



WPPTC

'24

SUNDANCE, UT

Best Practice Poster Session

#wptc2024

Day-1 JULY 10, 2024

Identifying and Addressing the Unmet Need for Resilience Training in Medical Education In the Face of Death and Trauma

Patrick Zimmerman, BS¹, Nicolas Do BS¹, Samuel Gendelman BA¹, YooJin Yoon, BS¹, Juliana Wilson, DO^{1,2}, Kelley Roswell, MD^{1,3}

¹University of Colorado School of Medicine, Aurora, CO

²Department of Emergency Medicine, University of Colorado, Aurora, CO

³Department of Pediatrics-Emergency Medicine, Children's Hospital Colorado, Aurora, CO

Background

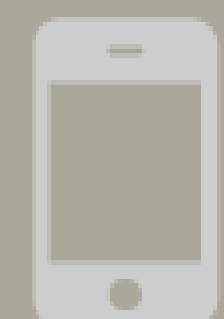
- Medical students experience death and trauma in their clinical roles
- Without adequate support and preparation, these experiences can lead to burnout, reduced empathy, and lapses in compassion¹

Objectives

- Evaluate the prevalence of patient death and traumatic patient encounters that medical students experienced during their clinical training at CUSOM
- Evaluate if and where students receive support after traumatic patient experience
- Assess whether students report receiving grief or resilience education at our institution
- Evaluate student's knowledge of grief and resiliency resources available at CU-SOM
- Use information to develop curriculum to support students' who experience patient death and traumatic patient experiences in the clinical space

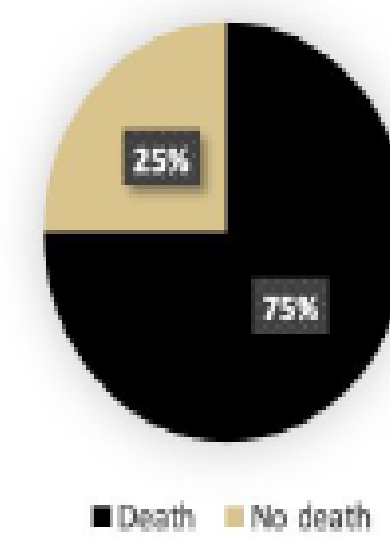
Methodology

- Cross-sectional survey of second year medical students (N=182) at the end of their clinical rotations at a single institution in August 2023
- Survey included questions surrounding traumatic experiences, patient death, and exposure to resiliency curricula or debriefing mechanisms

