



Indiana State
Department of Health

Indiana Medical Error
Reporting System

Final Report for 2008

August 20, 2009

**Indiana State Department of Health
2 North Meridian
Indianapolis, IN 46204**

Judith A. Monroe, M.D.
Indiana State Health Commissioner

This report was prepared by:

Terry Whitson, J.D.
Assistant Commissioner
ISDH Health Care Quality and Regulatory Services Commission

Burton Garten, J.D.
Director of Program Development
ISDH Health Care Quality and Regulatory Services Commission

Jon Lewis, Ph.D.
Director, Data Analysis Team, Epidemiology Resource Center
ISDH Public Health and Preparedness Commission

This report was published by the Indiana State Department of Health on August 20, 2009 and may be found online at www.in.gov/isdh. For more information on this report contact:

Office of Public Affairs
Indiana State Department of Health
2 North Meridian
Indianapolis, IN 46204
Phone: (317) 233-7254
Email: kseverson@isdh.in.gov

TABLE OF CONTENTS

Executive Summary	2
Introduction	3
Background on Medical Error Reporting	4
Indiana Medical Error Reporting Initiative	6
Overview of the Indiana Medical Error Reporting System	11
Definitions	15
Reportable Events	17
Report for 2008	20
Analysis of Report for 2008	29
Comparison of Annual Reports	33
ISDH Health Care Quality Initiatives for 2008	36
Indiana Patient Safety and Quality Improvement Organizations	51
Organization and Facility Patient Safety Activities in 2008	52
Changes for 2009 Reporting	68
References	69
Additional Information on Medical Errors and Patient Safety	71
Appendices	
Appendix A: Summary of Facilities Reporting Events for 2008	Appendix 1
Appendix B: Hospital Reported Events	Appendix 3
Appendix C: Ambulatory Surgery Center Reported Events	Appendix 148
Appendix D: Abortion Clinic Reported Events	Appendix 287
Appendix E: Birthing Center Reported Events	Appendix 297
Appendix F: Hospital Reporting Rule	Appendix 302
Appendix G: Ambulatory Surgery Center Reporting Rule	Appendix 306
Appendix H: Abortion Clinic Reporting Rule	Appendix 310
Appendix I: Birthing Center Reporting Rule	Appendix 314
Appendix J: Revised Events for 2009 Reporting	Appendix 318

EXECUTIVE SUMMARY

On January 11, 2005, Indiana Governor Mitchell E. Daniels Jr. issued an Executive Order requiring the Indiana State Department of Health to develop and implement a medical error reporting system. The purpose of the reporting system was to obtain data that could be used towards reducing the frequency of medical errors, revealing the causes of medical errors, and empowering healthcare professionals to design methods to prevent or discover errors before patients are harmed.

The first report of the Indiana Medical Error Reporting System was released in August 2007. This Report for 2008 is the third Indiana Medical Error Report and presents information about reportable events occurring in Indiana health care facilities between January 1, 2008 and December 31, 2008. The Report for 2008 is based on data received by the Indiana State Department of Health prior to August 1, 2009.

For 2008, there were a total of two hundred ninety-five (295) facilities required to report. One hundred and five (105) events were reported for 2008. The one hundred and five (105) reported events for 2008 is the same number of events reported for 2007. Ninety-nine (99) events occurred at hospitals while six (6) events occurred at ambulatory surgery centers.

For the third consecutive year, the three most reported events remain the same. The most reported event was thirty-three (33) events of stage 3 or 4 pressure ulcers acquired after admission to the facility. Thirty-three (33) events represent approximately 1 event per 24,000 hospital inpatient discharges. The second most reported event was thirty (30) events of retention of a foreign object in a patient after surgery or other invasive procedure equating to 1 event per 26,000 surgical procedures performed in hospitals and ambulatory surgery centers. There were sixteen (16) events of wrong body part surgery equating to 1 event per 111,000 surgical procedures performed in hospitals and ambulatory surgery centers. The number of pressure ulcers and retained objects increased from 2007.

In June of 2008, the Indiana State Department of Health implemented a 15-month health care quality initiative to prevent pressure ulcers. One hundred and sixty three (163) health care facilities and agencies are participating in the initiative.

Indiana's medical error reporting system is based on the National Quality Forum's twenty-seven serious reportable events. Only the most serious events are reportable events under this system. A serious event includes events resulting in death or serious disability or any surgical event involving a wrong patient, body part, or procedure. Indiana was the second state to develop a medical error reporting system based on the National Quality Forum consensus standards.

Requiring the reporting of these twenty-seven events is not meant as a way of identifying and punishing those responsible for the reportable event. Medical errors generally are not the sole result of actions of individuals but rather the failure of the systems and processes used in providing healthcare. The requirement to report events identifies persistent problems, encourages increased awareness of patient safety issues and assists in the development of evidence-based initiatives to improve patient safety.

Indiana's Medical Error Reporting System requires that hospitals, ambulatory surgery centers, abortion clinics, and birthing centers report any reportable event as defined by the rules that occurs within that facility. The facility is required to report which of the twenty-seven reportable events occurred, the health care facility where the reportable event occurred, and the calendar quarter and year within which the event occurred.

INTRODUCTION

This report is the Indiana Medical Error Reporting System Report for 2008. This Report for 2008 presents information about reportable events occurring in Indiana health care facilities between January 1, 2008 and December 31, 2008. The report is based on data received by the Indiana State Department of Health prior to August 1, 2009.

This report shows that stage 3 or stage 4 pressure ulcers acquired after admission to the hospital, retention of a foreign object in a patient after surgery, and surgery performed on the wrong body part were the three most common reported events for 2008. These three events have been the top three reported events in all three of the Indiana Medical Error Reports.

Indiana has a tradition of excellence in healthcare. Indiana's health care facilities are among the most advanced in the country. Indiana colleges and universities are recognized leaders in healthcare education and research. Healthcare professionals are often recognized for the dedicated and outstanding care provided to Hoosiers. It is imperative that Indiana continue to lead the way in improving patient care and health outcomes. The reduction of medical errors is an important component of continuing the Hoosier tradition of quality healthcare.

The goal of the Indiana State Department of Health is that this data will increase focus on these issues and promote the development of evidence-based initiatives designed to improve patient safety. With the growth and technical advancement of the healthcare system, maintaining and improving patient safety has become a complex and long term process. Patient care today involves a large number of healthcare professionals and health care facilities. With this larger and decentralized system, there is an increased potential for medical errors. While individuals may, and do, make independent mistakes, medical errors are more often a system failure resulting from inconsistent care practices between professionals or facilities or communication lapses within or between the many health care professionals or facilities providing care to a patient.

The data on medical errors reinforces the need for health care facilities and providers to collaborate on quality. In today's healthcare system, patient care is generally not limited to a single provider or facility. The reduction of medical errors requires care coordination to promote consistent healthcare practices and ensure appropriate communication between providers. The medical error reporting system is intended to encourage a culture in which health care providers report potentially unsafe situations without fear of reprisal in collaboration towards improved healthcare.

This Report for 2008 is available online on the Indiana State Department of Health Web site at www.in.gov/isdh. The Medical Error Reporting System home page is found at www.in.gov/isdh/23433 and includes this report as well as previous reports.

BACKGROUND ON MEDICAL ERROR REPORTING

History of Medical Error Reporting

Reports on medical errors can be traced back to the 1970's, when a physician-attorney named Don Mills analyzed more than 20,000 medical charts concluding that one patient in twenty was harmed by treatment.¹ A body of research describing the problem of medical errors began to emerge in the early 1990s with landmark research conducted by Leape, and supported by the Agency for Health Care Policy and Research, now the Agency for Healthcare Research and Quality.²

The Institute of Medicine of the National Academy of Sciences

The Institute of Medicine was chartered in 1970 as a component of the National Academy of Sciences in Washington, DC. It is a nonprofit organization providing evidence-based analysis and guidance on matters of biomedical science, medicine, and health.³

In 1998 the Institute of Medicine appointed the Committee on the Quality of Health Care in America to identify strategies for achieving a substantial improvement in the quality of healthcare delivered to Americans. In 1999 the Institute of Medicine published a landmark report on medical errors entitled *To Err Is Human: Building a Safer Health Care System*.⁴ The report estimated that between 44,000 and 98,000 patients die each year as a result of medical errors. The report estimated that a medication error occurs for two of every one hundred patients admitted to a hospital. The report further estimated that the total cost of preventable medical errors to be between 17 and 29 billion dollars per year.⁵

The 1999 Institute of Medicine report significantly increased awareness of medical errors and brought attention to the need for reliable data on the number of medical errors occurring in health care facilities. A subsequent Institute of Medicine report, *Crossing the Quality Chasm: A New Health System for the 21st Century*, reinforced the need for reliable data and cited the need for evidence-based policies and practices.⁶

The Institute of Medicine report cited several causes of medical errors including the following:⁷

- Lack of reliable data on the number of medical errors which limits the ability to identify origins of the problem and develop initiatives to resolve the problem

¹ D.H. Mills, *Medical Injury Information: A Preparation for Analysis and Implementation of Prevention Programs*, 236(4) *Journal of the American Medical Association*, pp. 379-381 (1976).

² Agency for Healthcare Research and Quality, *Medical Errors: The Scope of the Problem* (2000), Retrieved February 17, 2007 from <http://www.ahrq.gov/qual/errback.htm>.

³ Institute of Medicine of the National Academies, Retrieved February 12, 2007 from <http://www.iom.edu/CMS/AboutIOM.aspx>.

⁴ Institute of Medicine, *To Err Is Human: Building A Safer Health System* (Linda T. Kohn, Janet M. Corrigan, and Molla S. Donaldson, eds., National Academy Press, 1999).

⁵ *Id.*

⁶ Institute of Medicine, *Crossing the Quality Chasm: A New Health System for the 21st Century* (National Academy Press, 2001).

⁷ Institute of Medicine, *To Err Is Human: Building A Safer Health System* (Linda T. Kohn, Janet M. Corrigan, and Molla S. Donaldson, eds., National Academy Press, 1999).

- Medical errors are often a system failure where care practices are inconsistent between healthcare professionals leading to mistakes
- With larger, decentralized, and fragmented health care facilities and an increase in the number of health professionals providing care to a patient, there is an increased potential for medical errors
- Access to patient information by health care providers
- Lack of legible handwriting or conversely data entry mistakes
- Use of acronyms or abbreviations
- Inadequate documentation
- Patient loads placed on staff resulting in timing issues in the delivery of care
- Competition between facilities resulting in the lack of development of communication systems between health care providers

The National Quality Forum

In a 1998 report, the President's Advisory Commission on Consumer Protection and Quality in the Health Care Industry proposed creation of the National Quality Forum as part of an integrated national quality improvement agenda. The National Quality Forum was incorporated as a new organization in May 1999. The mission of the National Quality Forum is to improve the quality of American healthcare by setting national priorities and goals for performance improvement, endorsing national consensus standards for measuring and publicly reporting on performance, and promoting the attainment of national goals through education and outreach programs.⁸

The National Quality Forum is a not-for-profit membership organization created to develop and implement a national strategy for healthcare quality measurement and reporting. The National Quality Forum, a public-private partnership, is made up of all parts of the healthcare system, including national, state, regional, and local groups representing consumers, public and private purchasers, employers, healthcare professionals, provider organizations, health plans, accrediting bodies, labor unions, supporting industries, and organizations involved in healthcare research or quality improvement.⁹

In 2002, the National Quality Forum published a report titled *Serious Reportable Events in Healthcare*. The report identified twenty-seven (27) events that are serious, largely preventable, and of concern to both the public and health care providers. The report recommended that these twenty-seven events be reported by all licensed health care facilities. The National Quality Forum suggested that analysis of reported events could provide caregivers and patients with important information about the safety of healthcare and opportunities for improvement.¹⁰

Indiana's Medical Error Reporting System is based on the National Quality Forum's twenty-seven serious reportable events. Indiana added language to clarify a few of the events and added definitions of terms to provide further clarification. Indiana is the second state, following Minnesota in 2003, to develop a medical error reporting system based on the National Quality Forum serious adverse reportable events. Like Minnesota's system, the Indiana Medical Error Reporting System has been a collaborative effort with strong support from Indiana's healthcare community and a shared goal of improving patient safety.

⁸ National Quality Forum, <http://Qualityforum.org/about/mission.asp>.

⁹ *Id.*

¹⁰ *Serious Reportable Events in Healthcare*, National Quality Forum (2002).

INDIANA MEDICAL ERROR REPORTING SYSTEM

Development of the Indiana Medical Error Reporting System

On January 11, 2005, Governor Mitchell E. Daniels Jr. issued Executive Order 05-10 requiring the Indiana State Department of Health to develop and implement a medical error reporting system. The Executive Order cited successfully implemented medical error report systems for reducing the frequency of medical errors, revealing the causes of medical errors, and empowering healthcare professionals to design methods to prevent or discover errors before patients are harmed.

Prior to 2006, the Indiana State Department of Health did not collect medical error data. The Indiana State Department of Health initiated development of a medical error reporting system and adopted rules requiring hospitals, ambulatory surgery centers, abortion clinics, and birthing centers to report medical errors. The Indiana State Department of Health began collecting reportable event data on January 1, 2006.

Purposes of the Medical Error Reporting Initiative

Purposes of reporting requirement:

- Increase awareness of the problem of medical errors
- Collect and analyze data on medical errors to determine whether there are areas where mistakes could be reduced
- Provide ability to analyze data to assist health care providers in reducing medical errors
- Provide information to patients so that they understand their role in helping to prevent errors
- Promote the sharing of successful solutions and improvements between health care providers
- Culture of open discussion. The goal is not to fix blame but to encourage reporting of errors so that initiatives may be developed to prevent mistakes
- Develop best practices aimed at reducing medical error
- Reduce healthcare costs through elimination of errors and duplication

Responsibility for quality care

There is a tendency to attach blame when bad things happen. A “culture of blame” tends to decrease the communications needed to address something that is generally a system-based issue. By not communicating on quality issues, competing health care facilities have created inconsistent processes and procedures that have resulted in confusion among healthcare professionals as they move between facilities. The Indiana State Department of Health encourages collaboration on quality. This report is intended to encourage a healthcare culture that looks beyond blame and supports patient safety through collaboration and responsibility.

Requiring the reporting of these twenty-seven events is not meant as a way of identifying and punishing those responsible for the event. Studies have indicated that most medical errors were not the result of actions of individuals but rather the failure of the systems and processes used in providing healthcare. By reporting the most serious events, persistent problems can be identified and actions can be taken to prevent these events from occurring in the future. The requirement to report

serious events encourages the movement towards increased awareness of patient safety issues and encourages work towards evidence-based initiatives to improve patient safety.

This report is not intended to place blame or focus attention on specific facilities or individuals. Such an approach would be counterproductive because the reality is that medical errors are usually the result of a system failure. A medical error that occurs in one facility may have actually begun in another facility. For instance, a pressure ulcer may have started in one long term care facility or hospital and increased in severity during a stay in another hospital. The event becomes a reportable event for the hospital if it reaches a stage 3 or 4 level while the patient is admitted to that hospital. The solution to this situation requires increased care coordination and assessments by multiple health care providers. This illustrates the systemic nature of medical errors. Commercial manufacturers, health care facilities, clinics, healthcare professionals, professional organizations, government agencies, researchers, and patients all have responsibilities towards improving patient safety.

Healthcare licensing and certification surveys

The Indiana State Department of Health is the licensing authority for Indiana health care facilities. As part of the state licensing and federal certification program, the agency conducts regular health surveys at health care facilities. During the course of a survey, surveyors often review facts surrounding a possible medical error to determine whether there was a breach of health care facility regulations.

In developing the Indiana Medical Error Reporting System, one of the concerns of facilities was that a reportable event could be used to instigate a health survey of a health care facility. Such an action would likely discourage health care facilities from complete reporting as the reporting of an event could result in punitive action through the survey process. Incomplete reporting would reduce the reliability of the data and inhibit the development of quality of care initiatives. A goal of the system is to promote the reporting of events so that the data can be analyzed to determine areas where mistakes may be reduced.

To address this issue, the Indiana State Department of Health separated the Medical Error Reporting System from the health care facility survey program. The events reported by health care facilities via the Medical Error Reporting System are not received or reviewed by health care surveyors. Events are reported through an online system that goes to the agency's health information and data program. Surveyors are not provided with the reported events and therefore cannot base their investigations on events reported by a health care facility through the Medical Error Reporting System.

The licensing and certification program regulations require the Indiana State Department of Health to investigate complaints concerning health care facilities. Surveyors will investigate any complaint received through the licensing and certification complaint system. Surveyors may therefore investigate potential reportable events discovered as part of existing standard survey procedures or as part of a complaint survey that is based on an event.

Survey process for determining whether events were reported as required

During the course of a survey at a health care facility, Indiana State Department of Health surveyors will review whether the facility has implemented a process for determining and reporting reportable events as required by state rule. The survey process is as follows:

- Surveyors will first review and determine whether the health care facility has an effective, organized, facility-wide, comprehensive quality assessment and improvement program as required by rule [see, for example, 410 IAC 15-1.4-2(a)].
- Surveyors will review and determine whether the health care facility has implemented a process for reporting to the Indiana State Department of Health each reportable event that is determined by the facility's quality assessment and improvement program to have occurred in the facility [see, for example, 410 IAC 15-1.4-2.2(a)(2) and 2.2(b)].
- Surveyors will review and determine whether reportable events identified by the facility's quality assessment and improvement program were reported in a timely manner [see, for example, 410 IAC 15-1.4-2.2(c)].
- Surveyors will review whether the facility took appropriate action to address the opportunities for improvement found through the facility's quality assessment and improvement program and whether the outcome of the action was documented as to its effectiveness, continued follow-up, and impact on patient care [see, for example, 410 IAC 15-1.4-2(b)].

