0	0	0	1	0	1

SURGERY CENTER OF FAIRFIELD COUNTY

	2004	2005	2006	2007	2008	2009	2010	Total
4A- Disability associated with a medication error	0	0	0	0	1	0	0	1
7A- Perforations resulting in disability	1	1	1	0	0	0	0	3
Total	1	1	1	0	1	0	0	4

YALE UNIVERSITY HEALTH SERVICES ASC

	2004	2005	2006	2007	2008	2009	2010	Total
5D, 7B- Injury from a fall post-admission	0	0	0	0	0	0	1	1
Total	0	0	0	0	0	0	1	1

Appendix H. Adverse Event Report Rates per 100,000 Inpatient Days, Acute Care Hospitals

											per 100,000 days
	Adverse Event Reports by Year							Reports	Days	Rate	Rate
Hospital	2004	2005	2006	2007	2008	2009	2010	2004-2010	2004-2010	2004-2010	2010
William W. Backus Hospital	3	3	5	3	6	0	8	28	321,107	8.7	16.2
Bridgeport Hospital	6	14	9	9	10	6	6	60	683,230	8.8	5.7
Bristol Hospital	0	0	1	1	2	1	3	8	219,650	3.6	9.8
Connecticut Children's Medical Center	0	8	3	3	3	0	4	21	220,184	9.5	11.0
Danbury Hospital	4	12	16	10	13	14	14	83	576,184	14.4	14.7
Day Kimball Healthcare	0	6	7	1	3	3	2	22	132,993	16.5	10.6
John Dempsey Hospital	1	4	1	6	9	12	6	39	375,689	10.4	11.7
Greenwich Hospital	3	4	2	2	2	1	4	18	322,430	5.6	7.6
Griffin Hospital	0	3	5	4	8	6	4	30	214,552	14.0	12.2
Hartford Hospital	17	19	23	13	14	32	27	145	1,411,699	10.3	12.3
Charlotte Hungerford Hospital	0	2	3	2	2	2	2	13	179,402	7.2	7.1
Hospital of Central Connecticut	5	15	13	18	21	21	11	104	558,598	18.6	13.4
Johnson Memoral Hospital	0	5	4	2	3	5	3	22	136,765	16.1	17.0
Lawrence and Memorial Hospital	2	3	7	3	2	3	7	27	453,351	6.0	9.8
Manchester Memorial Hospital	1	3	6	5	9	6	4	34	283,225	12.0	9.1
Middlesex Hospital	1	2	10	4	5	6	4	32	355,238	9.0	7.2
Milford Hospital	6	2	4	1	0	2	2	17	136,789	12.4	11.3
MidState Medical Center	1	4	5	4	6	4	5	29	282,193	10.3	11.8
New Milford Hospital	0	2	0	0	0	2	2	6	75,161	8.0	21.4
Norwalk Hospital	12	8	7	5	12	16	7	67	500,420	13.4	10.0
Rockville General Hospital	1	1	0	1	1	0	1	5	96,399	5.2	7.1
Saint Francis Hospital	6	25	23	18	12	11	12	107	1,048,512	10.2	7.8
Saint Mary's Hospital	2	3	13	5	0	8	8	39	367,236	10.6	15.2
Hospital of Saint Raphael	7	14	7	14	14	9	24	89	865,242	10.3	19.2
Saint Vincent's Medical Center	5	8	16	12	20	26	18	105	710,570	14.8	14.6
Sharon Hospital	1	2	3	2	3	5	2	18	73,722	24.4	17.2
Stamford Hospital	6	3	4	11	9	4	6	43	493,346	8.7	7.8
Waterbury Hospital	5	2	7	5	10	7	6	42	444,468	9.4	10.1
Windham Community Memorial Hospital	1	2	0	2	1	1	2	9	134,650	6.7	9.6
Yale-New Haven Hospital	11	21	10	29	24	27	25	147	1,753,726	8.4	8.8
Total	107	200	214	195	224	240	229	1409	13,426,723	10.5	11.2

Report Rate is per 100,000 inpatient days; 2004 data are half year. FY 2010 patient days were used for CY 2010 patient days.
All reports for a hospital, including inpatient, ED, and outpatient facilities operated under the hospital license are included.
Outpatient visits and ED visits are not included in the denominator of the rate. See appendix L for ED data alone.
No conclusions can be drawn about quality based on the reporting, not even whether a high rate is good, bad, or neither.
Counts for St. Vincent's do not include 7 adverse events reported by Hall-Brooke Behavioral Services from 2004-2008, prior to becoming Westport facilty under St. Vincent's license during 2008. St. Vincent's graciously provided inpatient, outpatient, and ED data for 2010, but for the sake of format style, these are not shown.
Dempsey counts do not include one report from Farmington Surgery Center prior to becoming a satellite of Dempsey in 2006.
St. Raphael counts do not include two reports from Hamden Surgery Center prior to becoming a satellite of St. Raphael in 2009.
Johnson counts do not include two reports from Johnson Surgery Center prior to coming under the hospital license in 2007.

Appendix I. Adverse Event Report Rates per 100,000 Inpatient Days for Chronic Disease Hospitals and Hospices Connecticut, 2004-2010

	Adverse Event Reports by Year							Reports	Days	per 100,000 days est. Rate	Rate
Facility	2004	2005	2006	2007	2008	2009	2010	2004-2010	2010	2004-2010	2010
The Connecticut Hospice	0	0	0	0	0	0	0	0	13,700	0.0	0.0
Gaylord Hospital	0	2	1	2	2	2	2	11	40,039	4.2	5.0
The Hospital for Special Care	0	2	2	2	5	5	4	20	71,741	4.3	5.6
Masonicare Health Center	0	2	1	0	1	0	1	5	4,136	18.6	24.2
Mount Sinai Rehabilitation Hospital	0	0	1	0	0	0	0	1	9,603	1.6	0.0
Levitow Veterans Health Center	2	13	5	3	3	2	2	30	40,150	11.5	5.0
Hebrew Home and Hospital	0	3	0	7	3	5	5	23	9,703	36.5	51.5
Total	2	22	10	14	14	14	14	90	189,072	7.3	7.4

Appendix J. Adverse Event Report Rates per 100,000 Inpatient Days for Hospitals for Mentally Ill Persons Connecticut, 2004-2010

	Adverse Event Reports by Year							Reports	Days	per 100,000 days est. Rate	Rate
Facility	2004	2005	2006	2007	2008	2009	2010	2004-2010	2010	2004-2010	2010
Natchaug Hospital	1	1	3	1	0	0	0	6	68,506	1.3	0.0
Silver Hill Hospital	0	0	0	1	2	0	0	3	14,174	3.3	0.0
Masonicare Behavioral Health	5	8	12	4	5	3	2	39	10,334	58.1	19.4
Total	6	9	15	6	7	3	2	48	93,014	7.9	2.2

Report Rate is per 100,000 inpatient days. Estimated rate 2004-2010 is based on 6.5 times patient days in 2010.
Data for 2004 are half year.
No conclusions can be drawn about quality based on the reporting, not even whether a high rate is good, bad, or neither.

Appendix K. Adverse Event Report Rates per 100,000 Outpatient Visits for Ambulatory Surgical Centers (ASCs), Pain Medicine Centers, Fertility Centers, and Childbirth Centers, Connecticut, 2004-2010

