

How Patient- and Family-Centered Hospital Communications Reduce Medical Errors

May 20, 2024

Moderator & Panelists



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National Alliance Advisor



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PCORI-Funded Investigator,
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Webinar Background



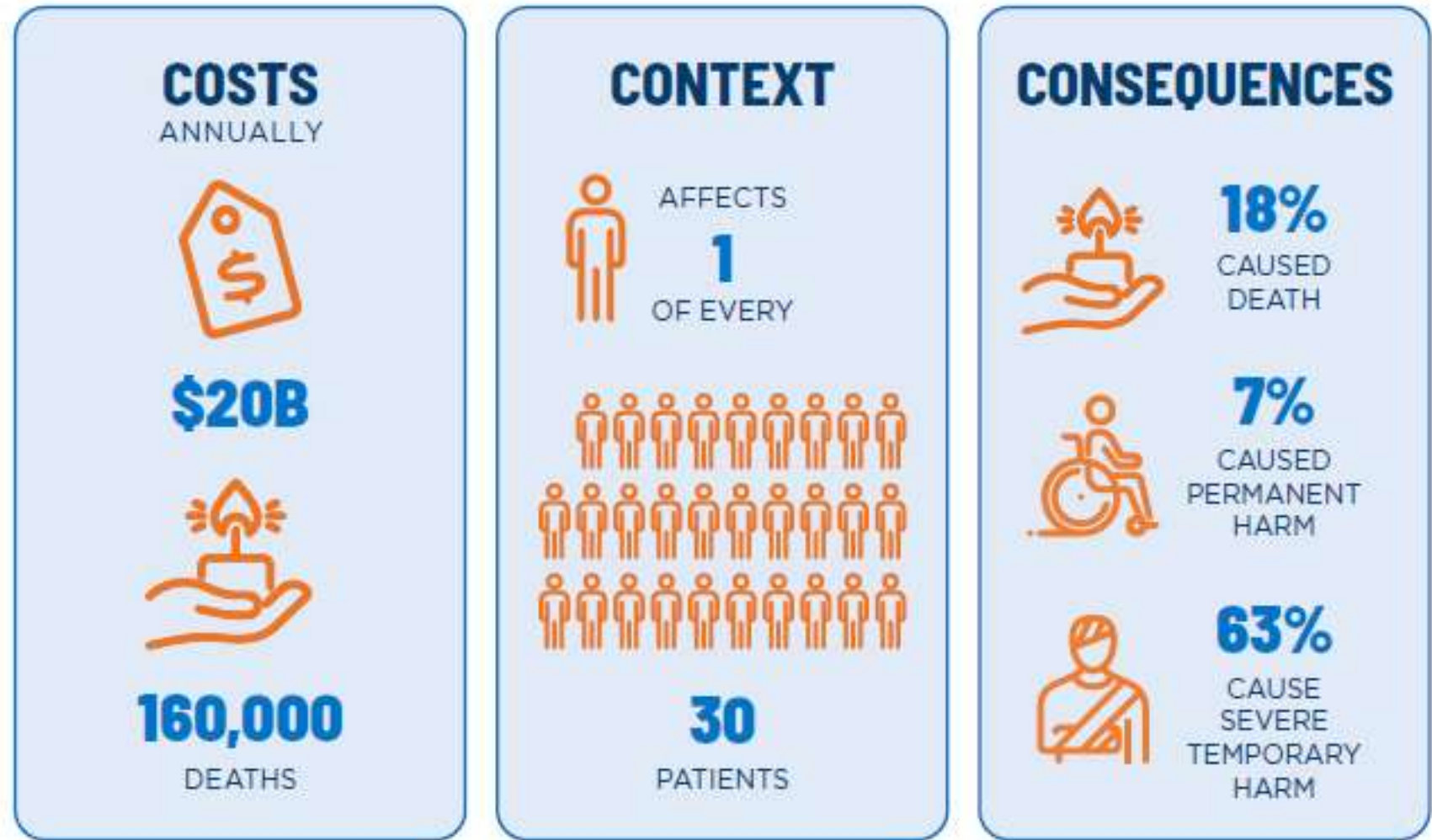
The National Alliance is disseminating relevant PCORI Research to coalitions and employer purchasers across the country that will have a measurable impact on patient-centered experiences and can serve as a model for future and continual dissemination.

The materials educate employers on the value of using stronger evidence-based approach in their health care planning



PCORI helps people make informed healthcare decisions, and improves healthcare delivery and outcomes, by producing and promoting high-integrity, evidence-based information that comes from research guided by patients, caregivers, and the broader healthcare community.

