

# What You Need to Know

---

Our quarterly special editions feature articles, stories, interviews, and more from our journal, *Patient Safety*. In this issue you will read about the impact of visitors on patient safety, ways to keep pediatric patients safe, determining potential harm from delayed communication, a tool to prevent postop pneumonia, and a review of safety events reported in 2021.

## Visitors—Help or Hindrance to Patient Safety?



**Visiting friends and loved ones when they're in the hospital has many wonderful benefits.** Your presence helps cheer them up when they're away from home, distracts them from their illness, and may even speed their recovery by keeping them positive and motivated to get better. It also keeps you more informed and involved in their care, which sometimes can have a direct impact on their safety—for better or worse.

Christine Sanchez et al. looked at 427 event reports from January 1 to June 30, 2019, [in which the behavior of visitors either increased or decreased the risk of patient harm](#). They found that 63.7% of these reports showed a helpful influence, for example by notifying staff when the patient's condition was getting worse; however, 36.3% of these reports involved a visitor contributing to the patient's risk of harm through activities such as moving them (resulting in falls) or giving them food or medication.

Understanding the role hospital visitors can play in patient care and the potential consequences of their actions can help facilities develop interventions, including warning and instructional signage to guide visitors' behavior in ways conducive to a safer patient experience.

## Patient Safety Trends in 2021: An Analysis of 288,882 Serious Events and Incidents From the Nation's Largest Event Reporting Database

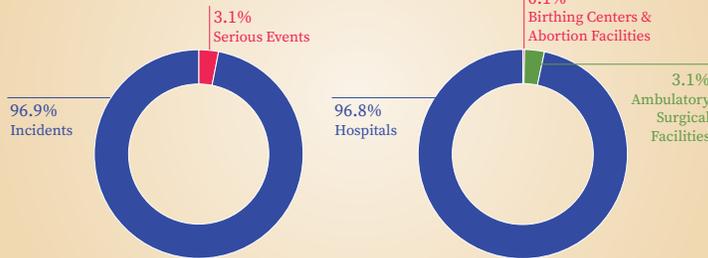
4.2+ million acute care event reports



The Pennsylvania Patient Safety Reporting System (PA-PSRS) is one of the largest repositories of patient safety data in the world.

288,882 reports submitted in 2021

This represents a 3.7% increase from 2020



- Most common event type across **all reports** was Error Related to Procedure/Treatment/Test
- Most common event type for **serious events** was Complication of Procedure/Treatment/Test

Kepner, S., & Jones, R. (2022). Patient Safety Trends in 2021: An Analysis of 288,882 Serious Events and Incidents From the Nation's Largest Event Reporting Database. *Patient Safety*, 4(2), 18–33. <https://doi.org/10.33940/data/2022.6.2>



## Long-Term Care Healthcare-Associated Infections in 2021: An Analysis of 17,971 Reports

The **Pennsylvania Patient Safety Reporting System (PA-PSRS)** is the largest repository of patient safety data in the United States, with over 4.2 million acute care event reports and more than 375,000 long-term care (LTC) healthcare-associated infection reports.



The number of reports **decreased** for all five infection types from 2020 to 2021, with **respiratory tract infections** decreasing the most, by 58.4%.



Kepner, S., Adkins, J., & Jones, R. (2022). Long-Term Care Healthcare-Associated Infections in 2021: An Analysis of 17,971 Reports. *Patient Safety*, 4(2), 6–17. <https://doi.org/10.33940/data/2022.6.1>



## Original Articles — 2021 Questions



**In conjunction with the Patient Safety Authority's 2021 annual report**, we published two articles in *Patient Safety* analyzing 2021 data from the Pennsylvania Patient Safety Reporting System (PA-PSRS), the nation's largest event reporting database.

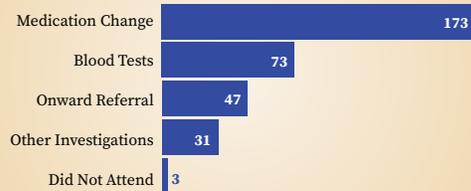
In “[Patient Safety Trends in 2021](#),” PSA data analysts take a close look at the 288,882 incidents and serious events reported by acute care facilities last year, while “[Long-Term Care Healthcare-Associated Infections in 2021](#)” examines 17,971 HAI reports from long-term care facilities last year. They supplement the data overview in the annual report with a comprehensive review and analysis of events reported in 2021, as well as insights into patient safety in Pennsylvania and how we may continue to improve it together.

## Systematic Process to Determine Clinical Harm From Delayed Communication Between Primary and Secondary Healthcare



A systematic analysis to determine any **potential harm** that may occur due to the **delay in communication** between primary and secondary care.