											per 100,000 visits
		Adverse Event Reports by Year							Reports	Patients	Rate
Facility	Location	2004	2005	2006	2007	2008	2009	2010	2004-2010	2010	2010
Hartford Surgical Center	Hartford	1	0	0	0	0	0	0	1	2,409	0.0
Danbury Surgical Center	Danbury	0	3	1	0	2	1	1	8	9,456	10.6
Surgical Center of Fairfield County	Bridgeport	1	1	1	0	1	0	0	4	4,984	0.0
Connecticut Surgery Center LP	Hartford	0	0	0	0	0	0	0	0		
Waterbury Outpatient Surgical Center	Waterbury	0	0	0	0	0	0	0	0	1,654	0.0
Naugatuck Valley Surgical Center	Waterbury	0	0	1	1	1	0	1	4	10,452	9.6
Connecticut Foot Surgery Center	Milford	0	0	0	0	0	0	0	0	544	0.0
Robbins Eye Center	Bridgeport	0	0	0	0	0	0	0	0	910	0.0
Laser and Vision Surgery Center	Manchester	0	0	0	0	0	0	0	0	1,684	0.0
New Vision Cataract Center	Norwalk	0	0	0	0	0	0	0	0		
Fairfield Surgery Center	Fairfield	0	0	0	0	0	0	0	0	1,226	0.0
The Eye Surgery Center	Bloomfield	0	0	0	0	0	0	0	0	1,238	0.0
Constitution Eye Surgery Center	Waterford	0	0	0	0	0	0	0	0	11,413	0.0
Constitution Eye Surgery Center East	Waterford	0	0	0	0	0	0	1	1	3,263	30.6
Fairfield County Endoscopy Center	Trumbull	0	0	0	0	0	0	1	1	5,583	17.9
Connecticut Eye Surgery Center South	Milford	0	0	0	0	0	0	0	0	5,799	0.0
Endoscopy Center of Northwest Connecticut	Torrington	0	3	0	0	0	1	2	6	3,482	57.4
Endoscopy Center of Connecticut-Guilford	Guilford	0	0	0	0	0	0	0	0	1,863	0.0
Endoscopy Center of Connecticut-Hamden	Hamden	0	0	0	0	0	0	0	0	6,198	0.0
Orthopedic Associates Surgery Center	Rocky Hill	0	0	0	0	0	0	1	1	6,929	14.4
Shoreline Surgery Center	Guilford	0	0	0	0	0	1	1	2	6,219	16.1
The Endoscopy Center of Fairfield	Fairfield	0	0	0	0	0	0	0	0	7,745	0.0
Naugatuck Valley Endoscopy Center	Waterbury	0	0	0	1	0	0	0	1		
Litchfield Hills Surgery Center	Torrington	0	0	0	0	0	0	0	0	2,040	0.0
Yale University Health Services ASC	New Haven	0	0	0	0	0	0	1	1		
Middlesex Endoscopy Center	Middletown	0	0	0	3	1	1	2	7	5,479	36.5
Wilton Surgery Center	Wilton	0	0	0	0	0	0	0	0	4,926	0.0
Central Connecticut Endoscopy Center	Plainville	0	0	0	0	0	0	0	0	5,526	0.0
Split Rock Surgical Associates	Wilton	0	0	0	0	0	0	0	0		
Center for Ambulatory Surgery	Westport	0	0	0	0	0	0	0	0		
Plastic Surgery of Southern Connecticut	Westport	0	0	0	0	0	0	0	0	34	0.0

Appendix K continued.

Ambulatory Surgical Centers (ASCs), Pain Medicine Centers, Fertility Centers, and Childbirth Centers

											per 100,000 visits
		Adverse Event Reports by Year							Reports	Patients	Rate
Facility	Location	2004	2005	2006	2007	2008	2009	2010	2004-2010	2010	2010
Ridgefield Surgical Center	Ridgefield	0	0	0	0	0	0	0	0		
Eastern Connecticut Endoscopy Center	Norwich	0	0	0	0	1	0	0	1	3,519	0.0
New England Fertility Institute	Stamford	0	0	0	0	0	0	0	0	841	0.0
Summer Street Ambulatory Surgery Center	Stamford	0	0	0	0	0	0	0	0	67	0.0
CT GI Endoscopy Center	Bloomfield	0	0	0	2	0	1	1	4	5,073	19.7
Diagnostic Endoscopy	Stamford	0	0	0	0	1	1	1	3	6,848	14.6
The Hand Center of Western Connecticut	Danbury	0	0	0	0	0	0	0	0	701	0.0
Connecticut Orthopaedic Specialist	Hamden	0	0	0	0	0	0	0	0	2,495	0.0
Coastal Digestive Care Center	New London	0	0	0	0	0	0	0	0	6,087	0.0
Surgical Center of CT-CT Hand	Bridgeport	0	0	0	0	0	0	0	0	571	0.0
North Haven Pain Medicine Center	North Haven	0	0	0	0	0	0	0	0		
Shoreline Colonoscopy Suites	Old Saybrook	0	0	0	0	0	0	0	0		
Dr. Felice's Youthful Images	Bloomfield	0	0	0	0	0	0	0	0	119	0.0
CT Plastic Surgery Center	Glastonbury	0	0	0	0	0	0	0	0		
Connecticut Surgical Arts	Norwich	0	0	0	0	0	0	0	0	33	0.0
Gary J. Price, M.D., Center for Aesthetic Surgery	Guilford	0	0	0	0	0	0	0	0	168	0.0
Gregory Brucato, M.D./Brucato Plastic Surgery	Ridgefield	0	0	0	0	0	0	0	0	63	0.0
Connecticut Center for Plastic Surgery	Guilford	0	0	0	0	0	0	0	0		
Leif O. Nordberg, M.D.	Stamford	0	0	0	0	0	0	0	0		
Aesthetic Surgery Center	New Haven	0	0	0	0	0	0	0	0	19	0.0
Center for Advanced Reproductive Services	Farmington	0	0	0	0	0	1	0	1	915	0.0
Reproductive Medicine Associates of Connecticut	Norwalk	0	0	0	0	0	0	0	0	504	0.0
Saint Francis GI Endoscopy	Windsor	0	0	0	0	0	0	1	1	4,447	22.5
Digestive Disease Associates Endoscopy Suite	Branford	0	0	0	0	0	0	0	0	1,965	0.0
SSC II	Guilford	0	0	0	0	0	1	0	1	3,891	0.0
Evergreen Endoscopy Center	South Windsor	0	0	0	0	0	0	0	0	5,127	0.0
John J. Borkowski, M.D.	Middletown	0	0	0	0	0	0	0	0		
Glastonbury Endoscopy Center, LLC	Glastonbury	0	0	0	0	0	0	0	0	4,305	0.0
Glastonbury Surgery Center	Glastonbury	0	0	0	0	0	0	0	0	607	0.0
Connecticut Fertility	Bridgeport	0	0	0	0	0	0	0	0	244	0.0
Connecticut Childbirth & Women's Center	Danbury	0	0	0	0	0	0	0	0	106	0.0
Total		3	7	3	8	7	8	14	50		

Report Rate is per 100,000 outpatient visits. Data for 2004 are half year.

No conclusions can be drawn about quality based on the reporting, not even whether a high rate is good, bad, or neither.

Some ASCs did not report events in earlier years because the ASC did not yet exist.

Glastonbury Surgery Center opened 3/24/2010; Connecticut Fertility opened 10/1/2010.

Gray shading = The data had not been provided by the facility by the time this report was written.

Appendix L. Adverse Event Report Rates per 100,000 ED Visits, Emergency Departments

	ED Adverse Event Reports by Year							Reports	ED Visits	per 100,000 ED visits	
Hospital	2004	2005	2006	2007	2008	2009	2010	2004-2010	2009	est. Rate 2004-2010	Rate 2009
William W. Backus Hospital	0	0	0	0	0	0	0	0	55,994	0.0	0.0
Bridgeport Hospital	1	0	2	0	0	0	0	3	73,625	0.6	0.0
Bristol Hospital	0	0	0	0	0	0	1	1	34,601	0.4	0.0
Connecticut Children's Medical Center	0	0	0	0	0	0	0	0	51,442	0.0	0.0
Danbury Hospital	0	0	0	0	0	2	1	3	55,691	0.8	3.6
Day Kimball Healthcare	0	0	1	0	0	0	0	1	25,585	0.6	0.0
John Dempsey Hospital	0	0	0	0	0	0	0	0	24,431	0.0	0.0
Greenwich Hospital	0	0	0	0	0	0	0	0	35,917	0.0	0.0
Griffin Hospital	0	0	0	0	1	0	0	1	32,839	0.5	0.0
Hartford Hospital	1	0	1	2	1	0	1	6	70,870	1.3	0.0
Charlotte Hungerford Hospital	0	0	1	0	0	0	0	1	35,328	0.4	0.0
Hospital of Central Connecticut	1	1	1	2	0	1	0	6	90,576	1.0	1.1
Johnson Memoral Hospital	0	0	0	0	0	2	0	2	17,561	1.8	11.4
Lawrence and Memorial Hospital	0	0	0	0	0	0	1	1	71,634	0.2	0.0
Manchester Memorial Hospital	0	1	0	1	1	0	0	3	41,377	1.1	0.0
Middlesex Hospital	0	0	2	0	2	1	1	6	80,480	1.1	1.2
Milford Hospital	1	0	1	0	0	0	0	2	36,970	0.8	0.0
MidState Medical Center	0	0	0	2	0	0	0	2	42,640	0.7	0.0
New Milford Hospital	0	0	0	0	0	0	0	0	16,758	0.0	0.0
Norwalk Hospital	0	0	0	0	0	1	1	2	39,518	0.8	2.5
Rockville General Hospital	0	1	0	0	0	0	0	1	23,950	0.6	0.0
Saint Francis Hospital	0	2	2	0	0	0	0	4	55,111	1.1	0.0
Saint Mary's Hospital	0	0	2	0	0	1	1	4	62,515	1.0	1.6
Hospital of Saint Raphael	1	0	1	0	0	1	3	6	40,130	2.3	2.5
Saint Vincent's Medical Center	0	0	1	0	0	0	0	1	51,508	0.3	0.0
Sharon Hospital	0	0	0	0	0	0	0	0	13,985	0.0	0.0
Stamford Hospital	1	0	1	0	0	0	1	3	57,550	0.8	0.0
Waterbury Hospital	0	0	0	0	1	0	0	1	48,983	0.3	0.0
Windham Community Memorial Hospital	0	0	0	0	0	0	0	0	26,664	0.0	0.0
Yale-New Haven Hospital	0	1	0	0	0	0	0	1	102,205	0.2	0.0
Total	6	6	16	7	6	9	11	61	1,416,438	0.7	0.6

Report Rate is per 100,000 ED visits; 2004 data are half year. Estimated rate 2004-2010 is based on 6.5 times ED visits in 2009.
ED Adverse Event reports are included in the numerators of appendix H rates, but ED visits are not included in the denominators.
No conclusions can be drawn about quality based on the reporting, not even whether a high rate is good, bad, or neither.