If during the course of a survey surveyors become aware of an event that constitutes a reportable event, the surveyors will inform the Director of Acute Care who will verify that the reportable event was reported within the appropriate time requirements. The Indiana State Department of Health may take enforcement action if it finds that a health care facility failed to report a reportable event as required by the rule or failed to perform the actions described above.

Event Terminology

There is no accepted universal terminology for the events described in this report. A definition of applicable terms was not adopted during the rule promulgation process. In reviewing the issue, the Indiana State Department of Health found that a wide variety of terminology has been used to describe unexpected or unplanned events that result in injury to a patient. The following are definitions utilized by various organizations.

The Joint Commission on the Accreditation of Healthcare Organizations encourages the voluntary reporting to the Commission of "sentinel events" and any root cause analysis performed by a hospital. The Joint Commission defines a sentinel event, root cause analysis, near miss, and adverse event as follows:¹¹

A sentinel event is an unexpected occurrence involving death or serious physical or psychological injury, or the risk thereof. Serious injury specifically includes loss of

¹¹ Joint Commission on the Accreditation of Healthcare Organizations, *Sentinel events*, Comprehensive Accreditation Manual for Hospitals Update 4 (November 2004).

limb or function. The phrase “or the risk thereof” includes any process variation for which a recurrence would carry a significant chance of a serious adverse outcome. Such events are called “sentinel” because they signal the need for immediate investigation and response.

Root cause analysis is a process for identifying the basic or causal factors that underlie variation in performance, including the occurrence or possible occurrence of a sentinel event. A root cause analysis focuses primarily on systems and processes, not on individual performance. It progresses from special causes in clinical processes to common causes in organization processes and identifies potential improvements in processes or systems that would tend to decrease the likelihood of such events in the future or determines, after analysis, that no such improvement opportunities exist.

Near miss is used to describe any process variation that did not affect an outcome but for which a recurrence carries a significant chance of a serious adverse outcome. Such a “near miss” falls within the scope of the definition of a sentinel event but outside the scope of those sentinel events that are subject to review by the Joint Commission under its Sentinel Event Policy.

Adverse event is an untoward, undesirable, and usually unanticipated event, such as death of a patient, an employee, or a visitor in a health care organization. Incidents such as patient falls or improper administration of medications are also considered adverse events even if there is no permanent effect on the patient.¹²

The Institute of Medicine defined the terms “error” and “adverse event” as follows:¹³

An error is defined as the failure of a planned action to be completed as intended (i.e., error of execution) or the use of a wrong plan to achieve an aim (i.e., error of planning).

An adverse event is an injury caused by medical management rather than the underlying condition of the patient. An adverse event attributable to error is a “preventable adverse event.” Negligent adverse events represent a subset of preventable adverse events that satisfy legal criteria used in determining negligence (i.e., whether the care provided failed to meet the standard of care reasonably expected of an average physician qualified to take care of the patient in question).

The National Patient Safety Foundation defined “healthcare error” as follows:¹⁴

An unintended healthcare outcome caused by a defect in the delivery of care to a patient. Healthcare errors may be errors of commission (doing the wrong thing), omission (not doing the right thing), or execution (doing the right thing incorrectly). Errors may be made by any member of the healthcare team in any healthcare setting.

¹² *Adverse Health Events in Minnesota, Second Annual Public Report*, at p. 73 (Minnesota Department of Health, February 2006).

¹³ Institute of Medicine, *To Err Is Human: Building A Safer Health System*, at p. 28 (Linda T. Kohn, Janet M. Corrigan, and Molla S. Donaldson, eds., National Academy Press, 1999).

¹⁴ National Patient Safety Foundation, http://www.npsf.org/html/about_npsf.html.

The Institute of Medicine defined the term “patient safety” as follows:¹⁵

Freedom from accidental injury; ensuring patient safety involves the establishment of operational systems and processes that minimize the likelihood of errors and maximizes the likelihood of intercepting them when they occur.

The National Patient Safety Foundation defined “patient safety” as follows:¹⁶

The prevention of healthcare errors, and the elimination or mitigation of patient injury caused by healthcare errors.

¹⁵ *Adverse Health Events in Minnesota, Second Annual Public Report*, at p. 73 (Minnesota Department of Health, February 2006). See also, Institute of Medicine, *To Err Is Human: Building a Safer Health System*, at p. 58 (Linda T. Kohn, Janet M. Corrigan, and Molla S. Donaldson, eds., National Academy Press, 1999).

¹⁶ National Patient Safety Foundation, http://www.npsf.org/html/about_npsf.html.

OVERVIEW OF THE INDIANA MEDICAL ERROR REPORTING SYSTEM

Who is required to report?

Indiana rules (410 IAC 15-1.4-2.2, 410 IAC 15-2.4-2.2, 410 IAC 26, 410 IAC 27) require that hospitals, ambulatory surgery centers, abortion clinics, and birthing centers report events as defined in the rules. A copy of each set of rules is included in the appendix to this report. For 2008, there were a total of 295 facilities required to report.

What are the essential components of the reporting system?

The Indiana Medical Error Reporting System was organized based on several general principles. The following is a description of the general principles and how the reporting system addresses them:

- Preserve patient confidentiality. Identifying information about a patient is not reported to the Indiana State Department of Health. The only information reported is the category of event, the quarter in which the event occurred, and the facility in which the event occurred. The report does not include the quarter in which the event occurred to further limit the linking of an event with a patient. The inclusion of the quarter in the data is to assist facilities in identifying reported events to prevent duplication of reported events.
- Consensus standards. The standards were developed by the National Quality Forum through a collaborative process with representatives from throughout the healthcare system. The consensus standards provide a means for measuring and publicly reporting on performance, and attaining healthcare goals.
- Timely. Events are reported through an online system. The health care facility may review their reported events at any time throughout the year to ensure correct reporting. By having an online system with constant access, this allows the Indiana State Department of Health to assemble the data quickly at the end of the reporting period and produce a report.
- Not punitive. The Indiana Medical Error Reporting System is intended to help find solutions to healthcare quality problems by promoting collaboration and communication between providers towards improving quality of care. As discussed above, information from reported events on the Indiana Medical Error Reporting System is not reviewed by surveyors as part of the survey process. The only punitive element is a failure to report reportable events.
- Transparency. Data will be available on the internet and available to the public. Each year the Indiana State Department of Health will publish a report. The report will include the reported data for each health care facility. The report will be published on the Indiana State Department of Health Web site.

- Health care facilities to share best practices. The Indiana State Department of Health will be working with health care providers and associations to identify initiatives designed to provide solutions to events identified in the data.

What is the health care facility required to report?

The above health care facilities are required to report any reportable event as defined by the rules that occurs within that facility. Once a health care facility has determined that a reportable event has occurred it must send the Indiana State Department of Health the following information:

- (1) Which of the twenty-seven reportable events occurred;
- (2) The health care facility where the reportable event occurred; and
- (3) The quarter and calendar year within which the event occurred.

The facility submitting the reportable event is not to include any identifying information regarding:

- (1) a patient;
- (2) a licensed healthcare professional; or
- (3) a facility employee involved.

The facility submits the reportable event in an electronic format. The Indiana State Department of Health has established an internet portal system that allows a facility to register and then submit the required reports electronically. The system does not allow for the submission of information identifying a patient or healthcare professional.

What is not included in the Indiana Medical Error Reporting System?

The Indiana Medical Error Reporting System only collects data on the number and category of reported events. The Indiana System does not include the following:

- Specific information about the event. The health care facility only reports the category of the event. The facility does not provide the Indiana State Department of Health with a description of the event. The agency therefore does not have the ability to analyze each event. Each event must be reviewed by the facility's Quality Improvement and Assessment Program. The Indiana State Department of Health anticipates that patient safety centers will become an evaluator of reported events once those centers are developed.
- A way to distinguish between events that resulted in death and events resulting in serious disability. Reports to the Indiana Medical Error Reporting System do not distinguish between death and serious disability. Data reported does not reflect the number of deaths resulting from such events.
- Events that resulted in less than death or serious disability. The threshold for some events is an event resulting in death or serious disability. For those events, an event that occurs but results in no harm or injury or harm to a patient at less than death or serious disability are not reportable events.

- “Near misses.” Near misses are events that were caught before the event occurred. For instance, the wrong patient is taken to the surgery department but it is caught before surgery is performed on the patient. The Indiana Medical Error Reporting System does not include near misses.
- Root cause analysis. Some states require a facility to perform a root cause analysis for each event and provide that analysis to the state department of health. Indiana’s rule requires events to be reviewed by the facility’s Quality Improvement and Assessment Program but does not require a report to the Indiana State Department of Health.

How does a health care facility determine whether a specific event is a reportable event?

Health care licensing rules require health care facilities to have an effective, organized, and comprehensive quality assessment and improvement program in which all areas of the facility participate (see, for example, 410 IAC 15-1.4-2). The facility is required to take appropriate action to address the opportunities for improvement found through the quality assessment and improvement program. The Indiana Medical Error Reporting System requires the facility’s quality assessment and improvement program to establish a process for reporting a reportable event that occurs within that facility.

The procedure for reporting a medical error is as follows:

- The health care facility must have a process in place for accurately and timely determining the occurrence of a potential reportable event
- When an event occurs that may constitute a reportable event, the event is referred to the health care facility’s quality assessment and improvement program for review
- If the facility’s quality assessment and improvement program determines that a reportable event occurred, the facility must report the event within fifteen days of the program’s determination that a medical error occurred and not later than six months after the potential event is brought to the program’s attention
- The reportable event is submitted to the Indiana State Department of Health via an online system. An individual is designated by each facility to report events and is provided access to the online system. The facility reports the category of the event and the quarter in which the event occurred.

What are the responsibilities of the health care facility towards correcting the medical error?

Health care licensing rules require health care facilities to have an effective, organized, and comprehensive quality assessment and improvement program in which all areas of the facility participate (see, for example, 410 IAC 15-1.4-2). The facility is required to take appropriate action to address the opportunities for improvement found through the quality assessment and improvement program. The facility’s quality assessment and improvement program is required to conduct in-depth analyses of events that may have been caused by medical error.

After conducting the analyses, the facility is required to develop and implement a plan to correct the problem. In developing corrective actions, the Indiana State Department of Health encourages collaboration between providers to develop consistent care practices that will reduce confusion and result in fewer medical errors. The Indiana Medical Error Reporting System is intended to promote the development of best practices that are shared across the provider community.

How will the Indiana State Department of Health enforce the reporting requirements?

The reporting requirements are included as part of the health care facility licensing rules. For violation of health care facility licensing rules, the Indiana State Department of Health may impose the following enforcement actions:

- issue a letter of correction
- issue a probationary license
- conduct a resurvey
- deny the renewal of the license
- revoke the license
- impose a civil penalty in an amount not to exceed ten thousand dollars (\$10,000) per violation

If the Indiana State Department of Health becomes aware that an event was not reported as required by rule, the agency will conduct an investigation. If the investigation determines that an event occurred and was not reported, the Indiana State Department of Health may issue an enforcement action.

DEFINITIONS

The requirements for the Indiana Medical Error Reporting System are codified in the Indiana Administrative Code (IAC). The following are definitions used in the reporting system and are found at 410 IAC 15-1.1, 410 IAC 26-1, and 410 IAC 27-1.

"ASA Class I patient" means a normal, healthy patient.

"Biologics" means a biological product, such as:

- (1) a globulin;
 - (2) a serum;
 - (3) a vaccine;
 - (4) an antitoxin;
 - (5) blood; or
 - (6) an antigen;
- used in the prevention or treatment of disease.

"Burn" means any injury or damage to the tissues of the body caused by exposure to any of the following:

- (1) Fire.
- (2) Heat.
- (3) Chemicals.
- (4) Electricity.
- (5) Radiation.
- (6) Gases.

"Elopement" means any situation in which a registered or admitted patient, excluding events involving adults with decision making capacity, leaves the hospital without staff being aware that the patient has done so.

"Hyperbilirubinemia" means total serum bilirubin levels greater than twenty-five (25) mg/dl in a neonate.

"Hypoglycemia" means a physiologic state in which:

- (1) the blood sugar falls below sixty (60) mg/dl (forty (40) mg/dl in neonates); and
- (2) physiological or neurological, or both, dysfunction begins.

"Immediately postoperative" means within twenty-four (24) hours after either of the following:

- (1) Induction of anesthesia (if surgery or other invasive procedure is not completed).
- (2) Completion of surgery or other invasive procedure.

"Joint movement therapy" means all types of manual techniques, to include:

- (1) mobilization (movement of the spine or a joint within its physiologic range of motion);
- (2) manipulation (movement of the spine or a joint beyond its normal voluntary physiologic range of motion); or
- (3) any other type of manual musculoskeletal therapy; regardless of their precise anatomic and physiologic focus or their discipline of origin.

"Kernicterus" means the medical condition in which elevated levels of bilirubin cause brain damage.

“Low-risk pregnancy” means a woman sixteen (16) to thirty-nine (39) years of age with no previous diagnosis of any of the following:

- (1) Essential hypertension.
- (2) Renal disease.
- (3) Collagen-vascular disease.
- (4) Liver disease.
- (5) Preeclampsia.
- (6) Cardiovascular disease.
- (7) Placenta previa.
- (8) Multiple gestation.
- (9) Intrauterine growth retardation.
- (10) Smoking.
- (11) Pregnancy-induced hypertension.
- (12) Premature rupture of membranes.
- (13) Other previously documented condition that poses a high risk of pregnancy-related mortality.

“Neonates” means infants in the first twenty-eight (28) days of life.

“Serious disability” means either of the following:

- (1) Significant loss of function including sensory, motor, physiologic, or intellectual impairment:
 - (A) not present on admission and requiring continued treatment; or
 - (B) for which there is a high probability of long-term or permanent lifestyle change at discharge.
- (2) Unintended loss of a body part.

“Sexual assault” means a crime included under IC 35-42-4 or IC 35-46-1-3.

“Surgery or other invasive procedure” means surgical or other invasive procedures that involve a skin incision, puncture, or insertion of an instrument or foreign material into tissues, cavities, or organs. A procedure begins at the time of the skin incision, puncture, or insertion of an instrument or foreign material into tissues, cavities, or organs. Such procedures include, but are not limited to:

- (1) Open or percutaneous surgical procedures.
- (2) Percutaneous aspiration.
- (3) Selected injections.
- (4) Biopsy.
- (5) Percutaneous cardiac and vascular diagnostic or interventional procedures.
- (6) Laparoscopies.
- (7) Endoscopies.
- (8) Colonoscopies.

The term excludes intravenous therapy, venipuncture for phlebotomy, diagnostic tests without intravenous contrast agents, nasogastric tubes, or indwelling urinary catheters.

REPORTABLE EVENTS

The following are the twenty-seven (27) reportable events included in the Indiana Medical Error Reporting System Report for 2008.

SURGICAL EVENTS:

1. Surgery performed on the wrong body part, defined as any surgery performed on a body part that is not consistent with the documented informed consent for that patient. Excluded are emergent situations:
 - (A) that occur in the course of surgery; or
 - (B) whose exigency precludes obtaining informed consent; or both.
2. Surgery performed on the wrong patient, defined as any surgery on a patient that is not consistent with the documented informed consent for that patient.
3. Wrong surgical procedure performed on a patient, defined as any procedure performed on a patient that is not consistent with the documented informed consent for that patient. Excluded are emergent situations:
 - (A) that occur in the course of surgery; or
 - (B) whose exigency precludes obtaining informed consent; or both.
4. Retention of a foreign object in a patient after surgery or other invasive procedure. The following are excluded:
 - (A) Objects intentionally implanted as part of a planned intervention.
 - (B) Objects present before surgery that were intentionally retained.
 - (C) Retention of broken microneedles.
5. Intraoperative or immediately postoperative death in an ASA Class I patient. Included are all ASA Class I patient deaths in situations where anesthesia was administered; the planned surgical procedure may or may not have been carried out.

PRODUCT OR DEVICE EVENTS:

6. Patient death or serious disability associated with the use of contaminated drugs, devices, or biologics provided by the facility. Included are generally detectable contaminants in drugs, devices or biologics regardless of the source of contamination or product.
7. 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. Included are, but not limited to, the following:
 - (A) Catheters.
 - (B) Drains and other specialized tubes.
 - (C) Infusion pumps.
 - (D) Ventilators.
8. Patient death or serious disability associated with intravascular air embolism that occurs while being cared for in the facility. Excluded are deaths associated with neurosurgical procedures known to present a high risk of intravascular air embolism.

PATIENT PROTECTION EVENTS:

9. Infant discharged to the wrong person.
10. Patient death or serious disability associated with patient elopement.
11. Patient suicide or attempted suicide resulting in serious disability, while being cared for in the facility, defined as events that result from patient actions after admission to the facility. Excluded are deaths resulting from self-inflicted injuries that were the reason for admission to the facility.