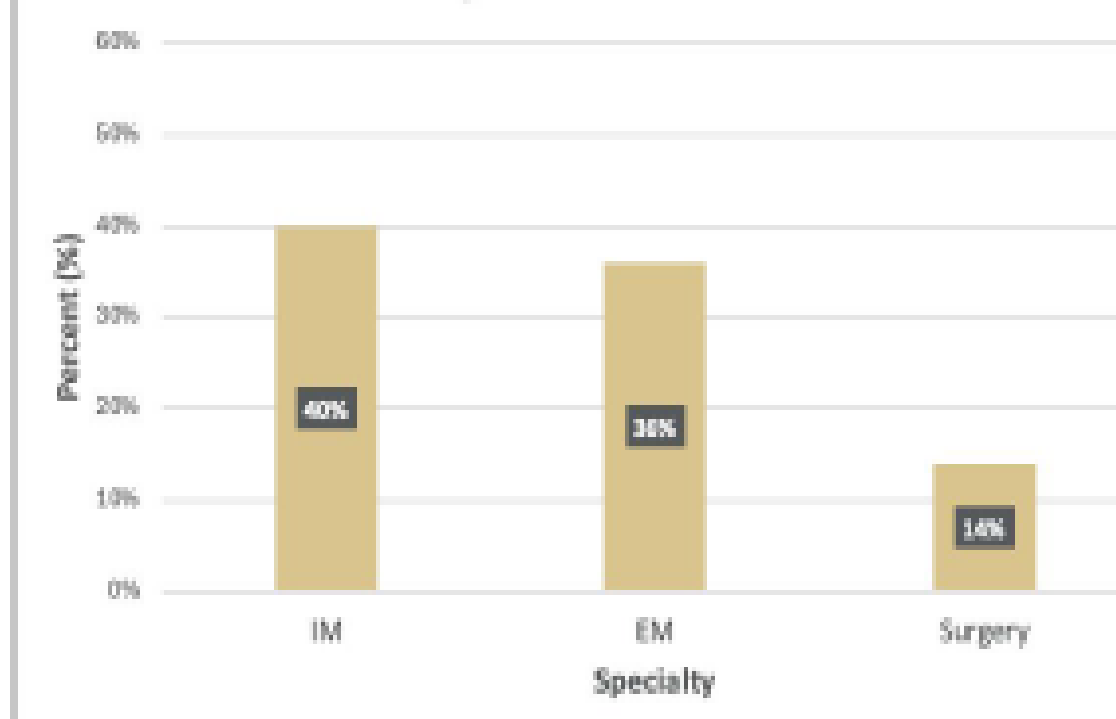


Scan the QR code to view the full abstract

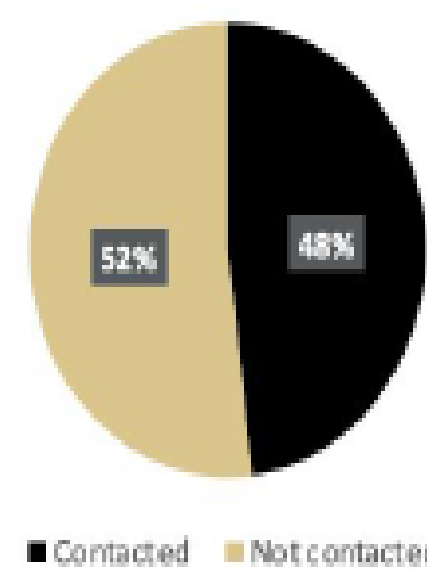
Second-year medical students who experienced a patient death



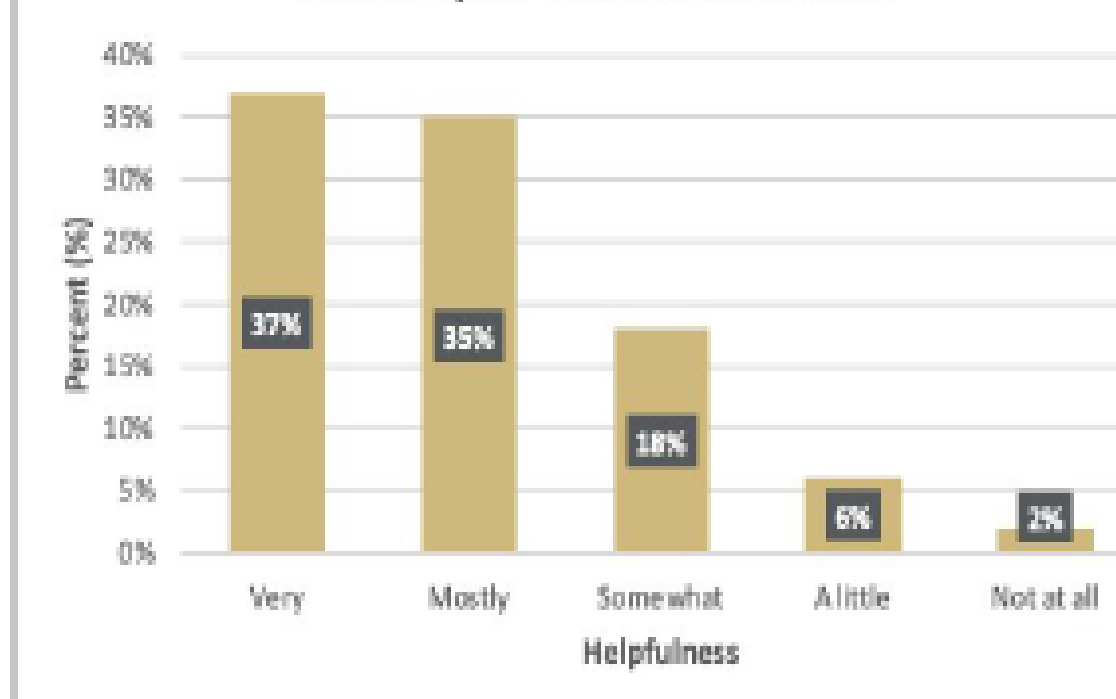
Patient death by specialty among second-year students



