Promote a Culture of Safety with Good Catch Reports
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Abstract

A hospital good catch program can be an effective means to improve patient safety. Good catches occur up to 100 times more frequently than Serious Events, but often go underreported. Recognizing and rewarding staff can encourage good catch submissions and provide more opportunities to improve patient safety. Queried data in the Pennsylvania Patient Safety Reporting System was aggregated to calculate a ratio of good catches to Serious Events. Statewide data has shown an increase in this ratio from 5.6:1 in 2005 to 10.3:1 in 2016. The Pennsylvania Patient Safety Authority created a Good Catch Comparison report for hospitals to compare their own ratio with peer facilities. A literature review and interviews conducted with risk managers and patient safety officers at five Pennsylvania hospitals allowed the authors to recognize key components to useful good catch reporting. Overall, the Authority concluded that good catch programs can help hospitals more effectively analyze reported data and implement risk reduction strategies. Additionally, using the Good Catch Comparison report available through the Authority's Patient Safety Liaisons can identify facility-specific event types or care areas that are reporting above or below aggregate peer rates, potentially highlighting successful practices or targets for improvement efforts.

Introduction

A good catch may break the cycle in the chain of events that could lead to patient harm or even death.¹ Studies suggest that good catches occur as much as 7 to 100 times more frequently than Serious Events and can reveal gaps in a facility’s organization.² When healthcare employees report good catches through an adverse-event reporting system, facilities can analyze these events to proactively implement risk reduction strategies to improve patient safety.³
For example, a patient care assistant in a Pennsylvania hospital was transferring a patient into a bed with locked wheels when the bed moved, despite the wheels being locked. Although the patient was not harmed, the patient care assistant raised the issue during one of her unit’s daily safety huddles, which led to examining all of the beds on the unit. Facility personnel discovered that the wheel locks on 60% of the beds on the unit needed repair, which led to hospital-wide wheel-lock inspection and repair. The patient care assistant was recognized by the Pennsylvania Patient Safety Authority in the 2017 "I Am Patient Safety" campaign.4

Healthcare facilities can implement structured good catch programs to promote reporting good catches to an adverse event reporting system or other reporting mechanism to initiate system improvements.5 Some programs launched in Pennsylvania provide staff recognition and offer rewards based on volume or quality of good catches.6-10

Authors sought to compare good catch data with Serious Events reported through the Pennsylvania Patient Safety Reporting System (PA-PSRS) to create a "good catch-to-Serious Event" ratio. Further, the authors created a Good Catch Comparison report for facilities, organized by date range and event type and subtype, for the facility, its peer group, and the state as a whole.

**Methods**

For the purpose of this article, a good catch (i.e., PA-PSRS harm score of A, B1, B2; also referred to as a near miss or close call) is defined as an event report about a circumstance that might have caused harm but was prevented from reaching the patient due to active recovery efforts by caregivers or by chance. The definition also includes unsafe conditions, which are circumstances that could cause an adverse event. Event reports based on retrospective recognition (e.g., harm score B1) were included because the reporting and examination of these events can add to our understanding of the mitigation of unsafe conditions.

Authors queried the PA-PSRS database for events submitted from hospitals to the Authority for the years 2005 through 2016. A "good catch-to-Serious Event" ratio was calculated by comparing the number of good catch reports (i.e., events submitted with harm scores A, B1, B2) to the number of Serious Event reports (i.e., harm scores E, F, G, H, I), creating a proportion that could be expressed as x:1, or simply x. This calculation was made in a variety of ways: by facility; by facility peer group; statewide; by month and year; and by event type and sub-types.

Additionally, ratios were calculated by peer group (facilities grouped by like size and primary service), using aggregate totals of good catches and Serious Events of the peer group. This allowed detailed comparisons of the data to detect trends or patterns.

Two authors (SW, CM) conducted semi-structured interviews with a convenience sample of six facility-designated patient safety, risk management, and quality leaders from four hospitals across Pennsylvania. The hospitals were identified by Patient Safety Liaisons (PSLs) as having a good catch program in place and varied in size from 36 to 464 beds. The interviews included the following topics:

- Program launch and promotion
- Nomination process
- Reward and recognition
- Resources needed
- Program benefits
In addition, an interview was conducted with a quality leader from a 250-bed hospital recognized by a PSL as having a successful program for using good-catch report data for process improvements. Authors conducted a review of the literature, as well as an Internet search using terms such as "good catch," to identify strategies to implement a good catch program.