Facts about *preventable* hospital errors in the US



Source: National Institutes of Health

CHRISTOPHER P. LANDRIGAN, MD, MPH

PCORI-Funded Investigator,

Chief, Division of General Pediatrics,
Boston Children's Hospital

Director, Sleep and Patient Safety
Program, Brigham and Women's Hospital

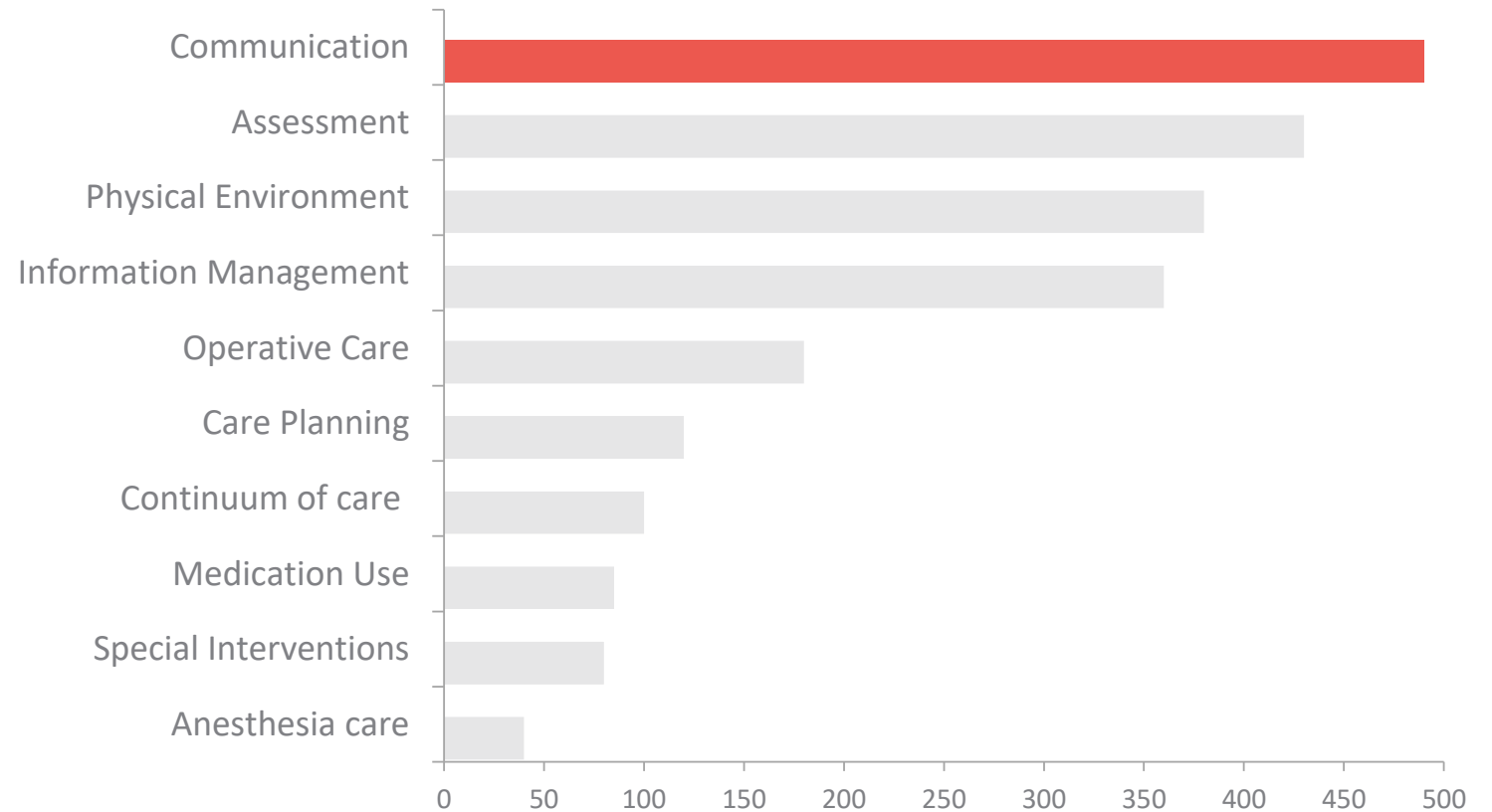
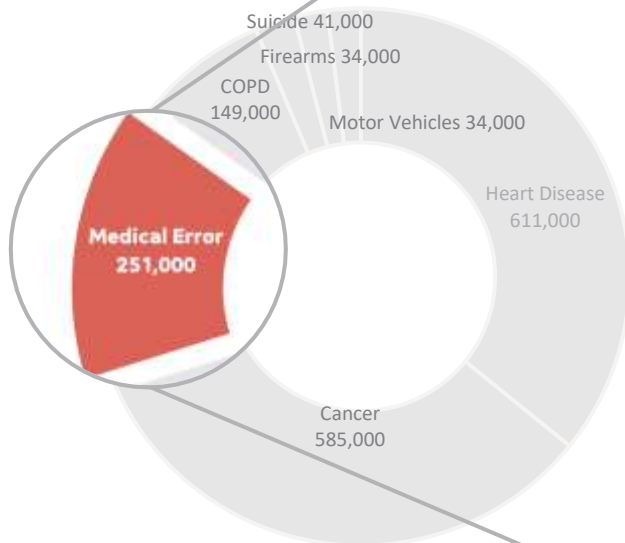
William Berenberg Professor of Pediatrics
and Professor of Medicine, Harvard
Medical School



Medical errors are the third leading cause of death in the U.S.

The leading cause of medical errors is **communication failures**.

Causes of Death, U.S.



I-PASS Institute Handoff Bundle

Structure / Universal Language

- I** **Illness Severity**
Stable, "Watcher," Unstable
- P** **Patient Summary**
Summary statement; events leading up to admission; hospital course; ongoing assessment; plan
- A** **Action List**
To do list; timeline and ownership
- S** **Situation Awareness & Contingency Planning**
Know what's going on; plan for what might happen
- S** **Synthesis by Receiver**
Receiver summarizes what was heard; asks questions; restates key action/to do items

Comprehensive Change Management Bundle



I-PASS Evidence



The NEW ENGLAND
JOURNAL of MEDICINE

Journal of
Hospital Medicine

crico | Protecting Providers.
Promoting Safety.



Single center pilot study at Boston Children's Hospital found significant **reduction in medical errors** after handoff bundle implementation. (JAMA 2013)



9-center federally funded study found **30% reduction in injuries from medical errors** after I-PASS implementation. (NEJM 2014)



Maximum benefits achieved with robust change management: **47% reduction in handoff-related harms** in AHRQ-funded 32-center I-PASS study in nursing, internal medicine, surgery, and across other clinical areas (JHM 2022)