CARE MANAGEMENT EVENTS:

12. Patient death or serious disability associated with a medication error, for example, errors involving the wrong:
 - (A) drug;
 - (B) dose;
 - (C) patient;
 - (D) time;
 - (E) rate;
 - (F) preparation; or
 - (G) route of administration.Excluded are reasonable differences in clinical judgment on drug selection and dose.
13. Patient death or serious disability associated with a hemolytic reaction due to the administration of ABO-incompatible blood or blood products.
14. Maternal death or serious disability associated with labor or delivery in a low-risk pregnancy while being cared for in the facility. Included are events that occur within forty-two (42) days postdelivery. Excluded are deaths from any of the following:
 - (A) Pulmonary or amniotic fluid embolism.
 - (B) Acute fatty liver of pregnancy
 - (C) Cardiomyopathy.
15. Patient death or serious disability associated with hypoglycemia, the onset of which occurs while the patient is being cared for in the facility.
16. Death or serious disability (kernicterus) associated with hyperbilirubinemia in neonates.
17. Stage 3 or Stage 4 pressure ulcers acquired after admission to the facility. Excluded is progression from State 2 or Stage 3 if the Stage 2 or Stage 3 pressure ulcer was recognized upon admission or unstageable due to the presence of eschar.
18. Patient death or serious disability due to joint movement therapy performed in the facility.

ENVIRONMENTAL EVENTS:

19. Patient death or serious disability associated with an electric shock while being cared for in the facility. Excluded are events involving planned treatment, such as electrical countershock.

20. Any incident in which a line designated for oxygen or another gas to be delivered to a patient:
 - (A) contains the wrong gas; or
 - (B) is contaminated by toxic substances.
21. Patient death or serious disability associated with a burn incurred from any source while being cared for in the facility.
22. Patient death associated with a fall while being cared for in the facility.
23. Patient death of serious disability associated with the use of restraints or bedrails while being cared for in the facility.

CRIMINAL EVENTS:

24. Any instance of care ordered by or provided by someone impersonating a physician, nurse, pharmacist, or other licensed health care provider.
25. Abduction of a patient of any age.
26. Sexual assault on a patient within or on the grounds of the facility.
27. Death or significant injury of a patient or staff member resulting from a physical assault, that is, battery, that occurs within or on the grounds of the facility.

REPORT FOR 2008

Using this report

The best use of this report by consumers is as a guide for increasing awareness of patient safety issues. Informed consumers are better prepared to ask questions about issues that are important to them and contribute to achievement of their healthcare goals. By learning about patient safety issues, patients may be better able to communicate with their health care providers. If patients have questions or concerns about their medical care, patients should not hesitate in discussing these questions with their health care provider or facility and ask what he or she can do to assist in the prevention of medical errors.

This report provides information about activities that have been implemented by facilities and coalitions to improve patient safety. Patients should inquire of their health care facilities about possible consumer groups or activities that promote healthcare quality and patient safety. Collaboration of consumers with facilities is an important part of improving the quality of healthcare and many facilities have a wide variety of programs and resources designed to promote and improve public health. Links to healthcare quality organizations are provided at the end of this report. Many of these links provide information as to how patients can assist in ensuring their safety.

It is important to remember that this report should not be used to make comparisons of the safety or quality of the facilities. The number and type of reported events can vary based on factors other than differences in safety or quality of care, including:

- Size of the facility.
- The scope, complexity, and number of procedures performed at a facility.
- Interpretation differences of reportable events by each facility.

How to read this report

The data used in this Report for 2008 is based on data received prior to August 1, 2009 and covers the reporting period of January 1, 2008 through December 31, 2008. The rules require a facility to report events within six months of discovery.

A table of reported events is provided for every Indiana health care facility that was required to report 2008 events. The individual tables are grouped according to the type of facility and the county of the facility. Appendix A is a summary of health care facilities that reported at least one event. Appendix B is the reported events for hospitals and begins with hospitals located in Adams County. Appendix C is the reported events for ambulatory surgery centers. Appendix D is the reported events for abortion clinics and Appendix E is the reported events for birthing centers. All licensed health care facilities in the above facility types that were open during 2008 are included in the Appendices.

Licensed health care facilities often include a wide range of services. A hospital, for instance, might include under their license a hospital, home health service, off-site clinics, and a long term care unit. Any reportable event occurring in any service included under a given license is reported under that license.

Facilities are reported by licensed facilities. In some cases, hospitals have more than one hospital under one license. The individual facility tables found in the appendices will indicate if there is more than one hospital included under that license.

Data on number of procedures performed at a facility

The reports for individual hospitals found in Appendix B provide the number of hospital inpatient discharges, the number of hospital outpatient visits, and the number of combined inpatient and outpatient surgical procedures performed at each hospital. This data is provided in this report for the purpose of comparison of how many patients are treated and how many surgical procedures are performed by each hospital in relation to the number of events reported. This data is required to be reported by hospitals to the Indiana State Department of Health through the Indiana Hospital Association no later than 120 days after the end of each calendar quarter. More information on this data is found at the beginning of Appendix B.

The Indiana State Department of Health has separated inpatient discharges from outpatient visits. Some of the reportable events apply only to an individual admitted to a hospital. By separating the data for inpatient discharges and outpatient visits, a more appropriate comparison with the specific reportable event is possible. The Indiana State Department of Health has limited the “surgical procedures” number to the primary procedures rather than all procedure codes. This improves clarity and accuracy by accounting for multiple codes applying to a specific procedure.

Appendix C similarly includes data for each ambulatory surgery center. For each ambulatory surgery center, the number of surgical procedures performed at the facility is listed. This data is directly reported to the Indiana State Department of Health by each ambulatory surgery center as part of their annual report.

In order to eliminate mistakes in the report and give facilities the opportunity to review their data for accuracy, the Indiana State Department of Health sent to each facility their draft Report for 2008. Facilities were instructed to review their data for correctness and completeness. Facilities then returned to the Indiana State Department of Health a verification of data. In July 2008, the Indiana State Department of Health called all facilities that had not returned their verification form to request that the form be returned. A few facilities failed to return the verification prior to the publishing of the report. The report for each facility reflects whether the data was verified by the facility.

Combined 2008 Data for All Health Care Facilities

TABLE 1 (2008): Number of health care facilities included in this report

Type of Health Care Facility	Number of Facilities
Hospitals	144
Ambulatory Surgery Centers	138
Abortion Clinics	9
Birthing Centers	4
TOTAL	295

TABLE 2 (2008): Total number of reported events by type of health care facility

Type of Health Care Facility	Total Number of Reported Events
Hospitals	99
Ambulatory Surgery Centers	6
Abortion Clinics	0
Birthing Centers	0
TOTAL	105

TABLE 3 (2008): Total number of reported events by categories for all facilities combined

Category of Event	Number of Reported Events
Surgical	48
Product or Device	3
Patient Protection	4
Care Management	42
Environmental	8
Criminal	0
TOTAL	105

TABLE 4 (2008): Total number of health care facilities reporting one or more events

Type of Health Care Facility	Total Number of Facilities Reporting at Least One Event	Number of Facilities	Percent of Facilities Reporting at Least One Event
Hospitals	50	144	34.7%
Ambulatory Surgery Centers	6	138	4.3%
Abortion Clinics	0	9	0%
Birthing Centers	0	4	0%
TOTAL	56	295	19%

Combined Data for All Facilities

Table 5 (2008): Total 2008 reported events by all facilities by reportable event categories

Reportable Event	Number Reported	Totals
SURGICAL		48
1. Surgery performed on the wrong body part	16	
2. Surgery performed on the wrong patient	0	
3. Wrong surgical procedure performed on a patient	1	
4. Retention of a foreign object in a patient after surgery	30	
5. Intra-operative or post-operative death in a normal, healthy patient	1	
PRODUCTS OR DEVICES		3
6. Death or serious disability associated with contaminated drugs, devices, or biologics	0	
7. Death or serious disability associated with misuse or malfunction of device	2	
8. Death or serious disability associated with intravascular air embolism	1	
PATIENT PROTECTION		4
9. Infant discharged to wrong person	0	
10. Death or serious disability associated with patient elopement	1	
11. Suicide or attempted suicide resulting in serious disability	3	
CARE MANAGEMENT		42
12. Death or serious disability associated with medication error	7	
13. Death or serious disability associated with hemolytic reaction	0	
14. Maternal death or serious disability associated with low risk pregnancy labor or delivery	0	
15. Death or serious disability associated with hypoglycemia	2	
16. Death or serious disability (kernicterus) associated with hyperbilirubinemia in neonates	0	
17. Stage 3 or 4 pressure ulcers acquired after admission	33	
18. Death or serious disability due to joint movement therapy	0	
ENVIRONMENTAL		8
19. Death or serious disability associated with electric shock	0	
20. Wrong gas / contamination in patient gas line	0	
21. Death or serious disability associated with a burn	0	
22. Death associated with a fall	8	
23. Death or serious disability associated with restraints or bedrails	0	
CRIMINAL		0
24. Care ordered by someone impersonating a health care provider	0	
25. Abduction of patient of any age	0	
26. Sexual assault of a patient on the facility grounds	0	
27. Death / injury of patient or staff from physical assault occurring on facility grounds	0	
TOTAL NUMBER OF REPORTED EVENTS		105

Combined Data for Hospitals

Table 6 (2008): Total 2008 reported events by hospitals by reportable event categories

Reportable Event	Number Reported	Totals
SURGICAL		42
1. Surgery performed on the wrong body part	13	
2. Surgery performed on the wrong patient	0	
3. Wrong surgical procedure performed on a patient	1	
4. Retention of a foreign object in a patient after surgery	28	
5. Intra-operative or post-operative death in a normal, healthy patient	0	
PRODUCTS OR DEVICES		3
6. Death or serious disability associated with contaminated drugs, devices, or biologics	0	
7. Death or serious disability associated with misuse or malfunction of device	2	
8. Death or serious disability associated with intravascular air embolism	1	
PATIENT PROTECTION		4
9. Infant discharged to wrong person	0	
10. Death or serious disability associated with patient elopement	1	
11. Suicide or attempted suicide resulting in serious disability	3	
CARE MANAGEMENT		42
12. Death or serious disability associated with medication error	7	
13. Death or serious disability associated with hemolytic reaction	0	
14. Maternal death or serious disability associated with low risk pregnancy labor or delivery	0	
15. Death or serious disability associated with hypoglycemia	2	
16. Death or serious disability (kernicterus) associated with hyperbilirubinemia in neonates	0	
17. Stage 3 or 4 pressure ulcers acquired after admission	33	
18. Death or serious disability due to joint movement therapy	0	
ENVIRONMENTAL		8
19. Death or serious disability associated with electric shock	0	
20. Wrong gas / contamination in patient gas line	0	
21. Death or serious disability associated with a burn	0	
22. Death associated with a fall	8	
23. Death or serious disability associated with restraints or bedrails	0	
CRIMINAL		0
24. Care ordered by someone impersonating a health care provider	0	
25. Abduction of patient of any age	0	
26. Sexual assault of a patient on the facility grounds	0	
27. Death / injury of patient or staff from physical assault occurring on facility grounds	0	
TOTAL NUMBER OF REPORTED EVENTS		99

Combined Data for Ambulatory Surgery Centers

Table 7 (2008): Total 2008 reported events by ambulatory surgery centers by reportable event categories

Reportable Event	Number Reported	Totals
SURGICAL		6
1. Surgery performed on the wrong body part	3	
2. Surgery performed on the wrong patient	0	
3. Wrong surgical procedure performed on a patient	0	
4. Retention of a foreign object in a patient after surgery	2	
5. Intra-operative or post-operative death in a normal, healthy patient	1	
PRODUCTS OR DEVICES		0
6. Death or serious disability associated with contaminated drugs, devices, or biologics	0	
7. Death or serious disability associated with misuse or malfunction of device	0	
8. Death or serious disability associated with intravascular air embolism	0	
PATIENT PROTECTION		0
9. Infant discharged to wrong person	0	
10. Death or serious disability associated with patient elopement	0	
11. Suicide or attempted suicide resulting in serious disability	0	
CARE MANAGEMENT		0
12. Death or serious disability associated with medication error	0	
13. Death or serious disability associated with hemolytic reaction	0	
14. Maternal death or serious disability associated with low risk pregnancy labor or delivery	0	
15. Death or serious disability associated with hypoglycemia	0	
16. Death or serious disability (kernicterus) associated with hyperbilirubinemia in neonates	0	
17. Stage 3 or 4 pressure ulcers acquired after admission	0	
18. Death or serious disability due to joint movement therapy	0	
ENVIRONMENTAL		0
19. Death or serious disability associated with electric shock	0	
20. Wrong gas / contamination in patient gas line	0	
21. Death or serious disability associated with a burn	0	
22. Death associated with a fall	0	
23. Death or serious disability associated with restraints or bedrails	0	
CRIMINAL		0
24. Care ordered by someone impersonating a health care provider	0	
25. Abduction of patient of any age	0	
26. Sexual assault of a patient on the facility grounds	0	
27. Death / injury of patient or staff from physical assault occurring on facility grounds	0	
TOTAL NUMBER OF REPORTED EVENTS		6

Combined Data for Abortion Clinics

Table 8 (2008): Total 2008 reported events by abortion clinics by reportable event categories

Reportable Event	Number Reported	Totals
SURGICAL		0
1. Surgery performed on the wrong body part	0	
2. Surgery performed on the wrong patient	0	
3. Wrong surgical procedure performed on a patient	0	
4. Retention of a foreign object in a patient after surgery	0	
5. Intra-operative or post-operative death in a normal, healthy patient	0	
PRODUCTS OR DEVICES		0
6. Death or serious disability associated with contaminated drugs, devices, or biologics	0	
7. Death or serious disability associated with misuse or malfunction of device	0	
8. Death or serious disability associated with intravascular air embolism	0	
PATIENT PROTECTION		0
9. Infant discharged to wrong person	0	
10. Death or serious disability associated with patient elopement	0	
11. Suicide or attempted suicide resulting in serious disability	0	
CARE MANAGEMENT		0
12. Death or serious disability associated with medication error	0	
13. Death or serious disability associated with hemolytic reaction	0	
14. Maternal death or serious disability associated with low risk pregnancy labor or delivery	0	
15. Death or serious disability associated with hypoglycemia	0	
16. Death or serious disability (kernicterus) associated with hyperbilirubinemia in neonates	0	
17. Stage 3 or 4 pressure ulcers acquired after admission	0	
18. Death or serious disability due to joint movement therapy	0	
ENVIRONMENTAL		0
19. Death or serious disability associated with electric shock	0	
20. Wrong gas / contamination in patient gas line	0	
21. Death or serious disability associated with a burn	0	
22. Death associated with a fall	0	
23. Death or serious disability associated with restraints or bedrails	0	
CRIMINAL		0
24. Care ordered by someone impersonating a health care provider	0	
25. Abduction of patient of any age	0	
26. Sexual assault of a patient on the facility grounds	0	
27. Death / injury of patient or staff from physical assault occurring on facility grounds	0	
TOTAL NUMBER OF REPORTED EVENTS		0

Combined Data for Birthing Centers

Table 9 (2008): Total 2008 reported events by birthing centers by reportable event categories

Reportable Event	Number Reported	Totals
SURGICAL		0
1. Surgery performed on the wrong body part	0	
2. Surgery performed on the wrong patient	0	
3. Wrong surgical procedure performed on a patient	0	
4. Retention of a foreign object in a patient after surgery	0	
5. Intra-operative or post-operative death in a normal, healthy patient	0	
PRODUCTS OR DEVICES		0
6. Death or serious disability associated with contaminated drugs, devices, or biologics	0	
7. Death or serious disability associated with misuse or malfunction of device	0	
8. Death or serious disability associated with intravascular air embolism	0	
PATIENT PROTECTION		0
9. Infant discharged to wrong person	0	
10. Death or serious disability associated with patient elopement	0	
11. Suicide or attempted suicide resulting in serious disability	0	
CARE MANAGEMENT		0
12. Death or serious disability associated with medication error	0	
13. Death or serious disability associated with hemolytic reaction	0	
14. Maternal death or serious disability associated with low risk pregnancy labor or delivery	0	
15. Death or serious disability associated with hypoglycemia	0	
16. Death or serious disability (kernicterus) associated with hyperbilirubinemia in neonates	0	
17. Stage 3 or 4 pressure ulcers acquired after admission	0	
18. Death or serious disability due to joint movement therapy	0	
ENVIRONMENTAL		0
19. Death or serious disability associated with electric shock	0	
20. Wrong gas / contamination in patient gas line	0	
21. Death or serious disability associated with a burn	0	
22. Death associated with a fall	0	
23. Death or serious disability associated with restraints or bedrails	0	
CRIMINAL		0
24. Care ordered by someone impersonating a health care provider	0	
25. Abduction of patient of any age	0	
26. Sexual assault of a patient on the facility grounds	0	
27. Death / injury of patient or staff from physical assault occurring on facility grounds	0	
TOTAL NUMBER OF REPORTED EVENTS		0

ANALYSIS OF REPORTED EVENTS FOR 2008

Significant Findings for 2008

- The total number of reported events was the same as reported in 2007
- The number of pressure ulcer events at hospitals increased
- The number of retained foreign objects after surgery increased
- Ambulatory surgery centers reported their first events related to retention of a foreign object
- The number of criminal events decreased to zero

Analysis of reported events

This is the third report of the Indiana Medical Error Reporting System. As compared to the Report for 2007, the number of reported events was the same. Based on experiences of other states, the Indiana State Department of Health expected an increase to occur in the second year with a leveling off to occur in either the third or fourth year of the report. There was an increase from 85 reported events in 2006 to the 105 events reported in 2007 and 2008.

