



OREGON
PATIENT
SAFETY
COMMISSION

Patient Safety Reporting Program 2021 Annual Report

Charting a Course for Progress





The Oregon Patient Safety Commission is a semi-independent state agency that supports healthcare facilities and providers in improving patient safety. We encourage broad information sharing, ongoing education, and open conversations to cultivate a more trusted healthcare system.

Learn more: oregonpatientsafety.org

Our Mission

To reduce the risk of serious adverse events occurring in Oregon's healthcare system and encourage a culture of patient safety.

BUILDING A CULTURE OF SAFER CARE—TOGETHER.

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Executive Summary

Since 2003, the Oregon Patient Safety Commission (OPSC) has been operating the Patient Safety Reporting Program (PSRP) to promote shared learning and enhance quality and safety across Oregon’s healthcare system. And, while healthcare has been in a constant state of change since PSRP was created, the program and its statute have remained largely unchanged. We have an opportunity to adapt and respond to new knowledge and insights to ensure PSRP can continue to support the rapidly changing healthcare environment and provide meaningful shared learning in service to OPSC’s mission—to reduce the risk of serious adverse events occurring in Oregon’s healthcare system and encourage a culture of patient safety.

Last year, we started work on a quality improvement process that included an analysis of PSRP to help shape recommendations to strengthen the program. This analysis takes a closer look at the following areas:

- **Advances in patient safety science.** We found a notable shift in focus from the specifics of what organizations are learning from individual adverse events to the systems and infrastructure organizations have in place to learn from these events. A key aspect of our analysis was understanding the unique, yet interdependent, roles of state and organization-level reporting programs in making progress in patient safety. We also dug deeper to understand the essential role of a state reporting program, like PSRP.

Essential Role of a State Reporting Program



- **Supportive.** It builds on organization-level efforts with minimal duplication.
 - **Shares learning.** It shares information to inform organization-level safety and quality improvement work.
 - **Collaborative.** It facilitates work on problems that can’t be solved in isolation.
 - **Provides accountability.** It provides meaningful public accountability.
 - **Advances equity.** It encourages practices and improvement efforts that advance equity.
- **Current patient safety priorities and practice in Oregon’s healthcare system.** Understanding the perspectives of healthcare organizations is essential to shaping the future of Oregon’s program. We talked with organizations whose members are eligible for the reporting program, and they identified staffing as the top priority. We also heard that many patient safety priorities are upstream from adverse event reporting. Other priorities varied across the different types of organizations that we talked with. One of the central lessons we took from this process was that patient safety must be collaborative to be successful. Our conversations with individual healthcare organizations are ongoing, as they work to find time to talk with us amid staffing constraints.

In this report, we share our analysis of how patient safety reporting program knowledge and practice have advanced and offer recommendations to ensure that PSRP can keep pace with an ever-evolving healthcare delivery system. We also discuss the qualities that make a state reporting program effective, as well as what is needed within organizations for learning and improvement to thrive at a state-level.

Our work to shape the future of the program is ongoing. We are convinced that the foundation of PSRP is strong, and the ability to evolve is central to a sustainable and effective program that can continue to help make care safer for all Oregonians.

Building on a Strong Foundation to Create Long-Term Sustainability

Oregon's Patient Safety Reporting Program (PSRP) has a strong foundation that is rooted in the Oregon Patient Safety Commission's (OPSC's) mission—to encourage a culture of safety and help make care safer for all Oregonians. However, healthcare has been in a constant state of change since 2003 when PSRP was created, and PSRP's original statute has remained largely unchanged. To ensure PSRP can continue to support the rapidly changing healthcare environment, OPSC's Board of Directors committed to embark on a phased analysis process to inform programmatic changes.

It Is Imperative to Integrate Equity into PSRP as We Plan for the Future



To serve all Oregonians, OPSC must integrate equity into everything we do,⁵⁷ including any revision to the PSRP statute. Patient safety is undeniably linked to health inequity—the differences in health outcomes that are systematic, avoidable, and unjust.^{1–3} Inequitable care is not safe care. In the past year, professional organizations across the country have issued policy statements recognizing systemic racism as a public health issue that the healthcare system must address explicitly and urgently.^{4–6} Local and state governments have followed suit.^{7,8} Structural racism and systemic discrimination based on factors such as race, sex, language, and socioeconomic class are codified in the policies and practices of the U.S. healthcare system.⁶⁶

When an organization's culture of safety (an organization's shared perceptions, beliefs, values, and attitudes that combine to create a commitment to safety and an effort to minimize harm¹⁷) does not address health equity head on, it can deepen the systemic biases and injustices that are already present. A 2020 study published in the *Journal of Patient Safety*⁵⁹ identified race differences for serious harm events by both type of event and hospital setting for events reported in a voluntary reporting system. Yet, there is limited understanding about how to connect what we know about health inequities to solutions that result in concrete changes.⁶⁷ In Oregon, even basic data on race and ethnicity are either not collected during facilities' event investigations or are simply not included in event reports submitted to PSRP (Figure 1 and Figure 2, page 22). We must take steps to understand the root causes of inequity in patient safety so that we can implement targeted strategies to make safety in healthcare more just.

While revising PSRP's statute cannot change the inequities inherent in Oregon's healthcare system, it would improve the program's ability to serve its intended goal—to help healthcare organizations build the culture of safety necessary to make our care delivery system safer for every Oregonian. We will explicitly look at how proposed revisions can advance health equity, including but not limited to revisions that codify health equity as an essential part of PSRP data collection and analysis.

PSRP Continuous Quality Improvement Process

Phase I: 2021-2023

Analyze Advances in Patient Safety Knowledge and Practice Compared to PSRP

We will conduct an analysis process looking at the following key areas to understand how our knowledge, insights, and practices related to patient safety may have changed since PSRP was created, and compare them to the current PSRP statute for alignment:

- **Our mission:** OPSC’s mission provides a clear and focused goal for PSRP. A strong connection between our mission and our mandates will help ensure the program continues to serve Oregonians.
- **Advances in patient safety science:** Recent patient safety science focuses on the systems and infrastructure organizations have in place to learn from adverse events or identified risks, rather than specific solutions to individual problems. This is a shift from the previous focus on what organizations learn to now looking at how they learn.
- **Current patient safety priorities and practice in Oregon’s healthcare system:** Since PSRP was designed, the healthcare system has been constantly changing. We are uniquely positioned to support collaboration and learning across Oregon through PSRP; but the best way to do that may have changed. Understanding the patient safety priorities and practices of healthcare organizations will be essential to shaping what future support looks like.

Apply What We Learn to Strengthen PSRP

We will use what we learn from the analysis process to inform potential revisions to PSRP to keep pace with patient safety science and the healthcare system that has, and will continue to, evolve. Specifically, we will look at:

- Where we have flexibility in how we operationalize the program that could be revised without statutory change. This process could highlight opportunities to make program improvements in the short term.
- Where we have opportunities to strengthen PSRP by updating the statute, making the program more relevant for a healthcare system that will continue to evolve.

Phase II: 2023-2025+

The Phase I analysis process will help shape our long-term strategy for PSRP. We expect to:

- Move forward with the statutory change process for opportunities identified during our Phase I analysis process. We will work with the OPSC Board of Directors (See Appendix III) and members of the healthcare community to thoughtfully consider any change to PSRP.
- Develop plans for and operationalize any statutory changes. Just as OPSC did in the initial roll out of PSRP, we will collaborate with representatives of relevant healthcare segments on any changes to the program.

Guiding Lessons for Our Continuous Quality Improvement Process

Through our work, we have learned many important lessons about patient safety, the vital role of culture, and what approaches might lead to widespread progress in patient safety. We believe some of these lessons are crucial to our work going forward and we have used them to guide our analysis process:



Culture of safety requires health equity. To serve all Oregonians, we must integrate equity into everything we do. Throughout our analysis process, we will explicitly look at how our decisions can advance health equity and take special care to make sure they do not perpetuate systemic inequities.



We must be able to adapt and innovate. To effectively support an industry that is constantly evolving, often in unpredictable ways, we must continuously incorporate new knowledge and insights to meet changing needs. Being responsive to the events of the past few years is our only option.



This work cannot happen in isolation; it must be done together. We will look for opportunities to focus on how we can support collaboration and learning across the healthcare system so that we can make progress together.



Our mission—to reduce the risk of serious adverse events occurring in Oregon’s healthcare system and encourage a culture of patient safety—remains vital. Supporting patient safety culture development is essential to making our healthcare system safer. We will ensure our mission drives our continuous quality improvement process for PSRP, as it drives everything we do.

OPSC is uniquely positioned to share information and best practices to help Oregon’s healthcare system move forward together. We believe that to support healthcare organizations in this shifting landscape, we have an obligation to learn and make deliberate and purposeful change. Embarking on a continuous quality improvement process for PSRP will ensure that the program can adapt to the changing needs of the healthcare delivery system and continue to fulfill our mission, to be a lever for culture change in Oregon.