Appendix M.

Primary Payer (%) of Inpatient Acute Care Hospital Bills

Hospital	Self Pay	Medicare	Medicaid	Blue Cross and Commercial	No Charge	HMO	PPO	Other
William W. Backus Hospital	2.3	42.8	18.2	19.0	0.0	13.0	0.0	4.7
Bridgeport Hospital	1.5	36.7	29.5	16.3	0.0	12.9	2.0	1.1
Bristol Hospital	1.3	45.4	21.4	16.7	0.0	14.5	0.0	0.7
Connecticut Children's Medical Center	1.4	0.1	53.3	15.0	0.1	25.2	4.2	0.7
Danbury Hospital	1.5	41.7	14.7	36.9	0.0	4.4	0.1	0.7
Day Kimball Healthcare	0.9	44.5	23.2	21.4	0.0	6.5	0.0	3.5
John Dempsey Hospital	5.5	40.9	18.0	20.9	0.0	12.0	0.2	2.6
Greenwich Hospital	2.5	38.6	5.8	17.9	0.0	22.1	12.7	0.4
Griffin Hospital	1.0	48.1	17.9	14.0	0.0	18.0	0.0	0.9
Hartford Hospital	2.4	38.2	21.0	13.6	0.0	19.1	3.6	2.1
Charlotte Hungerford Hospital	2.0	52.4	18.6	17.5	0.0	8.5	0.2	0.9
Hospital of Central Connecticut	2.3	44.4	23.8	14.5	0.0	13.9	0.2	1.1
Johnson Memoral Hospital	2.0	50.0	14.6	18.6	0.0	8.3	5.6	0.9
Lawrence and Memorial Hospital	1.2	43.9	19.8	17.0	0.0	4.9	4.9	8.3
Manchester Memorial Hospital	2.8	41.1	17.5	9.2	0.0	20.9	7.7	1.0
Middlesex Hospital	0.2	50.5	15.6	17.8	0.0	11.1	3.1	1.8
Milford Hospital	1.9	52.5	8.6	17.6	0.0	16.2	2.3	0.9
MidState Medical Center	2.7	47.1	19.1	11.6	0.0	15.9	2.6	1.0
New Milford Hospital	2.2	46.2	11.0	17.3	0.0	12.4	8.0	3.0
Norwalk Hospital	4.5	38.7	17.1	20.8	0.0	17.4	1.1	0.6
Rockville General Hospital	2.6	47.1	18.7	8.1	0.0	16.7	5.5	1.3
Saint Francis Hospital	0.9	42.4	21.4	16.6	0.0	14.9	2.7	1.2
Saint Mary's Hospital	2.9	43.9	22.6	20.5	0.0	7.2	0.2	2.7
Hospital of Saint Raphael	1.3	54.5	15.5	16.3	0.0	11.0	0.0	1.3
Saint Vincent's Medical Center	5.4	44.3	18.2	15.3	0.0	12.3	3.1	1.4
Sharon Hospital	4.2	55.2	13.1	12.3	0.0	13.4	0.0	1.8
Stamford Hospital	1.5	35.3	21.0	22.7	0.0	18.8	0.0	0.8
Waterbury Hospital	2.6	46.4	23.3	14.4	0.0	9.9	2.5	0.8
Windham Community Memorial Hospital	2.4	49.0	18.3	20.1	0.0	4.4	0.0	5.8
Yale-New Haven Hospital	1.3	31.1	26.7	22.8	0.4	11.6	4.7	1.3
Total	2.1	41.2	20.7	18.2	0.1	13.3	2.7	1.5

Data Source: DPH Office of Health Care Access.
Data are fiscal year 2010.

Appendix M continued
Primary Payer (%) of Bills,
Hospices, Chronic Disease Hospitals, and Hospitals for Mentally Ill Persons

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	0.1	49.0	17.1	32.9	1.0
The Hospital for Special Care	0.0	9.0	79.0	6.0	6.0
Masonicare Health Center, Chronic Disease Hospital	*	70.8	0.0	29.2*	0.0
Mount Sinai Rehabilitation Hospital	0.3	51.0	11.0	15.8	25.2
Levitow Veterans Health Center	0.0	100.0	100.0	0.0	0.0
Hebrew Home and Hospital	0.0	82.2	7.7	0.0	10.2
Natchaug Hospital	0.6	11.5	45.3	27.2	15.4
Silver Hill Hospital	3.6	5.4	0.0	91.2	0.0
Masonicare Behavioral Health	*	85.5	0.0	14.2*	0.0

*The percentage for Commerical Insurance includes Self Pay also.

Calendar Year 2010 data were provided by each facilty to DPH; Silver Hilll data are March 2010-Feb 2011.

Appendix M continued: Case Mix or Primary Payer (%) of Bills
Ambulatory Surgical Centers, Pain Medicine Centers, Fertility Centers, and Outpatient Childbirth Centers

Facility	Case Mix	Self Pay	Medicare	Medicaid	Blue Cross and Commercial	HMO	PPO	Other
Aesthetic Surgery Center		50.0			50.0			
Center for Advanced Reproductive Services		20.0			80.0			
Center for Ambulatory Surgery								
Central Connecticut Endoscopy Center	30.9% Egd, .2% Flex, 68.9% Colon							
Coastal Digestive Care Center	63% Colon, 23% upper, 15% Double							
Connecticut Center for Plastic Surgery								
Connecticut Childbirth & Women's Center		2.8		11.3	85.8			
Connecticut Eye Surgery Center South		0.7	50.9	1.4	42.6	1.1	0.2	
Connecticut Fertility	100% Retrievals							
Connecticut Foot Surgery Center	100% Foot surgery							
Connecticut Orthopaedic Specialist			10.0		50.0	20.0		20.0
Connecticut Surgery Center								
Connecticut Surgical Arts		100.0			0.0			
Constitution Eye Surgery Center			35.4		18.1			46.5
Constitution Eye Surgery Center East			100.0		0.0			
CT GI Endoscopy Center	67% Colon, 33% upper							
CT Plastic Surgery Center								
Danbury Surgical Center	41% GI, 14% opthal, 25% ortho, 20% pain							
Diagnostic Endoscopy		0.5	26.0	1.0	72.5			
Digestive Disease Associates Endoscopy Suite	Not able to calculate payer or case mix							
Dr. Felice's Youthful Images		100.0			0.0			
Eastern Connecticut Endoscopy Center		1.0	26.0		73.0			
Endoscopy Center of Connecticut-Guilford								
Endoscopy Center of Connecticut-Hamden								
Endoscopy Center of Fairfield, The			20.0	2.0	78.0			
Endoscopy Center of Northwest Connecticut		1.0	34.0	3.0	62.0			
Evergreen Endoscopy Center			23.9	1.3	68.8			
Eye Surgery Center, The		12.0	49.0		35.0			
Fairfield County Endoscopy Center					0.0	100.0		
Fairfield Surgery Center				6.0	55.0			
Gary J. Price, M.D., Center for Aesthetic Surgery		100.0			0.0			
Glastonbury Endoscopy Center, LLC	67.83% Colon, 31.96% upper, .16% Flex, .05% Pouch							
Glastonbury Surgery Center		0.5	13.8	0.2	30.3			
Gregory Brucato, M.D./Brucato Plastic Surgery	100% plastic surgery							
Hand Center of Western Connecticut, The	100% ortho							
Hartford Surgical Center	40% ortho, 50% GYN, 10% ENT/Pod							
John J. Borkowski, M.D.								
Laser and Vision Surgery Center	1302 cataract, 377 Yag, 5 other							
Leif O. Nordberg, M.D.								
Litchfield Hills Surgery Center			28.0		18.0			54.0
Middlesex Endoscopy Center		0.1	24.5	1.1	73.8			0.5
Naugatuck Valley Endoscopy Center								
Naugatuck Valley Surgical Center		1.0	32.0	6.0	32.0			29.0
New England Fertility Institute		20.0			100.0			
New Vision Cataract Center								
North Haven Pain Medicine Center								
Orthopedic Associates Surgery Center		2.9		14.1	0.0	65.4		17.7
Plastic Surgery of Southern Connecticut	100% plastic surgery							

