# Patient Safety Organizations: A Summary of 2013 Profiles

The Patient Safety Organization (PSO) program, authorized by the Patient Safety and Quality Improvement Act of 2005 and administered by the Agency for Healthcare Research and Quality (AHRQ), makes it possible for health care providers to voluntarily report information on patient safety events under legal protection and to use this information to develop patient safety interventions and solutions. Each year, PSOs are asked to complete the PSO Profile Form, which provides retrospective information about a PSO's operations, and the numbers and types of providers it serves. This brief looks at the evolution of PSOs based on profile information that was voluntarily submitted for 2013. Future briefs will summarize information for coming years.

Overall, the brief covers:

- Role of PSOs in health care,
- Characteristics of PSOs,
- Characteristics of providers contracted with PSOs,
- Event reports received by PSOs, and
- Examples of activities PSOs undertake to support patient safety improvement.

## Role of PSOs in Health Care

Both the mission and the primary activity of a PSO must be to conduct activities to improve patient safety and the quality of health care. The term "safety" refers to reducing risk from harm and injury, while the term "quality" suggests striving for excellence and value (defined as the health outcomes achieved per dollar spent). By addressing common, preventable adverse events, a health care setting can become safer, thereby enhancing the quality of care delivered.

PSOs aim to assist providers in detecting and reducing risks and hazards associated with their delivery of care that may lead to patient harm. PSOs create a secure environment where clinicians and health care organizations can share information, including event reports, and learn from each other's experiences. PSOs can analyze provider data and assist with root cause analysis of individual events, thus identifying targets for improving patient safety and quality. PSOs can also measure provider performance and patient outcomes that relate to quality of care other than the patient safety dimension.

PSOs collect and analyze patient safety work product (PSWP) from providers in a standardized manner that permits valid comparisons of similar cases among similar providers. The aim of aggregating PSWP locally, regionally, and nationally is to develop insights into the underlying causes of harm from patient safety events. Aggregating standardized information about patient safety events from multiple hospitals and other providers is necessary to identify patterns and trends in patient safety events and to accelerate the process of learning how best to improve patient safety.

In addition, the Patient Protection and Affordable Care Act of 2010 designates PSOs to help hospitals that have high risk-adjusted readmission rates to improve their performance. Furthermore, following a 2-year phase-in period that ends in January 2017, hospitals with more than 50 beds must work with a PSO in order to contract with health plans in insurance exchanges.

## Characteristics of PSOs

The Patient Safety Rule permits many types of entities to seek listing as a PSO; these may include an entire organization or a component of an organization, a public or private entity, or a for-profit or not-for-profit entity. The Patient Safety Act excludes certain entities from becoming listed as a PSO; these include health insurance issuers, a component of a health insurance issuer, regulatory agencies, organizations that serve as agents of regulatory agencies (i.e., Medicare Quality Improvement Organizations), accreditation and licensure entities, and entities that administer a Federal, State, local, or tribal patient safety reporting system to which health care providers are required to report by law or regulation.

As of the end of 2013, 77 organizations were listed as PSOs by AHRQ. Key characteristics self-reported for 2013 by 65 of those PSOs included:

- Almost one-third of PSOs were professional or trade associations and one-fourth were health care providers. The remaining PSOs were consulting firms, insurers other than health insurers, software developers, consumers, or other business types. The largest increase from 2012 to 2013 in PSOs was consulting firms.

- In terms of profit status, the majority of PSOs were not-for-profit entities (60%); in terms of organizational structure, the majority of PSOs were components of a larger entity (83%).



**Figure 1: Count of PSOs by Type of Business, 2013**

**Source:** Agency for Healthcare Research and Quality, Patient Safety Organization Profile, Calendar Year 2013.
**Note:** POSs may choose more than on type.

- Approximately two-thirds of PSOs served providers in all U.S. States and territories, i.e., they operated nationwide regardless of where the PSO was located.

- More than half of PSOs collected patient safety event reports across the full spectrum of clinical specialties, rather than focusing on a specific medical specialty. Among PSOs with a specific medical focus, the most common specialties were anesthesiology, emergency medicine, and pharmacy.