For our analysis, we looked at current patient safety science through a literature review process. In parallel, we also sought to understand the needs and priorities of the healthcare system through an interview process, talking with organizations eligible for the program, or entities whose members are eligible for the program.

Learning from Advances in Patient Safety Science

PSRP is Oregon’s state-level reporting program. A state-level reporting program is an information collection and dissemination tool to help support progress towards defined patient safety goals across the healthcare system. Much of the learning and value that comes from a reporting program happens outside of the program. A state adverse event reporting program relies on contributions from, and work on the ground in, healthcare organizations to fulfill its intended purpose so that all organizations across the state’s healthcare system can move forward together.

With this in mind, we first focused our literature review on understanding the **unique goals and role of a state reporting program** compared to organization-level programs. We used what we learned to delve deeper into the specific **qualities that make a good state reporting program**. In total, we reviewed 56 articles seeking to better understand expert recommendations for a state-level adverse event reporting program.

The Interdependent Goals of State and Organization-Level Reporting Programs

It is clear through our literature review, that it was not possible to isolate what we were learning about state-level reporting programs. The goals of state and organization-level reporting programs are interdependent, each playing an essential role in the larger patient safety ecosystem. An organization-level program gathers information about and investigates specific adverse events, while a state program gathers information about what the organization-level program learned. In so doing, the state program can facilitate collaboration and provide public accountability. System-wide learning and improvement occurs when state and organization-level reporting programs fulfill their unique, and mutually reliant roles.

Twenty-three of the articles that we reviewed identified one or more goals of a reporting program. Seven distinct goals of adverse event reporting programs emerged that we grouped into three overarching categories. Some goals applied to state reporting programs, some applied to organization-level reporting programs, and some applied to both (Table 1, page 5).

Table 1. Reporting Program Goals Supported by State and Organization-Level Programs

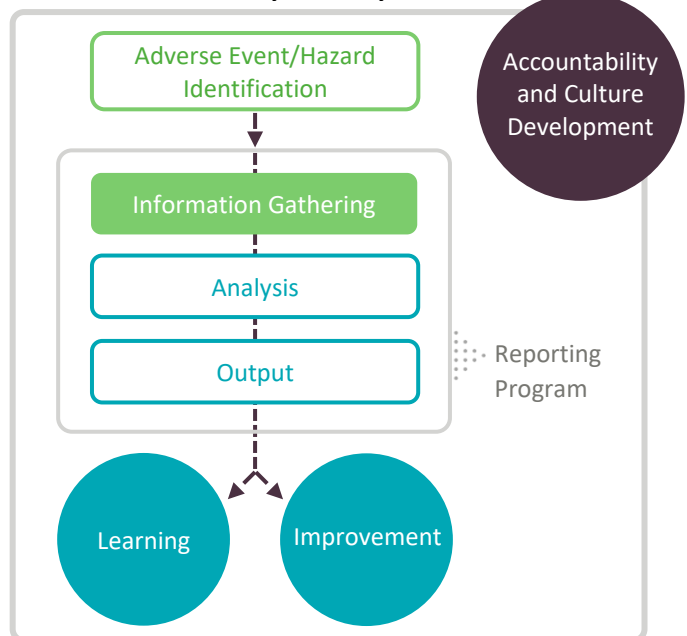
Goal	Can Program Achieve Goal?	
	State-Level	Organization-Level
Identification and Information Gathering		
Reporting programs are tools to collect information about the events and investigation findings. Identifying adverse events, hazards, or rare events is an appropriate goal for an organization-level reporting program, but not for a state reporting program. Information gathering is appropriate for both.		
Identifying Adverse Events, Hazards, or Rare Events	● No	● Not on its own
Information Gathering	● Yes	● Yes
Learning and Improvement		
Learning and improvement require participation of large, interconnected systems and cannot be achieved by a reporting program alone. Learning and improvement are achieved when the output of a reporting program is implemented. Although monitoring occurrence over time is identified in the literature as a reporting program goal, neither state nor organization-level programs are appropriate tools to achieve this.		
Learning from Adverse Events	● Not on its own	● Not on its own
Improving Safety and/or Quality	● Not on its own	● Not on its own
Monitoring Occurrence Over Time	● No	● No
Accountability and Culture Development		
Accountability and culture development reflect the environment created by our work and in which we do that work. Culture of safety is necessary for any successful reporting program, but it is also built and strengthened by a reporting program. Public accountability can only be achieved with and unbiased third party, as in a state program.		
Providing Public Accountability	● Yes	● No
Supporting Culture of Safety	● Yes	● Yes

Essential Role of a State Program

In the patient safety ecosystem, state and organization-level programs are interdependent, each playing an essential role to advance progress toward mutual goals. A state reporting program:

- **Is Supportive:** Builds on organization-level efforts with minimal duplication.
- **Shares Learning:** Shares information to inform organization-level safety and quality improvement work.
- **Is Collaborative:** Facilitates work on problems that can't be solved in isolation.
- **Provides Accountability:** Provides meaningful public accountability.
- **Advances Equity:** Encourage practices and improvement efforts that advance equity.

Patient Safety Ecosystem



Qualities of a State Reporting Program

We used what we learned about the goals and essential role of a state reporting program as a lens to evaluate the literature related to qualities of an effective state reporting program. The qualities reflected two distinct aspects of a state reporting program, the **structure** and the **purpose and values**, and were further grouped into seven categories based on similarity (Table 2). The structure of a reporting program enables it to fulfill its intended purpose and value.

Table 2. Qualities of an Effective State Reporting Program, by Category

Quality Category	Individual Qualities
Structure	
Non-Regulatory	<ul style="list-style-type: none"> • Confidential and non-punitive • Operated by an independent agency • Monitored for success
Fit for Purpose	<ul style="list-style-type: none"> • Reporting structure aligns with the intended purpose • Adequately resourced to fulfill purpose • Limits duplication to the extent possible • Provides standardized definitions and minimum datasets, that can: <ul style="list-style-type: none"> – Reduce organization burden – Offer shared definitions for shared learning – Set minimum standards for accountability
Agile	<ul style="list-style-type: none"> • Adaptable • Limited and flexible scope
Purpose and Value	
Supports a Culture of Safety	<ul style="list-style-type: none"> • Provides common cultural standards and norms, the high tide that raises all boats
Collaborative	<ul style="list-style-type: none"> • Facilitates collaboration among multiple providers or organizations • Focused on action and quality rather than rote reporting and quantity
Uses Data Purposefully	<ul style="list-style-type: none"> • Provides analysis • Uses data appropriately
Produces Meaningful Output	<ul style="list-style-type: none"> • Results in learning from adverse event reports • Broadly disseminates learning based on audience needs • Clearly communicates value of reporting

In this section, we offer summaries of the current scientific thinking about each individual quality of a good state reporting program. Not surprisingly, during this process qualities also emerged that were not the qualities of an effective state reporting program; rather, they were prerequisites at the organization-level to have an effective state program. This further solidifies our understanding of the interdependence between state and organization-level reporting programs.

Organization-Level Prerequisites for an Effective State Program

- **Is Part of a Comprehensive Patient Safety Approach with a Goal of Learning and Improvement.**^{1–16} A reporting program is a tool that, on its own, cannot improve patient safety. A comprehensive patient safety approach includes systems to support an adverse event investigation and analysis process, implementing changes, monitoring the effects of those changes over time, and reporting out on the findings.
- **Supports a Culture of Safety.** Culture of safety is an organization's shared perceptions, beliefs, values, and attitudes that combine to create a commitment to safety and an effort to minimize harm.¹⁷ Culture of safety is both necessary for a successful reporting program but also built and strengthened by a reporting program.
- **Is Resourced.** Healthcare providers and staff must be trained on what to report and how to report, and given protected time in which to do so.^{2–4,18,19} There is no “one size fits all” model for how to accomplish this. State programs are impacted by how organizations prioritize and resource internal reporting programs because it impacts what the organization is able to contribute to the state program.
- **Is Participative.**^{4,10,12,20} Healthcare providers and staff should be involved at all stages of the comprehensive patient safety approach. People are more likely to learn from a process in which they participate. Lack of participation and openly shared learning can send a message that the organization is hiding something, or nothing is being done. This can breed an environment of blame and shame that is antithetical to culture of safety.
- **Involves Patients and Families.** There is increasing evidence that patient and family involvement benefits patient safety work. The type and level of involvement is dependent on the situation. The concept of the patient and family as an important source of information and a member of their own healthcare team is also important for state reporting programs.^{3,21}

Structure of an Effective State Reporting Program

The structural elements of a state reporting program that drive how the program operates and enable it to fulfill a specific purpose and contribute value.