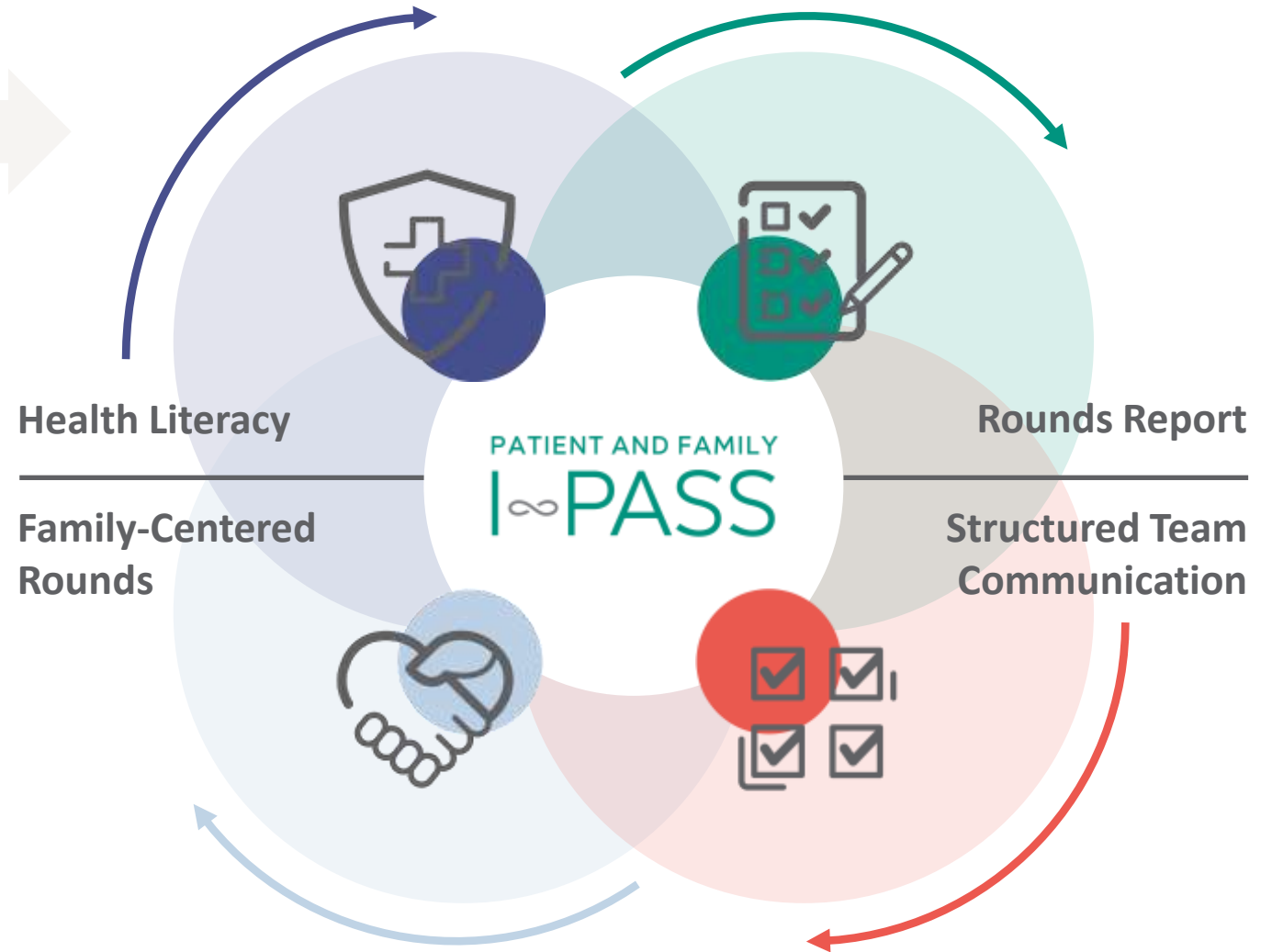


CRICO-funded study of ~500 randomly selected cases: found **49% of all malpractice claims involve miscommunications**. 40% of miscommunications involved a failed handoff, most potentially averted using I-PASS