* The Pennsylvania Patient Safety Authority Harm Score Taxonomy (/ADVISORIES/Documents/Tool%20PDFs/201503_taxonomy.pdf) is available.

**Results**

**Event Ratio**

The ratio of good catches to Serious Events increased from 5.62 in 2005 (n = 33,777/6,008) to 10.34 in 2016 (n = 54,472/5,269). (See Figure)

Figure. Good Catch Events versus Serious Events, with Good Catch Ratio, 2005-2016

*Note: As reported to the Pennsylvania Patient Safety Authority, January 1, 2005, through December 31, 2016.*

**Interpreting Good Catch Data**

http://patientsafety.pa.gov/ADVISORIES/Pages/201709_goodcatch.aspx
Statewide ratios for 2016 separated by hospital specialty and grouped by size range from a low of 0.51 to a high of 9.03 good catches per Serious Event, with a mean of 6.06 (see Table). The Authority can provide Pennsylvania hospitals with individualized ratios to help them compare with other Pennsylvania hospitals (statewide or by peer group) for any range of dates from 2005 through 2016, with a breakdown of event types for both their own data and the comparable information for the facility's peer group (see Using Your Good Catch Comparison Report).

Table. Good Catch Ratios by Peer Group for Hospitals in 2016

<table>
<thead>
<tr>
<th>Peer Group*</th>
<th>Number of Facilities (N = 237)</th>
<th>Good Catch Ratio†</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute care hospitals, 0 to 100 beds</td>
<td>47</td>
<td>9.03</td>
</tr>
<tr>
<td>Acute care hospitals, 101 to 200 beds</td>
<td>43</td>
<td>8.23</td>
</tr>
<tr>
<td>Acute care hospitals, 201 to 300 beds</td>
<td>29</td>
<td>7.85</td>
</tr>
<tr>
<td>Acute care hospitals, more than 300 beds</td>
<td>36</td>
<td>8.82</td>
</tr>
<tr>
<td>Critical access hospital</td>
<td>14</td>
<td>5.66</td>
</tr>
<tr>
<td>Long-term acute care hospitals</td>
<td>23</td>
<td>4.06</td>
</tr>
<tr>
<td>Psychiatric hospitals</td>
<td>20</td>
<td>0.51</td>
</tr>
<tr>
<td>Rehabilitation hospitals</td>
<td>19</td>
<td>4.32</td>
</tr>
<tr>
<td><strong>Overall Good Catch Ratio</strong></td>
<td></td>
<td><strong>10.34‡</strong></td>
</tr>
</tbody>
</table>

* Peer groups with fewer than 10 facilities are not displayed.

† Proportion of good catches per Serious Event.

‡ Compilation of all Pennsylvania hospitals. (Ratios of peer groups with fewer than 10 facilities are not listed.)

The report can identify facility-specific event types or care areas that are reporting above or below aggregate peer rates, potentially highlighting successful practices or targets for improvement efforts.

For example, a Pennsylvania hospital was found to have an overall ratio of good catches to Serious Events that is triple the peer rate. Facility personnel could assume on the surface that they have a successful reporting culture. However, drilling down further into the data using the Good Catch Comparison report, it became clear that 98% of this hospital's good catches were related to medication errors and were well below the peer rate for good catches related to laboratory testing errors and other event types.

The hospital could use this information and approach staff involved in the medication process to discuss reasons for the high reporting rate and use lessons learned to develop strategies to implement in other areas. Recognizing and sharing the success of medication event reporting could have multiple benefits: rewarding the staff involved and motivating staff in other areas to replicate their achievement.