## Characteristics of Providers Contracted With PSOs

Overall, PSOs had contracts or agreements with more than 14,000 providers. While two-thirds of PSOs had fewer than 50 providers under contract, the seven largest PSOs had an average of more than 1,500 providers under contract. A provider may be an individual practitioner, a provider entity, or a health system comprising several entities. Key characteristics of the providers—either individuals or entities—served by PSOs included:

- Specialized treatment facilities (e.g., dialysis, chemotherapy, psychiatric facilities) and general hospitals made up the vast majority of providers. "Other" providers included ambulance and emergency medical services, ambulatory surgery centers, and home health care.

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- General hospitals and specialized treatment facilities under contract with a PSO were geographically diverse across U.S. census regions.

- The average general hospital associated with a PSO had a larger bed size than the average general hospital in the United States.

- The general hospitals under PSO contract were somewhat more likely than all general hospitals in the United States to be private, nonprofit hospitals.

- Slightly more than one-third of general hospitals contracting with PSOs had an academic affiliation, either as part of an academic medical center or as a teaching affiliate.



**Figure 2: Distribution of PSO Contracted Providers by Type, 2013**

Other: 263 (6%)
Long-Term Care: 18 (0%)
Specialty Hospitals: 332 (8%)
Licensed Practitioner Groups: 306 (7%)
Specialized Treatment Facilities: 1,937 (45%)
General Hospitals: 1,501 (34%)

Source: Agency for Healthcare Research and Quality, Patient Safety Organization Profile, Calendar Year 2013.
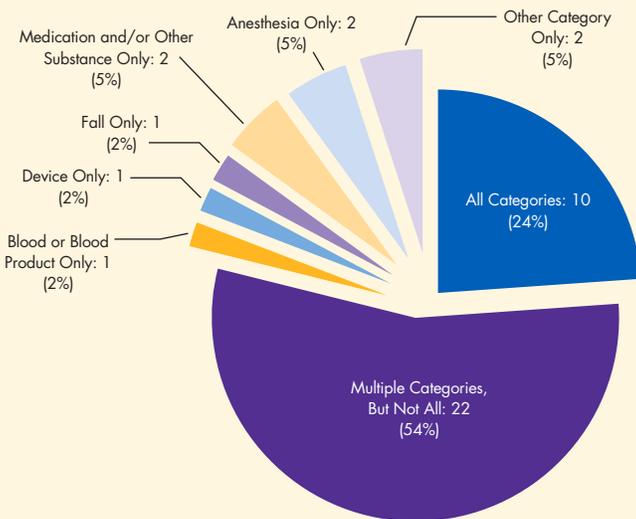
## Event Reports Received by PSOs

In conjunction with the creation of PSOs, the PSQIA of 2005 requires AHRQ to administer a Network of Patient Safety Databases (NPSD) to analyze and report aggregated patient safety event data submitted by PSOs. Data that have been voluntarily submitted by PSOs under PSQIA must be rendered nonidentifiable by the PSO Privacy Protection Center (PSOPPC) and are aggregated for analysis by the NPSD. The NPSD will analyze these data to better understand the underlying causes of patient harm and to develop information on how to improve patient safety. Both the PSOPPC and the NPSD are operated under contract to AHRQ.