In each of the first three reports (2006, 2007, and 2008), three reported events stood out as significant in the number of reports. These top three events were the same in each report and occurred in the same order of frequency. The top three events accounted for 75.2% of the reported events for 2008. The most frequent reported event was stage 3 or 4 pressure ulcers acquired after admission to the facility. In 2008 there were 33 reported pressure ulcer events. This was an increase from the 26 reported in 2006 and 27 reported in 2007. The second most reported event was retention of a foreign object in a patient after surgery or other invasive procedure. There were 30 of these events in 2008 which was an increase from 23 in 2006 and 24 in 2007. The third most reported event was surgery performed on the wrong body part. There were 16 of these events reported for 2008. This compared with 11 events in 2006 and 23 events in 2007.

A difference for 2008 was that death associated with a fall ranked as the fourth reported event ahead of death or serious disability associated with a medication error which fell to fifth place. Falls and medication errors were fairly close in numbers on the previous two reports so this is not particularly surprising.

One hundred and five (105) events were reported for 2008. Ninety-nine (99) events occurred at hospitals while six (6) events occurred at ambulatory surgery centers. That data is consistent with the scope of the facilities. Because an ambulatory surgery center does not have overnight stays and performs limited services, many of the twenty-seven (27) reporting categories would not be applicable to an ambulatory surgery center. The unlikely occurrence of many events at an ambulatory surgery center significantly reduces the expected number of reported events at those facilities. The data is consistent with that expectation.

For the first time, ambulatory surgery centers reported retention of foreign objects events. There were two (2) such events in 2008. All previous events at ambulatory surgery centers had been wrong body part surgeries. Hospitals continued to report more foreign object events than ambulatory surgery centers. Some of the difference may perhaps be attributable to the complexity of some hospital surgeries and the types of surgeries performed at the two types of facilities. It is still however a significant finding that there is a significant difference in foreign objects retentions between the two types of facilities.

In looking at the number of reported events by individual facilities, the licensing status of a health care facility likely is a consideration in analyzing the number of events occurring at a specific facility. Reports for individual facilities are by health care facility license. A facility may have more than one hospital under the license. One health care facility, Clarian Health Partners, accounted for seventeen of the reported events. In analyzing that information it should be noted that Clarian includes several large hospitals and services under the Clarian Health Partners license. Any reportable events occurring at Methodist Hospital of Indianapolis, Indiana University Hospital, and Riley Hospital for Children are reported under that one license.

No reportable events were submitted by abortion clinics or birthing centers for calendar year 2008. There have not been any reported events at these facilities over the three years of reporting. That is expected as abortion clinics and birthing centers have very limited services. Many of the twenty-seven reporting categories would not be applicable to an abortion clinic or birthing center. Because abortion clinics and birthing centers are limited in services and the scope is much smaller than even an ambulatory surgery center, the Indiana State Department of Health expected to have few, if any, reported events by these facilities. The data is consistent with that expectation as there were no reported events.

Data Tables

TABLE 10 (2008): 2008 Hospital Discharges, Visits and Procedures

2008 HOSPITAL DATA		
Data Category	Definition	Total Number Reported
Inpatient Discharges	Inpatient Discharge means the discharge of an individual who had been admitted to the hospital as an inpatient. It does not include hospice, skilled nursing facility and observation patients.	800,782
Outpatient Visits	Outpatient Visit refers to a visit to a facility for the purpose of emergency services, outpatient surgery, occupation and physical therapy/rehabilitation, cardiac diagnostic and treatment procedures, or psychiatric and social services. These classifications are based on selected billing or diagnosis codes.	3,629,371
Procedures	Procedure includes any surgical procedure coded "01.00" to "86.99" inclusive in the principal procedure field as reported by the hospital for both inpatient discharges and outpatient visits.	1,227,757

TABLE 11 (2008): 2008 Ambulatory Surgery Center Procedure Data

2008 AMBULATORY SURGERY CENTER DATA		
Data Category	Definition	Total Number Reported
Procedures	Procedure includes any procedure reported by the ambulatory surgery center on the ASC Utilization Report, State Form 49933	522,251

TABLE 12 (2008). Top Five Reported Events in Indiana for 2008

Event	Number of Reported Events	Percent of Total Number of Reportable Events	Ratio of Number of Reported Events to Total Number of Discharges or Surgical Procedures
Stage 3 or 4 pressure ulcers acquired after admission	33	31.4%	1 event per 24,000 hospital inpatient discharges
Retention of foreign object in patient after surgery	30	28.3%	1 event per 26,000 surgical procedures performed in hospital and ambulatory surgery centers
Surgery performed on the wrong body part	16	15.2%	1 event per 111,000 surgical procedures performed in hospital and ambulatory surgery centers
Death associated with a fall	8	7.6%	1 event per 554,000 hospital inpatient discharges and outpatient visits
Death or serious disability associated with medication error	7	6.7%	1 event per 633,000 hospital inpatient discharges and outpatient visits

TABLE 13 (2008). Percentage of Category of Events

Category of Event	Number of Reported Events	Percentage of all Reported Events
Surgical	48	45.7%
Product or Device	3	2.9%
Patient Protection	4	3.8%
Care Management	42	40.0%
Environmental	8	7.6%
Criminal	0	0.0%
TOTAL	105	100%

TABLE 14 (2008). Comparison of reported events for surgical procedures for hospitals and ambulatory surgery centers (ASC)

Event	Number of ASC Reported Events	Ratio of Number of Reported Events to Number of Surgical Procedures	Number of Hospital Reported Events	Ratio of Number of Reported Events to Number of Surgical Procedures
Surgery performed on the wrong body part	3	1 event per 174,000 surgical procedures performed in ambulatory surgery center	13	1 event per 94,000 surgical procedures performed in hospital
Surgery performed on the wrong patient	0	0 event per 522,251 surgical procedures performed in ambulatory surgery center	0	0 event per 1,227,757 surgical procedures performed in hospital
Wrong surgical procedure performed on a patient	0	0 event per 522,251 surgical procedures performed in ambulatory surgery center	1	1 event per 1,227,000 surgical procedures performed in hospital
Retention of foreign object in patient after surgery	2	1 event per 261,000 surgical procedures performed in ambulatory surgery center	28	1 event per 44,000 surgical procedures performed in hospital
Intra-operative or post-operative death in a normal, healthy patient	1	1 event per 522,000 surgical procedures performed in ambulatory surgery center	0	0 event per 1,227,757 surgical procedures performed in hospital

COMPARISON OF ANNUAL REPORTS

This Report for 2008 is the third report of the Indiana Medical Error Reporting System. The following tables provide a few comparisons between the 2006, 2007 and 2008 reported events.

TABLE 15 (2008). Top Five Reported Events in Indiana for 2006 through 2008

Event	Number of Reported Events for 2006	Number of Reported Events for 2007	Number of Reported Events for 2008
Stage 3 or 4 pressure ulcers acquired after admission	26	27	33
Retention of foreign object in patient after surgery	23	24	30
Surgery performed on the wrong body part	11	23	16
Death or serious disability associated with medication error	6	8	7
Death associated with a fall	4	5	8

TABLE 16 (2008): Total number of reported events by type of health care facility for 2006 - 2008

Type of Health Care Facility	Number of Reported Events for 2006	Number of Reported Events for 2007	Number of Reported Events for 2008
Hospitals	79	101	99
Ambulatory Surgery Centers	6	4	6
Abortion Clinics	0	0	0
Birthing Centers	0	0	0
TOTAL	85	105	105

TABLE 17 (2008): Combined total number of reported events by categories for 2006 - 2008

Category of Event	Number of Reported Events For 2006	Number of Reported Events For 2007	Number of Reported Events For 2008
Surgical	39	49	48
Product or Device	4	2	3
Patient Protection	0	2	4
Care Management	33	38	42
Environmental	6	5	8
Criminal	3	9	0
TOTAL	85	105	105

TABLE 18 (2008): Comparison of reported events for surgical events for 2006 - 2008

Event	Type of facility	Number of Reported Events For 2006	Number of Reported Events For 2007	Number of Reported Events For 2008
Surgery performed on the wrong body part	ASC	6	4	3
	Hospital	5	19	13
Surgery performed on the wrong patient	ASC	0	0	0
	Hospital	2	0	0
Wrong surgical procedure performed on a patient	ASC	0	0	0
	Hospital	3	1	1
Retention of foreign object in patient after surgery	ASC	0	0	2
	Hospital	23	24	28
Intra-operative or post-operative death in a normal, healthy patient	ASC	0	0	1
	Hospital	0	1	0

Combined Data for All Facilities

TABLE 19: Total reported events by all facilities by reportable event categories for 2006 - 2008

Reportable Event	Number Reported for 2006	Number Reported for 2007	Number Reported for 2008
SURGICAL - Total Reported Events	39	49	48
1. Surgery performed on the wrong body part	11	23	16
2. Surgery performed on the wrong patient	2	0	0
3. Wrong surgical procedure performed on a patient	3	1	1
4. Retention of a foreign object in a patient after surgery	23	24*	30
5. Intra-operative or post-operative death in a normal, healthy patient	0	1	1
PRODUCTS OR DEVICES – Total Reported Events	4	2	3
6. Death or serious disability associated with contaminated drugs, devices, or biologics	1	0	0
7. Death or serious disability associated with misuse or malfunction of device	3	1	2
8. Death or serious disability associated with intravascular air embolism	0	1	1
PATIENT PROTECTION – Total Reported Events	0	2	4
9. Infant discharged to wrong person	0	0	0
10. Death or serious disability associated with patient elopement	0	0	1
11. Suicide or attempted suicide resulting in serious disability	0	2	3
CARE MANAGEMENT – Total Reported Events	33	38	42
12. Death or serious disability associated with medication error	6	8	7
13. Death or serious disability associated with hemolytic reaction	0	1	0
14. Maternal death or serious disability associated with low risk pregnancy labor or delivery	0	1	0
15. Death or serious disability associated with hypoglycemia	1	1	2
16. Death or serious disability (kernicterus) associated with hyperbilirubinemia in neonates	0	0	0
17. Stage 3 or 4 pressure ulcers acquired after admission	26	27*	33
18. Death or serious disability due to joint movement therapy	0	0	0
ENVIRONMENTAL – Total Reported Events	6	5	8
19. Death or serious disability associated with electric shock	0	0	0
20. Wrong gas / contamination in patient gas line	0	0	0
21. Death or serious disability associated with a burn	2	0	0
22. Death associated with a fall	4	5	8
23. Death or serious disability associated with restraints or bedrails	0	0	0
CRIMINAL – Total Reported Events	3	9	0
24. Care ordered by someone impersonating a health care provider	0	0	0
25. Abduction of patient of any age	0	1	0
26. Sexual assault of a patient on the facility grounds	2	6	0
27. Death / injury of patient or staff from physical assault occurring on facility grounds	1	2	0
TOTAL NUMBER OF REPORTED EVENTS	85	105	105

* Includes one event that occurred in 2006 but was reported after the release of the Report for 2006

ISDH HEALTH CARE QUALITY INITIATIVES for 2008

As part of its mission to promote public health and provide health care leadership, the Indiana State Department of Health partners with providers, associations, advocate groups, and academic institutions to develop and implement health care quality improvement programs. The Indiana Health Care Quality Initiative has developed programs to address health care issues such as Alzheimer's, falls, restraints, and pressure ulcers. The resulting healthcare improvement campaigns include the following components:

- Evidence-based to promote proven solutions
- Implementation of system-based approaches
- Collaboration between providers on quality issues
- Transparency through the utilization of metrics that can be tracked
- Care coordination to assure communication between facilities
- Incorporation of culture change to include consistent assignments and patient-centered care
- Improved education and training on patient safety and quality issues
- Educating patients/residents and families as to their role in improving health care quality
- Implementation of common assessment tools to be used across facilities

The following are some of the health care quality initiatives implemented by the Indiana State Department of Health in the past year.

Indiana Pressure Ulcer Initiative

The development of stage three or four pressure ulcers while admitted to a hospital has been the number one reported event in the Indiana Medical Error Reporting System for each of the three years of the report. To address this problem, the Indiana State Department of Health developed and implemented the Indiana Pressure Ulcer Initiative to promote the prevention of pressure ulcers.

On August 26, 2009, the Indiana State Department of Health will host an Outcomes Congress for the Indiana Pressure Ulcer Initiative. At the time of writing of this report, outcome data has not been finalized. Preliminary data suggests a decrease in pressure ulcers. Based on data from the Centers for Medicare and Medicaid Services, the Indiana rate of pressure ulcer in nursing homes declined from the fourth quarter of 2008 to the first quarter of 2009 from 8.3% to 8.0%. This represents a decline of 171 pressure ulcers which is a 5.8% decrease over one quarter.

Initiative Overview

In early 2007 the Indiana State Department of Health (ISDH) began development of a statewide campaign to prevent pressure ulcers. The campaign was initiated in response to data indicating that Indiana health care facilities had a high rate of pressure ulcers. Pressure ulcers are a challenging health care problem. For health care providers, pressure ulcers are difficult to prevent, assess, and treat. For residents and their families, pressure ulcers are a serious detriment to quality of life.

The ISDH planned a three-phase initiative to assist with the prevention of pressure ulcers. The three-phase initiative included the following phases:

1. The Indiana Pressure Ulcer Quality Improvement Initiative formally kicked off on October 30, 2007 with a Leadership Conference focusing on pressure ulcers. The conference was attended by nearly 1,100 participants from over 400 health care facilities.

2. The ISDH purchased a high-end pressure redistribution mattress and wheelchair cushions for every Indiana nursing home and provided training on their use. This ensured the availability of at least one mattress at every nursing home for immediate needs of at-risk residents at the time of admission. Distribution of the products occurred in January 2008.
3. Implementation of a 15-month collaborative initiative utilizing a system-based approach to preventing and treating pressure ulcers. The collaborative initiative included nursing homes, hospitals, and home health agencies. The collaborative initiative began in June 2008 and ends in August 2009. A second phase of the collaborative initiative began in August 2009.

Indiana Pressure Ulcer Initiative

The ISDH selected the University of Indianapolis Center for Aging & Community to coordinate the collaborative initiative. The Center for Aging and Community has a history of academic excellence along with experience in collaborative efforts to improve healthcare. The Center is one of Indiana's leading centers for aging studies, with an interdisciplinary approach to developing partnerships between higher education, business organizations and the community to improve the quality of life for older adults.

A collaborative team was assembled in June 2008 to plan the initiative. An evidence-based initiative was designed to assist health care facilities implement improved pressure ulcer prevention and care coordination systems. A component of the initiative was that direct assistance would be provided to participating facilities and families by expert faculty. In recent years, states such as New Jersey and Minnesota had undertaken successful initiatives to reduce the number of pressure ulcers reported in their hospitals and long term care facilities.

In developing the initiative, the collaborative team identified the following benefits of participation:

- First and foremost, increased patient quality of life for Hoosiers
- Improved care coordination between hospitals, home health agencies, and long term care facilities
- Educational opportunities for health care providers and caregivers
- Opportunity for improved quality of care through the prevention of pressure ulcers
- Opportunity for improved reputation within the community
- Opportunity to work with and learn from expert faculty
- Cost savings from fewer pressure ulcers requiring treatment

Participants

In the summer of 2008, the collaborative team invited Indiana health care facilities and agencies to participate in the initiative. Selected were 95 nursing homes, 40 hospitals, and 28 home health agencies. Also participating in the initiative are representatives from state surveyors and health care organizations.

Resources Provided

This initiative included many activities and resources. The following are a few of the resources provided to participants through the initiative:

- Participating facilities received a tool kit that included assessment and coordination tools.

- Participating facilities were provided onsite technical assistance in implementing the initiative.
- Three one-day implementation meetings with expert faculty were provided for representatives of participating facilities to discuss their experiences and identify solutions.
- Six online education modules on pressure ulcer prevention were developed and provided to all Indiana nursing homes.
- A consumer guide/brochure was developed and published to provide information on pressure ulcers to residents, patients, family, and resident representatives.

Description of Indiana Pressure Ulcer Initiative

The following are the activities and events of the initiative:

- June 2008: Collaborative team formed to begin planning the initiative
- September 2008: Selection of participants
- September/October 2008: A knowledge exam was administered to staff of the participating facilities and agencies to determine their level of knowledge about pressure ulcers
- September/October 2008: Each participating facility and agency completed a self-assessment to determine the components of their pressure ulcer prevention system
- Throughout initiative: Each participant tracked pressure ulcer data for their facility or agency
- October/November 2008: An all day learning session was conducted regionally for participating facilities and agencies. There were seven total sessions. Separate sessions were provided for nursing home, hospital, and home health participants. Each participant sent up to five staff members. The first learning session provided information on the essentials of pressure ulcer prevention, risk assessment, rapid improvement events, and skin inspection. A toolkit was provided with resources for those areas.
- October/November 2008: Webinars were conducted for nursing home, hospital, and home health participants as well as a webinar for consumers
- Ongoing throughout the initiative: Support visits to each participating facility from initiative partners to assist in implementing system improvements
- April 2009: A second learning session was conducted regionally for participating facilities and agencies. There were five sessions. The session focused on lessons learned, consistency (staging), and care coordination. All three provider types were integrated at each session to discuss care coordination issues. Additional tools and resources were provided on the topics.
- April 2009: A consumer brochure was published
- April/May 2009: A second set of webinars were conducted for nursing home, hospital, and home health participants as well as a webinar for consumers
- July 2009: Six online education modules were completed and posted on the ISDH Web site. The modules provide education on pressure ulcers.
- July 2009: An Indiana Health Care Quality Resource Center was developed and posted on the ISDH Web site. The Resource Center provides information, toolkits, and resources for health care topics. The Center includes all tools and materials included in the initiative as well as information and links to other resources.
- July 2009: A knowledge exam was administered to staff of the participating facilities and agencies to determine their level of knowledge about pressure ulcers post-initiative
- July 2009: Each participating facility and agency completed a self-assessment to determine the components of their pressure ulcer prevention system post-initiative
- August 26, 2009: An Outcomes Congress for all participants. The event will celebrate accomplishments and provide information on continuity.