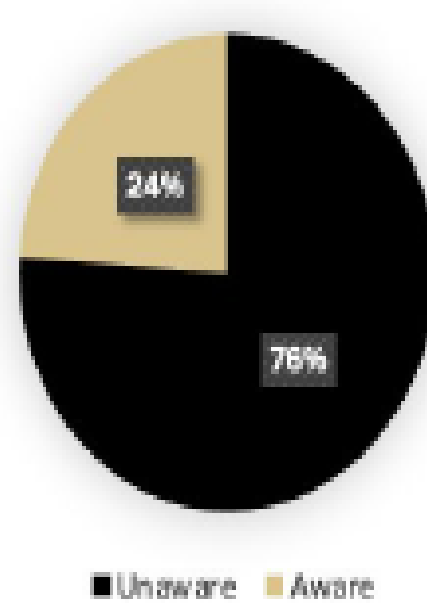
Did any faculty member reach out to you after the patient's death to discuss the experience?



How helpful was this outreach?



Grief and Resiliency Resource Awareness



“Resiliency and grief training is severely underrepresented in this curriculum. I feel like there are a large amount of students that would benefit from resiliency training”

Results

- 74% of second year students experienced the death of a patient during their clinical rotations.
- Students experienced patient deaths in all clinical areas as shown in **Figure 1**.
- Following patient deaths, 48% of second year students had a faculty member reach out to them, with 72% of those students reporting this as very helpful or mostly helpful
- Out of those who experienced a death, 48% reached out to a faculty member or other person associated with the school of medicine to discuss their experience
- 27% of all second-year students reported receiving training in resilience or grief.
- 25% of second-year students were aware of the grief and resiliency resources available at our institution.

Conclusion

- A large population of trainees experience a death in their first and second year of medical school.
- There is variable utilization of debriefing after these experiences, and medical students are largely underprepared with respect to grief and resiliency resources.
- Our findings underscore the unmet needs in students' preparation and support when confronted with a patient's death. A curriculum to better support students is needed.

Next Steps

- Developing dealing with death, resiliency and grief training curriculum for CU-SOM students based on year of training
- Creating curriculum to educate students on resiliency resources at CU-SOM
- Developed a notification system to alert clinical directors of student involvement in patient death or traumatic experience to aid in student follow up
- Continue end of year survey for all classes to improve sample size

References

1. Wiemann B, Ketteler E, Fahy B. Surgeon and medical student response to patient death. Ann Palliat Med. 2023 Jan;12(1):70-80. doi: 10.21037/apm-22-885. Epub 2022 Dec 27. PMID: 36627848.

Reducing Risks: The Role of a Free Gunlock Pilot Project in the Emergency Department

L. Williams, MPH, A. Necochea, MD, MPH, A. Gauthier, MD, S. Chow, MSN, RN, A. Noller, MSN, RN, M. Richards, MD, MPH, T. Schmidt, LCSW

Introduction

- ✓ Safe storage of firearms is linked to a decrease in accidental firearm deaths among young children and suicide in adolescents.
- ✓ Idaho is #8 highest rate for youth suicide.
- ✓ Firearms are one of the leading causes of suicide among children and teens in Idaho.
- ✓ The Emergency Department is one of the “first encounter visits” for people seeking professional help for a mental health crisis.
- ✓ Idaho is in the top twenty congressional districts with highest firearm suicide rate.
- ✓ In Idaho
 - ✓ Firearm suicide deaths per year: 114
 - ✓ Rate per 100,000 people: 13.1

