

Patient Safety Trends in 2024: An Analysis of 315,418 Serious Events and Incidents From the Nation's Largest Event Reporting Database

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Abstract

Background: The Pennsylvania Patient Safety Reporting System (PA-PSRS) is the largest patient safety data repository of its kind in the United States and one of the largest globally, housing over 5 million reports submitted since 2004. In this article, we present data from reports submitted to PA-PSRS in 2024.

Methods: We used data extracted from PA-PSRS and obtained from the Pennsylvania Health Care Cost Containment Council (PHC4). Report counts are based on the date the report was submitted, while reporting rates are calculated using the event occurrence date. Rates are expressed per 1,000 patient days for hospitals or 1,000 surgical encounters for ambulatory surgical facilities (ASFs).

Results: In 2024, 315,418 reports were submitted to PA-PSRS, marking a 9.5% increase from 2023. Reports of serious events rose by 7.3%, while high harm events increased by 1.1%. Of all reports, 96.0% came from hospitals, while

4.0% originated from nonhospital facilities (ASFs, birthing centers, and abortion facilities). The vast majority (96.0%) were incidents, while the remaining 4.0% were classified as serious events. Preliminary 2024 reporting rates show 32.2 reports per 1,000 patient days for hospitals and 11.4 reports per 1,000 surgical encounters for ASFs, with both rates increasing by 1.1 points from 2023. Error Related to Procedure/Treatment/Test (P/T/T) remained the most frequently reported event type overall, accounting for 33.4% of reports from all facilities combined and 47.6% from nonhospital facilities. Among serious events, Complication of P/T/T was the most common type, making up 57.7% of serious event reports from all facilities combined and 71.4% from nonhospital facilities.

Conclusion: In 2024, the total number of reports, serious event reports, and high harm event reports increased, as did the preliminary reporting rates for hospitals and ASFs. The Patient Safety Authority will continue working with Pennsylvania healthcare facilities to enhance reporting quality and promote patient safety.

Introduction

Pennsylvania is the only state that requires healthcare facilities to report all events that cause harm or have the potential to cause harm to a patient. These patient safety events are reported to the Pennsylvania Patient Safety Reporting System (PA-PSRS)^a, which is the largest patient safety data repository of its kind in the United States and one of the largest globally, housing over 5 million reports submitted since 2004.

In this article, we present data from reports submitted to PA-PSRS in 2024 and offer comparisons and insights to highlight potential areas for patient safety improvement.

Definitions

While many terms are commonly used interchangeably to describe the occurrence and severity of patient safety events, in the context of this manuscript they hold distinct meanings and indications for reporting to PA-PSRS under the Medical Care Availability and Reduction of Error (MCARE) Act (Act 13 of 2002).¹ As defined in MCARE, an “incident” is “an event, occurrence, or situation involving the clinical care of a patient in a medical facility which could have injured the patient but did not either cause an unanticipated injury or require the delivery of additional healthcare services

to the patient”¹ and a “serious event” is “an event, occurrence, or situation involving the clinical care of a patient in a medical facility that results in death or compromises patient safety and results in an unanticipated injury requiring the delivery of additional healthcare services to the patient.”¹

Each event report includes a harm score, assigned by the reporting facility, which indicates the potential or actual harm to the patient resulting from the event. **Table 1** provides the definitions for each harm score, as well as the groupings for incidents, serious events, and high harm events.

Methods

This analysis was conducted using data extracted from PA-PSRS on February 1, 2025, along with data from the Pennsylvania Health Care Cost Containment Council (PHC4)^b. Report counts are based on the date the report was submitted, while reporting rates are calculated using the event occurrence date. Rates are expressed per 1,000 patient days for hospitals and per 1,000 surgical encounters for ambulatory surgical facilities (ASFs). The event occurrence date is used for rate calculations to maintain consistency with the time frame of patient days or surgical encounters. At the time of this analysis, PHC4 data was available through Q2 2024, allowing for the calculation of 2024 rates using the first two quarters of PA-PSRS data.

Table 1. PA-PSRS Harm Scores

	Harm Score	Definition
Incidents	A	Circumstances that could cause adverse events (e.g., look-alike medications, confusing equipment)
	B1	An event occurred but it did not reach the individual because of chance alone
	B2	An event occurred but it did not reach the individual because of active recovery efforts by caregivers
	C	An event occurred that reached the individual but did not cause harm and did not require increased monitoring
	D	An event occurred that required monitoring to confirm that it resulted in no harm and/or required intervention to prevent harm
Serious Events	E	An event occurred that contributed to or resulted in temporary harm and required treatment or intervention
	F	An event occurred that contributed to or resulted in temporary harm and required initial or prolonged hospitalization
High Harm	G	An event occurred that contributed to or resulted in permanent harm
	H	An event occurred that resulted in a near-death event (e.g., required ICU care or other intervention necessary to sustain life)
	I	An event occurred that contributed to or resulted in death

^aPA-PSRS is a secure, web-based system through which Pennsylvania hospitals, ambulatory surgical facilities, abortion facilities, and birthing centers submit reports of patient safety-related incidents and serious events in accordance with mandatory reporting laws outlined in the Medical Care Availability and Reduction of Error (MCARE) Act (Act 13 of 2002).¹ All reports submitted through PA-PSRS are confidential and no information about individual facilities or providers is made public.

^bThe Pennsylvania Health Care Cost Containment Council (PHC4) is an independent state agency responsible for addressing the problem of escalating health costs, ensuring the quality of healthcare, and increasing access to healthcare for all citizens regardless of ability to pay. PHC4 has provided data to this entity in an effort to further PHC4’s mission of educating the public and containing healthcare costs in Pennsylvania. PHC4, its agents, and its staff have made no representation, guarantee, or warranty, express or implied, that the data—financial-, patient-, payor-, and physician-specific information—provided to this entity are error-free, or that the use of the data will avoid differences of opinion or interpretation. This analysis was not prepared by PHC4. This analysis was done by the Patient Safety Authority. PHC4, its agents, and its staff bear no responsibility or liability for the results of the analysis, which are solely the opinion of this entity.

Results

As shown in **Figure 1**, 315,418 reports were submitted in 2024, marking a 9.5% increase (27,424 reports) compared to 2023. This is the second largest percentage increase since 2006, following the highest increase in 2023. Of the 315,418 reports in 2024, 12,602 were classified as serious events, 617 of which were high harm. The number of serious and high harm event reports increased from 2023 by 7.3% and 1.1%, respectively. **Figure 2** illustrates the proportion of incidents and serious events within all reports. In 2024, 4.0% of reports were classified as serious events, the second highest percentage since the first full year of PA-PSRS reporting in 2005.

Table 2 shows a breakdown of incidents and serious events by facility type from the past three years. From 2023 to 2024, the number of reports submitted by hospitals increased by 26,321 (9.5%), and reports from nonhospital facilities (i.e., ASFs, birthing centers [BRCs], and abortion facilities [ABFs]) increased by 1,103 (9.5%).