**Pennsylvania Hospital-Based Programs**

**Program launch and promotion.** Programs of the interviewed facilities began with either a kick-off event or a campaign using posters and other types of publicity between January 2012 and October 2016. Kristin M. Grande, MBA, director of operations and risk management, UPMC Hamot, said she knew good catches were happening in
her hospital and wanted a way to encourage employees to report these events. She established a good catch program with a kickoff in November 2015 including a presentation by Sorrel King, a patient safety advocate whose daughter, Josie, died from a medical mishap.

Two of the hospitals used a baseball theme to publicize their good catch programs. The majority promote their programs during daily safety huddles, in newsletters, on bulletin boards, and other means of communication.

Nomination process. Hospitals accept nominations in a variety of ways, which include an assigned e-mail address, an internal electronic reporting system, by phone, or by paper form. Some of the facilities allow anonymous submissions, and half of the programs exclude all executive leaders from being nominated. Examples of good catches that prevented harm include incorrect medication orders, wrong labeling or patient identification on specimens, missed information, insufficient follow-up, and patient consent inconsistencies.

Reward and recognition. The hospitals recognize winners on a monthly basis, with some selecting additional good catches for quarterly and annual special recognition. Two of the hospitals also recognize the nominators, to help encourage submission of good catches. Hospital employees receive rewards for good catches usually based on the quality of the submission. Selection processes ranged from a random drawing of nominees to a rating scale used by a committee to identify the top good catches.

All the patient safety, risk management, and quality leaders interviewed recognize that rewarding good catches is essential to a successful program. A good catch program acknowledges the effort from staff to engage in patient safety, said Maryann Jordan, RN, BSN, director of quality management, Eagleville Hospital. "Staff appreciate being recognized for their interventions that improve processes and prevent patient harm. This is a win-win. It creates positive energy."

At UPMC Hamot, four employees are recognized quarterly with a "Josie King Hero Award," Grande said. The chief executive officer or the chief operating officer along with the chief nursing officer, chief medical officer, and the unit director accompany the risk manager and patient safety officer to the department when the employee is working, to present a plaque, she said.

"We gather everyone on the floor and have a celebration," Grande said. "We read their hero story to their peers." Grande wanted the good catch program to change the culture of patient safety by rewarding employees. "There are great things happening and we want to recognize those heroes with a positive story," she said. Since the UPMC Hamot's program began, good catch reporting has increased by about 30%, according to Grande.

Resources needed. The programs varied in the amount and number of monetary rewards. Every facility provided winners with some form of thank you note, and the majority included that in their employee records. Other prizes used included pins, gift cards, meal vouchers, and extra paid time off.

Similarly, the leaders agreed that the workload and staff resources needed to carry on the programs were worth the benefits. Facility personnel investments ranged from one staff member spending about one hour per week reviewing nominations to a committee of individuals meeting to score and rank the nominations in order to identify winners.

Program benefits. Good catch programs give hospitals a platform to think of events in a different way and empower frontline staff. "The frontline staff is our biggest asset," said Abigail Halloran, MA, director of risk management & performance improvement, Haven Behavioral Health. "They see everything and know everything. The more sophisticated and proactive they become, the safer our patients are going to be."

The program offers a way for hospitals to be open and honest about admitting mistakes, Halloran said. "You can't fix a problem if you don't know about it," she said.
**Key components.** Leadership support, staff feedback, a procedure for collecting good catch events, and an analysis process are key components to a successful program. A unit director or clinician giving feedback to an employee who has reported a good catch makes it more impactful,” according to Jacqueline Morgan, MSN, RN, CMSRN, quality nurse coordinator II, patient safety, UPMC St. Margaret.10

Knowing about good catches guides the hospital on where to concentrate its efforts, according to Grande. "We wanted to take the harm out of the equation and catch these events before they reach the patient,” she said.9

**Process improvement initiatives.** Aria Jefferson Health established a good catch program to enhance its culture of safety, according to Janice Taylor, RN, MSN, director, risk management.6 “Good catches occur at a much higher rate than events that reach the patient, but are significantly underreported,” Taylor said. "These good catches represent processes that are not reliable."6

Each of the hospital patient safety, risk management, and quality leaders interviewed reported an increase in good catch submissions after establishing a formal good catch program.5-10 Reporting these events is critical to strengthening Aria’s safety culture, Taylor said. "This enables investigation and follow up so events can be prevented from happening in the first place rather than reacting to mistakes that have been made,” she said.6