Adapting I-PASS for Patient & Family Centered Rounds

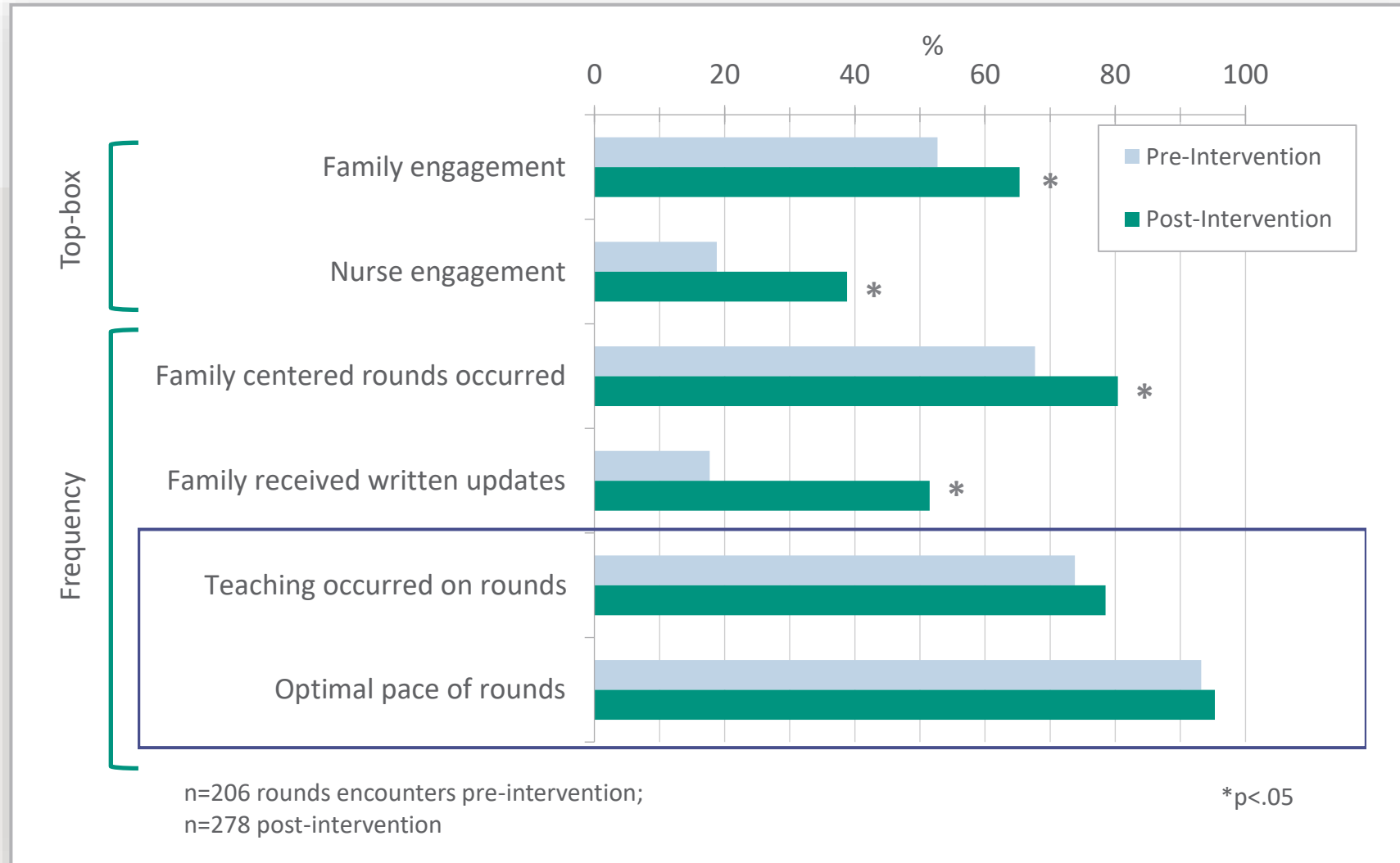
Patient and Family I-PASS Study

- **Funded by a grant from PCORI**
- **Aim:** To determine if improving communication and integrating patients/families into all aspects of decision-making during hospitalization will
 - Improve patient safety
 - Improve patient and family experience



Communication Process Scores

Khan et al, BMJ 2018

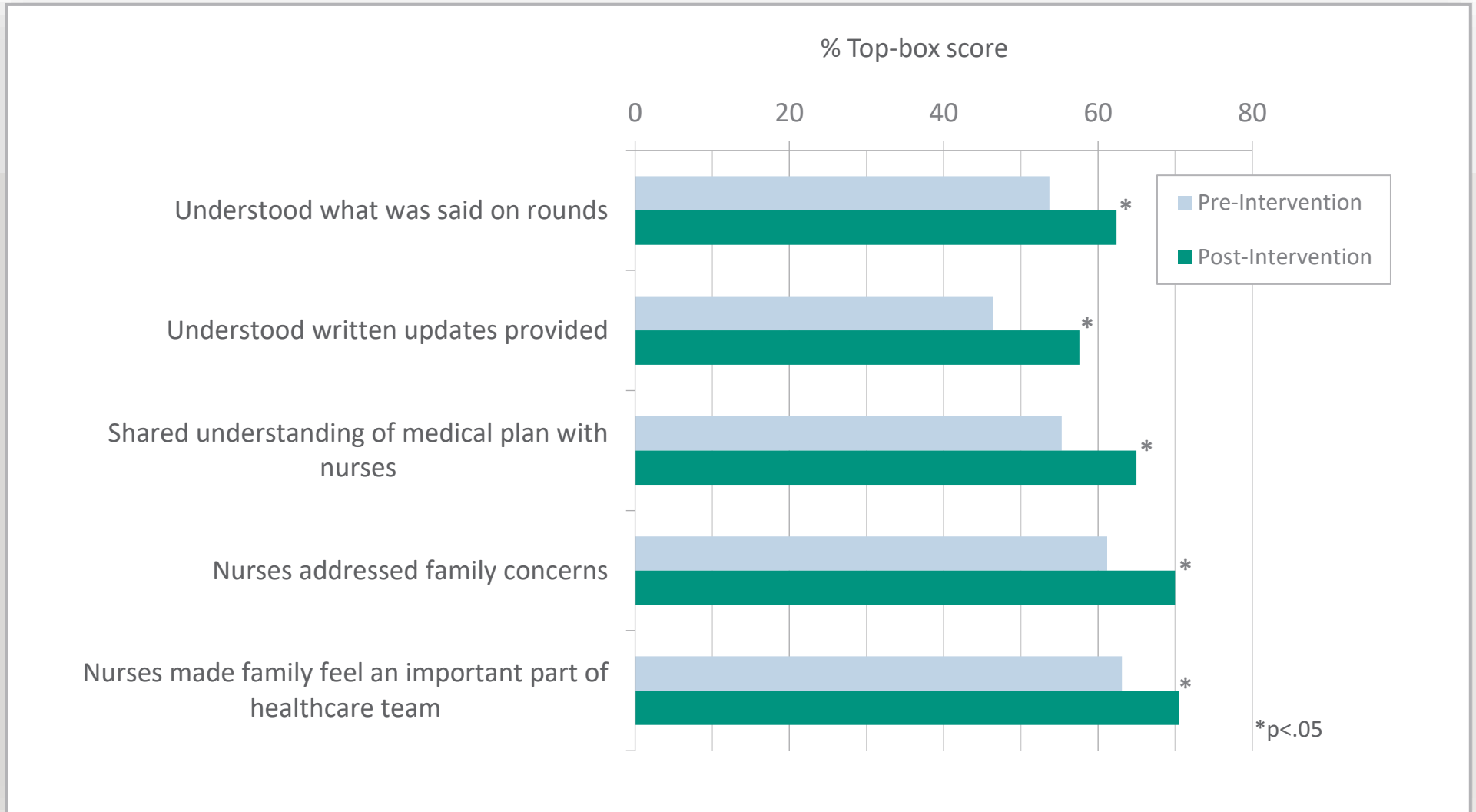


Medical Error Rates

Khan et al, BMJ 2018

Per 1000 patient-days	Pre	Post	P-value
Medical errors	41.2	35.8	0.21
Harmful errors/ Preventable AEs	20.7	12.9	0.01
Nonharmful errors/ Near misses	20.0	22.0	0.50

Aspects of Family Experience that Improved



CAROLE HEMMELGRAN

Georgetown University, MedStar Institute
for Quality & Safety







Children's Hospital
Colorado

PATIENT SAFETY

A TALE OF TWO COURSES AND THEIR SEPSIS OUTCOMES - CAROLE HEINWELGARN AND MAREK LENZ

Background

Alyssa was a nine-year-old girl and reader, budding artist, and soccer player. For a week, Alyssa had a cold, cough that would not heal, was tired, and had a bloody, rosy nose. All three signs were noticed by her. She saw her Pediatrician on a Monday morning and was admitted to the hospital by Monday evening with a diagnosis of Leukemia (ALL) (February 2007).