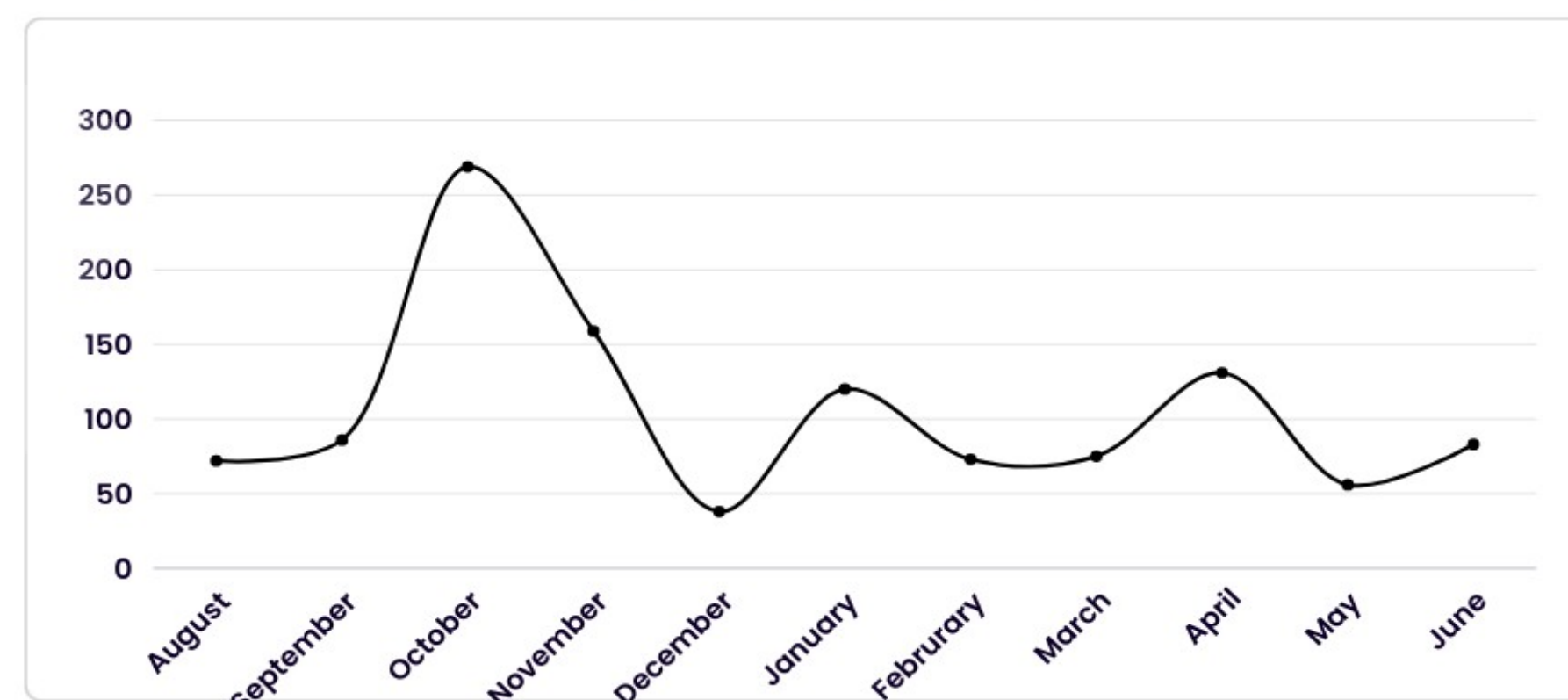
Discussion

- ✓ Boise Veterans Affairs Medical Center and St. Luke’s Children’s Hospital and Regional Medical Center worked in collaboration to place a self-serve distribution container in the main hallway of the emergency department.
- ✓ No paperwork needed; no questions asked.
- ✓ Over 11 months, >1,000 gunlocks were taken from the distribution box with an average of more than 100 monthly.