### Frequency of Actions Not Enacted Due to the Delay in Communication (N=327)



The review revealed no serious harm identified in this cohort of patients.



The structured methodology could serve as a template to other organizations that face similar incidents.

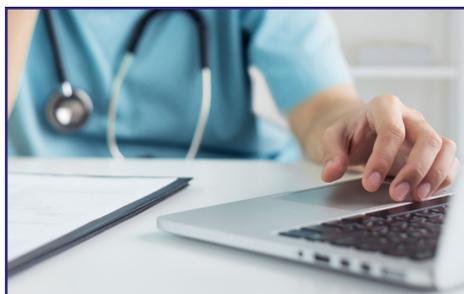
Patel, M., Parton, S., & Aitken, E. Systematic Process to Determine Clinical Harm From Delayed Communication Between Primary and Secondary Healthcare. *Patient Safety*, 4(2), 43–47. <https://doi.org/10.33940/data/2022.6.4>



## Delayed Communication, Delayed Care?

**Good communication is an essential part of patient care, particularly during hand-offs between healthcare providers.** So, when a technical issue between connected electronic patient record systems prevented letters from large hospital outpatient clinics from reaching local community doctors, it created a serious problem. U.K. researchers Mehoor Patel et al. [examined whether the communication failure resulted in harm to any of the 42,251 patients affected.](#)

Using a structured methodology—described in detail so it can be replicated by other organizations—36 evaluators analyzed the 58,521 outpatient clinic letters that were not sent electronically to general practitioners following clinic appointments. They identified 1,323 inactions, none of which were related to cancer, but identified no harm incidents or deaths linked to nonreceipt of a letter. This suggests that safety net mechanisms already in place may have mitigated the delayed communication, such as patients receiving the letters and contacting their providers directly, or other healthcare providers following up proactively. This underscores the importance of keeping the entire care team, including the patient, informed about their health.

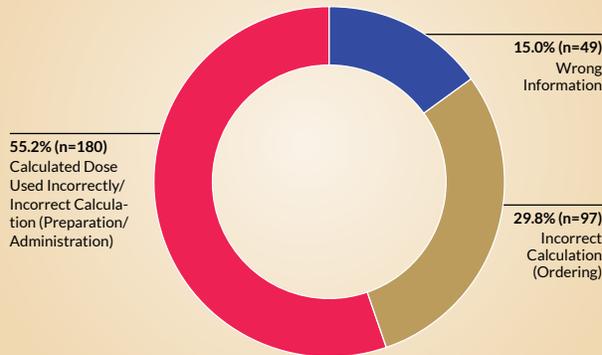


***The future of patient safety education is here!***

Click here to check out our new online learning system!

## Pediatric Dose Calculation Issues and the Need for Human Factors–Informed Preventative Technology Optimizations

### Dose calculation issues identified in pediatric dose-related event reports



**Technology optimizations** could potentially have addressed **81.6%** of the dose calculation issues identified.

- ✓ Use the accompanying safety checklist and test cases to help identify whether health information technology safeguards are implemented in your facility's systems.

Russell, J., Grimes, J. P., Teferi, S., Pruitt, Z. M., Howe, J. L., Adams, K. T., Nicol, N., Krevat, S., Busog, D., Ratwani, R. M., Jones, R., & Franklin, E. S. Pediatric Dose Calculation Issues and the Need for Human Factors–Informed Preventative Technology Optimizations. *Patient Safety*, 4(2), 48–61. <https://doi.org/10.33940/data/2022.6.5>



### Avoiding Pediatric Med Errors With Optimized Tech

**The youngest patients are also among the most vulnerable**, particularly when it comes to prescribing and administering medications. Some of the challenges presented by their age and unique needs, which may lead to medication errors: most medications and healthcare settings are tailored to adults, and children cannot communicate effectively about medication issues—or tolerate errors.

Researchers from MedStar Health Research Institute focused on dose calculation errors, a predominant type of medical error involving pediatric patients, and **used a human factors approach to identify the most common issues as well as missed opportunities to avoid them using optimized technologies**. They concluded that different technologies can address issues at different stages of the medication-use process; for example, information cross-checking during medication ordering and reviewing, and cross-system interoperability between devices (such as smart pumps) and the electronic medication administration record during medication preparation and administration. Their findings and recommendations could help healthcare facilities improve their existing health information technologies and devices to mitigate dose-related safety issues.