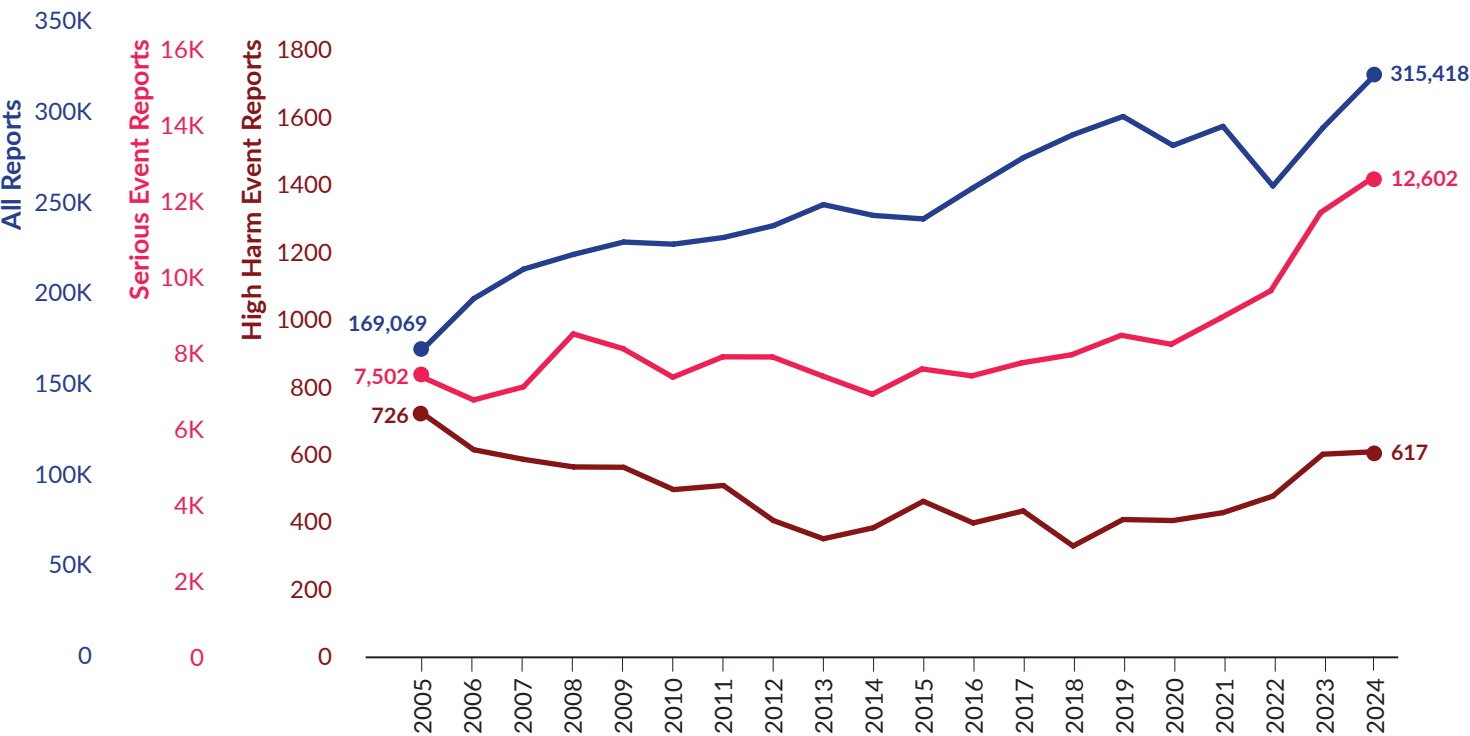
Table 3 displays harm score distributions for reports submitted from 2022 to 2024. While harm score C remained the most common classification in 2024, harm score D showed the largest increase

in number. Serious events accounted for 4.0% of all reports submitted in 2024, with harm scores E and F being reported most frequently. The largest percentage increase was observed with harm score B1, which rose by 45.9%. A closer examination of the B1 reports indicates that this increase was predominated by a few specific facilities rather than representing a widespread pattern across the state.

Reporting Rates Based on Event Occurrence Date

Unlike raw report counts, reporting rates provide a standardized measure for comparison over time. As shown in **Figure 3**, the preliminary hospital reporting rate for Q1 to Q2 of 2024 is 32.2 reports per 1,000 patient days, 1.1 points higher than the full-year 2023 rate. Similarly, **Figure 4** shows that the preliminary ASF reporting rate for 2024 is 11.4 reports per 1,000 surgical encounters, also reflecting a 1.1-point increase from 2023 and continuing the steady upward increase in ASF reporting.

Figure 1. All Reports, Serious Event Reports, and High Harm Event Reports Submitted to PA-PSRS



Note: High harm event reports are a subset of serious event reports, and serious event reports are a subset of all reports.

Figure 2. Incidents and Serious Events as a Percentage of All Reports Submitted to PA-PSRS