Appendix M continued: Case Mix or Primary Payer (%) of Bills
Ambulatory Surgical Centers, Pain Medicine Centers, Fertility Centers, and Outpatient Childbirth Centers

Facility	Case Mix	Self Pay	Medicare	Medicaid	Blue Cross and Commercial	HMO	PPO	Other
Reproductive Medicine Associates of Connecticut		20.0			80.0			
Ridgefield Surgical Center								
Robbins Eye Center		0.5	37.5	13.0	10.0			39.0
Saint Francis GI Endoscopy			14.0		42.0			44.0
Shoreline Colonoscopy Suites								
Shoreline Surgery Center		0.3	20.2	1.5	56.9	1.4	19.8	
Split Rock Surgical Associates								
SSC II		0.8	30.2		39.1		20.7	9.3
Summer Street Ambulatory Surgery Center	100% plastic surgery							
Surgery Center of Fairfield County	20% pain, 23% ortho, 16% ENT, 9% ophthal, 5% pod, 6% GYN, 21% other							
Surgical Center of CT-CT Hand	100% wrist and hand							
Waterbury Outpatient Surgical Center		1.0	56.0	6.0	11.0		24.0	2.0
Wilton Surgery Center	62% ophthal, 38% pain							
Yale University Health Services ASC								

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

Appendix N: National Quality Forum Serious Reportable Events and Rates, Acute Care Hospitals of Three States

National Quality Forum	CT	2005	CT	2006	CT	2007	CT	2008	CT	2009	CT	2010
Serious Reportable Event	number	rate	number	rate	number	rate	number	rate	number	rate	number	rate
Surgical Events (1A-1E)	22	1.07	20	0.97	27	1.30	20	0.96	10	0.48	27	1.31
Product or Device (2A-2C)	11	0.53	3	0.15	2	0.10	4	0.19	4	0.19	1	0.05
Patient Protection (3A-3C)	2	0.10	3	0.15	3	0.14	3	0.14	0	0.00	2	0.10
Care Management (4A-4H)	26	1.26	35	1.70	34	1.64	62	2.98	73	3.52	46	2.24
Environmental (5A-5E, 7B)	73	3.54	107	5.18	73	3.52	83	3.98	95	4.58	80	3.90
Criminal (6A-6D)	5	0.24	6	0.29	4	0.19	3	0.14	4	0.19	5	0.24
Total	139	6.74	174	8.43	143	6.90	175	8.40	186	8.97	161	7.84

National Quality Forum	MA	2008	MA	2009	MN	2007	MN	2008	MN	2009	MN	2010
Serious Reportable Event	number	rate	number	rate	number	rate	number	rate	number	rate	number	rate
Surgical Events (1A-1E)	62	1.53	75	1.87	56	2.08	72	2.56	76	2.77	81	3.05
Product or Device (2A-2C)	5	0.12	8	0.20	5	0.19	3	0.11	1	0.04	3	0.11
Patient Protection (3A-3C)	3	0.07	5	0.12	3	0.11	3	0.11	3	0.11	5	0.19
Care Management (4A-4H)	26	0.64	78	1.94	49	1.82	130	4.62	131	4.77	133	5.00
Environmental (5A-5E)	231	5.70	207	5.16	4	0.15	98	3.48	78	2.84	80	3.01
Criminal (6A-6D)	11	0.27	10	0.25	4	0.15	1	0.04	5	0.18	1	0.04
Total	338	8.34	383	9.54	121	4.50	307	10.90	294	10.70	303	11.40

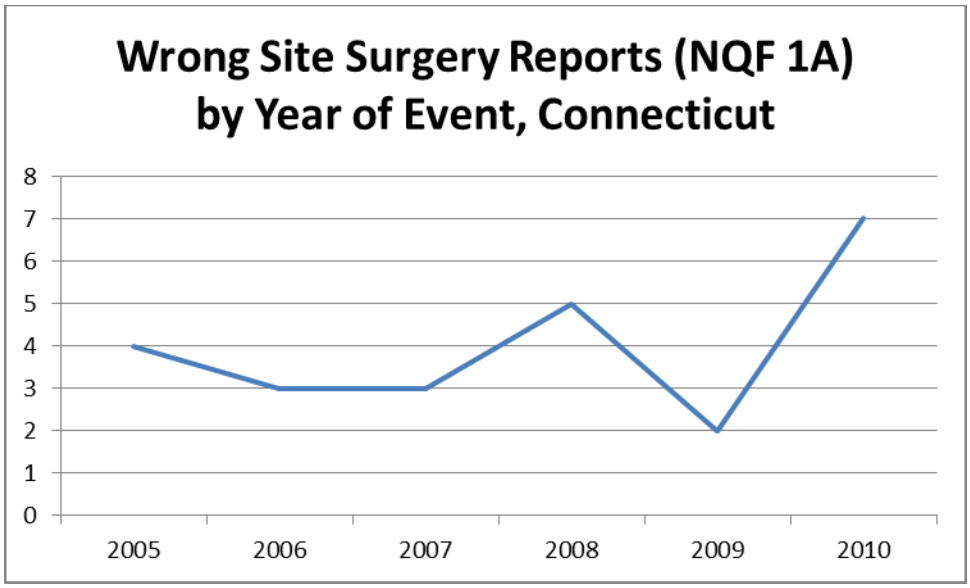
Category 7B is a Connecticut-specific fall event that was added to the NQF fall definition (5D) in May 2007.
Therefore, fall reports in Minnesota are not comparable before and after May 2007. Also, 86 of 122 pressure ulcers in 2008 were unstageable.
Unstageable ulcers are not reportable in CT, but are accepted if reported, since they always lead to stage 3-4 when staged.
In 2006, Connecticut's fall reports from acute care hospitals were distributed as 3 of 5D and 100 of 7B; the NQF rate without 7B was 3.58.
Category 4H, which was added in 2007, has never been reported in Connecticut, so it does not affect comparisons across years 2005-2010.
Connecticut rates for 2010 are based upon the number of hospital days for FY2010. All other CT rates use calendar year discharges.
Only adverse events reported by Acute Care or Children's Hospitals are included in numerators and denominators
Counts and rates for Massachusetts 2008 are from http://www.mass.gov/Eeohhs2/docs/dph/quality/healthcare/sre_acute_care_hospitals.pdf
Counts and rates for Massachusetts 2009 are from http://www.mass.gov/Eeohhs2/docs/dph/quality/healthcare/sre_report_2009.pdf
Rates for Minnesota 2006 are from http://www.health.state.mn.us/patientsafety/ae/aereport0107.pdf
Counts and rates for Minnesota 2007 are from http://www.health.state.mn.us/patientsafety/ae/aereport0108.pdf
Counts and rates for Minnesota 2008 are from http://www.health.state.mn.us/patientsafety/ae/09ahereport.pdf
Counts and rates for Minnesota 2009 are from http://www.health.state.mn.us/patientsafety/ae/2010ahereport.pdf
Counts and rates for Minnesota 2010 are from http://www.health.state.mn.us/patientsafety/ae/2011ahereport.pdf
Minnesota data cover October 7 of the preceding calendar year through October 6 of the labeled year.
See the text of this Connecticut 2011 adverse event report for a chart showing these data.