Pressure Ulcer Initiative Success Stories

In September 2008 Initiative participants began their work in the Indiana Pressure Ulcer Initiative. Efforts have continued over the past year. In June and July 2009, several facilities and agencies provided a description of their activities and successes. The following are a few of the success stories from the Initiative:

COMPREHENSIVE CARE FACILITIES (NURSING HOMES)

Franklin United Methodist Community

Franklin, IN

The main changes that have been made at our facility are:

- discussing the residents that are in their multi-data set (MDS) window and discussing all interventions that are in place or interventions that need to be in place to prevent pressure ulcers during our weekly wound meeting
- implementing our Pressure Ulcer Prevention (PUP) program
- providing cushions in beauty shop and transportation wheelchairs as residents may sit in those chairs for extended periods of time
- using special briefs from Medline on residents with a pressure ulcer and for those residents that have a history of skin breakdown
- using luggage tags on resident's wheelchairs to indicate what each resident needs in their wheelchair to prevent skin breakdown.

Our goal was to prevent coccyx pressure ulcers. All interventions appear to work well.

We are working with the medical surgical unit at Johnson Memorial Hospital in Franklin, Indiana. Since most of our residents use Johnson Memorial Hospital, Franklin United Methodist Community is working with the hospital on transfer information including areas of decubitus/skin breakdown, treatment orders, measurements, and interventions that are in place.

Since our facility is large, we chose one wing of one of the health center to begin with. Our goal was to have 5% or less coccyx pressure ulcers throughout the initiative. Our program was successful as our pressure ulcer rate is 2.3%. Both of the residents involved were hospice residents and had a decline in all areas. Since our program has been so successful we have initiated our interventions throughout the facility.

Contact:

Joann Johnson, RN, ADON

Phone: (317) 736-1136

E-mail: jjohnson@fumeth.com

Scenic Hills Care Center

Ferdinand, Indiana

Changes since the team came back from Learning Session #1 have been that nurses do rounds and check to make sure their residents are turned, repositioned, or toileted every two hours. The nurse aides have become more focused on toileting and repositioning. The team did a great job of coming back and informing other line staff of the things they learned.

All line staff has the skin report cards. The aides carry the report cards with them and when finding any areas they fill out the form and give the white copy to the nurse. The charge nurse assesses the area found and starts a treatment if needed. The form then goes to the wound nurse who assesses the treatment and area in question to make sure that the treatment is correct. The wound nurse then gives the information to the Director of Health Services (nursing) or the assistant so that on the next weekly wound and skin rounds the director goes along and re-assesses and makes sure the treatment is working and appropriate.

Family members have been involved in preventing pressure areas. They have joined in on the initiative by signing the commitment board, attending teleconferences, and informing staff when other residents need to be repositioned. They watch for their loved ones along with all the other residents in the health center.

We measure our success by looking weekly at the number of skin areas that we have. We have seen the number drop drastically since the Indiana Pressure Ulcer Initiative started. We continue to monitor and congratulate the line staff when we see the decline in areas. It is important to make sure that everyone knows that they play a part in reducing the number of skin issues in the health center.

Contact:

Lisa Stallman, RN, ADHS

Phone: (812) 367-2299

E-mail: 303-scenicills-dhs@trilogyhs.com

Warsaw Meadows Care Center

Warsaw, IN

Warsaw Meadows Care Center has benefited from being a part of the Indiana Pressure Ulcer Initiative. Since becoming part of the program, many changes have been implemented.

- We have a complete program set up to identify, track, and treat pressure wounds that did not exist in the past. The program includes tools such as the Braden scale, push tool, individualized turning and repositioning schedules, toileting programs (as well as other preventative measures) and tracking tools that have been created after researching and attending wound care seminars.
- We have begun an auditing system of the preventative measures that have been put in place for all residents at risk for skin breakdown.
- One person had been designated to measure and care for the wounds on a weekly basis as well as educate staff on the many options that are available for wound prevention and treatment. Education of the direct care staff on a routine basis is one of the most important changes that we have made.

All of the changes that have been implemented have been working well. The combination of all of the changes working together has decreased our number of pressure ulcers as well as increased the early identification of potential pressure ulcers. Explaining our involvement with the Initiative and our continued efforts to family members and residents has also had positive effects. Families and residents have been grateful, to say the least, when they are aware of preventative measures that have been put in place for them and are informed throughout the process of managing a wound. Our marketing department used the Initiative as a marketing tool to residents that we have accepted with wounds.

Just having the above programs in place has been a measure of our buildings' success. The results of our audit tools have shown us that education has been successful. Staff has been putting preventative measures in place initially and with increased risk. They ask questions, follow preventative programs, and actually want to do wound rounds with the nurse weekly to see if wounds are healing. This Initiative has improved the quality of care that our building gives.

Contact:

Sarah Clay, RN, DON

Phone: (574)-267-8922

E-mail: warsawdon@yahoo.com

Whispering Pines Health Care Center

Valparaiso, IN

Activities implemented:

- We have changed how we address Braden Scale Scores by really keying in on preventative measures to include mattresses, cushions, boots, etc.
- What is working well is a new skin care line Remedy from Medline. Olive oil based, more adherent, subtle texture, with less amount used, and residents plus staff like the fragrance.
- Families are brought in through care plan meetings and informed what is in place for prevention. The pressure ulcer consumer brochure is distributed to families.
- We track pressure ulcers monthly for QA and are able to check progress along with the rate of occurrence.

Contact:

Renel Hemmerling

Phone: (219) 462-0508

E-mail: rhemmerling@wphcc.org

HOME HEALTH AGENCIES

Saint John's Home Care Services

Anderson, IN

This collaborative has allowed Saint John's Home Care Services the opportunity to address agency processes and protocols related to pressure ulcer prevention and reduction. With our increased awareness, the following have been implemented:

- a new pressure ulcer prevention protocol has been created and added to our process for identifying patients at risk
- a new clinical plan of care has been written to provide clinical interventions for patients at risk and those with current pressure ulcers
- a revamped patient education process that includes focused visits on pressure ulcer prevention/reduction
- an on-going educational program for staff
- A booth at our annual competency fair highlighted the Indiana Pressure Ulcer Initiative and each participant was informed of the initiative and our agency's progress. A scavenger hunt was issued to address the five most frequently missed questions from the Facility Specific Knowledge Questionnaire. Signatures were obtained for the poster *We Will Know the Facts*

and Take Action to confirm our commitment to the initiative and the storyboard was displayed.

Contact:

Sharon McKnight, RN, BSN

E-mail: slmcknig@sjhsnet.org

HOSPITALS

Bloomington Hospital

Bloomington, IN

Improvements and changes that we have implemented since our involvement with the program:

Implemented changes:

- Pilot study to test the effectiveness of pressure ulcer alert signage in patient rooms for Braden scores < 18.
- Pilot study to evaluate the effectiveness of nurse, patient care tech, unit coordinator, and housekeeper education and involvement in pressure ulcer reduction.
- Hospital wide availability of perineal disposable wipes.
- Continual staff education at monthly unit meetings.
- Collection of pressure ulcer incidence data is being used to drive changes.

Positive Outcomes:

- Implementation of education visible when rounding (Example patient found with head of bed lowered when resting to reduce sacral pressure)
- New use for old product – skin barrier protectant wipes used on heels to prevent shearing.
- Sharing information to implement changes hospital wide.

Measuring Our Successes:

- Pre and Post education testing of employees
- Monthly incidence data reviewed
- Incorporated changes into annual competencies for all staff.

Thank you for your inspiration.

Contacts:

Mary Anne Proctor-Holmes, RN, BSN, PCCN

Phone: (812) 353-2933

Jean Young RN, BSN, OCN

Phone: (812) 353-9022

Gibson General Hospital

Princeton, IN

Changes we have implemented:

- Policies and Procedures are in place

- Initiated Medline Skin Care Products
- Have educated front line staff on Pressure Ulcer Prevention
- Have started tracking Pressure Ulcers on our patients

What is working well:

- Staff seem more knowledgeable about Pressure Ulcer Prevention
- Medline Products are working well for us

Community based collaborations:

- We are planning a community based skin fair in August

Measuring Success:

- We have been tracking all inpatients for 4 months and have found:
 - Hospital acquired Stage I – 4
 - Hospital acquired Stage II – 1
 - Hospital acquired Stage III or above – 0

Contact:

Angie Brewer, RN

Phone: (812) 385-9358

E-mail: abrewer@gibsongeneral.com

Good Samaritan Hospital
Vincennes, IN

We have seen many areas of success in regards to preventing pressure ulcers in the past six months. Changes Good Samaritan Hospital has implemented:

- Currently all patients in our facility have E-Z wraps to their O2 tubing in order to prevent pressure ulcers behind our patient's ears.
- We have Waffle Cushions for our patient's chairs available to the nursing staff on each unit. No longer does the nurse have to order the cushion from Central Service.
- We also have E-Z wraps on each unit and available to all staff.
- We have Braden score cards posted on each computer that is easily accessible for the staff. All staff members have a pocket Braden card and a pocket Charting Tool guide to assist them in charting correctly on their patient's skin

What is working well at Good Samaritan Hospital?

- Staff's participation!
- Nurse Managers participate in our weekly Prevalence study and assess patient's skin
- Easy access to products in preventing skin breakdown
- Increased awareness of staff's role in prevention of pressure ulcers

How is Good Samaritan Hospital measuring our success?

- We conduct weekly prevalence studies on 2 different units every week. Staff is unaware of what unit we will be on until we show up.
- We have a Skin Performance and Improvement committee that is made up of staff members, managers, wound care nurses, and skin team members where we discuss our plan of action to obtain ZERO percent hospital acquired pressure ulcers

Contacts:

Colleen Clidienst, RN, BSN
Cheryl Leimbach, RN, BSN, CWCN
Wound Care Department
Phone: (812) 885-3163

Hendricks Regional Health
Danville, IN

Hendricks Regional's Medical Unit had no hospital acquired pressure ulcers for July. The Indiana Pressure Ulcer Initiative was instrumental in our success by showing us how important it is to daily track and provide one-on-one education needed to correct knowledge deficits. These were the two most instrumental interventions for us.

As a participant of the Indiana Pressure Ulcer Initiative the Medical Unit at Hendricks Regional Health has accomplished the following process changes:

- Monitoring--Skin Champions audit nursing skin care records for all patients on medical unit to ensure skin risk assessment is done and preventative interventions are initiated. When a pressure ulcer finding is present treatment interventions are assessed to ensure standards of care are met and are initiated within twenty four hours of admission.
- Focused Education--Staff receives formal and informal education addressing knowledge gaps with best practice interventions for pressure ulcer assessment, prevention and care. Various methods include slide show, posted signage and one-on-one education. Auditing done by staff provided a source for determining educational needs. Inconsistencies were noted on staging ulcers which led to informal teaching to nursing staff by the Skin Champions.
- Staff Recognition-- An award system was implemented to recognize staff for assessment, prevention and treatment of pressure ulcers.

Community Collaboration:

- Initiation of educational handouts for patient and family. The handouts include information on risk factors, preventative measures and treatment for pressure ulcers.
- Planning is under way to share data collected through the initiative with the Directors of Extended Care Facilities that send patients to Hendricks Regional Health.

What Has Worked:

- All of the above process changes have worked however the monitoring intervention has had the most impact. When you can see and track what is happening with pressure ulcers, the data provides the impetus for further interventions using the PDSA process. Monitoring has been the most significant variable for us to determine which process changes need to be made and then initiate interventions to accomplish the changes.

Measuring Success through Outcomes:

- We chose to measure success by looking at the number of pressure ulcers acquired by patients after admission. From information on the daily data collection sheets we are able to determine how many pressure ulcers have occurred on the medical unit during a month. We examined all months of data collection for the initiative. Data revealed a significant decrease in monthly hospital acquired pressure ulcers. At the beginning of data collection we had fourteen hospital acquired pressure ulcers and last month that number was four.

- We also look at NDNQI Prevalence and since the beginning of the initiative we have been below the mean for unit acquired hospital pressure ulcers. We just finished the second quarter NDNQI Prevalence study. For the first time since doing NDNQI data collection the findings revealed no hospital acquired pressure ulcer.

Contacts:

Lisa Imlay

Phone: (317) 745-3496

E-mail: laimlay@hendricks.org

Paula Spoonmore

Phone: (317) 718-4616

E-mail: pispoon@hendricks.org

Schneck Medical Center

Seymour, IN

Changes implemented:

- “Skin Champions” Team Initiated
- Skin Champions Used Evidence Based Practice to Make Multiple Changes in Interventions
- Pre-albumins Versus Albumins
- Nurse Generated Nutrition Consults
- Wound Care Protocols
- Standardization of Products
- Improved Documentation
- Two Nurses Assessing Skin on Admission
- Aggressive Turning Schedule
- All Nurses Completed the NDNQI Pressure Ulcer Training Module
- Increased Education

What is working well:

- Monthly “SKIN CHAMPION” from every unit
- Monthly “UNIT CHAMPION” traveling trophy
- Mock Trials – Educating Nurses on Pressure Ulcer Prevention Utilizing Evidence Based Practices

Community based collaborations:

- Increased Communication with Long Term Care Facilities/Home Health and Hospice
- Improved Transfer Report Form
- Providing Facilities with a Day Supply of Wound Care/Treatment Supplies

Measuring success:

- Monthly Pressure Ulcer Prevalence and Incidence Studies
- Chart Reviews
- Leadership Rounding on Patients
- Feedback from Long Term Care Facilities/Home Health/Hospice

Contact:

Sarah Herb, RN, BSN, WCC

Phone: (812) 522-0712

E-mail: sherb@schneckmed.org

St. Francis Hospital

Beech Grove, IN

Our goal – To support and promote best nursing practice regarding skin care, prevention and treatment by standardizing skin care practices and utilizing algorithms to guide staff nurses to reduce hospital acquired pressure ulcers. Actions Taken to Reduce Hospital Acquired Pressure Ulcers at St. Francis Hospital:

Interventions:

- Establishment of a nurse driven committee that convenes on a monthly basis Skin Action Team, (SAT) with collaboration from the organizations certified wound care nurses (CWCN's). This collaborative team utilizes current best evidence to drive nursing practice and policy in regards to pressure ulcer prevention.
- We have conducted a pilot study which prominently reflects Institute for Healthcare Improvement (IHI) and National Pressure Ulcer Advisory Panel (NPUAP) guidelines and definitions for prevention of pressure ulcers.

Outcomes:

- Heightened awareness of pressure ulcer prevention strategies and visibility of Skin Action Team members on each nursing unit driving bedside practice.
- Successful implementation of IHI and NPUAP guidelines for pressure ulcer prevention.
- This initiative is expected to be implemented throughout the hospital by the end of third quarter 2009.

Measurement strategies:

- Skin Action Team members conduct monthly data collection on their respective units and focus on risk assessment and consistent implementation and documentation of preventative interventions.
- Quarterly pressure ulcer prevalence surveys are conducted.
- Monthly data collection for the Indiana Pressure Ulcer Quality Improvement Initiative has been underway on the pilot unit since the beginning of the project.

Contacts:

Stephanie Heckman, RN, CMSRN

Phone: (317)783-8525

E-mail: Stephanie.heckman@ssfhs.org

Amira Kehoe RN, BSN, CWCN, MBA

Phone: (317)783-8732

E-mail: amira.kehoe@ssfhs.org

Saint John's Health System
Anderson, IN

Changes Saint John's Health System has implemented during the Indiana Pressure Ulcer Prevention Initiative are:

- Two nurse skin assessments - on admission to hospital and by receiving units on transfer with documentation of findings.
- Care Coordination Unit for inpatient medical surgical admissions.
- Increased awareness and education.
- Wound, Ostomy, and Continence Nurses (WOCN) reporting to one person for inpatient nursing.
- WOCN's have regularly scheduled hours to round and consult and treat inpatients.
- Standardized documentation sheet for present on admission.

What is working well for us at Saint John's:

- The two nurse skin assessment system is working well on each floor.
- The Care Coordination Unit has provided consistency in present on admission documentation in the ERS reporting system, on the Nursing Health Admission History and on the nursing flow sheets.
- An interdisciplinary approach to increase awareness and education of staff has been implemented by providing education during education days and in traveling posters. A Wound Reference Guide is in the process of being placed on all inpatient floors, the Care Coordination Unit and the Emergency Department for reference on staging and products.
- WOCN's are more visible and staff is engaging them more with questions and asking for their opinion and suggestions.

Community based Collaborations:

- Saint John's hosts the Long Term Care Forum which includes hospital and long term care facilities throughout the county. Pressure ulcer awareness and increased communication between facilities is one of the focuses.

How are we measuring our success?

- We are measuring our success by the ERS reporting system, in documentation reviews and quarterly skin assessments.
- Weekly reviews at the Pressure Ulcer and Falls Meeting provide current information to staff.
- Documentation is placed on each individual unit balanced scorecard.