Non-Regulatory

Confidential and non-punitive

Confidentiality is necessary but not sufficient to encourage reporting.^{1–4,6,7,10,14,18,20,22–25} A non-punitive approach at the state level is essential. A punitive approach can incentivize organizations to “game” the system to avoid punishment.^{26,27}

Operated by an independent agency

An independent agency that is free from industry interests and does not play a regulatory role can:

- “Foster credibility among the public.”^{1(p7)}
- Develop expertise in the causes and prevention of safety risks that individual organizations may not be able to develop on their own.^{1,28–30}
- Set state-level priorities for everyone to work towards together.¹⁰

However, depending on the cultures of the organization and the independent agency, it can also introduce an invasive, confrontational feeling, which can have a negative impact on patient safety work.³⁰ This

highlights the need for a culture of safety at all levels of the healthcare system, as well as the interconnected nature of each of the qualities present in an effective state reporting program.

Monitored for success

Reporting systems should be monitored for success.² This requires defining what success looks like, developing a standard evaluation model, and applying it on a regular basis.

Fit for Purpose

Reporting structure aligns with the intended purpose

Voluntary reporting is most appropriate for learning systems; mandatory reporting is most appropriate for regulatory systems.^{2,8} For mandatory reporting to be viable, the governing agency must be able to evaluate compliance.^{10,31} Compliance evaluation typically comes with consequences for noncompliance, therefore evaluating for compliance can be perceived as punitive. There are times when mandatory reporting is appropriate and necessary, like healthcare-associated infections and device failures.¹⁰ Understanding the goals of the state program will help determine whether or not voluntary or mandatory is likely to be a successful approach.

Adequately resourced to fulfill purpose

Resources include budget, trained and dedicated staff, time for existing staff to participate, technology, as well as other infrastructure. State programs must clearly define their purpose and have adequate financial resources for staffing, data security, etc. to achieve that purpose. If a state program intends to collect adverse event reports, their resources must account for adequate staff to read, triage, and analyze every submitted report. It must also account for staff to turn the analysis into recommendations and disseminate those to healthcare organizations.^{3,4}

Limits duplication to the extent possible

Organizations often have multiple reporting requirements they must meet, which can mean entering the same information into multiple systems. Ideally, a state program would be able to accept automated, electronic submission of adverse event reports. However, that would require shared definitions and datasets across a variety of different types of organizations, which would limit the kinds of changes that could be made at the organizational level. More importantly, state systems serve a different purpose than organization-level programs, and that purpose drives their data needs. The goal of accepting adverse event reports must be clearly stated. If the goal is public accountability, what elements must be present to achieve that goal? Are those elements the same as in an internal investigation report? Is the variation among internal reports a kind of barometer of the systems they have in place to do patient safety work?^{1,3,4,22}

Provides standardized definitions and minimum datasets

The variation among different organizations' definitions and datasets can hinder collaboration and shared learning. A state program can offer standardized definitions and minimum datasets. This standardization can:

- **Reduce organization burden.** Organizations that are just beginning to build their internal reporting programs can choose to adopt a state program's reporting tool rather than developing their own. A state program has an opportunity to bolster an organization's internal support by providing standardized patient safety education and training. The organization can then focus on providing training for use of their specific internal reporting systems.

- **Offer shared definitions for shared learning.** Consistent classification of adverse events allows for state-level analysis.^{3,4,10,19} Standardized definitions allow everyone to speak the same language. The primary source of learning from adverse events is in the qualitative event descriptions, their contributing factors, and solutions. A standard set of report elements can help guarantee the descriptions in submitted reports contain all the necessary information to allow for state-level analysis and shared learning.
- **Set minimum standards for accountability.** Another potential role for a state program is to define the minimum standard for healthcare organizations incident reporting systems, investigation content, and staffing to attempt to guarantee that adequate resources are provided at the organization level.

Balances ease of use with ensuring the program can fulfill its intended purpose

A reporting program collects information it can analyze to understand adverse events and, ideally, prevent future events. A reporting program should make sure the information it's collecting clearly aligns with its purpose.^{3,4} It should avoid collecting information it cannot or will not use. Reporting systems should be easy to use and reporters should be trained on how to use them.^{1-4,20} There is a careful balance to be struck between making a system easy to use and getting the right information in an analyzable format.

Agile

Adaptable

To keep pace with the rapidly evolving healthcare delivery system, a reporting program must be able to adapt to changing needs, priorities, and innovation. Additionally, organizations have their own quality improvement priorities, so a state program must be able to adapt to organizational contexts without causing undue strain on their or the organization's resources.^{1,2}

Limited and flexible scope

The internal reporting systems employed by organizations to collect initial adverse event reports from providers and staff generate a large volume of reports that can easily swamp a state reporting system. Limiting the scope of what can be reported can be an important tool to manage volume.^{4,7,10,19} This can be done by reducing what's reportable to a limited set of event types or a certain level of harm or by focusing on specific elements of the event analysis process, like action planning to prevent future recurrence or tracking success over time. State programs can work with organizations to identify priority areas to work on collaboratively across the continuum of care.¹⁰ Topics can change as needed to reflect healthcare's ever-changing priorities.^{4,10} Limiting the scope of data collection for a state program does not have to limit the scope for organizations. It focuses organizational efforts as they relate to the state program and increases the likelihood that the state program will be able to develop meaningful output.

Purpose and Value of an Effective State Reporting Program

The intended goals and role of the state reporting program and the value that it brings to the larger healthcare system.

Supports a Culture of Safety

For any patient safety effort to be successful, organizations must cultivate a culture of safety. Without a culture of safety, patient safety improvement efforts, though well-intentioned, are ineffective and unsustainable.^{32,33} While participation in a state reporting program can reinforce and strengthen an organization's culture of safety, a state program, on its own, cannot create a culture of safety in an organization. A culture of safety must be driven by an organization's internal culture.

A state program can provide an organization with a mechanism by which the organization can improve their culture of safety. A state program gives organizations an opportunity to demonstrate their commitment to transparency and accountability, which is an important part of creating the psychological safety necessary for staff to feel comfortable speaking up. If a state program is punitive and apportions blame, it can hinder the development of culture of safety in organizations.

A state program can also provide a common pool of standards and norms to give organizations a shared, objective goal to aim for.^{4,6}

Collaborative

Facilitates collaboration among multiple providers or organizations

Collaboration can occur at the event level or more broadly. Because adverse events often occur over long periods of time and in multiple contexts, but investigations tend to be localized, a state program can provide confidentiality protection to participating organizations so they can work together. An additional difficulty at the organization level is provider discomfort with reporting an error made by someone else. Reporting to a neutral third party that provides some guidance for how to handle this sort of situation may be the beginning of a solution.³⁴⁻³⁷

The most important value in using state programs for collaboration may be found in standardizing policy and procedure across organizations, which has a better chance of eliminating unsafe practices.^{1,21,22,31,38,39}

Focused on action and quality rather than rote reporting and quantity

Reporting is a means to an end, and it's the end that matters. The end goal of collecting information is learning and change.^{3,4,10,29} However, state programs cannot make change inside organizations; they must do that themselves. A state program must consider how it supports taking action and evaluates its own processes to make sure it doesn't devolve into a rote reporting exercise for facilities. Additionally, learning cannot happen with incomplete information. A focus on rote reporting often becomes a focus on ever-increasing reporting volume, which is not synonymous with learning.^{3,4,6,10} Collecting a large quantity of adverse event reports with incomplete information that do not result in action or change will not support the end goals of learning and change. However, collecting a handful of reports with complete information that results in action or change can support a program's learning and change goals to prevent patient harm.

Uses Data Purposefully

Provides analysis

At the organization level, each report is reviewed and triaged for investigation and analysis. A state program should collect reports of an organization's complete investigation and analysis, and it should focus on rare or novel events,^{3,40} or on events related to a state or national patient safety priority. Qualitative analysis should be the main mode of study rather than quantitative statistics.³ Because state programs rely on organization level programs for high quality data, they should offer a standardized methodology for investigation and/or reporting, training courses on investigation and analysis, and direct feedback when necessary.³

Uses data appropriately

State and national reporting rates should not be used to compare healthcare organizations or to monitor organizational safety performance. Rather, the lessons learned from organizations in-depth investigation and analysis of events should be disseminated.⁴ This necessitates collecting those lessons and the results of implementation.

Produces Meaningful Output

Results in learning from adverse event reports

Aggregating reports from healthcare organizations and aggregating learning from healthcare organizations are not one and the same, because not all investigations result in learning. Weaknesses in any part of the complex adverse event identification and investigation processes, as well as the action planning and implementation processes, can inhibit or prevent organizational learning. These processes are also subject to the subjective preferences of the individuals tasked with doing the work. These opportunities for failure and subjectivity by all eligible organizations can make it difficult to aggregate and share learning at the state level.^{4-8,13,41} Understanding the context in which an improvement plan successfully leads to organizational change is critical to successfully disseminate lessons learned at a state level.

Broadly disseminates learning based on audience needs

Lack of feedback is arguably the most significant barrier to reporting program participation.^{1,2,6,12,15,18-20,25,31,35,37,40,42-55} State programs should disseminate what they learn as widely as possible. That includes both what they learn about adverse events, their causes, and prevention as well as information about investigation and prevention strategies.³ State programs should use a variety of channels to disseminate information.