Background

Marek was a sixteen-year-old young woman, beautiful player, strong student, and Alyssa's cousin. Marek had acute ear, nose, and throat. She remained in bed all weekend as she had fever in the evening Monday morning and went to urgent care immediately after. They had thought she potentially had sinusitis and suggested she go to the emergency room at the children's hospital. May 2010.

Alyssa's Vital Signs

Time	Temp	HR	RR	SpO2	BP
08:00	38.2	110	20	95	100/60
10:00	38.5	120	22	92	105/65
12:00	38.8	130	24	90	110/70
14:00	39.1	140	26	88	115/75
16:00	39.4	150	28	85	120/80
18:00	39.7	160	30	82	125/85
20:00	40.0	170	32	80	130/90
22:00	40.3	180	34	78	135/95
00:00	40.6	190	36	75	140/100
02:00	40.9	200	38	72	145/105
04:00	41.2	210	40	70	150/110
06:00	41.5	220	42	68	155/115

Alyssa's Vital Signs

Sepsis Course

On the evening of Alyssa's sixth day in the hospital and into the early morning her vital signs were changing. She was having her fevers frequently and required a drip, just an oxygen because her respiratory rate was dropping, pulse was racing, blood pressure dropping and was significantly declining. When Alyssa started deteriorating, they thought she was septic and kept treating her with fluids. This went on for twelve hours until a rapid response team was called and she was taken to the PICU. She was a classic case of failure to rescue. She had a hospital acquired infection (*Clostridium difficile*) and was septic. She died ten days after being diagnosed with ALL.

Sepsis Course

Marek's vital signs started changing on the second night of her hospital stay. She became short of breath and required oxygen, was uncomfortable and becoming febrile. Marek's Mom called the PICU the early morning hours telling her she was not sure about these signs because her daughter had been in the hospital for a week. They were the exact signs that she had seen in her daughter. Her diagnosis was septic. She died ten days after being diagnosed with ALL.

Presentation

Upon admission to the hospital, Alyssa was seen by a second-year resident on the last day of her admission, and she documented in her chart that she was septic. Alyssa's course of care followed an Acute Lymphoblastic Leukemia study protocol for eight days.

Presentation

Marek was admitted to the hospital and placed on the medicine floor. She was seen by two different consulting services, rheumatology and infectious disease trying to determine a diagnosis. She had a new-grade fever and her white blood cell count was off.



Alyssa, 4th Grade School Photo



Marek, High School Homecoming

Conclusion

I was there with Alyssa throughout her ten days in the hospital and took weekend in handouts by whose career. When Alyssa started falling, I knew something was wrong and kept advocating my concerns to the care team. I could not get them to listen to me. They kept saying she was septic and would just fix those things when they could.

Conclusion

Marek's course of care was different. When I saw the signs that she was septic, I knew something was wrong and kept advocating my concerns to the care team. I could not get them to listen to me. They kept saying she was septic and would just fix those things when they could.

Correct Diagnosis
Sepsis from a hospital acquired infection (*Clostridium difficile*)

What if?

What if they would have asked if Alyssa was an antibiotic user, we could have had them re-evaluate her. They would have listened to me on the night she was deteriorating and ask the questions that have been different and she would be alive today.

Opportunities and Action Items

This is a story about two sisters. The first who died and the second who survived because of positive changes in the organization. After Alyssa died, a rapid response team was implemented to respond to any concerns across the hospital. I was part of making it work about their child. The organization created a sepsis committee which I am a member of. This committee has created resources to support nurses in being confident in recognizing sepsis, order sets for providers, and efforts on educating parents and staff on the signs of sepsis. They hope to recognize sepsis, order sets for providers, and efforts on educating parents and staff on the signs of sepsis.

References

1. Kohn, M. C., Brennan, T. A., & Darby, A. A. (2011). Rapid response teams in a children's hospital. *Journal of Intensive Care Medicine*, 26(1), 174-180.
 2. Kohn, M. C., Brennan, T. A., & Darby, A. A. (2011). Rapid response teams in a children's hospital. *Journal of Intensive Care Medicine*, 26(1), 174-180.
 3. Kohn, M. C., Brennan, T. A., & Darby, A. A. (2011). Rapid response teams in a children's hospital. *Journal of Intensive Care Medicine*, 26(1), 174-180.



MISSY DANFORTH

The Leapfrog Group



About The Leapfrog Group

- National not-for-profit organization, founded by employers and purchasers, and headquartered in Washington, DC
- On a mission to trigger giant leaps forward in the safety, quality, and affordability of health care by using transparency to drive informed decision-making and promote high-value care
- The data we collect and the ratings we publish are used by national and regional health plans, employers and purchasing groups, transparency vendors, researchers, policy makers, healthcare consumers, and many others



The logo for Leapfrog Hospital Survey. It features a green square on the left containing a white grid of dots that forms a stylized frog shape. To the right of the square, the word "LEAPFROG" is written in green, uppercase letters, and "HOSPITAL SURVEY" is written in white, uppercase letters below it.

LEAPFROG HOSPITAL SURVEY



EXPLORES QUALITY AND SAFETY

The Survey is annual, includes broad range of patient safety, quality, and resource use measures, and is applicable to all hospitals.



HOSPITALS SUBMIT A SURVEY

Hospitals voluntarily submit data via an Online Survey Tool.