Contact:

Tracy McAllister, RN, BSN
Director Critical Care Area/Clinical Processes
Phone: (765) 646-8175
E-mail: tpmcalli@sjhsnet.org

St. Mary Medical Center
Hobart, IN

St. Mary Medical Center has always taken a proactive approach to preventing pressure ulcers but it seemed we had reached a plateau when it came to fresh, creative ideas. We had already implemented

several new products, had a variety of surfaces available, employed wound nurses and had educated staff.

Our decision to participate in the Indiana Pressure Ulcer Initiative project was just the shot in the arm we needed. The collaborative meetings of idea sharing generated rejuvenated interest and jump started our imaginations. As a result, we implemented several successful processes:

- Our pilot unit champion (a staff nurse) assures that all staff are compliant with unit PUP indicators (they are now at 98% compliance)
- A short informative “Paw Print” newsletter gives “bone bits” of pertinent information to the staff on a quarterly basis
- Every other hour, from 6a to 10p, overhead chimes cue staff to turn high risk patients
- Our inpatient units utilize the preprinted patient-family education pamphlet distributed at the Indiana Pressure Ulcer Initiative meeting
- We have a “group” email that includes participants from a variety of health care settings. The members of the group are those that were seated at our table at the last collaborative meeting.
- Any hospital acquired pressure ulcer is reviewed and correlated to the results of the units monthly quality indicators. The unit manager develops and implements an action plan.

Results: Zero hospital acquired ulcers on our pilot unit!

Thank you for what I hope is the first of many of these types of initiatives.

Contact:

E-mail: dkrejci@comhs.org

Other ISDH Health Care Quality Initiatives

Leadership Conference: Emergency Preparedness Planning

The Indiana State Department of Health held its fourth Long Term Care Leadership Conference on September 23, 2008. The conference focused on emergency preparedness planning for long term care facilities. There were 1,084 registrants for the conference to include staff from comprehensive long term care facilities (nursing homes), consultants, health care organizations, and state surveyors.

Speakers included Dr. Robert Roush, EdD discussing all hazards emergency planning. Susan Larsen, Centers for Medicare and Medicaid Services (CMS) Survey and Certification Emergency Preparedness Lead, provided an overview of the CMS survey and certification emergency preparedness initiative. A panel of Indiana health care providers affected by the flooding discussed their response and recovery to the disaster. Beverly Parota, M.Ed, and Karen Kolb, M.S., discussed details of putting together an emergency preparedness plan for long term care residents. Beth Kallmyer, L.C.S.W., discussed considerations for individuals with dementia in emergency preparedness planning. The ISDH then discussed the timetable for development of facility emergency preparedness plans.

Leadership Conference: Managing Incontinence Care

The Indiana State Department of Health held its fifth Long Term Care Leadership Conference on March 24, 2009. The conference focused on managing incontinence care for residents of long term care facilities. There were 1,099 registrants for the conference to include staff from comprehensive long term care facilities (nursing homes), consultants, health care organizations, and state surveyors.

Speakers included Dr. Martina Mutone, M.D., discussing the anatomy and physiology of urinary incontinence. Dr. Mikel Gray, PhD, reviewed the epidemiology of urinary and fecal incontinence in nursing home residents and explored its impact on quality of life. Ms. Jeri Lundgren, RN, discussed the assessment and evaluation of urinary incontinence, identifying types of incontinence and treatment options. Ms. Rebecca Bartle, RN, discussed meeting regulatory requirements for incontinence care. Dr. Nadine Coudret, EdD, presented a study on the use of bladder ultrasound scanners in Indiana nursing homes.

Alzheimer's and Dementia Care

With an aging population, Alzheimer's and dementia have become increasingly important care issues. Health care providers frequently do not receive specific education and training on Alzheimer's and dementia through their initial training. To address this issue, the Indiana State Department of Health has partnered with the Alzheimer's Association of Greater Indiana to develop educational and training resources for health care personnel. Beginning in 2003, the Indiana State Department of Health and Alzheimer's Association developed eight training courses and provided training to over 2,000 long term care providers.

In 2007, the Alzheimer's Association and Ivy Tech Community College launched a Dementia Professional Certification Program. This certification is the first of its kind in Indiana and recognizes health care professionals that have furthered their study in dementia care. The courses provide realistic best practices to provide quality dementia care. To earn the Dementia Professionals

Certification, health care professionals must have 40 hours of course work from courses offered through this program. This includes five core courses that are four hours each and twenty hours of electives. In 2007 the Indiana State Department of Health, Division of Long Term Care, provided funding to the Alzheimer's Association of Greater Indiana to provide 50 scholarships for this certification program. The Indiana State Department of Health would eventually like to have at least one certified individual in every acute care and long term care facility.

The Alzheimer's Association and Indiana State Department of Health are continuing to expand educational opportunities on Alzheimer's and dementia care. The following were 2008 programs:

- To address difficulties of rural health care providers in accessing training programs, the Alzheimer's Association presented educational programs in two rural Indiana communities. The programs provided over sixteen hours of educational activities.
- A seminar series by national speakers was presented at 18 sites throughout the state. Each seminar was a six-hour workshop consisting of ways to improve the quality of dementia care along with best practices.
- Two online educational programs were developed and made available to health care providers. This improves the ability of health care professionals to access accurate and quality education on Alzheimer's and dementia care.

Residential Care Facility Consumer Report

The Indiana State Department of Health has consumer reports for nursing homes, hospitals, ambulatory surgery centers, home health agencies, and hospice agencies. These reports provide information about the facility or agency to include services provided and survey history. In May 2009 the Indiana State Department of Health added a consumer report for free-standing residential care facilities. There are slightly over 100 of these facilities. The consumer report does not include residential care units that are part of another licensed entity. The report will be expanded in the future to include those residential units.

INDIANA PATIENT SAFETY and HEALTH CARE QUALITY IMPROVEMENT ORGANIZATIONS

Statewide Organizations

Health Care Excel
2901 Ohio Boulevard, Ste. 112
Post Office Box 3713
Terre Haute, IN 47803-0713
(812) 234-1499
www.hce.org

Indiana Patient Safety Center
Director: Betsy Lee, RN, MSPH
1 American Square, Suite 1900
Indianapolis, IN 46282
317/423-7795
blee@ihaconnect.org
www.indianapatientssafety.org

Regional Organizations

Evansville Community Patient Safety Coalition (Southern Indiana)
Contact: Vicki Belangee
Vicki_Belangee@deaconess.com

Indianapolis Coalition for Patient Safety
Director: Carol Birk, RPh, MS
cebirk@purdue.edu
www.indypatientssafety.org

Michiana Patient Safety Coalition (South Bend)
(Contact information not available)

Northeast Indiana Coalition for Patient Safety
Contact: Jeffrey Brookes, MD
Jeffrey.brookes@parkview.com

Patient Safety Coalition of Northwest Indiana (PSCNWI)
Contacts:
Peggy Gerard, PhD, RN, Dean Purdue University Calumet, School of Nursing
David Milen, PhD, Manager of Safety and Security, St. Margaret-Mercy
David.Milen@ssfhs.org

ORGANIZATION AND PROVIDER PATIENT SAFETY ACTIVITIES IN 2008

Numerous health care facilities and organizations conducted patient safety activities during 2008 and 2009. The following are patient safety activities and initiatives provided to the Indiana State Department of Health that were conducted subsequent to the Report for 2007 and through the date of publication of this report.

STATE AND FEDERAL QUALITY CARE INITIATIVES

CMS Hospital Quality Indicators

The Centers for Medicare and Medicaid Services (CMS) Hospital Quality Alliance (HQA) is a public-private collaboration that collects and reports hospital quality performance information. This effort is intended to make critical information about hospital performance accessible to the public and to inform and invigorate efforts to improve quality. Participating hospitals are voluntarily reporting the data. The goals are to promote the best medical practices associated with the targeted clinical disorders, prevent or reduce further instances of these selected clinical disorders, and prevent related complications. The Indiana State Department of Health added these quality measures to its hospital consumer report. The hospital consumer reports may be found at <http://www.in.gov/isdh/reports/Qamis/acc/hosrpt/index.htm>.

CMS GPRA Goals

The Government Performance and Results Act of 1993 (GPRA) emphasized the identification of meaningful outcome-oriented performance goals that address the fundamental purpose of federal programs. In 2005, the Centers for Medicare and Medicaid Services established an 18-month program to focus on pressure ulcers and restraints in nursing homes. The initiative was led by state quality improvement organizations. Indiana's efforts were led by Health Care Excel. The initial focus period was completed in 2007.

The two performance goals in this initiative were for pressure ulcers and restraints. Prior to 2005, Indiana's pressure ulcer rate was as high as 9.7%. In 2005 the rate was 8.6% as compared with a national rate of 8.5% and the six-state regional rate of 7.8%. At the conclusion of the third quarter in 2007, Indiana's rate decreased to 8.1% as compared to the national rate of 8.1% and the CMS Region V rate of 7.5%. Indiana's rate increased to 8.5% by the first quarter of 2008. The Indiana Pressure Ulcer Initiative appears to have contributed to a decline in the pressure ulcer rate in late 2008. From the December 2008 to March 2009 Indiana's rate decreased from 8.3% to 8.0% dropping Indiana to third in the Region. Indiana was the only state in the Region whose pressure ulcer rate declined.

For restraints, Indiana's baseline restraint rate in 2005 was 5.8% as compared with a national rate of 6.4% and regional rate of 4.8%. At the conclusion of the third quarter in 2007, Indiana had a restraint rate in nursing homes of 4.4% as compared with the national average of 5.0% and the regional rate of 4.1%. Since 2007, Indiana's rate has dropped significantly. In March 2008 the ISDH held a Long Term Care Leadership Conference on the topic. As of the first quarter in 2009, Indiana's restraint rate had fallen to 2.8%, well below the national average of 3.6%.

NATIONAL PATIENT SAFETY INITIATIVES

Institute for Healthcare Improvement - Protecting 5 Million Lives from Harm Campaign:

Building on the success of the Campaign to Save 100,000 Lives, the Institute for Healthcare Improvement launched the Campaign to Protect 5 Million Lives from Harm. This next phase of national campaign activity will reinforce the six interventions from the 100,000 Lives Campaign and add six new recommended interventions to prevent harm to patients to include:¹⁷

- Preventing harm from high alert medications (including anticoagulants such as heparin and warfarin, narcotics, sedatives and insulin)
- Preventing pressure ulcers by reliably using science-based guidelines for their prevention
- Reducing surgical complications by reliably implementing all of the changes recommended by the Surgical Care Improvement Project (www.medqic.org/scip)
- Reducing Methicillin-Resistant *Staphylococcus Aureus* (MRSA) infections by reliably implementing scientifically proven infection control practices
- Delivering reliable, evidence-based care for congestive heart failure to avoid readmissions
- Getting boards of directors involved in quality and patient safety efforts.

INDIANA PATIENT SAFETY ORGANIZATIONS

Indiana Patient Safety Center

The Indiana Hospital Association launched the Indiana Patient Safety Center in July 2006 to provide a resource for patient safety policy, education, and collaboration. During the past three years, the Indiana Patient Safety Center has established a reputation for leadership in patient safety throughout the state. As evidenced by its support of regional patient safety coalitions, a consistently robust educational calendar, and the promotion of a measurement system for evaluating cultures of safety in hospitals, the Indiana Patient Safety Center has raised awareness related to patient safety and provided front-line care givers and managers access to evidence-based principles of improving quality and safety.

The Indiana Patient Safety Center's strategic vision and plan set the course of action for the next ten years as it strives to make Indiana the safest state in the nation for patients to receive health care. This strategic plan incorporates six guiding principles that drive the work:

- Visible and consistent leadership set the tone and agenda for the cultural changes necessary for patient safety.
- Working together accelerates the pace of improvement.
- All patient safety improvements are local, but centralized support is imperative for leverage and economies of scale.
- Patient safety is personal. Breakthrough performance is achieved by engaging patients and families and empowering the front line caregivers to redesign their systems and work processes.
- Measurement and analysis are essential to promote accountability and drive changes that improve the safety of health care systems.
- Broad scale improvement depends on the steady spread of good ideas, consistent and widespread communication, and reliable application of evidence-based practices.

¹⁷ Protecting 5,000,000 Lives from Harm Campaign: www.ihl.org/IHI/Programs/Campaign

Vision: By 2015 the Indiana Patient Safety Center will lead Indiana hospitals and other care providers and systems to create the safest health care in the United States.

Mission: To engage and inspire health care providers to create safe cultures and reliable systems of care to prevent harm to patients in Indiana.

Values: Interdisciplinary leadership, collaboration, inclusiveness, innovation, transparency, integrity, consistency of message, evidence-based science, continuous improvement, and proactive transformational change.

The Indiana Patient Safety Center strives to elevate and expand its efforts as the leading resource for assisting Indiana hospitals, physicians, nurses, pharmacists, and other provider organizations in preventing harm to patients through improving the cultures of their organizations and spreading evidence-based practices and designs. In order to accelerate patient safety efforts throughout the state, the Indiana Patient Safety Center activities in the past year align with four specific goals central to improving patient safety in Indiana. These include:

1. Collaborative Learning and Education: Promote accelerated safety improvement through collaboration and coalition-building.

The educational strategy of the Center is to focus education and learning for safety at three levels within health care organizations: senior leaders and trustees; mid-level managers and safety professionals; and the front-line caregivers (including doctors and nurses). The strategy also includes a blend of training in safety tools and methods with collaborative learning opportunities to develop cultures of safety and to focus on high-risk clinical conditions.

Between July 2008 and July 2009, the Indiana Patient Safety Center offered or participated in the following educational programs:

- Tools training courses based upon the National Patient Safety Improvement Corps to enhance patient safety core competencies and create more reliable systems of care, including:
 - Root cause analysis
 - Healthcare failure modes and effects analysis
 - Error proofing
 - TeamSTEPPS, a program designed by the Agency for Healthcare Research and Quality and the Department of Defense
 - Advanced patient safety tools training in July 2009, including socio-technical probabilistic risk assessment and Just Culture
- Clinical safety improvement initiatives, including the following programs:
 - Surgical Safety Webinar featuring the World Health Organization (WHO) Surgical Safety Checklist and the adoption of a common protocol in all Indianapolis hospitals;
 - Eliminating Pressure Ulcers program in August 2008;
 - Eliminating Harm from Falls in November 2008;
 - Coordination of participation by over 40 hospitals in the Indiana Pressure Ulcer Initiative, spearheaded by the Indiana Department of Health and the University of Indianapolis

- One-day program at the 2008 Indiana Hospital Association Annual Meeting featuring best practices in patient safety, clinical quality improvement, and service excellence.
 - A graduate level inter-professional patient safety course was offered for the third consecutive year in the spring of 2009 for masters' level students in nursing, health administration, and public health at IUPUI.
2. **Communication and Culture Change:** Achieve safe cultures and heightened system “mindfulness” among leaders, patients, and front-line caregivers.

Communications plays a key role in patient safety improvement. The strategic communications goals of the Indiana Patient Safety Center are to accelerate the dissemination of existing evidence-based safety knowledge, to create a new safety culture in Indiana, and to provide Indiana with patient safety leadership.

To accomplish this, the Center has established regular communications flows with numerous stakeholder groups that have an interest in patient safety. Information is communicated through web sites, direct email, newsletters, educational meetings, media relations, stakeholder group meetings, statewide and national learning collaboratives, and regional safety coalitions.

While the Indiana Patient Safety Center continually shares global safety knowledge and developments, it also showcases the innovative safety improvement programs in Indiana. Each year, the Center offers a full day of patient safety programming during the Indiana Hospital Association Annual Meeting. Additionally, successful local safety programs are introduced at meetings and resources are posted on the Indiana Hospital Association and Indiana Patient Safety Center Web sites.

The Indiana Patient Safety Center initiated a statewide Just Culture Initiative in September 2008 that promotes a common algorithm for improving systems and addressing behaviors related to safe outcomes. The Just Culture algorithm, designed by David Marx of Outcomes Engineering, provides the framework for this statewide initiative. Specific components of the Indiana Just Culture Initiative have included:

- An introductory session by David Marx for leaders at the 2008 Indiana Hospital Association Annual meeting
- Just Culture Coaches Champions' Training in March 2009
- Development of a Just Culture Stakeholders group including representatives from professional organizations, licensing boards, and the Indiana State Department of Health
- Three Just Culture coaching webinars in Spring 2009
- Just Culture and Socio-Technical Probabilistic Risk Assessment in July 2009

Additionally, the Indiana Patient Safety Center provides access to relevant patient safety tools at <http://www.indianapatientssafety.org/links.aspx>. Posted toolkits include:

- Wristband color standardization toolkit
- Hand hygiene toolkit
- Anticoagulant toolkit
- Building a higher language services program toolkit
- Assessment tool: Reducing adverse drug events with anticoagulants
- Assessment tool: Multi-drug resistant organisms

3. Measurement and Analysis: Improve the performance of Indiana hospitals and health systems in processes and outcomes of care as reflected by relevant clinical quality and patient safety indicators and data regarding patterns of error, harm and common causes.

The Indiana Patient Safety Center offers all Indiana hospitals the opportunity to conduct employee patient safety culture surveys using a web-based application of the Agency for Healthcare Research and Quality (AHRQ) safety culture instrument. The AHRQ survey allows hospital leaders to gain insight into the perceptions of employees and physicians related to the culture of patient safety within each hospital. Participation in the statewide employee safety culture survey using a common database allows hospitals to compare their results to the state and national comparative data. Since 2007 seventy-five Indiana hospitals have utilized the survey with over 41,000 Indiana hospital employees and physicians assessing the cultures of their work units.