State programs must devise feedback that is appropriate for their purpose, with input from organization-level stakeholders.^{1,8} If the state program's purpose is to improve the culture of safety and share lessons learned from investigations, then feedback should be targeted at best practices and storytelling, not frequency charts.⁷ State programs have an opportunity to help demystify what to do with the lessons learned from incident reports by giving feedback with clear recommendations.⁷

Clearly communicates value of reporting

When reporting programs fail to clearly communicate their value, they disincentivize participation.^{2,4,13,20,25,42} As participation drops, so does the program's ability to learn and improve. The best way to communicate the value of reporting to both organizations as well as individual healthcare workers is to make good on the promise of a reporting program: to learn from what is submitted and disseminate that information far and wide.

Learning from the Healthcare System

In the 2020 report *Safer Together: A National Action Plan to Advance Patient Safety*, the National Steering Committee for Patient Safety (NSC) describes the critical need for a coordinated effort from all stakeholders across the healthcare continuum. In the report, NSC acknowledges a lack of progress in patient safety despite the many evidence-based practices for harm reduction identified by individual organizations, because they are seldom shared beyond the organization or effectively implemented across multiple organizations. NSC concludes, “It has become clear that reducing preventable harm is a complex endeavor that requires a concerted, persistent, coordinated effort by all stakeholders, and a total systems approach to safety.”^{56(p11)}

At OPSC, we are uniquely positioned to support learning and coordination across the healthcare system, free from industry interests. We can offer insight into the efficacy of organizations’ processes and systems for learning from patient harm events to make care safer. Individual healthcare organizations have the internal expertise to best investigate and understand the vast breadth of clinical and technical issues that comprise patient safety work.

As a part of our analysis process to strengthen PSRP, we interviewed representatives of Oregon’s healthcare organizations to understand their patient safety priorities, using *Safer Together: A National Action Plan to Advance Patient Safety* as a framing device. Understanding the current needs of the healthcare system will be essential to shaping what the future looks like for PSRP.

We identified ten professional organizations as important partners in this process and interviewed 8 of them between December 2021 and April 2022. Interviews were scheduled for 30 minutes and consisted of 9 questions about their members’ patient safety priorities.

Professional Organization Interview Summary

Patient safety priorities related to health equity. We heard that health equity is a priority, in general, for Oregon healthcare facilities. There was broad consensus that health equity is important, but it was largely seen as a separate priority, not connected to patient safety. Specific health equity priorities included access to care (including pharmacies and dialysis centers) for rural Oregonians as well as access for specific groups (like older Oregonians), and workforce diversity.

Patient safety priorities related to culture of safety, leadership, and governance. Interviewees recognized the importance of culture of safety and leadership. The definition of governance seemed less clear, with some organizations interpreting it as “government.” Specific priorities related to culture of safety and leadership were creating psychological safety for staff, patients and families to be able to speak up, as well as effective communication, checklist use, adequate staffing to enable system changes, and risk training and education. Interviewees also talked about needing more alignment between leadership and regulators as well as needing more support from regulators (for example, on administrative rule interpretation).

Patient safety priorities related to patient and family engagement. Interviewees agreed that patient and family engagement is an important part of patient safety. They identified the value of patient advisory councils and open communication with patients and families as priorities. We also heard about how the COVID-19 pandemic has made it more difficult to engage in meaningful relationships with families and keep

everyone safe. Some organizations mentioned the need to work with patients and families specifically on grievances or in the wake of an adverse event.

Patient safety priorities related to workforce safety. Organizations primarily identified staffing and burnout as their main priorities related to workforce safety.

Patient safety priorities related to organizational and system learning. The definition of “organizational and system learning” seemed to be unclear to many of the organizations we interviewed. Most talked instead about training and education priorities. That said, there were two organizations that spoke about the need for system-wide implementation of streamlined, standardized tools and resources, as well as the need to evaluate how COVID-19 has impacted various existing systems in healthcare facilities (e.g., systems related to transfers).

Other patient safety priorities. Interviewees identified a wide range of priorities, from legislative projects (e.g., payment reform) to very specific quality improvement project topics (e.g., sepsis or falls). Organizations also identified the need for coordination among different care settings and sometimes even different areas of government that might not typically be involved in healthcare conversations (e.g., agencies responsible for clean water or the power grid).

Support needs. Most of the organizations we spoke to identified some very specific needs of the facilities they represent. These included things like help with staffing, patient support (e.g., transportation or translation), event investigation and analysis support, help reducing administrative burden, communication training, and support on specific quality improvement topics (e.g., sepsis, falls, or COVID-19 response and management). There was some overlap in the specific needs identified across different care settings, illustrating the importance of bringing everyone together to collaborate.

Barriers to patient safety work. The biggest barriers to patient safety work interviewees identified were staffing and administrative or regulatory burden. The administrative or regulatory burden is magnified by the staffing challenges facing the healthcare system.

Discussion

Several overarching themes emerged from these interviews.



Staffing is the top priority. Staffing and workforce came up in every interview. Interviewees talked about some of the reasons for understaffing (e.g., not enough providers, thin profit margins, and inadequate incentives to keep providers in rural areas), as well as how understaffing impacts the workforce itself (e.g., long hours and burnout). They also acknowledged that understaffing reduces the capacity of facilities to make system changes or do quality improvement work because patient care comes first.



Many patient safety priorities are upstream from adverse event reporting. Interviewees talked about how workforce limitations and reduced access to care impact patient safety. When pharmacies, dialysis facilities, ambulatory surgery centers, hospitals, clinics and other types of healthcare facilities close in rural communities, it can result in patients going without care until they're sick enough to require an emergency department visit or hospital admission.



Support needs and other priorities are varied in their scope and specificity. Interviewees articulated a variety of different needs that ranged from specific training topics to a more general

reduction in administrative burden. Some of the types of support they identified are things that OPSC can do or has done in the past; others are outside our purview.



Definition variation. Although terms like “patient engagement” and “learning systems” are commonly used patient safety terms, we learned that they can be understood fairly differently by different organizations.

From these themes, OPSC takes the following lessons:



Patient safety must be collaborative to be successful. Staffing is a critical priority for all areas of healthcare right now. The sources of the staffing crisis vary by care setting and provider type. For some, there were not enough students in the pipeline to fill growing needs. For others, there were not enough good paying jobs to employ all of the students currently in the pipeline. Although it has significant impacts on patient safety, staffing decisions are typically not within the patient safety sphere of influence. Similarly, when patients delay care due to lack of access in their home community, it can be difficult to recognize lack of access as the cause of an adverse event. It can also be difficult to know who is responsible for bringing attention to it. Increased collaboration is needed to work on these multifaceted problems.



Role clarity. There was some lack of clarity about OPSC’s role. Because patient safety is so vast and far-reaching, it’s critical for OPSC to clarify its role and to work collaboratively with other organizations. This highlights the need for a coordinated and collaborative effort across healthcare settings to support patient safety work in Oregon’s healthcare system.



Building a shared vocabulary. The more OPSC brings people from across the healthcare continuum together, the more we’ll build a shared vocabulary. Using plain language will be an important tool for clarity.

Next Steps: Applying What We Learned

In comparing what we learned through our Phase I analysis process to the current PSRP statute, it is clear that there are opportunities to strengthen the program. The PSRP statute limits the ability of the program to evolve along with Oregon's healthcare system in response to new patient safety knowledge and practice. This is primarily driven by overly specific or outdated language and aspects of PSRP that do not support current patient safety science and/or practice. Revising the PSRP statute would allow OPSC to adapt and respond as necessary. Select revisions would aim to:

- Broaden and revise overly specific or outdated language.
- Revise elements of PSRP to support current patient safety knowledge and practice.
- Codify health equity as an essential part of PSRP data collection and analysis.

With the ability to adapt to a changing healthcare environment along with the healthcare organizations that use the program, PSRP would be able to continue to fulfill its intended purpose—to help make healthcare safer for all Oregonians. We will work with our board of directors and seek input from members of the healthcare community and the public as we continue to make progress on our continuous quality improvement process.

Acknowledgements

We are grateful for the time and expertise that many individuals contributed to help inform the PSRP continuous quality improvement process shared in this report. Special thanks to the OPSC Board of Directors (See Appendix III) and to the professional organizations who talked with us to help us understand the patient safety priorities of their members.