Not included in the chart, Indiana adverse event report rates were 11.9, 11.8, and 10.6 during 2007, 2008, and 2009, respectively.
However, if 20 hospitals not providing patient days data in 2009 were assigned the average days from the 127 providing such data,
the 2009 report rate would be 9.6 per 100,000 (analysis by CT DPH). Surgical events were 46 of 89 total events in 2009.
Counts and days for Indiana 2007 are from http://www.in.gov/isdh/files/2007_MERS_Data_Tables.pdf
Counts and days for Indiana 2008 are from http://www.in.gov/isdh/files/2008_MERS_Data_Tables.pdf
Counts and days for Indiana 2009 are from http://www.in.gov/isdh/files/2009_MERS_Data_Tables.pdf
New Jersey uses the NQF definitions plus a category 'other' in each of the groups surgical events, product or device,
patient protection, care management, and environmental, but criminal events are not included, and event 1E is differently defined.
Thus NJ is not directly comparable to the other states. NJ rates during 2005-2009 were 7.0, 7.8, 8.0, 9.6, and 8.4 per 100,000 patient-days.
NJ used the broader fall definition from 2005, but saw a decline in fall reports with more restricted definition in 2009.
Rates for New Jersey 2005-2009 are from http://www.state.nj.us/health/ps/documents/2009_summary_report.pdf.
In the Minnesota adverse events reports for 2006 and earlier, many facilities provided number of surgeries, not patient days.
Individual MN hospital data include inpatient and outpatient days (the latter are not included here).

Appendix O: Wrong Site, Wrong Patient, and Wrong Procedure Surgery in Connecticut

Between July 1, 2004 and May 11, 2011, 26 wrong site, 2 wrong patient, and 11 wrong procedure surgeries were reported to the Connecticut Department of Public Health (DPH) using National Quality Forum (NQF) event codes 1A-1C, and entered into the electronic database. This analysis is based upon these 39 reports in the electronic database, which includes the initial reports to DPH, but does not include subsequent facility investigations into causes, or corrective action plans.[21]

The 39 reports came from 21 facilities. Most (30) reports came from acute care hospitals and outpatient or ambulatory facilities owned by such hospitals. Two events were reported by children's hospitals and seven by independent ambulatory surgical centers. Almost three-quarters of reported events occurred in women. The distribution of patient ages was: 0-14 (4), 15-44 (12), 45-64 (12), 65 and older (11). The most common location of occurrence was the operating room (20). Other locations were outpatient services (4), ambulatory surgery (3), diagnostic services (3), adult medical (2), dialysis (1), and other or missing (6). The extent of the errors ranged from wrong site imaged, wrong incision or wrong injection site to begin a surgery, to an error discovered only after completion of a surgery. As shown in the chart below, there were more reports of 1A (wrong site) events in 2010 than in any previous year. Nevertheless, this apparent increase may be due to chance alone. As the reported number is influenced both by the number of events and the awareness of and willingness to report events, nothing can be concluded about frequency of errors based only upon the number of reports. Regardless of whether the increase in 2010 is statistically significant, any event of this sort is a serious concern.



Seventeen of the 39 1A-1C reports noted that the procedure was performed on the wrong side of the body. Usually the procedure was repeated on the correct side after informing the patient.

[21] Please see the cautions expressed by Dr. Kaveh Shojania about incident reporting in the September 2011 issue of AHRQ's M&M on the web; http://webmm.ahrq.gov/.

Ten procedures involved the spine, and frequently the L3-4 versus L4-5 intervertebral spaces was confused. Sometimes such an error of vertebral level was reported as wrong body part (1A) and sometimes as wrong procedure (1C). Five reports were wrong side nerve blocks.

Seven reports involved an orthopedic procedure on the wrist and or fingers and the correct side but wrong part. Twice the wrist was subjected to an unscheduled carpal tunnel release.[22]

Four reports in the chest involved wrong side chest tube placement, wrong side thoracocentesis (fluid removal near the lung using a hollow needle), or wrong level rib surgery.

Two arthroscopies were performed on the wrong knee, and one other knee surgery was performed using an implant designed for the other side. Two nerve blocks were performed on the wrong shoulders but the errors were detected before incisions. Other reports identified obstetrics, the GI tract, an eye (wrong size implant), and other implanted medical devices. Once, an x-ray was flipped, resulting in wrong side procedure.

One of the two reported wrong patient events involved a thoracocentesis intended for another patient, the second an amniocentesis intended for another patient with same first name.

Immediate plans submitted with the adverse event reports typically involved informing the patient of the error, review of time-out procedures, re-education of staff, and plans to conduct root cause analysis. Specific actions included:

(1) confirmatory x-ray of spinal level will be required for all spinal surgery;

(2) revise verification policy so that mark is visible at time of procedure;

(3) re-education regarding the importance of each step in the Time-Out Procedure; as a visual queue, posters were placed in all operating rooms defining key individual and team roles;

(4) use of the Radiology Clinical Information Form for documentation of all communications with referring physicians will be mandated;

(5) a documented time out will be required before initiation of any block, in addition to the time out required prior to surgery;

(6) clarify circumstances under which a second time out is required;

(7) development of a surgical safety checklist;

(8) discuss case with senior leadership;

(9) form a multi-disciplinary investigation team.

If followed, these steps should prevent recurrence of the adverse event. However, this summary of immediate plans does not evaluate whether they are wise, are transferable to other settings, or were confirmed in subsequent corrective action plans or root cause analyses.

[22] See "Case 34-2010: A 65-Year-Old Woman with an Incorrect Operation on the Left Hand," *New England Journal of Medicine* 2010: 363:1950-7 for a similar story.

Comparison of the Connecticut data with other sources is difficult, although wrong side error is common in wrong site reports and error in level is common in spinal surgery reports.

A March 2011 Pennsylvania Patient Safety Advisory noted progress in preventing wrong-site surgery after interventions. However, the improvement did not reach statistical significance. A review of 40 wrong-site knee procedures found 20 wrong side nerve blocks by anesthesiologists, 11 wrong-side anesthetic injections by orthopedic surgeons, 8 wrong-site surgeries, and 1 wrong procedure on the correct knee.[23]

Minnesota developed stronger time-out and site-marking processes in 2007-08. The Minnesota Department of Health 2011 report on adverse events contained 48 wrong patient, procedure or site events in the previous year, using the NQF definitions. The most commonly reported events involved spinal or other orthopedic procedures, regional anesthetic blocks or other injections, and cystoscopies with stent placement or removal. Common themes included the removal of markers or clips to identify the level during spinal surgery, the lack of visualization of the site mark on skin, which was not questioned, and multiple distractions during the time-out process.[24]

In the Veterans Health Administration a review of incorrect surgical procedures found that between 2001-2006 and 2006-2009 the rate of reported adverse events decreased while the rate of close calls increased. Events were evenly split between the operating room (OR) and all other locations. Ophthalmology, Invasive Radiology, and Orthopedics had the highest rates overall. Neurosurgery (due to spinal cases), followed by ophthalmology (wrong implants) had the highest rates in the OR. The most common (18%) root cause was lack of standardization of the clinical process.[25]

Between 1985 and 2004, a large malpractice carrier received 25 nonspine wrong-site operations; 12 were wrong side, 12 were wrong-site that did not involve laterality, and 1 was wrong patient. (15 wrong vertebral level or wrong-side laminectomy cases were not studied.) Through chart review of 13 cases a study determined that 8 (62%) might have been prevented by use of the Joint Commission on Accreditation of Healthcare Organizations Universal Protocol (which became effective July 1, 2004 for all JCAHO accredited facilities). That protocol emphasizes preoperative verification, site marking, and a "time out" in the operating room. Many protocols involved considerable complexity without added benefit.[26] In 9 of the 13 nonspine cases there was an ambiguity or error that preceded the arrival of the patient at the operating room area on the day of surgery.

A medical center in Ohio experienced eight wrong site, wrong patient, or wrong procedure events between April 2008 and January 2010. Root Cause Analysis was conducted for each event; later a Common Cause Analysis included all events. The two most frequently identified failure modes were: (1) the procedure consent did not include a detail such as laterality or site, or the consent was obtained by a practitioner not directly involved in the procedure; (2) staff did not understand that the source documents (procedure consent, history and physical, procedure schedule, actual images, physician's order) were to be reconciled with one another, and whose responsibility it was to determine pre-procedure verification. It was unclear who had responsibility for

[23] http://patientsafetyauthority.org/ADVISORIES/AdvisoryLibrary/2011/mar8(1)/Pages/39.aspx
[24] http://www.health.state.mn.us/patientsafety/ae/2011ahereport.pdf
[25] Neily J, Mills PD, Eldridge N, et al. Incorrect surgical procedures within and outside of the operating room. *Archives of Surgery*. Published online July 18, 2011. Doi:10.1001/archsurg.2011.171
[26] Kwaan MR, Studdert DM, Zinner MJ, Gawande AA. Incidence, patterns, and prevention of wrong-site surgery. *Archives of Surgery* 2006;141:353-358.

calling time-outs. After addressing these and other issues, the center has had no further such events during the past year.[27]