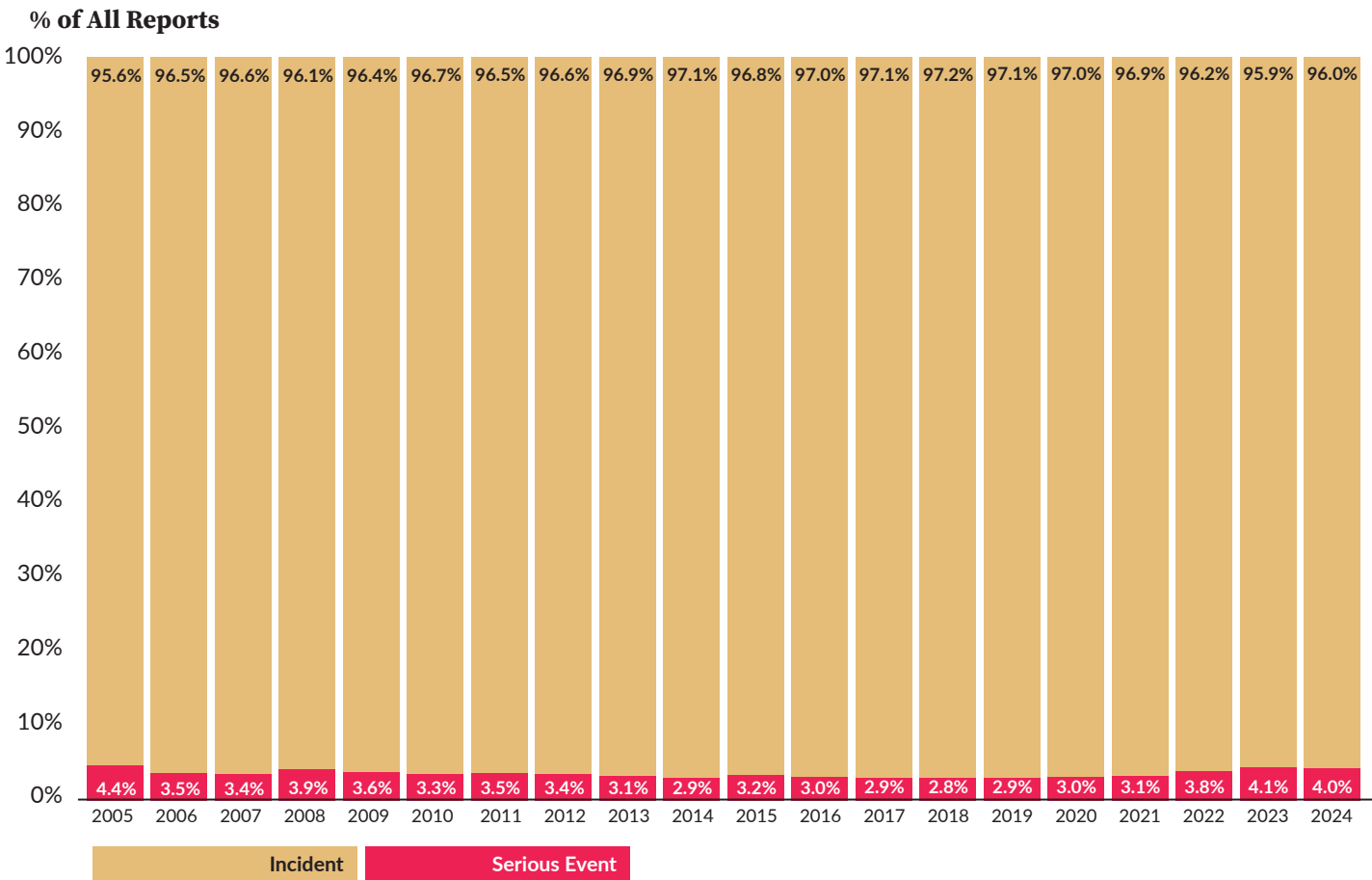


Table 2. Number and Percentage of Reports Submitted to PA-PSRS by Facility Type and Event Classification

Facility Types	Event Classification	Number of Reports			% of Total Reports		
		2022	2023	2024	2022	2023	2024
Hospitals	Incident	238,359	266,724	292,209	92.9%	92.6%	92.6%
	Serious Event	7,755	9,696	10,532	3.0%	3.4%	3.3%
	Subtotal	246,114	276,420	302,741	95.9%	96.0%	96.0%
Nonhospital Facilities	Incident	8,569	9,520	10,607	3.3%	3.3%	3.4%
	Serious Event	1,986	2,054	2,070	0.8%	0.7%	0.7%
	Subtotal	10,555	11,574	12,677	4.1%	4.0%	4.0%
All Facilities Combined	Incident	246,928	276,244	302,816	96.2%	95.9%	96.0%
	Serious Event	9,741	11,750	12,602	3.8%	4.1%	4.0%
	Total	256,669	287,994	315,418	100.0%	100.0%	100.0%

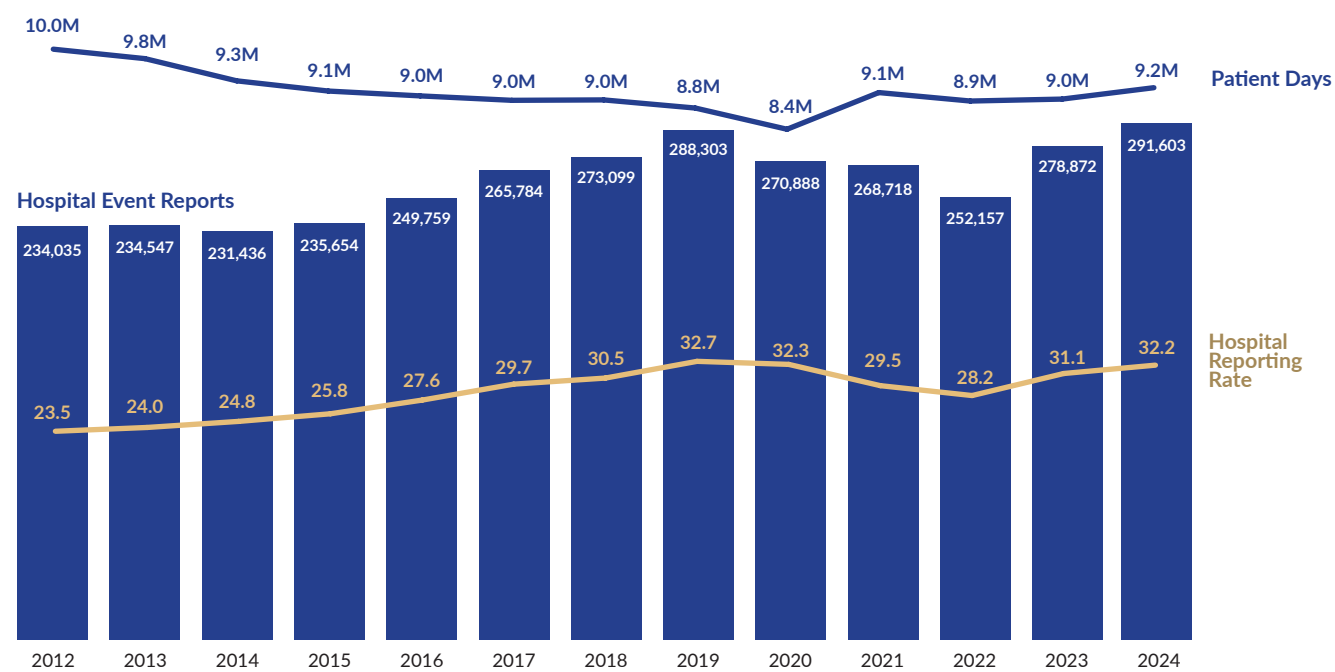
Note: Nonhospital Facilities include ambulatory surgical facilities, birthing centers, and abortion facilities. Numbers shown for prior years may differ from previously published numbers due to subsequent report deletions or classification changes made by reporting facilities. Sums of % of Total Reports for Event Classification may not equal the Subtotals and Total due to rounding.

Table 3. Number and Percentage of Reports Submitted to PA-PSRS by Harm Score With Change in Reports From 2023 to 2024

Harm Score	Number of Reports			% of Total Reports			Change in Reports 2023 to 2024	
	2022	2023	2024	2022	2023	2024	Number	Percent
A	29,658	32,725	29,631	11.6%	11.4%	9.4%	-3,094	-9.5%
B1	2,042	2,617	3,817	0.8%	0.9%	1.2%	1,200	45.9%
B2	22,236	26,668	31,655	8.7%	9.3%	10.0%	4,987	18.7%
C	105,104	118,753	129,399	40.9%	41.2%	41.0%	10,646	9.0%
D	87,888	95,481	108,314	34.2%	33.2%	34.3%	12,833	13.4%
Incidents - Subtotal	246,928	276,244	302,816	96.2%	95.9%	96.0%	26,572	9.6%
E	6,811	8,081	8,819	2.7%	2.8%	2.8%	738	9.1%
F	2,442	3,059	3,166	1.0%	1.1%	1.0%	107	3.5%
G	53	97	65	<0.05%	<0.05%	<0.05%	-32	-33.0%
H	165	211	271	0.1%	0.1%	0.1%	60	28.4%
I	270	302	281	0.1%	0.1%	0.1%	-21	-7.0%
Serious Events - Subtotal	9,741	11,750	12,602	3.8%	4.1%	4.0%	852	7.3%
Total	256,669	287,994	315,418	100.0%	100.0%	100.0%	27,424	9.5%