References

1. Karsh BT, Escoto KH, Beasley JW, Holden RJ. Toward a theoretical approach to medical error reporting system research and design. *Applied Ergonomics*. 2006;37(3):283-295. doi:10.1016/j.apergo.2005.07.003
2. Mayer E, Flott K, Callahan RP, Darzi A. *National Reporting and Learning System Research and Development*. NIHR Patient Safety Translational Research Centre at Imperial College London; 2016. doi:10.25561/34060
3. Reporting and Learning Subgroup of the European Commission PSCQWG. *Key Findings and Recommendations on Reporting and Learning Systems for Patient Safety Incidents across Europe*. European Commission; 2014:55 pages. Accessed March 30, 2021. <http://buonepratiche.agenas.it/documents/More/8.pdf>
4. World Health Organization. *Patient Safety Incident Reporting and Learning Systems: Technical Report and Guidance*. World Health Organization; 2020.
5. Anderson JE, Kodate N. Learning from patient safety incidents in incident review meetings: Organisational factors and indicators of analytic process effectiveness. *Safety Science*. 2015;80:105-114. doi:10.1016/j.ssci.2015.07.012
6. Flott K, Nelson D, Moorcroft T, et al. Enhancing Safety Culture Through Improved Incident Reporting: A Case Study In Translational Research. *Health Affairs*. 2018;37(11):1797-1804. doi:10.1377/hlthaff.2018.0706
7. Guffey PJ, Culwick M, Merry AF. Incident reporting at the local and national level. *Int Anesthesiol Clin*. 2014;52(1):69-83. doi:10.1097/AIA.0000000000000008
8. Health Quality Ontario. Patient Safety Learning Systems: A Systematic Review and Qualitative Synthesis. *Ont Health Technol Assess Ser*. 2017;17(3):1-23.
9. HSE (Health Service Executive). *Incident Management Framework*. HSE (Health Service Executive) QAVD (Quality Assurance and Verification Division); 2020:164 pages. Accessed April 26, 2021. <https://www.hse.ie/eng/about/qavd/incident-management/hse-2020-incident-management-framework-guidance.pdf>
10. Howell AM, Burns EM, Hull L, Mayer E, Sevdalis N, Darzi A. International recommendations for national patient safety incident reporting systems: an expert Delphi consensus-building process. *BMJ Qual Saf*. 2017;26(2):150-163. doi:10.1136/bmjqs-2015-004456
11. Leistikow I, Mulder S, Vesseur J, Robben P. Learning from incidents in healthcare: the journey, not the arrival, matters. *BMJ Qual Saf*. 2017;26(3):252-256. doi:10.1136/bmjqs-2015-004853
12. Macrae C. The problem with incident reporting. *BMJ Qual Saf*. 2016;25(2):71-75. doi:10.1136/bmjqs-2015-004732
13. World Health Organization (WHO). *WHO Draft Guidelines for Adverse Event Reporting and Learning Systems*. World Health Organization; 2005:80 pages. Accessed September 17, 2021. <https://apps.who.int/iris/handle/10665/69797>
14. Knudsen P, Graversen L, Larsen T. High-risk medications identified from the Danish Patient Safety Database and the challenge of dissemination. *Journal of Patient Safety and Risk Management*. 2019;24(1):7-12. doi:10.1177/2516043518815020

15. Mahajan RP. Critical incident reporting and learning. *BJA: British Journal of Anaesthesia*. 2010;105(1):69-75. doi:10.1093/bja/aeq133
16. Pronovost PJ, Morlock LL, Sexton JB, et al. Improving the Value of Patient Safety Reporting Systems. In: Henriksen K, Battles JB, Keyes MA, Grady ML, eds. *Advances in Patient Safety: New Directions and Alternative Approaches*. Vol 1: Assessment. Agency for Healthcare Research and Quality; 2008. Accessed September 27, 2018. <http://www.ncbi.nlm.nih.gov/books/NBK43621/>
17. Weaver SJ, Lubomksi LH, Wilson RF, Pfoh ER, Martinez KA, Dy SM. Promoting a Culture of Safety as a Patient Safety Strategy: A Systematic Review. *Ann Intern Med*. 2013;158(5_Part_2):369. doi:10.7326/0003-4819-158-5-201303051-00002
18. Mitchell I, Schuster A, Smith K, Pronovost P, Wu AW. Patient safety incident reporting: a qualitative study of thoughts and perceptions of experts 15 years after 'To Err is Human.' *BMJ Quality & Safety*. 2016;25(2):92-99. doi:10.1136/bmjqs-2015-004405
19. Howell AM, Burns EM, Bouras G, Donaldson LJ, Athanasiou T, Darzi A. Can Patient Safety Incident Reports Be Used to Compare Hospital Safety? Results from a Quantitative Analysis of the English National Reporting and Learning System Data. *PLOS ONE*. 2015;10(12):e0144107. doi:10.1371/journal.pone.0144107
20. Sujan MA, Huang H, Braithwaite J. Learning from incidents in health care: Critique from a Safety-II perspective. *Safety Science*. 2017;99:115-121. doi:10.1016/j.ssci.2016.08.005
21. Vincent CA, Carthey J, Macrae C, Amalberti R. Safety analysis over time: seven major changes to adverse event investigation. *Implementation Science*. 2017;12(1):151. doi:10.1186/s13012-017-0695-4
22. Trbovich P, Vincent C. From incident reporting to the analysis of the patient journey. *BMJ Qual Saf*. 2019;28(3):169-171. doi:10.1136/bmjqs-2018-008485
23. Connolly W, Li B, Conroy R, Hickey A, Williams DJ, Rafter N. National and Institutional Trends in Adverse Events Over Time: A Systematic Review and Meta-analysis of Longitudinal Retrospective Patient Record Review Studies. *Journal of Patient Safety*. 2021;17(2):141-148. doi:10.1097/PTS.0000000000000804
24. Harper ML, Helmreich RL. Identifying Barriers to the Success of a Reporting System. In: Henriksen K, Battles JB, Marks ES, Lewin DI, eds. *Advances in Patient Safety: From Research to Implementation*. Vol 3: Implementation Issues. Agency for Healthcare Research and Quality (US); 2005. Accessed September 27, 2018. <http://www.ncbi.nlm.nih.gov/books/NBK20544/>
25. Leape LL. Reporting of Adverse Events. *N Engl J Med*. 2002;347(20):1633-1638.
26. Lilford R, Mohammed MA, Spiegelhalter D, Thomson R. Use and misuse of process and outcome data in managing performance of acute medical care: avoiding institutional stigma. *The Lancet*. 2004;363(9415):1147-1154. doi:10.1016/S0140-6736(04)15901-1
27. Maxton F, Darbyshire P, Daniel DJM, Walvin T. Nursing can help end the travesty of 'Datix abuse.' *Journal of Clinical Nursing*. 2021;30(9-10):e41-e44. doi:10.1111/jocn.15691
28. Macrae C. Early warnings, weak signals and learning from healthcare disasters. *BMJ Qual Saf*. 2014;23(6):440-445. doi:10.1136/bmjqs-2013-002685
29. Macrae C, Vincent C. Learning from failure: the need for independent safety investigation in healthcare. *J R Soc Med*. 2014;107(11):439-443. doi:10.1177/0141076814555939

30. Hibbert PD, Thomas MJW, Deakin A, et al. Are root cause analyses recommendations effective and sustainable? An observational study. *Int J Qual Health Care*. 2018;30(2):124-131. doi:10.1093/intqhc/mzx181
31. Levinson DR. *Adverse Events in Hospitals: Overview of Key Issues*. Department of Health and Human Services Office of Inspector General; 2008. Accessed September 29, 2018. <https://oig.hhs.gov/oei/reports/oei-06-07-00470.pdf>
32. David DS. The Association Between Organizational Culture and the Ability to Benefit From “Just Culture” Training. *Journal of Patient Safety*. 2019;15(1):e3-e7. doi:10.1097/PTS.0000000000000561
33. Armstrong N, Brewster L, Tarrant C, et al. Taking the heat or taking the temperature? A qualitative study of a large-scale exercise in seeking to measure for improvement, not blame. *Social Science & Medicine*. 2018;198:157-164. doi:10.1016/j.socscimed.2017.12.033
34. Duffy EL, Adler L, Ginsburg PB, Trish E. Prevalence and Characteristics of Surprise Out-of-Network Bills From Professionals in Ambulatory Surgery Centers. *Health Affairs*. 2020;39(5):783-790. doi:10.1377/hlthaff.2019.01138
35. Evans SM, Berry JG, Smith BJ, et al. Attitudes and barriers to incident reporting: a collaborative hospital study. *BMJ Quality & Safety*. 2006;15(1):39-43. doi:10.1136/qshc.2004.012559
36. Lawton R, Parker D. Barriers to incident reporting in a healthcare system. *BMJ Quality & Safety*. 2002;11(1):15-18. doi:10.1136/qhc.11.1.15
37. Vincent C, Stanhope N, Crowley-Murphy M. Reasons for not reporting adverse incidents: an empirical study. *Journal of Evaluation in Clinical Practice*. 1999;5(1):13-21. doi:10.1046/j.1365-2753.1999.00147.x
38. Dixon-Woods M, Pronovost PJ. Patient safety and the problem of many hands. *BMJ Qual Saf*. 2016;25(7):485-488. doi:10.1136/bmjqs-2016-005232
39. Hohl CM, Small SS, Peddie D, Badke K, Bailey C, Balka E. Why Clinicians Don’t Report Adverse Drug Events: Qualitative Study. *JMIR Public Health Surveill*. 2018;4(1):e21. doi:10.2196/publichealth.9282
40. Institute of Medicine (US) Committee on Quality of Health Care in America. *To Err Is Human: Building a Safer Health System*. (Kohn LT, Corrigan JM, Donaldson MS, eds.). National Academies Press; 2000. Accessed October 4, 2018. <http://www.ncbi.nlm.nih.gov/books/NBK225182/>
41. Bos K, Dongelmans DA, Greuters S, Kamps GJ, Laan MJ van der. The Next Step in Learning from Sentinel Events in Healthcare. *BMJ Open Qual*. 2020;9(1):e000739. doi:10.1136/bmjopen-2019-000739
42. Shojania KG. The frustrating case of incident-reporting systems. *BMJ Quality & Safety*. 2008;17(6):400-402. doi:10.1136/qshc.2008.029496
43. Aaronson EL, Brown D, Benzer T, Natsui S, Mort E. Incident Reporting in Emergency Medicine: A Thematic Analysis of Events. *Journal of Patient Safety*. 2019;15(4):e60-e63. doi:10.1097/PTS.0000000000000399
44. Carlford S, Öhrn A, Gunnarsson A. Experiences from ten years of incident reporting in health care: a qualitative study among department managers and coordinators. *BMC Health Serv Res*. 2018;18(1):113. doi:10.1186/s12913-018-2876-5
45. Kaldjian LC, Jones EW, Wu BJ, Forman-Hoffman VL, Levi BH, Rosenthal GE. Reporting Medical Errors to Improve Patient Safety: A Survey of Physicians in Teaching Hospitals. *Archives of Internal Medicine*. 2008;168(1):40-46. doi:10.1001/archinternmed.2007.12