4. Alignment and Sustainability: Align existing and new partners to promote Indiana's strengths to fight harm.

In November 2008, the Indiana Hospital Association promoted statewide implementation of standardized patient alert wristbands to promote consistency among hospitals in Indiana and in other states. If hospitals choose to use colors to designate patient alerts, Indiana Hospital Association posted a web-based implementation toolkit that recommends the following color designations:

- White or clear for patient identification;
- Red for allergies;
- Yellow for fall risks;
- Purple for do not resuscitate;
- Green for latex allergies; and
- Pink for restricted extremity.

The expansion and encouragement of regional patient safety coalitions is a primary strategy of the Indiana Patient Safety Center and Indiana Hospital Association. Such regional coalitions exist in Indianapolis, Evansville, Northeast Indiana, Northwest Indiana and the Michiana region. In the past year, the Indiana Patient Safety Center has increased efforts to promote sharing between the regional coalitions.

The Indiana Patient Safety Center also serves as the Indiana "node" or contact for the Institute for Healthcare Improvement (IHI). In this role, the Indiana Patient Safety Center encouraged Indiana hospitals to participate in IHI "Campaign" activities. IHI and the IPSC encouraged hospitals to test the World Health Organization (WHO) Surgical Safety Checklist in at least one operating room between December 2008 and April 2009. Fifty-seven Indiana hospitals and surgery centers reported that they tested the checklist. As the Institute for Healthcare Improvement and other national organizations make available patient safety resources and recommendations, the Indiana Patient Safety Center serves as the dissemination and organizing entity for Indiana's efforts.

Indianapolis Coalition for Patient Safety

Since being founded in 2003, the Indianapolis Coalition for Patient Safety provides a forum for Indianapolis-area hospitals to share information about 'best practices' and work together to solve patient safety issues in Indianapolis and surrounding county hospitals. The Indianapolis Coalition for Patient Safety is comprised of chief executive, medical, nursing, quality/patient safety and pharmacy officers from Clarian Health, Community Health Network, Richard L. Roudebush VA Medical

Center, St. Francis Hospitals and Health Centers, St. Vincent Health, Wishard Health Services, and the Suburban Health Organization hospitals (Hancock Regional Hospital, Hendricks Regional Health, Henry County Hospital, Morgan Hospital and Medical Center, Riverview Hospital, Witham Health Services and Westview Medical Campus). In addition, there is participation by entities such as Eli Lilly, WellPoint, Indiana University, Purdue University, and the Regenstrief Institute, Inc. The Coalition undertakes projects that use patient-centered strategies to improve safety by addressing all the barriers observed by patients and providers to achieving a standardized approach to patient care.

The following are key milestones of the Indianapolis Coalition for Patient Safety in focusing on solutions to patient safety issues during the past year:

- High-Risk Drugs: Anticoagulants (blood thinners), insulin, narcotics/opiates, etc. are commonly used in hospitals, but are considered by experts to be “high risk drugs”.
 - IV “Smart” Pump High Risk Drug Alerts: Working collaboratively with faculty from the Purdue University Rosen Center for Advanced Computing a method has been developed to query and report comparative data on infusion pump alerts for high risk drugs. The goal is to conduct a common cause analysis by trending root causes for smart pump alerts and overrides followed by interventions designed to reduce risk.
 - The Medication List: The rate of prescription medication use in the United States continues to grow daily with over 60 percent of adults aged 65 or older taking at least five different medications per week and 15 percent taking at least 10. This same population is at a significantly higher risk for adverse drug events (ADEs) with individuals aged 65 and older being 2.4 times as likely to sustain an ADE and 7 times as likely to be hospitalized versus younger patients. A key solution to improving medication safety is to engage patients by asking them to share a complete and accurate list of their medications with their provider(s). An awareness campaign targeted to Coalition hospitals’ staff and families and designed to stress the importance of maintaining and carrying a current medication list is planned for Fall 2009.
 - Standardizing concentrations and dosing units for high risk IV infusion medications: IV infusion drug concentrations and dosing units for 25 high risk medications were standardized across Coalition hospitals to reduce the potential for error as physicians, staff and patients move between hospitals. Tools and resources to assist hospitals with implementation are posted on the Coalition website for public access.
- Surgical Safety: Coalition hospitals have implemented a standard set of best practices for surgery and procedure safety to include site marking and time outs consistent with the WHO checklist and Joint Commission standards. This Universal Protocol provides a standardized set of practices for continuity as physicians, staff and patients move between hospitals. Tools and resources to assist hospitals with implementation are posted on the Coalition website for public access.
- Peer Reviewed Common Cause Analysis: Building on the work of the Indiana Medical Error Reporting System, Indianapolis Coalition for Patient Safety, as a peer review organization, has shared information from adverse events to facilitate learning to prevent the same event from occurring in other member hospitals. Areas of focus to date include pressure ulcers and retention of foreign objects.

- Culture of Safety: Coalition hospitals are working to standardize and consistently apply a culture of safety algorithm to address human error through mentorship, at risk behavior through coaching, and reckless behavior through disciplinary action.
- Hospital Acquired Infections: The highest rate of mortality in Indiana is associated with Septicemia and its underlying causes such as MRSA, UTIs and CRBSI (based on APR-DRG 2007 adjusted risk). Our goal is to implement evidence-based, standardized clinical bundles for screening, early intervention, and treatment to reduce mortality within all Coalition hospitals.
 - “Targeting Severe Sepsis”: implementation of an evidenced based and standardized tool for screening for sepsis, an early resuscitation bundle, and a physician progress note is underway within Coalition hospitals.
 - Urinary Tract Infections: one common set of standards for insertion and maintenance of indwelling urinary catheters is in development.
 - Central Line Blood Stream Infections: one common set of standards for insertion and maintenance of central venous catheters is in development.
 - MRSA (Methicillin Resistant Staphylococcus Aureus): four Coalition hospitals are participants in a national study aimed at reducing MRSA infection rates in Indianapolis hospitals through improved preventive practice adherence.
- Wristband color standardization: Coalition hospitals have adopted the American Hospital Association recommendations for standardized wristband alerts colors to avoid potential for confusion as physicians, staff and patients move between hospitals.
- Patient Safety “Hero” Awards: annually the Coalition recognizes an individual or a group within each member health system that has championed a specific patient safety project. The awards are presented by the CEO of each organization during a Coalition awards luncheon. The 2008 award winner topics by health system are:
 - Clarian Health – IV Assessments Culture Survey in Pediatrics
 - Community Health Network – Private Rooms in Neonatal Intensive Care Unit
 - Richard L. Roudebush VA Medical Center – Cardiac Surgery Glucose Control
 - St. Francis Hospital and Health Centers – Medication Event and Decision Support
 - St. Vincent Health – Implementation of Hourly Rounding
 - Suburban Health Organization (SHO) – Dr. Lynn Bowers’ for his role as a dedicated leader in the area of patient safety
 - Wishard Health Services – Diversion Avoidance

Through the shared vision and challenge of making Indianapolis the safest for health care, the Coalition hospitals work together to achieve accelerated improvements resulting in safer care. In addition to standardization and implementation of best known practices and recognizing excellence in patient safety, other activities include professional, public and media education, translating research into practice, sharing lessons learned, benchmarking performance measures, and sharing expert resources. Based on our past successes and leveraging our current ideas, efforts, and staff resources we will continue our collaborative efforts going forward to include a focus on hospital readmissions and standardizing medical event triggers for high risk medications.

For information about the Indianapolis Coalition for Patient Safety contact: Glenn Bingle, M.D., Chairman, or Carol Birk, Executive Director, Indianapolis Coalition for Patient Safety; gbingle@ecommunity.com or cbirk@indypatientsafety.org or visit www.indypatientsafety.org.

Patient Safety Coalition of Northwest Indiana (PSCNWI)

On Tuesday, May 5, 2009, the members of the Northwestern District of the Indiana Hospital Association voted to create a Patient Safety Coalition of Northwest Indiana and asked Dr. Peggy Gerard, Dean of the Purdue University Calumet School of Nursing to facilitate the formation and organization of the Coalition. Following a presentation on Wristband Standardization by Purdue School of Nursing students, the members also voted to implement the Indiana Hospital Association Wristband Standardization Toolkit (available through the Indiana Patient Safety Center) in all organizations affiliated with the Northwestern District of the Indiana Hospital Association.

The first planning meeting for the Patient Safety Coalition of Northwest Indiana occurred on Friday, June 26, 2009 at Purdue University Calumet. Drs. Peggy Gerard and David Milen facilitated the meeting. Representatives from Community Hospital, St. Anthony Memorial Hospital, St. Anthony Medical Center, St. Catherine Hospital, St. Margaret-Mercy Medical Center and St. Mary's Hospital participated in the planning process.

Prior to the next meeting of the Coalition, scheduled for July 2009, officers will be selected through a nomination and voting process and a final list of members for the Executive Working Group will be obtained. Participants developed a list of possible coalition projects and a schedule of future meeting dates and times. During the next meeting, participants will identify priority projects for 2009, establish Project Specific Subgroups, and establish other needed committees. Nursing students from the Purdue University Calumet School of Nursing will be assigned to assist the project subgroups.

Contacts:

Peggy Gerard, PhD, RN, Dean Purdue University Calumet, School of Nursing
David Milen, PhD, Manager of Safety and Security, St. Margaret-Mercy

Deaconess Patient Safety Ambassadors

Deaconess has taken a number of steps to make patient care safer. Our Safety Ambassador program provides structure, coordination, and staff involvement to appropriately focus on implementing those activities which will have the greatest impact in improving patient safety. The Safety Ambassador Program was initiated in March 2007 and continues to be driven by our department/unit-based staff.

The Ambassadors receive education on Patient Safety and serve as champions to raise awareness and improve safety within their departments and throughout the Deaconess Health System.

Our Safety Ambassadors meet monthly to suggest, discuss and implement safety measures. Safety Ambassador activities and initiatives have included:

- Implementation of our Error Reduction toolbox. The following 6 Expected Behaviors and associated Error Prevention Tools allow Ambassadors and our staff to focus and apply the necessary structure tools for staff to improve safety. The Behaviors emphasized include:
 1. Paying attention to details

2. Communicating clearly
 3. Having a questioning attitude
 4. Performing effective hand-offs
 5. Working together with your team
 6. Following the rules
- Ambassadors facilitate “Safety Moments” at department and other meetings to allow all staff to take time to focus on errors that have occurred and actions that have been taken to prevent errors from happening.
 - Ambassadors share important information in their department meetings and in one-on-one discussions during their work hours. Our Ambassadors implement and support patient safety improvement efforts within their departments, providing examples and illustrating how a principle applies within their area of expertise. In the past year they have focused on:
 - Improving understanding and compliance with hand hygiene principles
 - Educating and encouraging participation during implementation of Electronic Incident Reporting system
 - Communicating Safety Moments and Good Catches
 - They have also implemented process changes aimed at improving effective Hand-Offs, and improving patient identification across departments

The Ambassadors show that they “own” safety in their department by coming up with memorable ways to make safety principles “stick.” Using simple but effective and creative ideas, their “grassroots” efforts have proven meaningful because they are individualized and specific to each Ambassador’s department. As a result, their hard work has been well-received and remembered by their coworkers.

Our Safety Ambassadors tell us:

- “I know our units are responding”
- “We are improving safety awareness”
- “It’s good to have co-workers (other Ambassadors) to go to”

Indiana Orthopaedic Hospital Safety Program

Concern Cards:

Concern Cards are placed in strategic areas for staff access. Privately locked collection boxes are available. Staff may sign the cards or remain anonymous. Each card will receive follow-up. This also lists references to our Corporate Compliance Hot Line and our Ask Admin section on our hospital Intranet.

Fall Prevention Program:

Fall Risk Alert Agreement
Yellow Blankets
Yellow Patient ID Bands
Slip-proof footies
Door alert signs
Safety Rounds
Bed Alarm Checks
Morse Fall Risk Assessment Tool
Use of the SLIPP
Use of the Patient Lift Device
Dry erase board used by physical therapy in each room for ambulation guidance

Orthostatic blood pressure checks with first time out of bed postoperatively

National Color-Coded Wristband Standardization (to come):

Allergies	Red	(In process)
Fall Risk	Yellow	(Already in place)
DNR	Purple	(In process)
Limb Alert	Pink	(Already in place)
Latex Allergy	Green	(In process)
Patient ID	White	(Already in place)

No-Blame Reporting:

An event report is completed for any event or near miss. This aids future prevention and allows for trending.

Surgical Safety Checklist:

World Health Organization (WHO) has created a tool used in the operating room to facilitate completing the "Time Out" procedure.

Quarterly Environmental and Infection Control Walk-Throughs:

Safety officers (one per unit) share the responsibility of visiting designated areas for inspection following a given form. Any deficiencies are reported to the manager who follows up.

Weekly Safety Checklist:

There is a suggested list for each area. Safety officers are encouraged to take a few minutes each week and report back to the manager.

Phone Security Stickers:

These are neon -colored & have been placed on each phone.

Spill Kits:

Small spill kits for biohazard waste have been distributed to needed areas.

Physical Therapy Signs:

A magnetic sign is now available to place outside the stairwell to warn others that therapy is in progress. Also, on the portable step a bright orange flag and tape has been placed to help prevent trips/falls.

Helpful Tips:

Emails are sent out regarding lifting, slips, trips, falls, ladder safety, car and driving safety. Recent email education was also sent for the Teach Back Method, Consents and Patients on Anticoagulants.

On-going Drills:

Mandated and voluntary drills are performed throughout the year.

Annual Education/Safety Fair:

Employees attend and complete test/competencies as required.

Annual Employee/Physician Survey

Unit Emergency Preparedness Book for Each Unit:
Available to all units.

Rapid Response Team:
Various registered nurses are trained to respond to emergencies as needed.

Preanesthesia Anesthesia Surgical Screening (PASS):
This group of nurses screens the patient for medical testing and health histories prior to hospital arrival. This helps avoid patient safety issues and day of surgery cancellations.

MSDS Books:
Available on all areas of need.

Use of a Computer Physician Order Entry System

Use of an Automated Medication Dispensing Device (Omniceil)

Use of a Red-Taped Section in Front of the Omnicell as a “No Interruption” Area for Nurse Medication Removal

Use of a Colored Flag System in the Preoperative Admission Area (Lists Colors and Definitions)

Root Cause Analysis (RCA):
Performed as needed for designated events.

Feedback Form:
This can be used by staff to report any patient/family/employee issue.

National Reporting Agencies:
CoPS – Culture of Patient Safety Survey
Leapfrog
SCIP/CMS/Health Care Excel
Physicians Hospitals of America (PHA)
IHI maps/5 Million Lives Campaign
HCAHPS
Press Ganey
HFAP

Parkview Hospital
Fort Wayne, Indiana

Bar-Code Scanning: History/Background

Hospitals have been under significantly increased scrutiny nationwide since 1999 when the Institute of Medicine (IOM) issued a report entitled “To Err is Human: Building a Safer Health System”. The IOM report estimated in 1993 alone, 7,000 deaths were attributable to medication errors; and these errors account for 1 out of every 131 outpatient deaths, and 1 out of every 854 inpatient deaths.

In addition, in March 2001, the Agency for HealthCare Research and Quality (AHRQ) issued a report entitled “Reducing and Preventing Adverse Drug Events to Decrease Hospital Costs”. The report

stated more than 770,000 people are injured or die each year in hospitals from adverse drug events, and studies suggested that 28 to 95 percent of adverse drug events could be prevented by reducing medication errors through the use of computerized systems.

Although most medication errors do not result in harm to patients, medication errors can and have resulted in serious injury or death. They also represent a significant economic cost to the United States. The Food and Drug Administration (FDA) reports an estimate of the direct cost of preventable drug related mortality and morbidity to be \$76.6 billion annually, with drug-related hospital admissions accounting for much of the cost. Indirect costs, such as those relating to lost productivity, might be two to three times greater than the direct costs, making the total cost of all preventable, drug-related mortality and morbidity range from \$138 to \$182 billion.

It is within this environment that Parkview in 2000 committed to implement an electronic medical record, including an electronic medication administration record and bar code medication scanning to enhance the safety of medication administration. Bar coding is a mature technology whose benefits have been demonstrated in virtually every other American industry. Bar coding of medications for use in bedside bar coding scanning has been endorsed by the American Hospital Association, the American Society of Health-System Pharmacists, the American Pharmaceutical Association, the American Medical Association, and many other organizations. In 2007 the FDA estimated only 10% of hospitals nationwide (500 hospitals) had implemented barcode scanning, with another 10% working on or planning implementation. The 2008 American Society of Health-System Pharmacists survey of pharmacy practice in hospital settings found that 25.1% had adopted Bar-code-assisted medication administration, with another 18% intending to have it in place within twelve months.

Bedside scanning of unit doses of medications, and patient ID bands was implemented in the inpatient areas at Parkview in May of 2004. A nurse logs into the bedside computer with a personal ID, scans the medication package, then the patient ID band. Any mismatch between the patient, the drug packaging, and the patient's medication record triggers a warning, prompting the nurse to investigate the discrepancy before administering the medication. The system also checks for alerts or reminders for the nurse, then electronically documents administration of the medication.