The Joint Commission estimates that 40 wrong-site surgeries occur each week in the United States. In its sentinel report investigations, 39% of wrong site surgeries involved errors introduced during the scheduling process, and problems could arise at any stage. Site marking problems included the mark being too far from the site, being covered, or washing off. There were discrepancies between what was seen in the holding area, when the surgeon was not present, to what was seen in the operating room. The solution used in a Rhode Island hospital is that the surgeons all go out to the holding area to make the initial mark with the patient and the staff. They subsequently affirm that mark by placing a finger on the mark and asking if everyone can see the mark. The Joint Commission is testing a revised wrong-site surgery prevention protocol in eight hospitals to see if compliance can be maintained above 90%. Targeted solutions for the Wrong Site Surgery Project will be available in the Center's Targeted Solutions Tool in the fall of 2011.[28]

In a recent article, Paul Levy, the former CEO of Beth Israel Deaconess Medical Center, recounted that Crew Resource Management (CRM) processes were introduced to the Obstetrics and Gynecology Department after a tragic event in 2008. Adapted from the airline industry, CRM involves checklists, but also a shared sense of responsibility for the outcome of a case, by all members of a team. The result was a dramatic reduction in major obstetric events. Levy concluded,

> Transparency, combined with a commitment to and training in crew resource management, enables doctors to hold themselves accountable to the standard of care they would wish for their own family members. This combination of ingredients offers far more potential than financial penalties or other regulatory actions for sustained process improvement in the operating rooms of America.[29]

[27] Mallett R, Conroy M, Saslaw LZ, Moffett-Bruce S. Preventing wrong site, procedure and patient events using a common cause analysis. *American Journal of Medical Quality* Aug 10, 2011 [Epub ahead of print], doi 10.1177/1062860611412066.
[28] http://www.healthleadersmedia.com/content/LED-268180/Joint-Commission-Unveils-Wrong-Site-Surgery-Prevention-Tool##
[29] Paul Levy, "Never Events? Well, Hardly Ever," *Virtual Mentor: American Medical Association Journal of Ethics*, September 2011, volume 13, number 9, 659-662. http://virtualmentor.ama-assn.org/2011/09/pdf/vm-1109.pdf

Appendix P: Retained Foreign Object in a Patient after Surgery or other Procedure

From mid-2004 to mid-2011 there have been 107 reports of retained objects after surgery or other procedure (NQF category 1D) to the Connecticut DPH. About half occurred in the operating room and the other half in a variety of places, which may, however include the surgical setting (e.g. outpatient, ambulatory surgical, other). One hundred four of the retained object reports came from acute care hospitals or outpatient facilities operated by these hospitals. The annual number of retained object events reported has been steady over time.

Of 25 retained object reports for Jan 2010-Oct 2011, nine involved a guide wire (especially the tip separating), six involved gauze or sponge, two reports mentioned catheters, two mentioned drains, one identified a stapler, and one a visceral sheath. Removal was delayed beyond a day in 10, including one guide wire, four sponges, one catheter piece, one drain piece, one dental bracket (these eight were not noticed when they occurred), one curved needle, and in one case a fall six weeks post-surgery required removal of Steinman pin and revision of hip arthroplasty. The purposes for guide wires included endoscopy of bile ducts, femoral line insertion, and central line insertion (i.e. for coronary catheterization). Sometimes surgeons decided not to remove guide wire tips because the trauma of additional surgery would exceed the risk posed by the object remaining in the body. Five reports were obstetric, of which three involved sponges.

The Pennsylvania Patient Safety Authority's June 2009 Advisory "Beyond the Count: Preventing the Retention of Foreign Objects"[30] reviewed the literature and summarized 194 retained foreign object (RFO) reports. The rate of RFOs that are discovered after the patient has left the operating room is estimated to be between one in 5,500 surgeries and one in 7,000 surgeries, and one in 70 count discrepancy cases in coronary artery bypass graft (CABG) surgery results in an RFO. In 2008 the Patient Safety Authority received 2,228 reports involving an incorrect count, of which 47% were incorrect needle count, 33% incorrect equipment count, and 20% incorrect sponge count. Radiograph was positive for RFO in 24, and negative in 1,123 of these reports. Among the 194 RFO reports as a separate category from count discrepancy, 84% had a radiograph; 22% of RFOs were discovered after the patient left the operating room (OR).

Several studies suggest that reliance on counts may not be sufficient to prevent RFOs. Accuracy of the count was affected by complexity of the surgery, emergency surgery, and surgical team fatigue. Communication may be affected by cultural factors, interruptions, noise, underestimation of time requirements, staff turnover, handoffs across physical locations and staff, and rule bending or violation. Some researchers have recommended radiographs at the end of procedures involving an emergent procedure, unexpected change in procedure, or high body mass index. Others, citing the poor quality of portable radiographs, advocate a radiograph if the count is incorrect, and before wound closure, and that the x-ray be viewed by a radiologist. The Department of Veterans Affairs suggests that any radiograph order to locate an RFO should specify the item missing and the OR suite number and telephone number. The Mayo Clinic employs a multidisciplinary process that includes a standardized counting process and actions to take if the count is incorrect. According to the Patient Safety Authority's review, bar coded or radiofrequency detectable sponge systems have varying costs and efficacy, and do not replace a manual count.

The Joint Commission advises that organizations take steps to mitigate the occurrence of retained objects, including: (1) audit operative and procedural records to ensure that counts are complete and documented, (2)

[30] http://patientsafetyauthority.org/ADVISORIES/AdvisoryLibrary/2009/Jun6(2)/Pages/39.aspx

review policies and procedures, (3) monitor staff compliance with safe practice, (4) assess staff competencies, (5) use assistive technology, and (6) learn from near miss incidents.[31] Surgeons informed at the time of closure that a sponge or instrument is missing must stop and do a visual and manual interrogation of the cavity that has been operated on. A second count should be done concurrently, followed by an x-ray if the count is still incorrect. The radiologist must be informed of the item in question, operative site, and additional drains or lines that may affect the reading.

[31] http://www.jcrinc.com/Foreign-Objects-Retained-After-Surgery/

APPENDIX Q: DPH Screening of Death Records for Possible Unreported Fatal Adverse Events

The phenomenon of underreporting in patient safety reporting systems is widely recognized.[32] In 2010 DPH expanded screening of death records for possible unreported adverse events using the system described below. To date, no unreported adverse events have been identified through cause of death (COD) codes. This analysis estimates the utility of the COD codes used for screening.

Primary cause of death (PCAUSE) and contributing cause of death codes, COD 1-20, are used on death certificates. Based on expert internal opinion and precedent, DPH assigned low, medium, or high priority to groups of codes, indicating by high priority that a code was thought to be strongly linked to adverse events. DPH began screening deaths with any code Y60-Y84 (medical and surgical misadventure, device-related misadventure, and abnormal reaction) or T80-T88 (medical and surgical complication) in the PCAUSE or any of the 20 COD fields. (T codes cannot appear in the PCAUSE variable). These correspond to the medium and high priority groups.

To evaluate whether the priority classifications selected were well-defined, DPH linked death and adverse event records, to see if the higher priority classifications identified more adverse events.

Reported adverse events during 2005-2009 with a valid social security number and indication that the patient expired or with a date of death given (n=113) were matched with death records. Two adverse event reports of different adverse events 9 days apart with the same patient were found. After deleting the earlier report, there were 80 matches.[33]

Codes that DPH considered for screening use were associated with 16 of the 80 linked adverse event records (20%). By comparison, any of these codes appeared in only 3.2% of all death records in 2005-2009. Almost all individual codes were more common among deaths with reported adverse event than deaths in general. The strength of the association, measured by a ratio between the proportion of fatal adverse events with a code and the proportion of all deaths with the same code, increased from low to medium to high priority. In the high priority group the ratio was 287.0, but only 4 of 80 (5%) of adverse events had such high priority code. Among those with medium or high priority, used for screening, the ratio was 15.9, and 9 (11%) had such a code. This suggests that the priorities were well chosen, although the yield was low.

[32] For example, Douglas J. Noble, Sukhmeet S. Panesar, and Peter J. Pronovost, "A Public Health Approach to Patient Safety Reporting Systems is Urgently Needed," *Journal of Patient Safety*, June 2011;7:109-112.

[33] For confidentiality protection, social security number is no longer included in adverse event reports to DPH, so this linkage exercise will be impossible using data years after 2009.