46. Kreckler S, Catchpole K, McCulloch P, Handa A. Factors influencing incident reporting in surgical care. *BMJ Quality & Safety*. 2009;18(2):116-120. doi:10.1136/qshc.2008.026534
47. Krouss M, Alshaikh J, Croft L, Morgan DJ. Improving Incident Reporting Among Physician Trainees. *Journal of Patient Safety*. 2019;15(4):308-310. doi:10.1097/PTS.0000000000000325
48. Macht R, Balen A, McAneny D, Hess D. A Multifaceted Intervention to Increase Surgery Resident Engagement in Reporting Adverse Events. *Journal of Surgical Education*. 2015;72(6):e117-e122. doi:10.1016/j.jsurg.2015.06.022
49. Miller N, Bhowmik S, Ezinwa M, et al. The Relationship Between Safety Culture and Voluntary Event Reporting in a Large Regional Ambulatory Care Group. *Journal of Patient Safety*. 2019;15(4):e48-e51. doi:10.1097/PTS.0000000000000337
50. Smith KS, Harris KM, Potters L, et al. Physician Attitudes and Practices Related to Voluntary Error and Near-Miss Reporting. *JOP*. 2014;10(5):e350-e357. doi:10.1200/JOP.2013.001353
51. Westbrook JI, Li L, Lehnbohm EC, et al. What are incident reports telling us? A comparative study at two Australian hospitals of medication errors identified at audit, detected by staff and reported to an incident system. *Int J Qual Health Care*. 2015;27(1):1-9. doi:10.1093/intqhc/mzu098
52. Benn J, Koutantji M, Wallace L, et al. Feedback from incident reporting: information and action to improve patient safety. *Quality and Safety in Health Care*. 2009;18(1):11-21. doi:10.1136/qshc.2007.024166
53. Braithwaite J, Westbrook MT, Travaglia JF, Hughes C. Cultural and associated enablers of, and barriers to, adverse incident reporting. *BMJ Quality & Safety*. 2010;19(3):229-233. doi:10.1136/qshc.2008.030213
54. Jeffe DB, Dunagan WC, Garbutt J, et al. Using Focus Groups to Understand Physicians' and Nurses' Perspectives on Error Reporting in Hospitals. *The Joint Commission Journal on Quality and Safety*. 2004;30(9):471-479. doi:10.1016/S1549-3741(04)30055-9
55. Kingston MJ, Evans SM, Smith BJ, Berry JG. Attitudes of doctors and nurses towards incident reporting: a qualitative analysis. *Medical Journal of Australia*. 2004;181(1):36-39. doi:10.5694/j.1326-5377.2004.tb06158.x
56. National Steering Committee for Patient Safety. *Safer Together: A National Action Plan to Advance Patient Safety*. Institute for Healthcare Improvement (IHI); 2020:41 pages. Accessed September 22, 2020. www.ihl.org/SafetyActionPlan
57. Austin JM, Weeks K, Pronovost PJ. Health System Leaders' Role in Addressing Racism: Time to Prioritize Eliminating Health Care Disparities. *JCJQPS*. 2021;47(4):265-267. doi:10.1016/j.jcjq.2020.11.010
58. Okoroh JS, Uribe EF, Weingart S. Racial and Ethnic Disparities in Patient Safety. *J Patient Saf*. 2017;13(3):153-161. doi:10.1097/PTS.0000000000000133
59. Thomas AD, Pandit C, Krevat SA. Race Differences in Reported Harmful Patient Safety Events in Healthcare System High Reliability Organizations. *J Patient Saf*. 2020;16(4):e235-e239. doi:10.1097/PTS.0000000000000563
60. Wyatt R, Laderman M, Botwinick L, Mate K, Whittington J. *Achieving Health Equity: A Guide for Health Care Organizations*. Institute for Healthcare Improvement (IHI); 2016:46 pages. (Available at ihl.org)
61. American Academy of Family Physicians (AAFP), Cullen J. AAFP Letter to Domestic Policy Council Director Opposing Systemic Racism. Published online June 10, 2020. Accessed June 15, 2021.

<https://medialib.aafp.org/dam/AAFP/documents/advocacy/prevention/strategy/LT-DPC-OpposingSystemicRacism-061020.pdf>

62. American Medical Association (AMA). New AMA policies recognize race as a social, not biological, construct. American Medical Association. Published November 16, 2020. Accessed June 15, 2021. <https://www.ama-assn.org/press-center/press-releases/new-ama-policies-recognize-race-social-not-biological-construct>
63. American Public Health Association (APHA), Benjamin G. Racism is an ongoing public health crisis that needs our attention now. American Public Health Association (APHA). Published May 29, 2020. Accessed June 15, 2021. <https://www.apha.org/news-and-media/news-releases/apha-news-releases/2020/racism-is-a-public-health-crisis>
64. Multnomah County. Multnomah County declares racism a public health crisis. Multnomah County. Published April 9, 2021. Accessed June 15, 2021. <https://www.multco.us/multnomah-county/news/multnomah-county-declares-racism-public-health-crisis>
65. Representative Andrea Salinas, Representative Teresa Alonso León, Representative Courtney Neron. *HB 2337: Relating to Equity; Declaring an Emergency.*; 2021. Accessed June 15, 2021. <https://olis.oregonlegislature.gov/liz/2021R1/Measures/Overview/HB2337>
66. Sivashanker K, Gandhi TK. Advancing Safety and Equity Together. *N Engl J Med.* 2020;382(4):301-303. doi:10.1056/NEJMp1911700
67. Benda NC, Wesley DB, Nare M, Fong A, Ratwani RM, Kellogg KM. Social Determinants of Health and Patient Safety: An Analysis of Patient Safety Event Reports Related to Limited English-Proficient Patients. *Journal of Patient Safety.* 2022;18(1):e1-e9. doi:10.1097/PTS.0000000000000663
68. Trbovich P, Shojania KG. Root-cause analysis: swatting at mosquitoes versus draining the swamp. *BMJ Qual Saf.* 2017;26(5):350-353. doi:10.1136/bmjqs-2016-006229
69. Peerally MF, Carr S, Waring J, Dixon-Woods M. The problem with root cause analysis. *BMJ Qual Saf.* 2017;26(5):417-422. doi:10.1136/bmjqs-2016-005511
70. Wu AW, Lipshutz AKM, Pronovost PJ. Effectiveness and Efficiency of Root Cause Analysis in Medicine. *JAMA.* 2008;299(6):685-687. doi:10.1001/jama.299.6.685
71. Balsler J, Ryu J, Hood M, Kaplan G, Perlin J, Siegel and B. *Care Systems COVID-19 Impact Assessment: Lessons Learned and Compelling Needs.* National Academy of Medicine; 2021. doi:10.31478/202104d
72. Classen DC, Resar R, Griffin F, et al. “Global trigger tool” shows that adverse events in hospitals may be ten times greater than previously measured. *Health Aff (Millwood).* 2011;30(4):581-589. doi:10.1377/hlthaff.2011.0190
73. Landrigan CP, Parry GJ, Bones CB, Hackbarth AD, Goldmann DA, Sharek PJ. Temporal Trends in Rates of Patient Harm Resulting from Medical Care. *New England Journal of Medicine.* 2010;363(22):2124-2134. doi:10.1056/NEJMsa1004404
74. Levinson DR. *Adverse Events in Hospitals: National Incidence Among Medicare Beneficiaries.* Department of Health and Human Services Office of Inspector General; 2010:81. Accessed September 29, 2018. <https://oig.hhs.gov/oei/reports/oei-06-09-00090.pdf>
75. Levinson DR. *Adverse Events in Hospitals: Case Study of Incidence Among Medicare Beneficiaries in Two Selected Counties.* Department of Health and Human Services Office of Inspector General; 2008. Accessed September 29, 2018. <https://oig.hhs.gov/oei/reports/oei-06-08-00220.pdf>