A standardized set of common definitions and reporting formats, called Common Formats, was developed by AHRQ to help providers uniformly report patient safety events. Common Formats facilitate the collection and reporting of patient safety events in a standardized manner across different health care providers dedicated to improving care quality. Common Formats are broadly divided into two categories: (1) generic ones that apply to all patient safety events and (2) event-specific ones that relate to certain high-frequency event types and are used together with the generic modules. Common Formats also are being developed for surveillance of adverse events through medical record review. Currently, AHRQ Common Formats for reporting quality data do not exist.
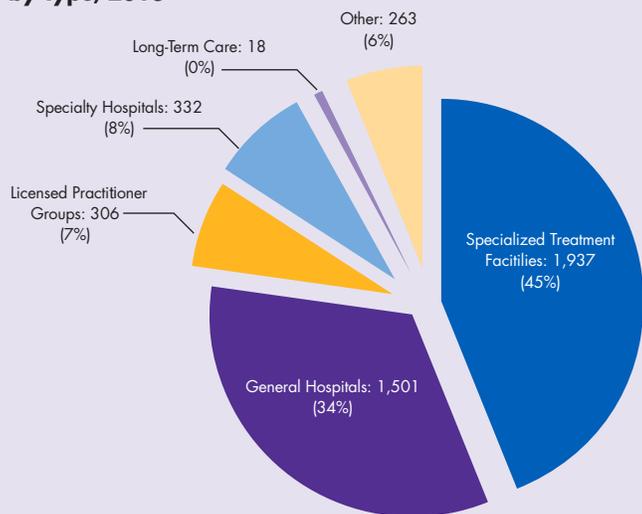
**Figure 3: Original Types of AHRQ Common Format Modules**

| Generic Forms | Event-Specific Forms |
|---|---|
| • Healthcare Event Reporting Form (HERF) <br> • Patient Information Form (PIF) <br> • Summary of Initial Report (SIR) | • Blood or Blood Product <br> • Device or Medical/Surgical Supply, including Health Information Technology (HIT) <br> • Fall <br> • Healthcare-associated Infection <br> • Medication or Other Substance <br> • Perinatal <br> • Pressure Ulcer <br> • Surgery or Anesthesia <br> • Venous Thromboembolism |

In 2012, about 32 percent of PSOs received at least one patient safety event report in AHRQ Common Formats; in 2013, 63 percent of PSOs—nearly twice the percentage for the previous year—received data for at least one patient safety event report in a standardized format. Key characteristics of reports collected by PSOs self-reporting for 2013 included:

- About two-thirds of providers under contract with a PSO sent at least one patient safety event report to a PSO, totaling more than 1,150,000 reports.

- Among the 41 PSOs that received event reports in 2013:
  - 78 percent of PSOs collected reports in multiple or all event categories (54 percent in multiple event categories but not all and 24 percent in all event categories).
  - 14.6 percent of PSOs received patient safety reports in AHRQ Common Formats.

- – An additional 46.3 percent of PSOs received reports in both AHRQ Common Formats and another standardized format.
- – 93 percent of PSOs received the reports electronically.
- ■ Four PSOs submitted event reports to the PSO Privacy Protection Center in 2013.

**Figure 4: Distribution of PSOs by Category of Event Reports Collected, 2013**



Medication and/or Other Substance Only: 2 (5%)

Anesthesia Only: 2 (5%)

Other Category Only: 2 (5%)

Fall Only: 1 (2%)

Device Only: 1 (2%)

Blood or Blood Product Only: 1 (2%)

All Categories: 10 (24%)

Multiple Categories, But Not All: 22 (54%)

**Source:** Agency for Healthcare Research and Quality, Patient Safety Organization Profile, Calendar Year 2013.

**Note:** Only self-reporting PSOs that received at least one patient safety report were included. PSOs can collect reports on more than one type of event. Percentages do not add to 100 due to rounding.

## Examples of PSO Activities

Among AHRQ-listed PSOs that self-reported for 2013, the types of resources and services most universally provided were educational opportunities such as through webinars. More than three-fourths of PSOs offered analytical support for adverse events and slightly more than two-thirds provided comparative reports. Six of 10 provided networking events (e.g., access to subject matter experts) and technical assistance (e.g., on-call support by experts).

**Data and Analysis.** PSOs collect event reports and analyze data so that hospitals, physicians, and other health care providers can find ways to improve the quality of health care. For example, the Anesthesiology Quality Institute facilitates incident reporting through a downloadable cell phone application. Any anesthesia provider can report any unintended incident or near miss related to anesthesia or pain management with the

significant potential for patient harm at the convenience of their mobile device. Many PSOs provide participating providers with event reporting systems that use a standardized taxonomy determined by the PSO for submitting incidents, near misses, and unsafe conditions. A few PSOs are working with providers to align event reporting with the AHRQ Common Formats before they are sent to the PSO. Alternatively, PSOs that are preparing to submit event reports to the NPSD via the PSOPPC attempt to align provider data with the Common Formats taxonomy after they are received by the PSO.