The program at UPMC St. Margaret has led to several improvements, including a change in the way a peritoneal dialysis solution is ordered, according to Morgan.10 The good catch was reported through the event reporting system and led to changes in how the solutions are ordered in the electronic health record, she said.10

**Discussion**

Analysis of PA-PSRS reveals an increase in the “good catch-to-Serious Event” ratio of Pennsylvania hospitals over a 12-year period. Good catch programs have helped Pennsylvania hospitals promote the reporting of good catches and support a nonpunitive safety culture with recognition and rewards.6-10 Analyzing and trending good-catch data may maximize its effectiveness and identify opportunities for system improvements.13

Studies have found that by using the larger number of events reported as good catches, analysis can be performed on common causes of system hazards or failures as a basis to drive improvements such as changing practices, upgrading equipment, or increasing educational activities, to decrease the possibility of the same event occurring to another patient.14,15 Through this vigilant monitoring, an event with serious patient harm may be averted.5

For example, in the good catch by the patient care assistant who reported a bed moved while transferring a patient despite the wheels being locked, a series of actions took place after the event was reported that led to hospital-wide improvements and decreased the possibility of the event reoccurring. After the patient care assistant noticed the problem and prevented harm, she did not just fix the problem at the moment and move on but also checked to see whether the problem was elsewhere in her unit, and the hospital subsequently took the information seriously and checked on the conditions throughout the facility.

**Six-phase framework.** Johns Hopkins Hospital used a six-phase framework to identify, report, analyze, mitigate, reward, and follow its good catches.13 The process examined 29 patient safety hazards identified by individuals or groups in the hospital, which led to sustained quality improvement initiatives.13

In one case, an anesthesiologist found a high-concentration heparin vial in a bin labeled for low concentration.13 This resulted in the removal of the vial, an investigation of why this occurred, and a process to prevent the stocking of high-concentration heparin throughout the institution. Further, the physician who identified the event received a reward, and more than a year's worth of monitoring verified that corrective measures were sustained.13
**Event investigation.** Mazur and coauthors found that a good catch program in the Department of Radiation Oncology at the University of North Carolina had a positive impact on the organization's quality and safety efforts, resulting in improvements in the patient safety culture and in patient satisfaction. After investigating 560 good catches, they discovered more than half of the good catches occurred in situations caused by performance issues such as not following standardized processes and poor communication.

The remaining events were caused by the lack of standardized processes and technological/environmental factors. Using a safety survey tool from the Agency for Healthcare Research and Quality (AHRQ), the department reviewed results from three different surveys before and after instituting their good catch program and found improvements in their safety culture. Mazur and co-authors in another study found that identifying behaviors of healthcare workers though direct observation led to filling in gaps of knowledge about what factors drive effective improvement efforts.

**Increased reporting through recognition.** The Children's Hospital of Penn State Health Milton S. Hershey Medical Center found its good catches increased by 240% after establishing a "Great Catch" program in the Pediatric Acute Care Unit. In the published study, employees found that reporting good catches resulted in immediate action from nursing leadership and led to increased reporting of good catches in other units within the hospital.

**Limitations**

The type and number of reports collected depend on the degree to which facility reporting is accurate and complete. Variations may be the result of reporting cultures and patterns and interpretation of how events are reported. No benchmark for the optimal number of reports or ratio of good catches to Serious Events has been established. Interviews may include unrecognized biases, and the sample may not represent the entire spectrum of facility types.

**Good Catch Program Design**

The following program design elements suggested in the literature, and by the Pennsylvania patient safety, risk management, and quality leaders noted above, may be useful to healthcare facilities seeking to establish a good catch program.

**Program Kickoff**

- Get support from top leadership. Present the program to the board and executive leadership prior to launch.
- Choose a theme and/or slogan to promote the program (e.g., baseball or fishing).
- Use positive language; collect "good/great catches" instead of "near-misses" or "close calls."
- Present and describe program to all staff in departmental meetings and through all communication methods available in the facility, such as newsletters, e-mail, and bulletin boards.
- Involve leadership in the kickoff and provide regular feedback on program actions.