76. de Vries EN, Ramrattan MA, Smorenburg SM, Gouma DJ, Boermeester MA. The incidence and nature of in-hospital adverse events: a systematic review. *Qual Saf Health Care*. 2008;17(3):216-223. doi:10.1136/qshc.2007.023622
77. James JT. A New, Evidence-based Estimate of Patient Harms Associated with Hospital Care. *Journal of Patient Safety*. 2013;9(3):122. doi:10.1097/PTS.0b013e3182948a69
78. Levinson DR. *Adverse Events in Skilled Nursing Facilities: National Incidence Among Medicare Beneficiaries*. Department of Health and Human Services Office of Inspector General; 2014. Accessed December 9, 2019. <https://oig.hhs.gov/oei/reports/oei-06-14-00530.asp>
79. Levinson DR. *Adverse Events in Long-Term-Care Hospitals: National Incidence Among Medicare Beneficiaries Report*. Department of Health and Human Services Office of Inspector General; 2018. Accessed January 14, 2019. <https://oig.hhs.gov/oei/reports/oei-06-14-00530.asp>
80. Woods DM, Thomas EJ, Holl JL, Weiss KB, Brennan TA. Ambulatory care adverse events and preventable adverse events leading to a hospital admission. *Quality and Safety in Health Care*. 2007;16(2):127-131. doi:10.1136/qshc.2006.021147
81. National Patient Safety Foundation. *Free from Harm: Accelerating Patient Safety Improvement Fifteen Years after To Err Is Human*. National Patient Safety Foundation; 2015.
82. Agency for Healthcare Research and Quality. Patient Safety Primer: COVID-19: Team and Human Factors to Improve Safety. AHRQ Patient Safety Network. Published May 2020. Accessed June 4, 2020. <http://psnet.ahrq.gov/primer/covid-19-team-and-human-factors-improve-safety>
83. Amalberti R, Vincent C. Managing risk in hazardous conditions: improvisation is not enough. *BMJ Qual Saf*. 2020;29(1):60-63. doi:10.1136/bmjqs-2019-009443
84. Moscovitch B. Americans Want Federal Government to Make Sharing Electronic Health Data Easier. The Pew Charitable Trusts. Published September 16, 2020. Accessed June 15, 2021. <https://pew.org/3hqjFEV>
85. Kaldjian LC. Communication about medical errors. *Patient Educ Couns*. 2021;104(5):989-993. doi:10.1016/j.pec.2020.11.035
86. Agency for Healthcare Research and Quality. Patient Safety Primer: Culture of Safety. AHRQ Patient Safety Network. Published September 2019. Accessed December 1, 2020. <http://psnet.ahrq.gov/primer/culture-safety>

Appendix I. Adverse Events in Oregon

Demographics

Figure 1. Patient Race, 2021

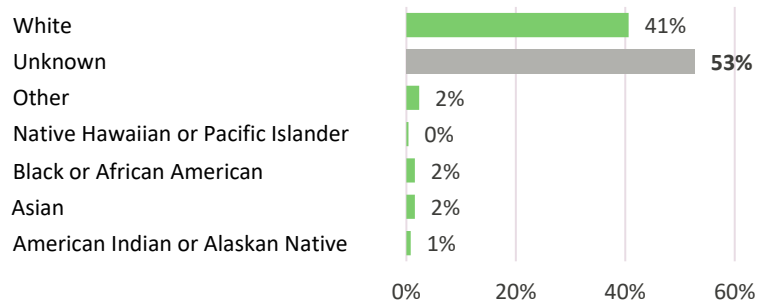


Figure 2. Patient Ethnicity, 2021

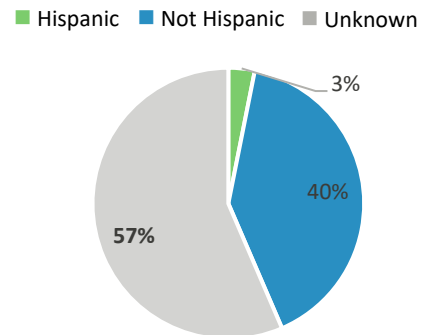


Figure 3. Patient Age Groups, 2021

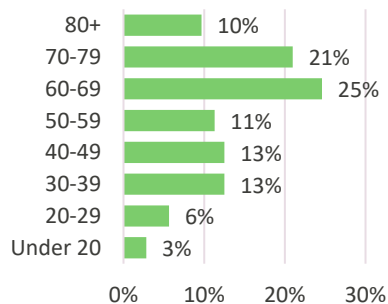
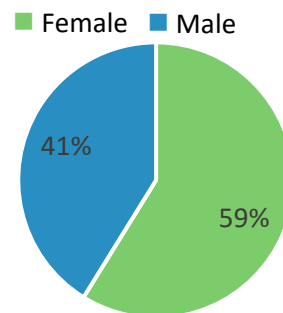


Figure 4. Patient Gender, 2021



Participation and Engagement

Four healthcare segments—ASCs, hospitals, nursing facilities, and pharmacies—are eligible to participate in the Patient Safety Reporting Program (PSRP). All eligible hospitals are enrolled in PSRP, while some ASCs, nursing facilities and pharmacies have not yet enrolled. Not all enrolled facilities submit reports every year.

Table 3. Percent of Eligible Facilities Enrolled and Percent of Enrolled Facilities that Submitted, by Segment, 2021

Segment	Enrolled	Eligible	% of Eligible That Are Enrolled	Number of Enrolled That Submitted	% of Enrolled That Submitted
ASC	67	93	72%	11	16%
Hospital	59	59	100%	30	51%
Nursing Facility	106	130	82%	1	1%
Pharmacy	113	696	16%	1	1%
Grand Total	345	978	35%	43	12%

Oregon facilities submitted 256 adverse event reports in 2021 (Table 4).

Table 4. Total Submissions by Segment, 2021

Segment	Number
ASC	44
Hospital	205
Nursing Facility	2
Pharmacy	4
Total	256

Event Type

In 2021, Oregon healthcare organizations voluntarily contributed 256 adverse event reports to PSRP for learning: 44 reports were from ASCs, 205 were from hospitals, 2 were from nursing facilities, and 4 were from pharmacies. Table 5 provides a list of the types of adverse events that Oregon healthcare facilities contributed to PSRP.

Table 5. Event Types by Segment, 2021

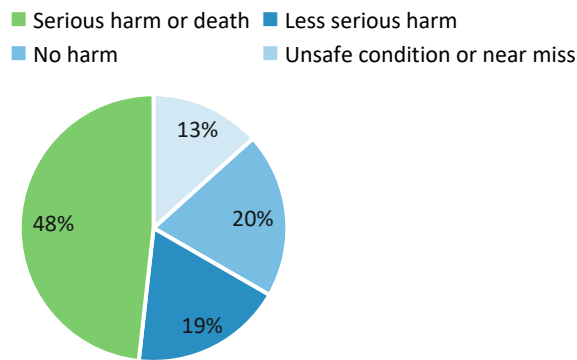
Event Type	ASC		Hospital		Nursing Facility		Pharmacy		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Fall	6	9%	24	11%					44	17%
Surgical or other invasive procedure	33	52%	15	7%					36	16%
Care delay			24	11%					29	11%
Medication or other substance	5	8%	18	8%			13	100%	28	11%
Device or supply	1	2%	19	9%					27	11%
Healthcare-associated infection (HAI)	11	17%	23	10%					20	8%
Retained object			18	8%					19	7%
Other	4	6%	12	5%					9	4%
Maternal			12	5%					8	3%
Pressure injury			27	12%					7	3%
Suicide or attempted suicide			8	4%					6	2%
Perinatal			5	2%					6	2%
Failure to follow up test results			5	2%					5	2%
Anesthesia	2	3%	1	0%					4	2%
Irretrievable loss of irreplaceable specimen	1	2%	1	0%					3	1%
Elopement			1	0%					3	1%
Aspiration			4	2%					3	1%
Radiologic			2	1%					2	1%
Blood or blood product			1	0%					2	0%
Burn									1	0.4%
Total Reports	44		205		2		4		256	

Event types that are unavailable to a particular segment are denoted with gray cells.

Harm Level

OPSC has adapted the National Coordinating Council for Medication Error Reporting and Prevention’s (NCC MERP) Medication Error Index (2001) to classify adverse events reported to PSRP according to the severity of the outcome. PSRP participants are required to report serious adverse events. Participants are also encouraged to report less serious harm events, no harm events, and near misses, because all events, regardless of harm, are prime opportunities to learn and improve systems of care. As expected from the program’s emphasis on serious adverse events, almost half of the reports submitted to PSRP in 2021 (48%) resulted in serious harm or death (Figure 5).