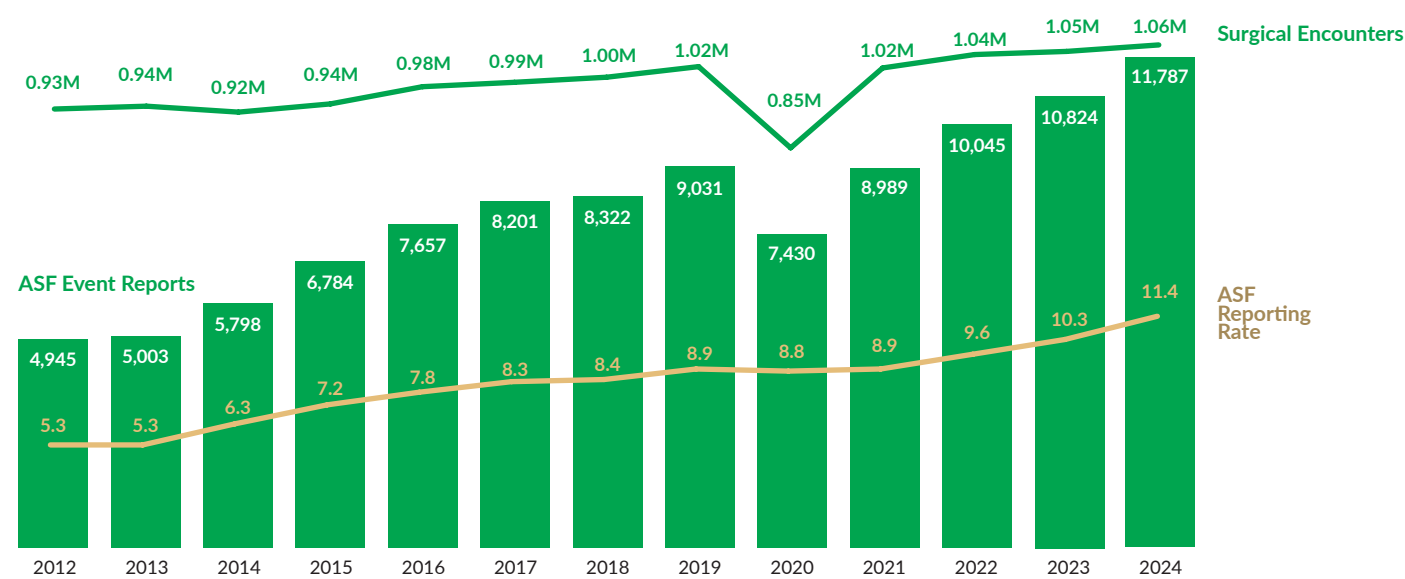
Note: Numbers shown for prior years may differ from previously published numbers due to subsequent report deletions or harm score changes made by reporting facilities. All percentages that are greater than 0 but would otherwise round to 0.0% are displayed as <0.05%. Sums of % of Total Reports may not collectively equal the Subtotals and Total due to rounding.

Figure 3. Hospital Event Reports, Patient Days, and Reporting Rates by Year



Note: The number of hospital event reports shown for each year is based on event occurrence date, rather than report submission date, to ensure consistency with the time frame in which the patient days occurred. The 2024 hospital reporting rate is based on event occurrence dates in Q1–Q2 only due to lagged data related to patient days. Rates shown for prior years may differ from previously published rates due to subsequent changes made by reporting facilities.

Figure 4. ASF Event Reports, Surgical Encounters, and Reporting Rates by Year



Note: The number of ASF event reports shown for each year is based on event occurrence date, rather than report submission date, to ensure consistency with the time frame in which the surgical encounters occurred. The 2024 ASF reporting rate is based on event occurrence dates in Q1–Q2 only due to lagged data related to surgical encounters. Rates shown for prior years may differ from previously published rates due to subsequent changes made by reporting facilities.

Event Types

Each PA-PSRS report includes an event type and subtype(s) that are assigned by the reporting facility. The reporting taxonomy for incidents and serious events provides for 10 main event types, with 228 possible combinations of event type and subtype.

Table 4 shows the number and percentage of all reports submitted for each main event type from 2020 to 2024. Over the past five years, the most frequently reported event type has been Error Related to Procedure/Treatment/Test (P/T/T), with 105,224 reports submitted in 2024, accounting for 33.4% of all reports. From a distribution perspective, the proportion of Equipment/Supplies/Devices reports grew more than any other event type in 2024, rising 0.4 percentage points from 3.3% in 2023 to 3.7% in 2024. Medication Error reports showed the largest decline, dropping from 14.1% in 2023 to 13.6% in 2024, a decrease of 0.5 percentage points.

Table 5 shows the number and percentage of serious event reports submitted for each main event type from 2020 to 2024. Over the past five years, Complication of P/T/T has been the most frequently reported serious event type, and in 2024 it showed the largest increase in reports, with 595 more submissions than the previous year. From a distribution standpoint, the largest increase was also seen for Complication of P/T/T for the second consecutive year, rising by 0.9 percentage points from 56.1% in 2023 to 57.0% in 2024. Skin Integrity reports showed the largest decline, decreasing by 0.5 percentage points in 2024. Notably, reports of serious Adverse Drug Reactions (ADRs) have shown a steady increase both in absolute numbers and as a proportion of serious event reports over the past five years. Further analysis reveals this trend is primarily driven by a small number of facilities that have individually demonstrated significant upward reporting patterns during this period. In fact, just two facilities account for 89.1% of the increase observed between 2023 and 2024.

Event Subtypes

Each of the 10 main event types is further classified into subtypes, with each type having between six and 13 subtypes. **Table 6** provides a detailed breakdown of all reports and serious event reports, along with their percentage distributions, based on the first level of subtypes for each main event type.

The event subtype with the largest increase in number of reports submitted from 2023 to 2024 was Other/Miscellaneous–Other (specify). Additionally, three subtypes under the Error Related to P/T/T event type saw increases of more than 2,000 reports in 2024: Radiology/imaging test problem, Other (specify), and Surgery/invasive procedure problem. The subtypes with the largest increase in serious event reports from 2023 to 2024 were under the Complication of P/T/T event type: Complication following surgery or invasive procedure, which increased by 111 serious event reports, followed by Catheter or tube problem, which increased by 90 serious event reports.

Event Type and Harm Score

Table 7 presents a cross tabulation of submitted reports by harm score for each of the 10 main event types. The colored cells highlight the most common intersections of event type and harm score in 2024, with darker shades indicating higher concentrations of reports. The intersection of Error Related to P/T/T and harm score C was the most common in 2024, with 52,305 reports and representing 16.6% of all reports. The second most common intersection was Complication of P/T/T and harm score D, with 24,958 reports, representing 7.9% of all reports.

Care Area and Harm Score

Within PA-PSRS, facilities have 168 options to specify the care area where an event occurred. These care areas are then grouped into 23 broader care area group categories. **Table 8** shows a cross tabulation of care area group with harm score. This reflects the same two areas of highest concentration that were seen in the data from 2023, in the cross sections of the Med/Surg care area group and harm scores C and D.

Care Area and Event Type

Table 9 shows a cross tabulation of care area group and event type. The three highest concentrations of reports are at the intersections of care area groups Surgical Services and Emergency with Error Related to P/T/T and of Med/Surg with Fall.