**Nominations**

- Accept all nominations, but establish clear definitions of what constitutes a good catch for the group responsible for recognition.
- Make the submission process easy, streamlined, and available 24 hours per day.
• Provide as many submission methods as possible, including e-mail, phone/voicemail, electronic health record, and written nominations.6,9,18

• Acknowledge all nominations in some way.7,8

Reward and Recognize

• Recognize nominators, to increase the number of submissions.8

• Use departmental meetings to review nominations with staff and share improvement actions.3,6,9,11-13,18

• Recognize selected nominees with one or more of the following:
  ◦ Description in newsletter or on website8,9,11
  ◦ Thank you note or letter from administration6,9
  ◦ Certificate or plaque6,7,9,13
  ◦ Gift card or voucher7,8,11,12
  ◦ Additional paid-time off6
  ◦ Pin or other ornament6,9,11
  ◦ Photo of winner(s) posted in staff area6,7,9,12,13
  ◦ Presentation involving administration and direct supervisor9
  ◦ Letter in personnel file7

Analysis and Improvement Activities

• Analyze for patterns/trends by organizing submission into categories.3,6-9,11-13

• Provide feedback to staff.3,7,9,12,13

• Involve nominee and/or nominator in improvement efforts.3,7,9,12,13

• Use a process life cycle algorithm such as Plan, Do, Study/Check, Act or the Define, Measure, Analyze, Improve, and Control method to help review good catch events and implement corrective actions.9,12,20

• Evaluate program by surveying staff.6,9,12,18

• Report follow up in PA-PSRS under recommendations for tracking and trending.21

• Implement improvement actions based on what is learned from good catches.21

Conclusion
Analysis of PA-PSRS reveals a positive increase in the ratio of good catches to Serious Events for Pennsylvania hospitals over a 12-year period. The hospital patient safety, risk management, and quality leaders interviewed concur that good catch programs help Pennsylvania hospitals promote the reporting of good catches and support a nonpunitive safety culture with recognition and rewards.1-10 Implementing and promoting good catch reporting may help facilities analyze events and proactively implement risk reduction strategies to improve patient safety.12,13 Pennsylvania hospitals may consider using their facility ratio provided by their PSL in the Good Catch Comparison report to compare their reporting performance to hospitals of similar type and size and statewide. Analyzing facility-specific "good catch-to-Serious Event" ratios by event type may help hospitals keep track of their good catches and emphasize successful practices or targets for improvement efforts.

Notes


http://patientsafety.pa.gov/ADVISORIES/Pages/201709_goodcatch.aspx


15. Good catches result in system changes. MD Today. 2012 Fall.


17. Albright D, Blevins L, Bradley B. Increased error reporting through a great catch program. AONE Annual Meeting. Also available: http://www.aone.org/annual-meeting/docs/posters/p344.pdf.


Supplemental Material

Using Your Good Catch Comparison Report

The Pennsylvania Patient Safety Authority provides a hospital-specific Good Catch Comparison report that allows individual Pennsylvania hospitals to compare with hospitals of similar type and size. Children's hospitals can obtain their ratios separately from hospitals. The report contains the individual hospital's ratio of good catches to Serious Events and a breakdown of their own good catches and Serious Events by event type. Hospitals can view their own data side-by-side with statewide aggregate data to highlight potential areas for improvement.

Consider the following opportunities when reviewing a report:

- Target event types with a lower ratio of good catches to Serious Events.
- Identify effective practices in event types with a higher or increasing good-catch-to-Serious-Event ratio.
- Identify event types with lower ratios than peer groups.
- Review changes in data over time to categorize areas where reporting has shifted to either more or fewer good catches.

Patient Safety Officers may request a Good Catch Comparison Report by contacting their Patient Safety Liaison (PSL)—see a map identifying PSLs by region (/Pages/ContactPatientSafetyAuthorityStaff.aspx) or contact the Authority office at patientsafetyauthority@pa.gov (mailto:paitnsafetyauthority@pa.gov) or (717) 346-0469.

![Good Catch Comparison Report](image-url)
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