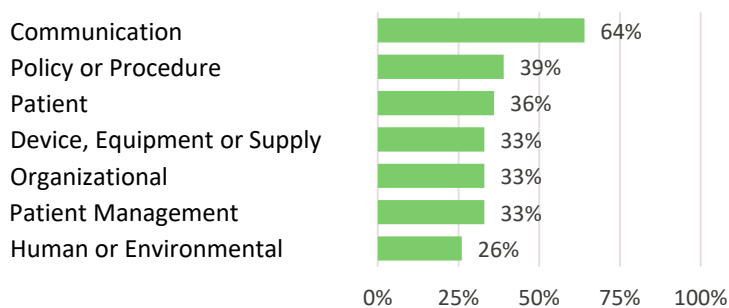
Figure 5. Harm Categories for All Segments, 2021



Contributing Factors

Contributing factors shed light on the circumstances or conditions that increased the likelihood of an event. By identifying system-level factors, such as communication and patient management factors, organizations have a solid starting point to uncover deeper system-level causes (or root causes) that can be addressed to prevent the event from recurring. PSRP reporters selected 54 individual contributing factors across seven categories (Figure 6).

Figure 6. Contributing Factor Categories, 2021

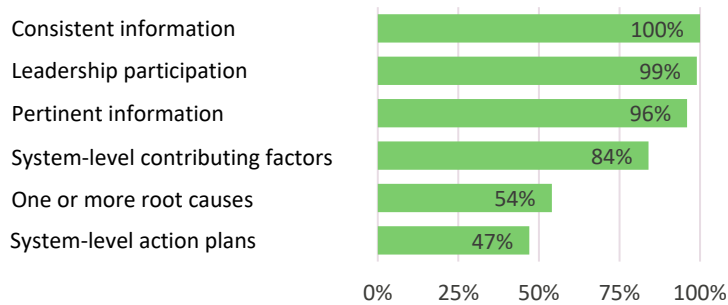


Quality

Event reports submitted to PSRP provide a window into an organization’s event review and analysis process. OPSC reviews reports based on a set of quality components, which serve as indicators of a strong event review and analysis process that can prevent future events. The two most frequently missing quality components were:

1. One or more system-level action plans designed to minimize risk
2. One or more root causes

Figure 7. Percent of Reports Receiving Each Quality Component, 2021



During the COVID-19 pandemic, healthcare facility resources have been strained and staffing has been a significant problem.⁷¹ Adverse event investigations and analysis require a significant investment in time and resources in order to be successful.^{7,30,68–70} They can take months to complete, with final analysis of root causes and action planning occurring at the end of the process.

Just over a third of submitted reports (37%) included all six elements necessary for acceptable quality. Less than 20% of ASC reports and no Pharmacy reports were acceptable quality (Table 6).

Table 6. Acceptable Quality by Segment (2021)

Segment	Number	Percent
ASC (n=46)	6	14%
Hospital (n=205)	86	42%
Nursing Facility (n=2)	2	100%
Pharmacy (n=4)	0	0%
All Segments (n=255)	157	53%

Appendix II. Foundational Reading

A selection of resources we are looking at to inform our Patient Safety Reporting Program analysis.



Safer Together: A National Action Plan to Advance Patient Safety

Institute for Healthcare Improvement (IHI), 2020 | National Steering Committee for Patient Safety

Key takeaways: *Safer Together* addresses a key issue hindering patient safety progress over the past 20 years: everyone is approaching patient safety independently and learning is siloed within organizations. Effective implementation of evidence-based best practices at a national level requires a shared framework. *Safer Together* is a national action plan to give everyone the same framework for patient safety improvement. It focuses on infrastructure and culture, and it includes a self-assessment tool for organizations and an implementation resource guide. This national action plan focuses on the systems and infrastructure organizations have in place rather than specific solutions to individual problems. OPSC is uniquely positioned to support collaboration and learning across Oregon, so that we can make progress as a state.



Advancing Racial Equity in America

[National Academies of Sciences, Engineering and Medicine](#), 2021 | Molly Galvin and Sara Frueh

Key takeaways: This statement from the National Academies of Sciences, Engineering and Medicine articulates the urgency with which we must act to address racial inequity. *Advancing Racial Equity in America* describes the problems created by systemic racism in the domains of healthcare, criminal justice and the fields of science, engineering, and medicine, as well as the work the National Academies are doing to inform meaningful change. The Academies recognize that these are complex, structural problems that require coordinated efforts across multiple domains. OPSC's mission to encourage a culture of safety is not achievable if our efforts do not explicitly acknowledge and address systemic racism.



Health Care Equity: From Fragmentation to Transformation

NEJM Catalyst, 2020 | Karthik Sivashanker, Tam Duong, Andrew Resnick, Sunil Eappen

Key takeaways: The authors provide a four-tier framework for evaluating and improving quality measurement to support the advancement of health equity. Healthcare organizations cannot provide high quality care if they do not first provide equitable care. *Safer Together* outlines a coordinated, system-focused plan to advance patient safety that incorporates equity as a core principle and cross-cutting theme for all of its recommendations. *Health Care Equity* outlines the practical application of that principle which OPSC can use in support of our mission. The first tier of the framework is access, which "refers to whether patients can even gain entry to the health care system." As OPSC gathers information to inform the future of the reporting program, we will pay special attention to providing equitable access to participate in our process.



Safety Analysis over Time: Seven Major Changes to Adverse Event Investigation

Implementation Science, 2017 | Vincent, Charles A., Jane Carthey, Carl Macrae, and Rene Amalberti

Key takeaways: The authors reassess adverse event investigation methods used in healthcare and find that they are no longer meeting our needs. They make seven recommendations aimed at improving the efficacy of investigations. Some of their recommendations, like working together across organizational boundaries, could be facilitated by organizations like OPSC.



Patient Safety Incident Reporting: A Qualitative Study of Thoughts and Perceptions of Experts 15 Years after 'To Err Is Human'

BMJ Quality & Safety, 2016 | Imogen Mitchell, Anne Schuster, Katherine Smith, Peter Pronovost, and Albert W. Wu

Key takeaways: The authors interviewed 11 patient safety experts to understand what had changed about our understanding of incident reporting since the publication of *To Err is Human*. The experts identified five key challenges to explain why incident reporting doesn't seem to be associated with safer care. All five challenges (and their associated recommendations) are about the systems facilities have in place to do the work that results from incident reporting rather than the content of the reports themselves. Currently, OPSC's evaluation of PSRP adverse event reports focuses on the report content without information to understand the systems that facilities have in place to analyze incident reports and implement proposed solutions.



Learning from Incidents in Healthcare: The Journey, Not the Arrival, Matters

BMJ Quality & Safety, 2017 | Ian Leistikow, Sandra Mulder, Jan Vesseur, and Paul Robben

Key takeaways: Based on evolving patient safety science, the Netherlands Healthcare Inspectorate changed how they evaluate adverse event reports submitted to their national reporting program. They stopped evaluating the specific events and their associated solutions ("what hospitals learn") and focused instead on facilities' learning processes ("how hospitals learn"). The article concludes that, while more research is needed, "shifting the goal of incident reporting systems from solving specific safety issues to improving the process of learning seems a promising strategy." Currently, OPSC's evaluation of PSRP adverse event reports focuses on the report content without information to understand the systems that facilities have in place to analyze incident reports and implement proposed solutions.

Appendix III. OPSC's Board of Directors

The Oregon Patient Safety Commission (OPSC) Board of Directors is made up of 17 members, reflecting the diversity of facilities, providers, insurers, purchasers, and consumers that are involved in patient safety. The board serves as the governing body for OPSC to further OPSC's mission.

Amanda Bemetz BSN, RN-BC, PCCN-K

Bay Area Hospital

Position: Nurse

Smitha Chadaga MD, FHM, FACP

Legacy Health

Position: Physician

Bob Dannenhoffer MD

Douglas County Public Health

Position: Physician

Lisa Bui MBA

Oregon Health Authority

Position: Public Purchaser

Mary Engrav MD, FACEP **VICE CHAIR**

Care Oregon

Position: Health Insurer

Heather Hurst MSN, RN, CCRN-SCRN-CNRN

Kaiser Permanente

Position: Labor Representative

Leah Mitchell MSN, BS, RN **TREASURER**

Salem Health

Position: Hospital Administrator

Kristi Ketchum RN, MBA, HACP, CPHQ

Surgical Care Affiliates

Position: Ambulatory Surgery Center Representative

Linda Kirschbaum

Oregon Health Care Association

Position: Nursing Facility Representative

Judy Marvin MD **CHAIR**

Providence Health and Services

Position: Health Insurer

Jessica Morris

Meals on Wheels People

Position: Healthcare Consumer

Dana Selover MD, MPH

Oregon Health Authority

Position: Public Health Officer

Vacant

Position: Faculty Member

Vacant

Position: Healthcare Consumer

Vacant

Position: Hospital Administrator

Vacant

Position: Private Purchaser

Vacant

Position: Pharmacist