PROGRESS TOWARDS MEETING NATIONAL STANDARDS IS REPORTED

Expert panels establish national standards for performance on each measures, and progress is publicly reported.

Hospital Survey Results – ratings.leapfroggroup.org

LEAPFROG RATINGS About FAQs **THELEAPFROGGROUP**


Search Leapfrog's Hospital and Surgery Center Ratings

Search by:

- Facility Name
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- Maternity Care
- Guided Search

Facility name *Start typing the name of the facility here.*

Search



The highest-performing hospitals on the Leapfrog Hospital Survey are recognized annually with the prestigious Leapfrog Top Hospital award.

[View List](#)





The highest-performing surgery centers on the Leapfrog ASC Survey are recognized annually with the prestigious Leapfrog Top ASC award.

[View List](#)




Valley Children's Hospital

9300 Valley Children's Place
Madera, California 93636
Survey Submission Date: August 11, 2023
[Facility info, location, and more](#)

[Show all](#)

Patient-Centered Care

Measure name	Leapfrog's Standard	Hospital's Progress
Billing Ethics	Hospitals should provide patients with complete billing information and access to a representative that can quickly resolve billing issues. In addition, hospitals should not sue patients over late or unpaid bills.	 ACHIEVED THE STANDARD
SHOW LESS		
<p>This hospital provides a detailed bill within 30 days of receiving insurance payments: Yes</p> <p>This hospital provides access to a representative who can quickly investigate billing errors and establish payment plans: Yes</p> <p>This hospital sues patients: No</p>		
Informed Consent	Hospitals should ensure that all patients are fully aware of risks and alternatives prior to tests, treatments, and procedures.	 ACHIEVED THE STANDARD
SHOW LESS		
<p>All staff involved in the informed consent process achieve the appropriate training: Yes</p> <p>Doctors explain expected difficulties and recovery time and allow patients to ask questions: Yes</p> <p>Doctors involved in the test, treatment, or procedure are listed on the consent form, and patients are notified if the doctor will be absent and if trainees will be involved: Yes</p> <p>Consent forms are written at a fifth grade reading level: Yes</p> <p>Staff ask patients about their preferred language for decision-making and make a trained medical interpreter available if appropriate: Yes</p> <p>Doctors use the "teach back method" to ensure patients understand what will be performed and what are the risks: Yes</p>		
Responding to Never Events	Hospitals should have a never events policy that includes all nine (9) actions that should occur following a "never event," which includes apologizing to the patient and not charging for costs associated with the never event.	 ACHIEVED THE STANDARD

Current Survey Standards focused on Communication with Patients and Family Caregivers



Informed Consent: Assesses whether hospitals have a robust informed consent process in place that includes training for staff, a process to ensure clinicians explain risks and patients can ask questions, forms written at a 6th grade reading level, ample access to trained medical interpreters, and the use of the “teach back method” with patients to ensure that patients/legal guardians understand what will be done, why it will be done, and what are the primary risks.



Patient Reporting of Concerns: Assesses whether hospitals have a protocol to follow-up on patient-reported concerns about their care that includes notifying all patients how to report concerns, having a hospital representative follow-up within 30 days of making the report, and logging all patient reports in an incident reporting system.

Employers/Purchaser Initiatives



Educate their employees on choosing a place to receive care



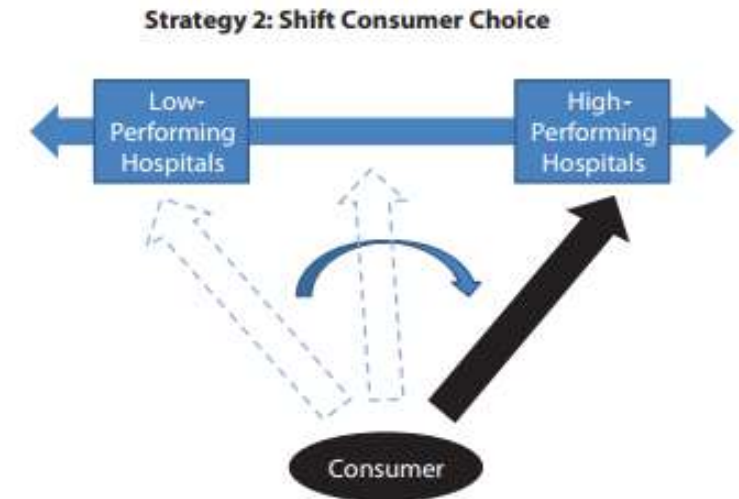
Leverage purchasing power to structure value-based payment arrangements



Design benefits to steer employees to the most high-quality facilities



Encourage transparency and accountability in hospitals in their community



Source: Altarum Institute

Purchasing Groups and Business Coalitions

Purchasing Groups and Business Coalitions use Survey Results to engage their employer members around patient safety and quality and to inform value-based strategies.



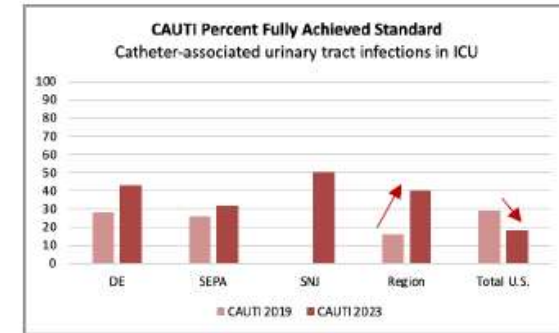
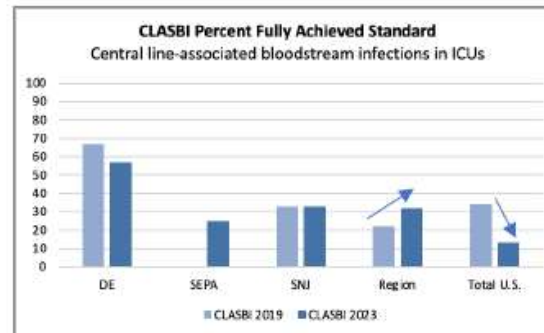
GPBCH LEAPFROG BRIEF 2019 vs 2023 Hospital Survey Findings