**Feedback.** PSOs also use analyzed data to improve patient safety by giving feedback to providers. For example, many PSOs have started writing case reports of newly identified concerns involving the categories of medications errors, falls, or pressure ulcers. These case reports are featured in periodic alerts, monthly newsletters, or annual reports. These publications are often available to both the general public and participating organizations. For example, the Missouri Center for Patient Safety publishes an annual report that highlights and summarizes data from their PSO database.



**Education and Networking.** The types of resources and services most universally provided were educational opportunities and networking events. For example, the California Hospital Patient Safety Organization hosts an annual conference for CEOs and hospital executives; quality, risk, and patient safety leaders; and nursing, physician, and pharmacist leaders, creating a "safe table"

environment among reporting providers for sharing lessons learned.

**Process Improvement.** The Society for Vascular Surgery Patient Safety Organization (SVS PSO) has had success in using data reported across multiple hospitals to drive a number of quality improvement initiatives. The SVS PSO is a component of the Society for Vascular Surgery and has been an AHRQ-listed PSO since 2011. They launched the Vascular Quality Initiative (VQI®) in 2011 with the goal of improving the quality, safety, effectiveness, and cost of vascular health care by collecting and exchanging information on common major procedures using a Web-based registry.

Between 2011 and 2013, the SVS PSO found that some contracted practice entities (referred to as "centers" within the SVS PSO) participating in the VQI® had higher than expected rates of surgical site infection following lower extremity bypass operations. This resulted in longer lengths of stay for patients and higher health care costs. By analyzing very granular data, the SVS PSO identified three factors that predicted a higher likelihood of surgical site infection in patients receiving a lower extremity bypass:

1. Long operation time

2. Need for higher quantities of blood transfusion

3. Skin preparation using iodine rather than chlorhexidine disinfectant

The VQI® helped change provider behavior by issuing Center Opportunity Profile for Improvement (COPI) reports to each center. COPI reports showed the center's performance across each of these three risk factors with anonymous comparison to other centers participating in the VQI®. These COPI reports improved the use of chlorhexidine among VQI® centers, which reduced the rate of surgical site infection, as shown below.

- Overall use of chlorhexidine increased by 14 percent, and 75 percent of centers that rarely or selectively used chlorhexidine began to use it routinely.

- The centers that improved chlorhexidine usage to routine use reduced their rate of surgical site infections from 5.5 percent to 1.5 percent between 2011 and 2013 (Figure 5); this resulted in an improved quality of care and reduced health care costs.



Figure 5: Reduction in Surgical Site Infections Among Centers That Improved to Routine Chlorhexidine Use
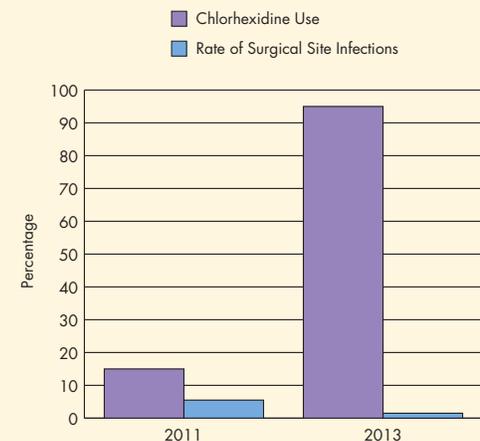
**Source:** VQI® data, 2011-2013.

## Conclusion

PSOs are working with health care providers to improve patient safety and quality and to reduce harm. The program is continuing to grow in participation and in the amount of data being collected, analyzed, and used to impact safety and quality. Look for more information about PSOs and their activities in future years.

To learn more about PSOs, visit www.pso.ahrq.gov.

- Providers can learn about how to work with and choose a PSO.

- Organizations can learn more about the process to become a PSO.

- Users can access a full list of AHRQ-listed PSOs.

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