Appendix R. Connecticut Adverse Event Reports in Electronic Database
by Event Code, Year of Occurrence, and Whether a DPH Investigation was Launched
NQF List (1A-6D) and Connecticut-Specific List (7A-7G)
February 2007-May 11, 2011

Event Code	Brief Description	2007-2008 Launch Investigation	2007-2008 No Investigation	2007-2008 %	2009-2011 Launch Investigation	2009-2011 No Investigation	2009-2011 %	Total Launch Investigation	Total No Investigation	Total %
1A	Surgery performed on the wrong body part	5	3	63%	8	2	80%	13	5	72%
1B	Surgery performed on the wrong patient	1	0	100%	0	0		1	0	100%
1C	Wrong surgical procedure performed on a patient	3	2	60%	4	0	100%	7	2	78%
1D	Retention of a foreign object in a patient	11	20	35%	21	8	72%	32	28	53%
1E	Intra or post-op death in an ASA class I patient	1	0	100%	0	0		1	0	100%
2A	Contaminated drugs, devices, or biologics	0	1	0%	0	0		0	1	0%
2B	Device is used or functions other than as intended	3	1	75%	1	2	33%	4	3	57%
2C	Intravascular air embolism	1	0	100%	0	2	0%	1	2	33%
3A	Infant discharged to the wrong person	0	0		0	0		0	0	
3B	Disability associated with patient elopement	0	0		0	0		0	0	
3C	Attempted suicide resulting in serious disability	7	1	88%	2	0	100%	9	1	90%
4A	Disability associated with a medication error	3	1	75%	2	2	50%	5	3	63%
4B	Hemolytic reaction, ABO-incompatible blood	1	0	100%	0	0		1	0	100%
4C	Maternal disability in a low-risk pregnancy	2	0	100%	1	1	50%	3	1	75%
4D	Disability from hypoglycemia onset in facility	1	1	50%	0	0		1	1	50%
4E	Kernicterus from hyperbilirubinemia in neonates	0	0		0	0		0	0	
4F	Stage 3&4 pressure ulcers post-admission	34	60	36%	10	122	8%	44	182	19%
4G	Disability due to spinal manipulation	0	0		0	0		0	0	
4H	Artificial insemination with the wrong sperm or egg	0	0		1	0	100%	1	0	100%
5A	Disability from an electric shock	0	0		0	0		0	0	
5B	Wrong gas or contaminated	0	1	0%	0	0		0	1	0%
5C	Disability associated with a burn post-admission	0	1	0%	0	1	0%	0	2	0%
5D,7B	Injury from a fall post-admission	20	157	11%	26	182	13%	46	339	12%
5E	Disability associated with restraints or bedrails	0	1	0%	2	1	67%	2	2	50%
6A	Impersonating a physician, nurse, pharmacist	0	0		0	0		0	0	
6B	Abduction of a patient of any age	0	0		0	1	0%	0	1	0%
6C	Sexual assault within or on the grounds	9	3	75%	3	2	60%	12	5	71%
6D	Injury of a patient or staff member from assault	0	3	0%	3	2	60%	3	5	38%
7A	Perforations resulting in disability	9	81	10%	11	95	10%	20	176	10%
7B	See event code 5D & 7B*							0	0	
7C	Obstetrical events harming the neonate	5	1	83%	6	1	86%	11	2	85%
7D	Significant medication reactions	5	2	71%	1	3	25%	6	5	55%
7E	Test results reported incorrectly in ER	0	0		1	1	50%	1	1	50%
7F	Nosocomial infections resulting in injury	6	3	67%	1	4	20%	7	7	50%
7G	Death or serious injury due to surgery	0	0		6	11	35%	6	11	35%
Total		**127**	**343**	27%	**110**	**443**	20%	**237**	**786**	23%

Adverse events reported using the older classification system, Oct 2002-June 2004 are not included.
Category 4H was added to the list of reportable adverse events in May 2007.
Category 7G was added to the list of reportable events in January 2010.
*Prior to May 2007 category 5D included only death associated with a fall.
*Events formerly classified as 7B are reportable as 5D starting May 2007.

APPENDIX S: Facility Comments

This section includes comments that were received by DPH before the adverse event report publication date,[34] listed in the order received.

Comments from:

[34] Comments were sent to Dr. Jon C. Olson, Epidemiologist at the Connecticut Department of Public Health; email: jon.olson@state.gov; telephone: 860-509-7889; fax 860-509-8403

Waterbury Hospital

The Waterbury Hospital exists to provide safe, compassionate, high quality health care services through a family of professionals and services. We are committed to the elimination of patient harm and have infrastructure and processes in place to assess, analyze, design and improve systems and procedures that impact patient care.

The Hospital has invested heavily in information technology, having recently upgraded its electronic medical record and implemented computerized provider order entry (CPOE) with decision support. We utilize surveys, clinical outcomes and other patient care metrics to evaluate our effectiveness as well as the satisfaction of patients, physicians and staff. We also audit and monitor high risk procedures and have implemented checklists for clinicians where appropriate. We regularly participate in clinical performance improvement collaboratives sponsored by Qualidigm and/or CHA. The Hospital also proactively conducts failure mode and effects analysis (FMEA) on new or high risk procedures.

Hospital staff is required to report safety events, including “near misses,” and these are tracked electronically to ensure follow up. A committee composed of clinical and administrative leaders reviews all serious safety events associated with patient care. This committee oversees the investigation of the event and corrective action taken to prevent recurrence. System failures and/or individual practitioner performance are addressed. Front line staff is involved in the root cause analysis of the event and staff members contribute to recommendations for improvement. All safety event reports are analyzed and reported to a safety and quality oversight committee. We have implemented disclosure policies to ensure appropriate communication between healthcare providers and patient/families, and non-retaliation policies for staff who report events.

Connecticut Children's Medical Center

Connecticut Children's Medical Center consistently places great emphasis 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:

- Creation of new roles dedicated to the improvement of Patient Safety including: Senior Vice President of Quality and Patient Safety, Clinical Risk and Patient Safety Manager role, Medication Safety Specialist;
- Existence of multidisciplinary committees which meet to review quality improvement and patient safety topics. These include: Patient Safety Committee, Outpatient Quality Committee, and Patient Event Review and Reimbursement Committee;
- Implementation of electronic occurrence reporting system to increase event reporting, efficiency, and follow through;
- 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 Communication Handoffs, Medication Safety, and Reduction of Blood Stream Infections;
- Mandatory risk management education for clinical staff and hospital leadership on topics such as documentation, informed consent, and medication management;
- 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;
- Creation of internal patient safety website where information related to root cause analysis, occurrence reporting, lessons learned and other patient safety initiatives are shared with staff;
- Leadership in the initiation of a mandatory Influenza vaccine program for all employees, making Connecticut Children's the first children's hospital and one of a select few hospitals in the state to institute a mandatory flu vaccine program for all employees as a condition of employment; and
- 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.

William W. Backus Hospital

The William W. Backus Hospital's first priority is Zero Harm. During the past year, the hospital, in partnership with its medical staff, has worked to implement patient safety initiatives designed to further improve all areas of safety and quality. Throughout the organization there has been extensive focus on preventing medical errors, falls, pressure ulcers, blood clots (also called VTE) and hospital-acquired infections. Improvements in these areas demonstrate the seriousness and strength of these projects. To work toward our goal of Zero Harm, we have instituted team training for our OR staff, mandatory VTE risk assessments for all patients, active fall and pressure ulcer committees, as well as bar code technology for medication delivery.

Backus believes we learn best when we learn from others, and realize that the first step to eliminate errors is to share and discuss lessons learned. This philosophy extends to a collaborative working relationship with the Department of Public Health, which includes reporting even when no serious or unexpected outcome has been associated with an event. Our philosophy is we can't fix what we don't know about, so we are aggressive in identifying areas for improvement and acting on this information in real time.

As an organization we review many statistics, but we are keenly aware that the most important number for harm is 0.

Saint Vincent's Medical Center

Patient safety is the highest priority of St. Vincent's Medical Center and St. Vincent's Behavioral Health Services. Our ongoing assessment and review of the care of our patients allows us to identify problems and apply effective solutions for a better, safer patient care experience. While the Department of Public Health requires hospitals to report certain adverse outcomes, the process is one of self-reporting. St. Vincent's works hard to ensure prompt and accurate reporting, and recognizes that this information is important to patients and their families when choosing health care services.

St. Vincent's has actively developed a culture of safety through a number of initiatives. Over the last two years, we developed with our staff and physicians a training program and tools used for High Reliability Organizations. Safety skills and behaviors that were successful in other industries have proven to be successful in health care. This training results in increased reporting of all potential or actual adverse events, with eventual overall reduction in the number of events. High Reliability Safety training is mandatory for all staff and physicians. We have made significant progress in the reduction of adverse events, including falls and pressure ulcers which are below the national rate.

St. Vincent's is also a member of national and local consortiums for the improvement of health care, including the Institute of Health Care Improvement Pressure Ulcer Expedition and Connecticut Hospital Association Patient Falls with Injury Collaborative.