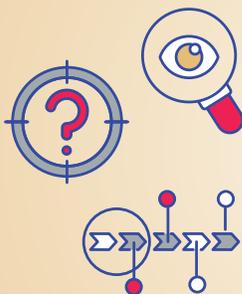
## Implementation of Improvements Based on the Analysis of Severe Adverse Events in Pediatric Patients



**Objective:** describe a severe drug-related adverse event, root cause, and improvements



3-month-old patient undergoing therapeutic cardiac catheterization at another hospital presented with cardiorespiratory arrest



- London Protocol used to perform root cause analysis
- Improvements identified and implemented include:
  - *changes to patient transport*
  - *drug dispensing*
  - *administration*
- These changes were monitored, and after five years the indicators show that they have become consolidated

Bigio, C. T., Rodrigues, M. R., de Melo, C., Isoppo, C. S., & Hoffmeister, L. V. Implementation of Improvements Based on the Analysis of Severe Adverse Events in Pediatric Patients. *Patient Safety*, 4(2), 34–42. <https://doi.org/10.33940/culture/2022.6.3>



### Patient Safety Initiatives — Root Analysis as a Route to Improvements



**An adverse event is difficult for the patient, their family, and hospital staff**, especially when a child is harmed. But when a 3-month-old patient in a Portuguese pediatric hospital suffered severe complications following a cardiac procedure, which resulted in a permanent tracheostomy, a multidisciplinary patient safety team **focused their efforts on making sure it would never happen again**.

They initiated a root cause analysis to informed policy changes that improved team communication and training, and introduced new safeguards and safety checks. More than a year later, these safer workflows and processes have seen 100% compliance, protecting patients from harm and serving as an example for other facilities to help reduce risks and prevent future adverse events through event analysis.

FOLLOW THE PSA ON



Instagram

@PATIENTSAFETYAUTHORITY

## Postoperative Pneumonia Prevention Checklist Improves Provider Compliance and Patient Awareness of Previously Established Reduction Protocol



**Postoperative pneumonia increases length of stay and increases cost of care.**

Many quality improvement projects achieve initial success, but that soon drops off after time and effort are directed to other projects.

This project utilized a **postoperative pneumonia checklist** to improve provider compliance with a postoperative pneumonia prevention protocol, initiated years earlier.



### Compliance increased in

- patient oral care
- ambulation
- frequency of patient being in chair
- having incentive spirometer (IS) within reach
- having information booklet within reach
- patient's ability to perform incentive spirometer correctly
- patient awareness initiatives, including importance of oral care, cough and deep breathing, ambulation, and IS use



This method is low-cost and easy to implement, and can revive older successful projects that have lost compliance.

Lamm, R., Creisher, B. A., Curran, J. G., Foecke Munden, E., Williamson III, J. E., Schleider, C., Shindle, K., Cowan, S., Lavu, H., & Costanzo, C. Postoperative Pneumonia Prevention Checklist Improves Provider Compliance and Patient Awareness of Previously Established Reduction Protocol. *Patient Safety*, 4(2), 62–69. <https://doi.org/10.33940/med/2022.6.6>



## A Simple Way to Keep Postop Pneumonia in Check

**Even the best safety intervention can only be effective if patients and providers are aware of and adhere to it.** This has been one of the challenges in preventing a common health complication in patients following surgery, postoperative pneumonia (PoPNA), which can extend their hospital stay by 75% and increases costs of care by 47%. Although the ICOUGH pneumonia prevention program—which stands for Incentive spirometry, Coughing and deep breathing, Oral care, Understanding, Getting out of bed three times daily, and Head of bed elevation—has been highly successful at Thomas Jefferson University Hospital in reducing incidents of PoPNA, compliance has fallen off since it was introduced in 2016. So, one team introduced another tried-and-true tool to try to give it a boost: checklists.

They implemented a preprogrammed 10-item checklist in the electronic medical record (EMR), accessible with short words or phrases (“SmartPhrases”), to reinforce the key points of ICOUGH. Some of these important elements include prevention checks, such as making sure the patient is out of bed (OOB) to a chair for all meals and at least three times a day, as well as notes on their progress, for example: “Patient was/was not OOB today.” Care providers were educated about these prompts, which were designed to reinforce both compliance with the protocols and patients’ awareness of them. The initiative showed clinically significant improvements, reducing PoPNA cases from 46 to 31 (a 33% reduction). This suggests that EMR checklists requiring active participation in daily notes can help enforce safe practices—and provides a template for other facilities to support previously successful interventions.

# Submit your manuscript to *Patient Safety* today!

- 60,000+ readers worldwide
- 14 weeks: Average time from submission to publication
- Free to read and no author fees

[patientsafetyj.com](https://patientsafetyj.com)



Patient Safety Authority | 333 Market Street, Lobby Level, Harrisburg, PA 17101  
[patientsafety.pa.gov](https://patientsafety.pa.gov) | [patientsafetyauthority@pa.gov](mailto:patientsafetyauthority@pa.gov)