Nonhospital Facilities

Since the data primarily reflects reports from hospitals, it is important to separately analyze data from nonhospital facilities—mainly ASFs, along with BRCs and ABFs—to identify patient safety issues specific to those settings. **Table 10** presents the distribution of reports submitted by these facilities across the 10 main event types from 2020 to 2024. Compared to all facilities combined (**Table 4**), reports from nonhospital facilities show a distinct distribution. While Error Related to P/T/T remains the most common event type overall, it accounts for a larger share of reports from nonhospital facilities (47.6%) than from all facilities combined (33.4%). Reports of this event type from nonhospital facilities have increased annually, with a notable rise of 1,187 reports (24.5%) between 2023 and 2024. Further analysis indicates that this increase is primarily driven by reports of procedures that were canceled or not performed, with four facilities accounting for more than one-third of the increase.

Table 11 displays the distribution of serious event reports reported by nonhospital facilities from 2020 to 2024. These reports also show a different distribution compared to all facilities (**Table 5**). While Complication of P/T/T remains the most common serious event type overall, it represents a larger proportion of serious event reports from nonhospital facilities (71.4%) compared to all facilities combined (57.0%).

Table 4. Number and Percentage of **All Reports** Submitted to PA-PSRS by Event Type in Descending Order by 2024 Frequency

Event Type	Number of Reports					% of Total Reports				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Error Related to P/T/T	89,335	90,452	84,287	95,189	105,224	32.1%	31.3%	32.8%	33.1%	33.4%
Complication of P/T/T	45,180	44,129	40,144	45,012	49,305	16.2%	15.3%	15.6%	15.6%	15.6%
Medication Error	46,559	48,714	33,980	40,680	42,769	16.7%	16.9%	13.2%	14.1%	13.6%
Fall	32,775	35,600	32,918	32,606	35,450	11.8%	12.3%	12.8%	11.3%	11.2%
Other/Miscellaneous	23,190	27,707	26,649	31,562	34,372	8.3%	9.6%	10.4%	11.0%	10.9%
Skin Integrity	19,697	20,583	17,146	17,930	20,125	7.1%	7.1%	6.7%	6.2%	6.4%
Equipment/Supplies/Devices	8,062	7,806	7,552	9,403	11,690	2.9%	2.7%	2.9%	3.3%	3.7%
Adverse Drug Reaction	5,624	5,868	6,526	7,063	7,582	2.0%	2.0%	2.5%	2.5%	2.4%
Transfusion	5,779	5,648	5,235	6,033	6,372	2.1%	2.0%	2.0%	2.1%	2.0%
Patient Self-Harm	2,329	2,351	2,232	2,516	2,529	0.8%	0.8%	0.9%	0.9%	0.8%
Total	278,530	288,858	256,669	287,994	315,418	100%	100%	100%	100%	100%

Note: Numbers shown for prior years may differ from previously published numbers due to subsequent report deletions or event type changes made by reporting facilities. The sum of % of Total Reports may not equal the Total due to rounding.

Table 5. Number and Percentage of **Serious Event Reports** Submitted to PA-PSRS by Event Type in Descending Order by 2024 Frequency

Event Type	Number of Reports					% of Total Reports				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Complication of P/T/T	4,577	4,907	5,216	6,590	7,185	54.7%	54.3%	53.5%	56.1%	57.0%
Fall	940	1,046	1,140	1,097	1,119	11.2%	11.6%	11.7%	9.3%	8.9%
Other/Miscellaneous	708	849	850	919	950	8.5%	9.4%	8.7%	7.8%	7.5%
Adverse Drug Reaction	344	430	577	783	939	4.1%	4.8%	5.9%	6.7%	7.5%
Error Related to P/T/T	753	729	831	905	938	9.0%	8.1%	8.5%	7.7%	7.4%
Skin Integrity	575	610	633	765	759	6.9%	6.7%	6.5%	6.5%	6.0%
Medication Error	166	172	227	294	269	2.0%	1.9%	2.3%	2.5%	2.1%
Patient Self-Harm	166	171	141	234	244	2.0%	1.9%	1.4%	2.0%	1.9%
Equipment/Supplies/Devices	77	96	86	105	108	0.9%	1.1%	0.9%	0.9%	0.9%
Transfusion	58	33	40	58	91	0.7%	0.4%	0.4%	0.5%	0.7%
Total	8,364	9,043	9,741	11,750	12,602	100%	100%	100%	100%	100%

Note: Numbers shown for prior years may differ from previously published numbers due to subsequent report deletions or event type changes made by reporting facilities. The sum of % of Total Reports may not equal the Total due to rounding.

Table 6. Number and Percentage of All Reports and Serious Event Reports Submitted to PA-PSRS by Event Type and Subtype in Descending Order by 2024 Frequency

		2023				2024							
		All Reports		Serious Event Reports		All Reports		Serious Event Reports					
		Number of Reports	% of Total Reports	Number of Reports	% of Total Reports	Number of Reports	% of Total Reports	Number of Reports	% of Total Reports	Change in All Reports			
Event Type	Event Subtype									Number		Percent	
Error Related to P/T/T	Laboratory test problem	40,034	13.9%	62	0.5%	41,814	13.3%	54	0.4%	1,780		4.4%	
	Surgery/invasive procedure problem	22,118	7.7%	662	5.6%	24,338	7.7%	692	5.5%	2,220		10.0%	
	Referral/consult problem	9,772	3.4%	15	0.1%	10,217	3.2%	11	0.1%	445		4.6%	
	Other (specify)	9,160	3.2%	66	0.6%	11,561	3.7%	69	0.5%	2,401		26.2%	
	Radiology/imaging test problem	8,199	2.8%	52	0.4%	10,861	3.4%	61	0.5%	2,662		32.5%	
	Respiratory care	3,128	1.1%	40	0.3%	3,312	1.1%	38	0.3%	184		5.9%	
	Dietary	2,778	1.0%	8	0.1%	3,121	1.0%	13	0.1%	343		12.3%	
Complication of P/T/T	IV site complication (phlebitis, bruising, infiltration)	12,311	4.3%	350	3.0%	13,476	4.3%	392	3.1%	1,165		9.5%	
	Other (specify)	7,593	2.6%	530	4.5%	8,787	2.8%	579	4.6%	1,194		15.7%	
	Complication following surgery or invasive procedure	6,250	2.2%	3,698	31.5%	6,595	2.1%	3,811	30.2%	345		5.5%	
	Maternal complication	3,414	1.2%	511	4.3%	3,199	1.0%	574	4.6%	-215		-6.3%	
	Catheter or tube problem	3,056	1.1%	221	1.9%	3,643	1.2%	311	2.5%	587		19.2%	
	Cardiopulmonary arrest outside of ICU setting	3,025	1.1%	72	0.6%	3,634	1.2%	104	0.8%	609		20.1%	
	Extravasation of drug or radiologic contrast	2,662	0.9%	71	0.6%	3,153	1.0%	101	0.8%	491		18.4%	
	Neonatal complication	2,461	0.9%	150	1.3%	2,318	0.7%	210	1.7%	-143		-5.8%	
	Anesthesia event	1,227	0.4%	283	2.4%	1,291	0.4%	313	2.5%	64		5.2%	
	Healthcare-associated infection	1,212	0.4%	567	4.8%	1,317	0.4%	635	5.0%	105		8.7%	
	Onset of hypoglycemia during care	1,061	0.4%	34	0.3%	927	0.3%	28	0.2%	-134		-12.6%	
	Emergency department	736	0.3%	102	0.9%	964	0.3%	127	1.0%	228		31.0%	
	Complication following spinal manipulative therapy	4	<0.05%	1	<0.05%	1	<0.05%	0	0.0%	-3		-75.0%	
Medication Error	Wrong	15,129	5.3%	128	1.1%	16,136	5.1%	119	0.9%	1,007		6.7%	
	Other (specify)	10,935	3.8%	46	0.4%	11,381	3.6%	36	0.3%	446		4.1%	
	Dose omission	4,755	1.7%	37	0.3%	5,010	1.6%	31	0.2%	255		5.4%	
	Prescription/refill delayed	3,446	1.2%	5	<0.05%	3,408	1.1%	5	<0.05%	-38		-1.1%	
	Monitoring error (includes contraindicated drugs)	2,610	0.9%	35	0.3%	2,939	0.9%	40	0.3%	329		12.6%	
	Extra dose	2,024	0.7%	27	0.2%	1,905	0.6%	26	0.2%	-119		-5.9%	
	Medication list incorrect	904	0.3%	15	0.1%	1,128	0.4%	11	0.1%	224		24.8%	
	Unauthorized drug	792	0.3%	1	<0.05%	763	0.2%	1	<0.05%	-29		-3.7%	
	Inadequate pain management	85	<0.05%	0	0.0%	99	<0.05%	0	0.0%	14		16.5%	
Fall	Found on floor	7,687	2.7%	351	3.0%	8,786	2.8%	383	3.0%	1,099		14.3%	
	Ambulating	5,319	1.8%	256	2.2%	5,730	1.8%	244	1.9%	411		7.7%	
	Other/Unknown (specify)	4,242	1.5%	69	0.6%	4,420	1.4%	89	0.7%	178		4.2%	
	Toileting	3,227	1.1%	152	1.3%	3,566	1.1%	153	1.2%	339		10.5%	
	Lying in bed	2,968	1.0%	51	0.4%	2,921	0.9%	60	0.5%	-47		-1.6%	
	Assisted fall	2,762	1.0%	18	0.2%	3,531	1.1%	26	0.2%	769		27.8%	
	Sitting in chair/wheelchair	2,730	0.9%	60	0.5%	2,751	0.9%	53	0.4%	21		0.8%	