Our patients and families provide us with much valued feedback. In 2007, we established the first Patient and Family Advisory Board in Connecticut. Its members helped us implement improvements such as a care partner visitor program, and a patient and family initiated medical emergency response team.

St. Vincent's continues to monitor the effectiveness of these initiatives, and actively reviews new evidence-based practices that can benefit 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**. 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 improvement collaboratives which include Pressure Ulcer Prevention, Multiple Drug Resistant Organisms Reduction, Patient Falls with Injury, and Reduction of Heart Failure Readmissions.

Manchester Memorial Hospital and Rockville General Hospital

At Manchester Memorial and Rockville General Hospitals (ECHN), we have worked to create an environment that fosters patient safety and quality. Our employees and physicians take an active role in identifying and resolving safety issues. Action plans include revisions to our processes, staff and physician education and increased vigilance. ECHN initiates collaborative efforts with all levels of staff and physicians to continuously improve patient safety. These include such things as pressure ulcer prevention, fall prevention, surgical site identification strategies and reduction in healthcare acquired infections. Our patients have come to expect the use of two identifiers (name & date of birth) any time a staff member or physician has interaction whether it be lab draws, specimen labeling, the delivery of dietary trays, or an interventional procedure.

In addition ECHN has put in place very specific processes to assure that the correct invasive procedure is performed on the correct patient at the correct site. Our "Universal Protocol" is a mandatory multi-disciplinary procedure expected whenever an invasive procedure is performed. This procedure includes patient involvement in verification of procedure and involves them in marking their surgical site. We then complete a "Time Out" where the entire surgical team and the patient verbally verify the patient's name & date of birth, the surgical site and the marking is then visualized by the team.

Providing safe care is the priority of all ECHN employees and physicians.

Middlesex Hospital

Middlesex Hospital is committed to providing the best healthcare possible to the communities we serve. We work diligently to improve our processes and services and employ established best practices in medicine that can produce consistently high-quality outcomes for our patients.

Middlesex Hospital is a leader in pursuing industry initiatives, and monitoring industry data, that we believe have the capability of improving our performance. We have participated in multiple initiatives to consistently enhance the quality of patient care. These include several CHA collaborative projects, including preventing falls, preventing pressure ulcers, addressing multiple drug-resistant organisms and reducing heart failure readmissions.

In addition, Middlesex Hospital has many internal initiatives, including a Fall Prevention Program and a Wound and Skin Care Program, whose collaborative teams review any incidents of falls and pressure ulcers, in order to identify areas for improving care and avoiding potential adverse events. Middlesex Hospital has joined the national CMS "Partnership for Patients" program, to assist in meeting these goals. Middlesex Hospital has also appointed a physician as its Patient Safety Officer to assist the hospital in nurturing an organization-wide culture of safety and the highest level of quality care.

Working together, with targeted programs and services, Middlesex Hospital can improve the health of those in our community for years to come.

Danbury Hospital and New Milford Hospital

Danbury Hospital and New Milford Hospital, members of Western Connecticut Health Network, have long been focused on providing high quality, safe care to the patients in our community. This is driven by a strong culture of accountability and best practice adoption. Through participation in multiple voluntary national quality improvement data sharing programs in specialties such as surgery, cardiology, and nursing, to name a few, we ensure that our outcomes are comparable to the best in the country. Nationally recognized for our quality and safety outcomes, we have also received national grants that support our ability to hardwire best practices across our network, most recently in the area of healthcare communication. Both hospitals participated in statewide quality and safety collaboratives, focused on such topics as: pressure ulcer prevention, infection prevention, fall prevention, equipment safety, and the avoidance of hospital readmissions. Additionally, national experts have helped us ensure the delivery of high quality care through the deployment of advanced team time outs, universal checklists, and enhanced procedural safety. All of our Board-driven quality and safety goals are tied to performance targets that represent top 10^{th} percentile national performance. We are proud of the fact that we are reaching these goals in many areas.

Our internal reporting processes are not only focused on capturing adverse events, but on detecting potentially unsafe conditions, allowing us to make changes before something unintended occurs. We have robust non-punitive event reporting, with a focus on the identification of systems-based contribution to errors, and a sharing of lessons learned. In the unfortunate case when an adverse event occurs, we quickly determine what happened, immediately take any necessary corrective action, and fully and honestly report to all required external agencies. With the recognition that healthcare has become increasingly complex, and our patients often have multiple medical conditions, we know that we must focus more than ever on system and patient-specific factors that contribute to undesired outcomes. Our quality and safety program includes bringing-in national experts to objectively assess our clinical services, and to help us identify ways we can improve care delivery. We engage in root cause analyses, failure mode and effects analyses, hazard vulnerability analyses, and risk assessments, to further identify opportunities for improvement. We've also invested in organization-wide Lean Six Sigma training, with certification for a number of our employees in key areas. Our quality and safety work will never be "done". We take very seriously the trust our patients place in us, and commit to continuously partnering with them in our pursuit of quality and safety excellence.

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

Yale-New Haven Health System, which consists of Yale-New Haven Hospital, Bridgeport Hospital and Greenwich Hospital fully supports the transparency this report represents. We all strive continually to deliver the highest quality patient care, while keeping the safety of our patients our number one priority. To that end we participate actively in the Connecticut Hospital Association's statewide clinical quality collaboratives 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, which encourages and expects the reporting of all unexpected or adverse outcomes, has created a safer and more transparent healthcare environment, ensuring the thorough evaluation of each case and the implementation of system improvements.

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.

Hospital of Central Connecticut

The Hospital of Central Connecticut (HOCC) supports a culture of transparency and accountability. The organization has long embraced a philosophy of reporting both internally and externally. Improvement can only occur via identification of issues and analysis of contributing factors. Where evidence-based improvement strategies have existed, practice has been modified at HOCC with positive results. One such success story has been the reduction of hospital acquired, advanced stage pressure ulcers. HOCC aims higher. With aspirations to *eliminate* preventable patient harm, HOCC recently began work to integrate the attributes of highly reliable organizations (such as the nuclear power and aviation industries) into the hospital setting. Recognizing the high-risk nature of healthcare settings and adopting behaviors to reduce risk is the approach that HOCC is taking. This journey is a continuous one and as an organization, HOCC is committed to partnering with local and national stakeholders to forge ahead.

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.

Saint Francis Hospital and Medical Center

Saint Francis Hospital and Medical Center continues to strive for Best Care for a Lifetime. Between 2005-2007, the Hospital experienced an increase in perforations (7.A). Perforations as a result of a colonoscopy is one of the most common adverse events associated with that procedure. The literature on the rates of perforation vary widely depending on the age of the patient and indications for the procedure. Despite having perforation rates below most national benchmarks, the Quality Department and Medical Staff at Saint Francis agreed to conduct an external review of the Endoscopy Unit after seeing an increase in perforations between 2005-2007. As a result of this external review, the process for purchasing new endoscopic equipment and the process for review of all complications from endoscopic procedures were completely revised. All proceduralists who use the endoscopic equipment now participate in these internal reviews. Best practices recommended by the external reviewer have been implemented; the endoscopy nursing staff, the anesthesiologists, and the proceduralists are all involved in this multi-disciplinary effort. As a result of these interventions and process changes, the number of adverse events due to perforations has dropped significantly over the past four years.

Hartford Hospital

Hartford Hospital is committed to Patient Safety. Our first priority – and the first rule of medicine- is to protect patients from harm. We believe that maintaining the highest safety standards is critical to delivering the highest quality care. In 2008 Hartford Hospital instituted a Patient Safety Action Group which consists of a multidisciplinary team and senior leadership that huddles each morning to identify opportunities to enhance patient safety and quality. Hartford Hospital developed a “Patient Health Care guide and journal to encourage patients and families to partner with us to reduce fall and other engage the patients and families in other safety initiatives.

Hartford Hospital participates in fall reduction and pressure ulcer collaboratives. Hartford Hospital has succeeded in reducing reportable falls by 45% from 2009 to 2010 and seen a 55 % reduction in hospital acquired pressure ulcers from 2009 to 2010.

John Dempsey Hospital

At John Dempsey Hospital, patient safety has always been, and will always be, our top priority. In recent years, through the efforts of our Quality Department, we have successfully launched a series of initiatives to promote a culture that results in safe, effective, efficient and timely, patient-centered care.

As the only public Academic Medical Center in the state, we are routinely called upon to care for many of the most medically compromised, critically ill patients in Connecticut. We are extremely proud of the care we provide and our patient safety track record. We support the goal of improving the quality of patient care through the collection of data from Connecticut's hospitals.