Healthcare-Associated Infections

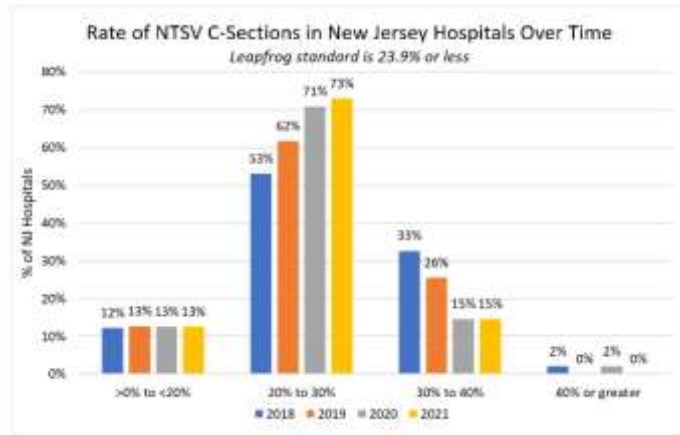
*Hospitals in Greater Philadelphia Region improved on fully meeting some Leapfrog standards during pandemic
More improvement still needed*

Healthcare-Associated Infections (HAIs) are common and complicating, yet largely preventable for hospitalized patients. Each day approximately 25 patients in U.S. hospitals contracts an HAI. These infections can delay recovery, increase expense of a hospital stay, and even result in death. Of approximately two million American patients who acquire an HAI annually, an estimated 90,000 will die. Studies have shown that selected HAIs can be reduced by as much as 70% with the help of the proper patient-safety interventions. The direct cost of HAIs to hospitals is estimated at between \$28 billion and \$45 billion. These costs are passed along to insurers and employers, as well as to patients in the form of higher out-of-pocket costs. ([Leapfrog Group Castlight HAI Report](#))

This Brief shares Leapfrog Hospital Survey findings for HAIs for hospitals in Delaware (DE), Southeastern Pennsylvania (SEPA) and Southern New Jersey (SNJ), comparing 2019 and 2023, pre- and post- pandemic. The results below show the aggregate of hospitals that reported on these measures each year and fully meet the Leapfrog Standard. Excluded are Unable to Calculate for Survey participants and hospitals that Declined to Respond to Survey. See page 2 for individual 2023 hospital results in the region.



Health Plan Collaboration for Network Quality Improvement



CASE STUDY:
HOW ONE HEALTH PLAN HARNESSSED THE POWER OF THE LEAPFROG VALUE-BASED PURCHASING PROGRAM TO IMPROVE MATERNITY OUTCOMES IN NEW JERSEY

Q & A



Moderator
Cristie Travis
National Alliance Advisor



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Carole Hemmelgarn
Georgetown University,
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& Safety



Christopher Landrigan, MD
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Harvard Medical School

Resources

NEW Infographic released on “Reducing Medical Errors in the Hospital”

It includes:

- PCOR/CER research study
- Medical error fast facts
- The role of employers
- Recommendations for employers
- Additional resource links

Reducing Medical Errors in the Hospital
The Role of Employers in Promoting Patient- and Family-Centered Communications to Improve Safety

THE CHALLENGE: Even with significant efforts to improve care, **medical errors** in hospitals that harm patients still occur at alarming rates and substantial avoidable financial and human costs. Involving patients and families in conversations during rounds when possible allows great promise in reducing errors. National Alliance coalition members often serve as a bridge between employers and health systems, helping employers play a key role in driving costs down and safety and patient satisfaction up, starting with these four steps. Details about implementing the steps are found on side two.

Facts about preventable hospital errors in the US

- COSTS ANNUALLY:** \$20B
- CONTEXT:** AFFECTS 1 OF EVERY 30 PATIENTS
- CONSEQUENCES:** 18% CAUSED DEATH

Health literacy: An integral part of patient safety

Patients with low health literacy:

- ARE MORE LIKELY TO VISIT A HOSPITAL EMERGENCY DEPARTMENT
- HAVE MORE HOSPITAL STAYS
- ARE LESS LIKELY TO FOLLOW TREATMENT PLANS
- HAVE HIGHER MORTALITY RATES

PCORI® Research Study

A research team wanted to see if improving communication would help reduce hospital errors and **adverse events**. The team created a program to help doctors and nurses communicate with families during rounds. The program took place in hospital pediatric units.

The program included:

- A way to make sure doctors and nurses included families on daily rounds
- A way to make sure medical staff talked about everything important on daily rounds

Reducing Medical Errors in the Hospital
The Role of Employers in Promoting Patient- and Family-Centered Communications to Improve Safety

Details for employers/purchasers, following the recommendations on side 1:

- 1 Reduce Hospitalizations**
 - Improve access to and coverage levels for comprehensive preventive care and care for chronic conditions.
 - Hold virtual or in-person employer/family health fairs or promote community health events. Click [here](#) for examples of successful health events.
 - Find creative, casual ways to invite healthcare provider partners to employer events, such as holiday luncheons or lunch-and-learn initiatives. Have translators on hand to meet the needs of specific employee communities.
 - Meet face-to-face with all provider partners, including hospitals, at least annually to build relationships, check in on expectations and accountability, and review educational and marketing materials being provided.
 - Understand the social determinants/ drivers of health in your organization, working to mitigate their impact.
 - Promote the use of urgent care clinics and telehealth to avoid unnecessary hospital emergency department use.
 - Work with your health plan to establish accountability for integrating clear and effective end-to-end communication protocols across healthcare teams (i.e., diagnosis, treatment, discharge, transition to home).
- 2 Establish Communication Protocols**
 - Ask your coalition, and health plans, and other vendors to define patient- family centered communications expectations. Fact check to see that expectations are reasonable, reasonable and enforceable.
 - Ask your health plan benefit partners how they are supporting training for medical professionals that address challenges associated with complex patient-family conversations.
 - Advocate for a cultural shift within healthcare systems that promotes a culture of transparency and honesty.