Table 6. (continued.)

		2023				2024							
		All Reports		Serious Event Reports		All Reports		Serious Event Reports					
		Number of Reports	% of Total Reports	Number of Reports	% of Total Reports	Number of Reports	% of Total Reports	Number of Reports	% of Total Reports	Change in All Reports			
Event Type	Event Subtype									Number		Percent	
Fall (cont.)	Sitting at side of bed	1,140	0.4%	30	0.3%	1,048	0.3%	31	0.2%		-92		-8.1%
	Transferring	902	0.3%	36	0.3%	1,045	0.3%	21	0.2%		143		15.9%
	Hallways of facility	659	0.2%	26	0.2%	710	0.2%	16	0.1%		51		7.7%
	From stretcher	398	0.1%	28	0.2%	422	0.1%	19	0.2%		24		6.0%
	Grounds of facility	288	0.1%	9	0.1%	291	0.1%	13	0.1%		3		1.0%
	In exam room/from exam table	284	0.1%	11	0.1%	229	0.1%	11	0.1%		-55		-19.4%
Other/ Miscellaneous	Other (specify)	20,929	7.3%	398	3.4%	23,611	7.5%	439	3.5%		2,682		12.8%
	Unanticipated transfer to higher level of care	8,777	3.0%	449	3.8%	9,047	2.9%	450	3.6%		270		3.1%
	Inappropriate discharge	1,769	0.6%	7	0.1%	1,628	0.5%	9	0.1%		-141		-8.0%
	Other unexpected death	82	<0.05%	60	0.5%	83	<0.05%	49	0.4%		1		1.2%
	Death or injury involving restraints	3	<0.05%	3	<0.05%	2	<0.05%	2	<0.05%		3		-33.3%
	Death or injury during inpatient elopement	1	<0.05%	1	<0.05%	1	<0.05%	1	<0.05%		0		0.0%
	Death or injury involving seclusion	1	<0.05%	1	<0.05%	0	0.0%	0	0.0%		-1		-100.0%
Skin Integrity	Pressure injury	6,158	2.1%	573	4.9%	7,210	2.3%	570	4.5%		1,052		17.1%
	Other (specify)	6,125	2.1%	51	0.4%	6,296	2.0%	43	0.3%		171		2.8%
	Skin tear	3,527	1.2%	42	0.4%	4,135	1.3%	42	0.3%		608		17.2%
	Abrasion	904	0.3%	1	<0.05%	1,089	0.3%	3	<0.05%		185		20.5%
	Blister	481	0.2%	5	<0.05%	540	0.2%	7	0.1%		59		12.3%
	Laceration	317	0.1%	47	0.4%	352	0.1%	56	0.4%		35		11.0%
	Burn (electrical, chemical, thermal)	271	0.1%	41	0.3%	319	0.1%	35	0.3%		48		17.7%
	Rash/hives	139	<0.05%	5	<0.05%	177	0.1%	3	<0.05%		38		27.3%
	Venous stasis ulcer	8	<0.05%	0	0.0%	7	<0.05%	0	0.0%		-1		-12.5%
Equipment/ Supplies/ Devices	Equipment malfunction	3,222	1.1%	41	0.3%	3,845	1.2%	43	0.3%		623		19.3%
	Equipment not available	1,018	0.4%	3	<0.05%	1,144	0.4%	2	<0.05%		126		12.4%
	Medical device problem	891	0.3%	13	0.1%	1,161	0.4%	16	0.1%		270		30.3%
	Broken item(s)	841	0.3%	24	0.2%	1,071	0.3%	18	0.1%		230		27.3%
	Sterilization problem	814	0.3%	5	<0.05%	1,352	0.4%	12	0.1%		538		66.1%
	Other (specify)	771	0.3%	9	0.1%	1,056	0.3%	4	<0.05%		285		37.0%
	Equipment misuse	497	0.2%	1	<0.05%	629	0.2%	3	<0.05%		132		26.6%
	Equipment safety situation	334	0.1%	0	0.0%	409	0.1%	4	<0.05%		75		22.5%
	Disconnected	328	0.1%	5	<0.05%	340	0.1%	4	<0.05%		12		3.7%
	Equipment wrong or inadequate	220	0.1%	2	<0.05%	204	0.1%	1	<0.05%		-16		-7.3%
	Inadequate supplies	210	0.1%	1	<0.05%	209	0.1%	1	<0.05%		-1		-0.5%
	Electrical problem	147	0.1%	1	<0.05%	160	0.1%	0	0.0%		13		8.8%
	Outdated item(s)	110	<0.05%	0	0.0%	110	<0.05%	0	0.0%		0		0.0%

Table 6. (continued.)