Conclusions

- ✓ Immediate resource available to provide time and space in crisis.
- ✓ In a state with high gun ownership and active discussions on child safety in the local community, the gunlock pilot was effectively launched and executed with remarkable success.
- ✓ Encountered no negative reactions on social media.
- ✓ Further expansion of gunlock program throughout the healthcare system and throughout the state of Idaho is being implemented.
- ✓ Limitations to this pilot:
 - ✓ Need for more data around usage of gunlocks in households
 - ✓ Effectiveness in preventing firearm death and injury

Monthly Gunlock Distribution
2023-2024



More than 48,000 people died by suicide in 2021	12.3 million Adults considered suicide
1 death every 11 minutes	3.5 million Adults made a plan for suicide
	1.7 million Adults attempted suicide

TTYS, SBIRT: Establishment of Electronic Communication Tools to Achieve Screening, Brief Intervention, and Referral to Treatment (SBIRT) Compliance

Cristen J. Rojas-Noto, RN, Lindsay Kifer, RN, Maria L. Gutierrez, LCSW, Deonna Villegas-McPeters, LCSW, ACM, Cauryn Updegraff, MSN, RN, CNML, Shannon L. Castle, MD
Valley Children's Hospital (VCH)

Introduction

- Valley Children's Hospital (VCH) relied on the hospital's Social Work (SW) team to identify and perform SBIRT on qualifying patients.
- This method proved inconsistent with an overall average of 75% compliance.
- The aim of this project was to establish interdepartmental electronic communication utilizing current workflows within the electronic medical record (EMR) and Trauma Registry.

Methods

- Development of an EMR Best Practice Alert (BPA) in all trauma patients equal to or greater than 12 years of age admitted to our organization which simultaneously populated in SW's in-basket (Figure 1a).
- Development of a custom Trauma Registry SBIRT data element tab to facilitate efficient registrar abstraction; along with a custom Trauma Registry SBIRT report utilized to export data that also functioned as a shared communication log between SW and the Trauma Program (Figure 1b).
- Initially, the Trauma Performance Improvement (PI) Coordinator provided daily concurrent notification to individual SW team members of in-house patients pending SBIRT utilizing VCH SPOK Messaging System.
- Ultimately, SW team established consistent compliance, and communication transitioned to monthly notification of the SW Director, Manager, and Team Leads. Bi-Monthly report out continues at Trauma Committee.

Results

From time of implementation one hundred and fifty-three patients have qualified for SBIRT, with VCH achieving an overall average of 91% compliance, noting multiple individual months illustrating 100% compliance.