Quick Tip: Even in this era of hybrid work, employers often say that still communications are a top tactic for sharing health education messages such as reducing medical errors.
- 3 Educate Employees and their Families**
 - Strengthen shared responsibility partnerships with employees and their families.
 - If possible and rounds schedule and visitor hours permit, include families in patient conversations, especially in children's hospitals.
 - Offer access to cost and quality comparison tools such as [Leapfrog Hospital Safety Index](#).
 - Invest in a culture of communications to employees know how to prevent and remediate hospital errors.
 - Evaluate and revise health benefit communication materials to account for literacy and health literacy levels.
 - Support and invite employee resource groups (ERGs) to foster a diverse, inclusive, workplace.
- 4 Partner with Health Plans, Vendors and Primary Care Groups on Continuous Education**
 - Ensure systems are in place for collaborative communications to protect patients from preventable harm, including [informed consent](#).
 - Address individualized needs through [continuous and coordinated care practices](#) to prevent avoidable hospitalizations and hospital errors.
 - Prioritize continuity of care in hospital and outpatient settings.
 - Develop reimbursement mechanisms that provide incentives for providers to engage in patient-family discussions.
 - Integrate health system reporting of medical errors or adverse events in your network evaluation to establish/enforce accountability.

DID YOU KNOW?

Primary care doctors would need a 27-hour workday to follow current medical guidelines. That's why it's important to ask health plans and other vendor partners to identify and address time constraints and prioritize safety initiatives.

Source: [National Institutes of Health, 2015 The New York Times](#)

RESOURCES

- [PCORI Study: Does a Patient- and Family-Centered Hospital Communication Program Reduce Hospital Errors?](#)
- [The Leapfrog Group: Informed Consent, Fact Sheet and Hospital Safety Grades](#)
- [Interventions to Prevent Potentially Avoidable Hospitalizations](#)
- [Approach to Improving Patient Safety: Communication](#)
- [AHA Checklists to Improve Patient Safety](#) (for providers)
- [AHRQ \(H\)SAFE Checklist and Question Building App](#) (for patients)

The National Alliance gratefully acknowledges funding through a Patient-Centered Outcomes Research Institute® (PCORI®) Eugene Washington PCORI Engagement Award (EADI-2686Z).

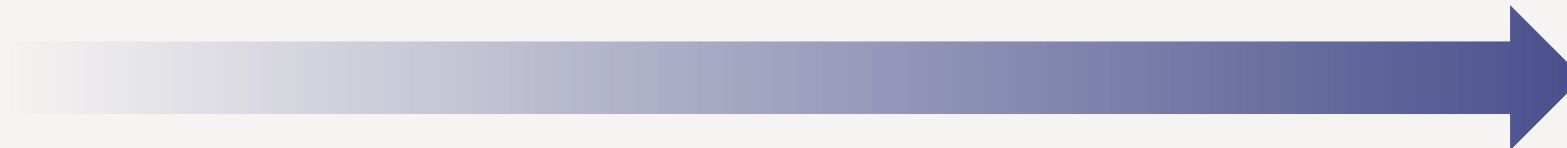
National Alliance of Healthcare Purchaser Coalitions • 1015 18th Street, NW, Suite 705 • Washington, DC 20036 • (202) 775-8300 • [nahealth.org](mailto:info@nahealth.org) • www.nahealth.org/communications/alliance

Thank You

We would appreciate your feedback!



Developed to Scale the I-PASS Methodology



Digital Solutions Developed to Support Large Scale Hospital Implementations

LEARNING



The screenshot shows a digital learning interface with four main sections: I (Introduction), P (Preparation), A (Assessment), and S (Summary/Action). Each section contains text and icons. A video player is embedded in the bottom right, showing a virtual simulation of a handoff. The video title is 'Spoken handoff' and the speaker is identified as Jennifer Campbell. The video content shows a healthcare professional in a green uniform sitting in a chair, talking to another person who is partially visible.

WRITTEN TOOL

The form is a structured handoff tool. It includes fields for patient name, room number, and date. The main body of the form is organized into columns for different aspects of care, such as 'Vital Signs', 'Assessment', 'Plan', and 'Action'. Each column has a header and several rows for data entry. The form is designed to be filled out by a healthcare professional during a handoff.

The screenshot shows a digital version of the handoff tool. It features a clean, modern interface with a header bar and several columns for data entry. The columns are labeled with letters I, P, A, and S, corresponding to the sections in the learning module. The interface includes dropdown menus, checkboxes, and text input fields. A central area displays a flowchart or diagram, possibly representing a patient's care path or a specific procedure.

MEASUREMENT

The form is titled 'Rounds Report'. It includes a header section with patient information and a main body with several sections for data entry. The sections are labeled with letters I, P, A, and S. Each section contains text and checkboxes. The form is designed to be filled out by a healthcare professional during rounds.

The screenshot shows a digital version of the 'Rounds Report'. It features a clean, modern interface with a header bar and several columns for data entry. The columns are labeled with letters I, P, A, and S, corresponding to the sections in the learning module. The interface includes dropdown menus, checkboxes, and text input fields. A central area displays a table with patient information and assessment data.

Workflow & Throughput Highlights

ED to Inpatient Callbacks



Brigham & Women's
Hospital

80%

Fewer Clarifying
Callbacks

Reduced Sign Out Time



St. Jude's Cancer
Research Hospital

18 mins

reduction in length
of NICU sign-out per
patient

Nursing Overtime Reduction



Hawaii Pacific Health

70%

reduction in
Nursing Overtime

Decrease in Interruptions



Boston Children's
Hospital

40%

reduction of
interruptions



St. Christopher
Hospital for Children's

92%

reduction in
interruptions

The Evolution of I-PASS...A 15-Year Journey