		2023				2024							
		All Reports		Serious Event Reports		All Reports		Serious Event Reports					
		Number of Reports	% of Total Reports	Number of Reports	% of Total Reports	Number of Reports	% of Total Reports	Number of Reports	% of Total Reports	Change in All Reports			
Event Type	Event Subtype									Number		Percent	
Adverse Drug Reaction	Other (specify)	4,976	1.7%	394	3.4%	5,120	1.6%	413	3.3%		144		2.9%
	Skin reaction (rash, blistering, itching, hives)	1,455	0.5%	223	1.9%	1,669	0.5%	287	2.3%		214		14.7%
	Mental status change	186	0.1%	63	0.5%	330	0.1%	125	1.0%		144		77.4%
	Hypotension	166	0.1%	47	0.4%	189	0.1%	59	0.5%		23		13.9%
	Dizziness	107	<0.05%	7	0.1%	124	<0.05%	6	<0.05%		17		15.9%
	Hematologic problem	100	<0.05%	23	0.2%	73	<0.05%	22	0.2%		-27		-27.0%
	Arrhythmia	40	<0.05%	17	0.1%	46	<0.05%	18	0.1%		6		15.0%
	Nephrotoxicity	33	<0.05%	9	0.1%	31	<0.05%	9	0.1%		-2		-6.1%
Transfusion	Event related to blood product sample collection	1,685	0.6%	1	<0.05%	1,652	0.5%	0	0.0%		-33		-2.0%
	Other (specify)	1,659	0.6%	3	<0.05%	1,866	0.6%	2	<0.05%		207		12.5%
	Event related to blood product administration	986	0.3%	11	0.1%	1,074	0.3%	6	<0.05%		88		8.9%
	Apparent transfusion reaction	776	0.3%	42	0.4%	771	0.2%	81	0.6%		-5		-0.6%
	Event related to blood product dispensing or distribution	533	0.2%	0	0.0%	614	0.2%	2	<0.05%		81		15.2%
	Consent missing/inadequate	244	0.1%	0	0.0%	230	0.1%	0	0.0%		-14		-5.7%
	Wrong patient requested	46	<0.05%	0	0.0%	38	<0.05%	0	0.0%		-8		-17.4%
	Special product need not issued	26	<0.05%	0	0.0%	18	<0.05%	0	0.0%		-8		-30.8%
	Special product need not requested	25	<0.05%	0	0.0%	42	<0.05%	0	0.0%		17		68.0%
	Wrong component issued	24	<0.05%	0	0.0%	34	<0.05%	0	0.0%		10		41.7%
	Mismatched unit	19	<0.05%	1	<0.05%	18	<0.05%	0	0.0%		-1		-5.3%
	Wrong component requested	9	<0.05%	0	0.0%	10	<0.05%	0	0.0%		1		11.1%
	Wrong patient transfused	1	<0.05%	0	0.0%	5	<0.05%	0	0.0%		-5		-100.0%
Patient Self-Harm	Other self-harm (specify)	1,543	0.5%	64	0.5%	1,417	0.4%	82	0.7%		-126		-8.2%
	Self-mutilation	615	0.2%	23	0.2%	753	0.2%	35	0.3%		138		22.4%
	Ingestion of foreign object or substance	316	0.1%	114	1.0%	322	0.1%	98	0.8%		6		1.9%
	Suicide attempt - Injury	27	<0.05%	27	0.2%	22	<0.05%	22	0.2%		-5		-18.5%
	Anorexia/bulimia	10	<0.05%	1	<0.05%	8	<0.05%	0	0.0%		-2		-20.0%
	Suicide - Death	5	<0.05%	5	<0.05%	7	<0.05%	7	0.1%		2		40.0%
Total		287,994	100%	11,750	100%	315,418	100%	12,602	100%	27,424		9.5%	

Note: Numbers shown for prior years may differ from previously published numbers due to subsequent report deletions or event type changes made by reporting facilities. All percentages that are greater than 0% but would otherwise round to 0.0% are displayed as <0.05%. The sum of % of Total Reports may not equal the Total due to rounding.

Table 7. Number of Reports Submitted to PA-PSRS in 2024 by Event Type and Harm Score in Descending Order by Event Type Frequency

Event Type	A	B1	B2	C	D	E	F	G	H	I	Total
Error Related to P/T/T	14,756	1,637	15,122	52,305	20,466	704	184	13	25	12	105,224
Complication of P/T/T	1,567	381	1,391	13,823	24,958	4,577	2,209	37	190	172	49,305
Medication Error	3,827	681	8,789	19,056	10,147	211	49	0	6	3	42,769
Fall	136	42	344	17,019	16,790	849	249	2	8	11	35,450
Other/Miscellaneous	5,554	812	3,107	12,388	11,561	560	304	10	12	64	34,372
Skin Integrity	247	9	54	4,846	14,210	734	24	1	0	0	20,125
Equipment/Supplies/ Devices	2,404	155	2,179	5,113	1,731	93	10	0	2	3	11,690
Adverse Drug Reaction	14	2	10	1,334	5,283	816	100	1	17	5	7,582
Transfusion	1,092	86	540	2,782	1,781	76	11	0	2	2	6,372
Patient Self-Harm	34	12	119	733	1,387	199	26	1	9	9	2,529
Total	29,631	3,817	31,655	129,399	108,314	8,819	3,166	65	271	281	315,418

Table 8. Number of Reports Submitted to PA-PSRS in 2024 by Care Area Group and Harm Score in Descending Order by Care Area Group Frequency

Care Area Group	A	B1	B2	C	D	E	F	G	H	I	Total
Med/Surg	4,954	505	3,744	23,572	24,813	1,449	319	9	34	40	59,439
Surgical Services	6,981	640	6,754	16,368	10,839	3,186	1,802	26	107	91	46,794
Emergency	3,932	578	2,696	17,116	9,005	430	107	5	15	21	33,905
ICU	1,875	153	1,439	8,493	10,549	715	92	5	18	28	23,367
Specialty Unit	1,545	167	1,419	7,493	8,587	466	108	0	21	19	19,825
Imaging/Diagnostic	1,336	282	1,888	8,836	6,272	394	120	4	17	17	19,166
Other	1,486	275	2,238	6,276	6,506	334	143	5	9	14	17,286
Clinic/Outpatient Office	754	160	2,402	4,713	4,294	308	73	4	3	6	12,717
Laboratory	848	191	1,350	7,563	2,172	31	11	1	0	0	12,167
Psychiatric Unit	512	91	594	4,440	4,821	351	109	0	3	6	10,927
Rehab Unit	409	117	550	3,823	4,372	146	49	0	1	5	9,472
Intermediate Unit	851	126	721	3,496	3,880	140	30	0	4	7	9,255
Pediatric	1,069	123	1,241	4,559	2,124	67	9	0	0	0	9,192
Labor and Delivery	282	54	381	1,883	3,678	403	100	2	20	15	6,818
NICU	943	74	773	3,206	1,580	61	13	2	2	7	6,661
PICU	797	74	1,242	2,732	955	36	2	2	1	1	5,842
OB/GYN Unit	363	71	524	1,865	2,005	253	54	0	15	3	5,153
Pharmacy	357	81	1,172	1,193	526	2	2	0	0	0	3,333
Rehab Services	67	19	123	1,057	664	21	11	0	1	0	1,963
Nursery	60	19	142	348	516	22	12	0	0	1	1,120
Administration	135	5	233	189	69	2	0	0	0	0	633
Respiratory	75	12	29	178	87	2	0	0	0	0	383
Total	29,631	3,817	31,655	129,399	108,314	8,819	3,166	65	271	281	315,418