While implementation of barcode medication scanning was successful, it was not without difficulties. We encountered the same issues other hospitals using barcode technology were experiencing nationwide:

- The FDA has only recently approved a rule requiring the pharmaceutical industry to place and standardize barcodes on medications manufactured after April of 2006. Initially only about 5% of medications came into Parkview's pharmacy with a usable barcode. This required our pharmacy to repackage and place individual barcodes on thousands of products. Due to efforts by pharmaceutical manufacturers, as of the middle of 2009, this number has increased to 20%. Parkview's pharmacy continues to be committed to ensuring a barcode is on every product. Even when an injectable product has a barcode, the pharmacy supplements the item with an additional barcode that is able to be removed and applied to the syringe into which the medication is drawn. As well, pharmacy overwraps many items to ensure that a barcode is not discarded when an outer box is discarded.
- Consistent performance from a wireless network, computers that can easily be taken to the bedside, and scanners that recognize unique medication barcodes were required for nurses to easily incorporate barcode scanning into their work.
- The right type of patient identification wristband in terms of size and durable material was needed. Barcodes could be difficult to scan depending on the curvature of the bar code on the wrist.

- Nurses needed ongoing education and training (how to use the scanner, different types of barcodes)
- Pharmacy staff needed ongoing education and training (how to operate the bar coding and repackaging technology and verify it's effectiveness)

Despite these challenges, we were initially able to successfully scan 79 percent of medications at the bedside. While this represents a significant improvement in medication safety, we wanted to improve even more as patient safety is a priority for our organization. According to Mike Packnett, CEO of Parkview Health, "Our health care system serves over 500,000 patients each year and we relentlessly strive to have the safest and best care for every patient, every day."

As a result of this commitment to safety, we decided to increase scanning compliance of all medications to 95% by December 31, 2006. This initiative was strongly supported by our Board of Directors, Medical staff, pharmacists, and nursing staff. The bedside practitioners and pharmacy staff were very important throughout this process. It was through their dedication and commitment to providing safe patient care that ultimately made this project successful.

Plan:

A formal team was initiated in September of 2006, with participation from leaders in pharmacy, nursing, information systems, respiratory therapy, and project management. Direct support and leadership was provided at the executive level from the Chief Operating Officer, Chief Medical Officer, and Chief Nursing Officer. The primary goal was to increase the quality and safety of the care provided to the patient by preventing medication administration errors.

The team met weekly to discuss progress, share information, and collaborate on individual initiatives. We knew with a focused effort we could quickly make improvements. Therefore we set a timeframe of 15 weeks to achieve our primary metric, which was to successfully barcode scan at least 95% of medications administered.

Execution:

The first tasks prioritized by the team were to quickly put in place routine reports for bar code scanning rates by facility, nursing station, and individual user, and a method for the nurses to report when barcode scanning was not utilized. Collecting and analyzing data from these reports allowed us to drill down and focus on the key issues that were barriers to barcode scanning. These issues were tracked on a spreadsheet, reviewed at each meeting, and key initiatives which would result in the most improvement were assigned to departmental process owners for implementation.

Key project steps completed were:

Pharmacy initiatives:

- Intravenous medication label conversion from laser printer generated to direct thermal printer generated
- Single use medication label conversion from thermal transfer to direct thermal
- Over 100 medications were identified as not being consistently dispensed from pharmacy with a barcode. All of those medications are now provided with a barcode
- Verification of manufacturer provided medication barcodes prior to entering pharmacy distribution process eliminating the potential for invalid barcodes to enter pharmacy

inventory and hospital circulation. This requires daily review and update of the computer system database.

IS initiatives

- Reprogrammed 450 scanners to support Reduced Space Symbology (RSS) barcodes on smaller packages

Nursing/RT initiatives:

- Entirely new process developed and implemented to facilitate barcode scanning for respiratory care practitioners
- Process change and education on administration of medications to isolation patients in medical/surgical areas
- Distributed individual user (by nurse or therapist) reports so that individual nurses and therapists could track their personal scanning success rates.
- Distributed individual medication reports to the pharmacy
- Weekly education regarding barcode scanning tips, problem solving activities, and medication specific barcodes completed for nursing

Results:

The overall goal of the project was to increase safety of the medication administration process:

1. We developed and implemented a policy/procedure for barcode medication administration that is used by all practitioners.
2. We collected a comprehensive list of barriers and issues that prevented barcode scanning. Through Six Sigma DMAIC methodology we were able to achieve significant improvement in key process steps that are essential for successful barcode scanning.
 - Reliability of scanning IV labels increased from approximately 50% to 100%
 - Reliability of scanning single use medication labels increased from approximately 75% to 100%
 - Added barcodes to 100 additional products from the pharmacy
 - Increase success of scanning RSS barcodes from 71% to 94%
 - Increased scanning of medication for patients in isolation from 0% to nearly 100%
 - The percent of individual users scanning above 96% increased from 32%.
3. We achieved a 94.2% scanning success rate overall by December 31, 2006. This was very close to our goal of 95%. However, by January 18, 2007 we achieved the 95% rate maintained it consistently throughout 2007.
4. A process for nurses and therapists to report barcode scanning exceptions was implemented and maintained.

Summary:

Medication safety is an important commitment at Parkview Hospital and implementing bar code medication scanning was the right thing to do despite our operational challenges. This initiative was an excellent example of multiple disciplines working together to improve a complex patient care process. The pharmacy staff had to address significant equipment and processing issues to ensure medications were sent to the nursing units with usable barcodes. Nurses and respiratory therapists had to change how they worked with patients to utilize bar code scanning. Our IS department diligently checked and evaluated scanners, wireless network, and computers used by the patient care providers. They also developed automated reports which pulled information from our electronic medical record database which allowed us to monitor our key measures weekly. Our project management department was instrumental in helping us to document and track our progress. Ultimately, moving the number of medications successfully scanned from 79% to 95% results in

more medications being double checked every day before they are given to a patient. We note that the number of medication errors reported went up by over 80% which included the “near-misses” since the bar-scanning began. This increase has provided us with data we then trended to initiate responses to medication errors or potential errors and thus provide a safe environment for our patients.

While our initial efforts focused on Parkview Hospital, our electronic medical record and pharmacy resources are shared throughout the Parkview Health system. Therefore, improvements realized at Parkview Hospital were also utilized throughout the community hospitals. Eventually the bar code scanning rates were tracked and reported for all 6 of the hospitals in the system.

A second phase of this project started later in 2007. The focus was to ensure we not only maintained, but continued to improve our bar code scanning processes. We implemented an electronic reporting process for the bedside clinicians to report when bar code scanning does not work. These reports are sent daily to operational leads in nursing, pharmacy, and registration. In 2008 we implemented a user specific report which goes weekly to every nursing and respiratory therapy manager. Managers can quickly detect if a clinician is having problems with BCMS. In 2009, we awarded our first BCMS Academy Awards, recognizing high volume, and high accuracy scanners. Currently at the system level we average a 96% scanning rate.

St. Mary’s Medical Center, Hobart IN

One of the objectives of the Indiana Medical Error Reporting System is to highlight serious adverse events so that procedures can be developed to prevent the occurrence of those events. The ISDH would like to share stories of how new procedures have been implemented to help prevent serious adverse events. The following is an example of a health care provider that has addressed a system problem to promote patient safety.

In 2007 St. Mary’s Medical Center in Hobart, Indiana reported two serious adverse events to the Indiana Medical Errors Reporting System. Both events were for retention of a foreign object in a patient after surgery. As a result of these events St. Mary’s seriously studied approaches to prevention of such an event. They realized that their current approach to preventing retention of a foreign object in a patient after surgery, a standardized counting protocol, was not sufficient. The counting process is labor intensive and prone to human error. When the count was not correct, x-rays to locate the unaccounted for item may not reveal an item such as a sponge.

St. Mary’s determined that any new approach must be easy to use, not delay the surgical procedure, be economical, and be accurate. The hospital identified the RF/Wand System which locates sponges via radio frequency detection. Sponges, which are not detectable by x-ray, have an RF tag affixed to them. With this technology in place the hospital continues their manual counting practice and has added identified procedures to use the RF/Detection Wand System prior to closure. The patient does not leave surgery until the sponge is found.

Contact:

Sherry Brewer, Director of Risk Management for St. Mary’s Medical Center.

White County Memorial Hospital

During 2008 White County Memorial Hospital was able to design and move into a new facility in Monticello. One of the objectives for this move was increased patient safety as well as improved services and environment. A focus for the inpatient units was the purchase of beds with built in fall prevention monitors and alarms. As an additional safety measure the alarms sound through an improved patient call system to alert staff of the location where a patient is attempting to get up without assistance. The call light system is computerized to allow monitoring of response times to all call lights. The alarms are set based upon routine nursing assessment with assigned zones that reflect the concerns identified by the staff. These beds also have a secondary monitoring system that informs staff both visually or audibly with an alert when a preset condition exists, brakes on bed unlocked, side rails down when they shouldn't be, the bed height is inappropriate.

This initiative is just one component of a series of improvements that have been made in the fall prevention program. The Fall Risk Assessment has been revised to reflect more stringent guidelines for identifying patient's at risk to fall. Computerized documentation has been improved to allow staff the ability to more easily document their safety rounds. Staffing levels have been adjusted based upon the volume of patients identified as At Risk To Fall. Staff has received intense training by the manufacturer in the operation of the equipment; each patient care provider has received an additional badge with reminders about the appropriate use of the equipment. Plans for the future include the addition of The Color of Safety wristbands that will identify these patients anywhere in the hospital they might be transported. With the continuation of patient safety rounds, the fall prevention monitors and increased staff awareness it is the goal of the hospital to maintain a patient fall level well below the national average.

CHANGES FOR 2009 REPORTING

In May 2007 the National Quality Forum published *Serious Reportable Events in Healthcare 2006 Update*. The update identified a 28th adverse event as well as further refinement of the initial list of events. The 28th adverse event is “artificial insemination with the wrong donor sperm or wrong egg”.

In March 2008 the Indiana State Department of Health promulgated a proposed rule that would update the rules for the Indiana medical error reporting system. Final rules were adopted and became effective for reporting purposes on January 1, 2009. For events occurring in 2009, health care facilities and clinics will be using the revised reporting rules. A copy of the revised reporting rule for 2009 events is attached as Appendix J.

REFERENCES

2006 Update on Consumers' Views of Patient Safety and Quality Information, Kaiser Family Foundation / Agency for Healthcare Research and Quality (September 2006).

Accountability: Patient Safety and Policy Reform (Virginia A. Sharpe, ed., Georgetown University Press, 2004).

Adverse Health Events in Minnesota, Second Annual Public Report, at p. 73 (Minnesota Department of Health, February 2006).

Agency for Healthcare Research and Quality, *Medical Errors: The Scope of the Problem* (2000), Retrieved February 17, 2007 from <http://www.ahrq.gov/qual/errback.htm>.

CMS Needs Additional Authority to Adequately Oversee Patient Safety in Hospitals, United States Government Accountability Office GAO-04-850 (July 2004).

D.H. Mills, *Medical Injury Information: A Preparation for Analysis and Implementation of Prevention Programs*, 236(4) *Journal of the American Medical Association*, pp. 379-381 (1976).

Institute of Medicine, *Crossing the Quality Chasm: A New Health System for the 21st Century* (National Academy Press, 2001).

Institute of Medicine, *To Err Is Human: Building A Safer Health System* (Linda T. Kohn, Janet M. Corrigan, and Molla S. Donaldson, eds., National Academy Press, 1999).

Jill Rosenthal and Maureen Booth, *Maximizing the Use of State Adverse Event Data to Improve Patient Safety*, National Academy for State Health Policy (October 2005).

Jill Rosenthal and Maureen Booth, *State Patient Safety Centers: A new approach to promote patient safety*, National Academy for State Health Policy (October 2004).

Jill Rosenthal and Trish Riley, *Patient Safety and Medical Errors: A Road Map for State Action*, National Academy for State Health Policy (March 2001).

Jill Rosenthal, Trish Riley, and Maureen Booth, *State Reporting of Medical Errors and Adverse Events: Results of a 50-State Survey*, National Academy for State Health Policy (April 2000).

Joint Commission on the Accreditation of Health Care Organizations, *Sentinel events*, Comprehensive Accreditation Manual for Hospitals Update 4 (November 2004).

Lynda Flowers and Trish Riley, *State-based Mandatory Reporting of Medical Errors*, National Academy for State Health Policy (March 2001).

Lynda Flowers and Trish Riley, *How State are Responding to Medical Errors: An Analysis of Recent State Legislative Proposals*, National Academy for State Health Policy (September 2000).

Medical Errors: Practicing Physician and Public Views, Kaiser Family Foundation / Harvard School of Public Health (December 2002).

Mimi Marchev, *Medical Malpractice and Medical Error Disclosure: Balancing Facts and Fears*, National Academy for State Health Policy (December 2003).

National Patient Safety Foundation, http://www.npsf.org/html/about_npsf.html.

National Survey on Consumers' Experiences with Patient Safety and Quality Information, Kaiser Family Foundation / Agency for Healthcare Research and Quality / Harvard School of Public Health (November 2004).

Serious Reportable Events in Healthcare, National Quality Forum (2002).

ADDITIONAL INFORMATION ON MEDICAL ERRORS AND PATIENT SAFETY

There are numerous organizations that are a resource for information on patient safety. The following is a list of Web sites that provide information on patient safety. This list provides only a fraction of the resources available. There are many more resources available for consumers, health care providers, and policy makers.

Agency for Healthcare Policy and Research (AHRQ): www.ahrq.gov/consumer

The mission of the federal Agency for Healthcare Policy and Research is to improve the quality, safety, efficiency, and effectiveness of healthcare for all Americans. Information from this agency's research helps people make more informed decisions and improve the quality of healthcare services.

Centers for Medicare and Medicaid Services: www.cms.hhs.gov/

The Centers for Medicare and Medicaid Services (CMS) administers the Medicare program and works in partnership with the states to administer the Medicaid program. CMS has developed a number of quality improvement initiatives that can be found at this site.

Consumers Advancing Patient Safety: www.patientsafety.org

Consumers Advancing Patient Safety is a consumer-led nonprofit organization, formed to be a collective voice for individuals, families and healers who wish to prevent harm in healthcare encounters through partnership and collaboration. In addition to the organization resources available on their Web site, this site also provides several links to other patient safety Web sites of interest to consumers.

Institute of Medicine of the National Academies: www.iom.edu

A nonprofit organization specifically created for science-based advice on matters of biomedical science, medicine, and health as well as an honorific membership organization, the Institute of Medicine was chartered in 1970 as a component of the National Academy of Sciences.

Institute for Safe Medication Practices: www.ismp.org/Pages/Consumer.html

Alerts for Patients page containing a listing of frequent medication errors and how to avoid them, general information and advice on medication safety for consumers.

Joint Commission on the Accreditation of Health Care Organizations (JCAHO):
www.jointcommission.org/PatientSafety/

The Commission evaluates and accredits more than 15,000 healthcare organizations and programs in the United States. Its mission is to continuously improve the safety and quality of care provided to the public. A number of patient safety tips for patients and consumers can be found at their website.

Leapfrog Group: www.leapfroggroup.org

The Leapfrog Group is an initiative driven by organizations that buy health care who are working to initiate breakthrough improvements in the safety, quality and affordability of healthcare for Americans. The Leapfrog Website provides quality and safety information about hospitals that consumers can search.

Minnesota Alliance for Patient Safety: www.mnpatientsafety.org

The Minnesota Alliance for Patient Safety was established in 2000 as a partnership between public and private health care organizations working together to improve patient safety. Information about Minnesota's patient safety coalition can be found at this site.

Minnesota Department of Health: www.health.state.mn.us/patientsafety/publications/index.html

This site provides information on Minnesota's Adverse Health Event Annual Reports.

National Academy for State Health Policy: www.nashp.org

The National Academy for State Health Policy is a non-profit, non-partisan organization dedicated to helping states achieve excellence in health policy and practice. The organization provides resources to compare patient safety initiatives and approaches across the states.

National Coordinating Council for Medication Error Reporting and Prevention: www.nccmerp.org

This organization is an independent body comprised of twenty-three national organizations. The mission of the National Coordinating Council for Medication Error Reporting and Prevention is to maximize the safe use of medications and to increase awareness of medication errors through open communication, increased reporting and promotion of medication error prevention strategies.

National Patient Safety Foundation: www.npsf.org

The Foundation's mission is to improve the safety of patients through efforts to: identify and create a core body of knowledge; identify pathways to apply the knowledge; develop and enhance the culture of receptivity to patient safety; raise public awareness and foster communications about patient safety; and improve the status of the Foundation and its ability to meet its goals.

National Quality Forum: www.qualityforum.org

The mission of the National Quality Forum is to improve the quality of American healthcare by setting national priorities and goals for performance improvement, endorsing national consensus standards for measuring and publicly reporting on performance, and promoting the attainment of national goals through education and outreach programs.

Pressure ulcer information

Mayo Clinic: www.mayoclinic.com/health/bedsores/DS00570

This site provides information from the Mayo Clinic, the world's first and largest integrated group medical practice.

Medline Plus: www.nlm.nih.gov/medlineplus/pressuresores.html

Medline Plus is a service of the U.S. National Library of Medicine and the National Institutes of Health

Protecting 5,000,000 Lives from Harm Campaign: www.ihl.org/IHI/Programs/Campaign

The Institute for Healthcare Improvement is a Cambridge, Massachusetts based not-for-profit organization. The Institute launched the Campaign to Protect 5 Million Lives from Harm, the next phase after their Campaign to Save 100,000 Lives.

Quality Interagency Coordination Task Force: www.quic.gov/report/

The Quality Interagency Coordination Task Force was established in 1998 in accordance with a Presidential directive. The purpose of the Task Force was to ensure that all federal agencies involved in purchasing, providing, studying, or regulating health care services were working in a coordinated manner toward the common goal of improving quality care.