Table 9. Number of Reports Submitted to PA-PSRS in 2024 by Care Area Group and Event Type in Descending Order by Care Area Group Frequency

Care Area Group	Error Related to P/T/T	Complication of P/T/T	Medication Error	Fall	Other/ Miscellaneous	Skin Integrity	Equipment/ Supplies/ Devices	Adverse Drug Reaction	Transfusion	Patient Self-Harm	Total
Med/Surg	11,123	7,796	10,908	12,178	8,440	5,698	1,181	733	1,180	202	59,439
Surgical Services	23,221	8,844	1,896	635	4,259	2,156	4,766	358	649	10	46,794
Emergency	15,524	3,348	4,296	3,667	4,087	319	645	424	1,405	190	33,905
ICU	6,373	3,765	4,399	1,147	1,750	3,970	896	247	782	38	23,367
Specialty Unit	3,921	2,598	3,764	3,617	2,696	1,818	279	492	587	53	19,825
Imaging/Diagnostic	8,633	6,054	238	839	1,093	520	678	1,071	33	7	19,166
Other	6,186	1,814	2,278	2,388	1,688	1,155	559	914	258	46	17,286
Clinic/Outpatient	4,305	1,080	1,792	824	796	217	480	2,908	290	25	12,717
Laboratory	11,363	115	40	74	129	21	45	2	378	0	12,167
Psychiatric Unit	739	272	802	4,200	2,465	394	78	52	1	1,924	10,927
Rehab Unit	994	596	1,582	2,800	1,303	1,929	133	101	28	6	9,472
Intermediate Unit	1,958	1,489	1,601	1,184	1,470	975	209	147	210	12	9,255
Pediatric	1,996	2,293	2,161	524	1,386	228	405	35	152	12	9,192
Labor and Delivery	1,580	3,940	380	118	399	53	204	25	119	0	6,818
NICU	2,927	1,199	1,024	9	846	138	421	3	94	0	6,661
PICU	1,836	1,217	1,442	47	561	201	438	2	97	1	5,842
OB/GYN Unit	1,420	2,159	557	201	513	57	145	24	77	0	5,153
Pharmacy	58	10	3,177	2	24	0	20	39	1	2	3,333
Rehab Services	169	203	47	949	293	252	47	1	1	1	1,963
Nursery	492	453	58	10	66	9	28	1	3	0	1,120
Administration	188	37	275	22	67	8	7	2	27	0	633
Respiratory	218	23	52	15	41	7	26	1	0	0	383
Total	105,224	49,305	42,769	35,450	34,372	20,125	11,690	7,582	6,372	2,529	315,418

Table 10. Number and Percentage of **Reports** Submitted to PA-PSRS by Nonhospital Facilities (ASF, BRC, ABF) by Event Type in Descending Order by 2024 Frequency

Event Type	Number of Reports					% of Total Reports				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Error Related to P/T/T	3,048	3,333	4,126	4,850	6,037	39.0%	35.8%	39.1%	41.9%	47.6%
Complication of P/T/T	2,265	2,816	2,659	2,822	2,824	29.0%	30.3%	25.2%	24.4%	22.3%
Other/Miscellaneous	1,766	2,283	2,843	2,867	2,775	22.6%	24.5%	26.9%	24.8%	21.9%
Equipment/Supplies/Devices	145	160	213	285	294	1.9%	1.7%	2.0%	2.5%	2.3%
Skin Integrity	206	245	272	296	292	2.6%	2.6%	2.6%	2.6%	2.3%
Fall	161	222	225	228	226	2.1%	2.4%	2.1%	2.0%	1.8%
Medication Error	129	137	130	149	133	1.7%	1.5%	1.2%	1.3%	1.0%
Adverse Drug Reaction	77	100	79	71	86	1.0%	1.1%	0.7%	0.6%	0.7%
Patient Self-Harm	10	5	6	6	7	0.1%	0.1%	0.1%	0.1%	0.1%
Transfusion	0	3	2	0	3	0.0%	<0.05%	<0.05%	0.0%	<0.05%
Total	7,807	9,304	10,555	11,574	12,677	100%	100%	100%	100%	100%

Note: Numbers shown for prior years may differ from previously published numbers due to subsequent report deletions or event type changes made by reporting facilities. The sum of % of Total Reports may not equal the Total due to rounding.

Table 11. Number and Percentage of **Serious Event Reports** Submitted to PA-PSRS by Nonhospital Facilities (ASF, BRC, ABF) by Event Type in Descending Order by 2024 Frequency

Event Type	Number of Reports					% of Total Reports				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Complication of P/T/T	1,179	1,372	1,343	1,447	1,477	72.0%	70.9%	67.6%	70.4%	71.4%
Other/Miscellaneous	300	417	473	428	397	18.3%	21.6%	23.8%	20.8%	19.2%
Error Related to P/T/T	74	55	74	83	102	4.5%	2.8%	3.7%	4.0%	4.9%
Skin Integrity	23	21	36	30	33	1.4%	1.1%	1.8%	1.5%	1.6%
Adverse Drug Reaction	24	17	23	21	24	1.5%	0.9%	1.2%	1.0%	1.2%
Fall	18	29	23	26	24	1.1%	1.5%	1.2%	1.3%	1.2%
Equipment/Supplies/Devices	10	13	11	15	10	0.6%	0.7%	0.6%	0.7%	0.5%
Medication Error	5	8	2	3	2	0.3%	0.4%	0.1%	0.1%	0.1%
Patient Self-Harm	5	1	1	1	1	0.3%	0.1%	0.1%	<0.05%	<0.05%
Transfusion	0	1	0	0	0	0.0%	0.1%	0.0%	0.0%	0.0%
Total	1,638	1,934	1,986	2,054	2,070	100%	100%	100%	100%	100%

Note: Numbers shown for prior years may differ from previously published numbers due to subsequent report deletions or event type changes made by reporting facilities. The sum of % of Total Reports may not equal the Total due to rounding.

Discussion

The number of reports submitted to PA-PSRS has varied over the past five years. In 2024, 315,418 reports were received, marking the first time more than 300,000 reports were submitted in a single calendar year. Reporting rates, which allow for normalized comparisons over time, show that the hospital reporting rate has increased for the second consecutive year, while the ASF rate has risen for the fourth. While our analysis identified increases related to several specific variables in 2024, further examination showed these were largely influenced by shifts in a limited number of facilities.

Conclusion

In 2024, the total number of reports, serious event reports, and high harm event reports increased, as did the preliminary reporting rates for hospitals and ASFs. The Patient Safety Authority will continue working with Pennsylvania healthcare facilities to enhance reporting quality and promote patient safety.

Note

This analysis was exempted from review by the Advarra Institutional Review Board.

Data used in this study cannot be made public due to their confidential nature, as outlined in the Medical Care Availability and Reduction of Error (MCARE) Act (Pennsylvania Act 13 of 2002).

References

1. Pennsylvania Department of Health. Medical Care Availability and Reduction of Error (MCARE) Act, Pub. L. No. 154 Stat. 13 (2002). DOH website. <https://www.pa.gov/content/dam/copapwp-pagov/en/health/documents/topics/documents/laws-and-regulations/Act%2013%20of%202002.pdf>. Published 2002. Accessed February 12, 2025.

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