Figure 1a

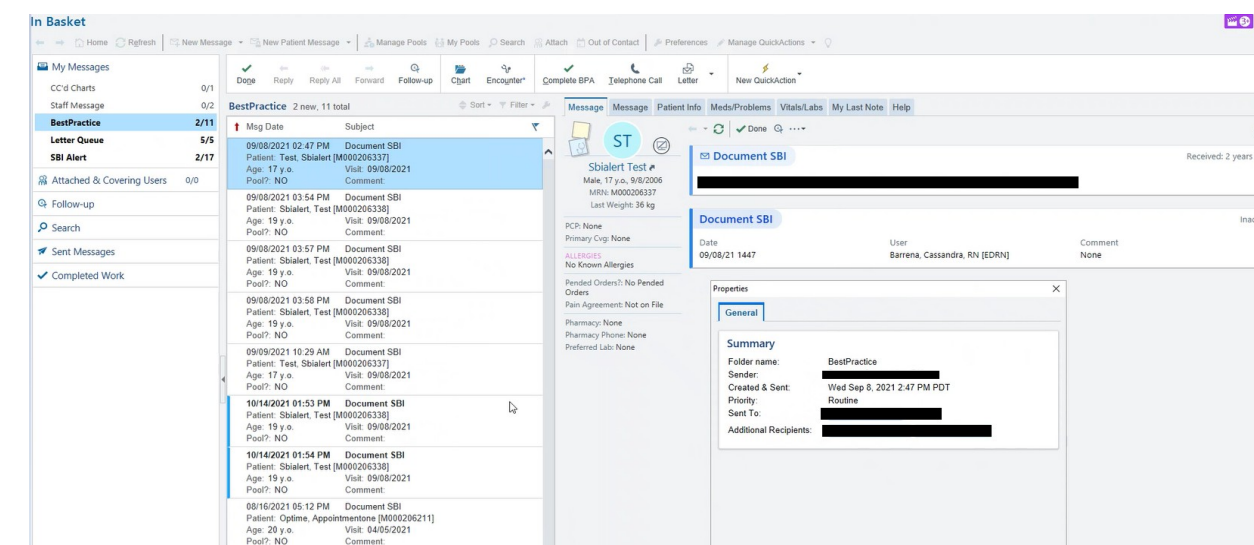
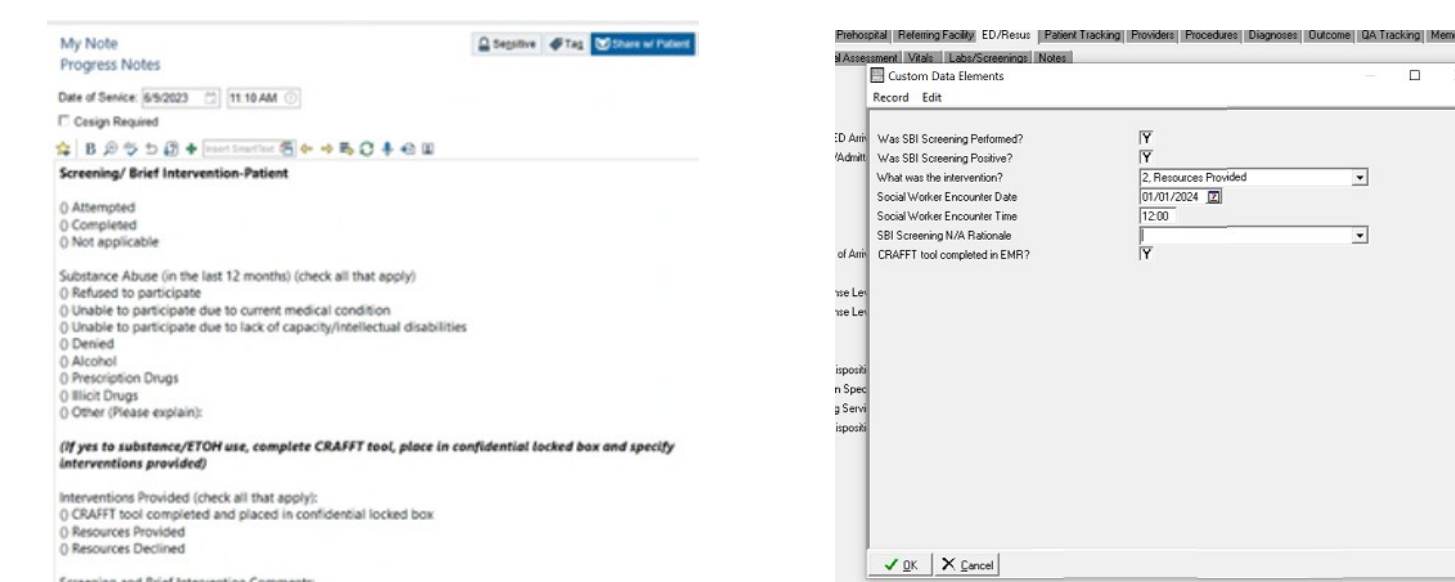
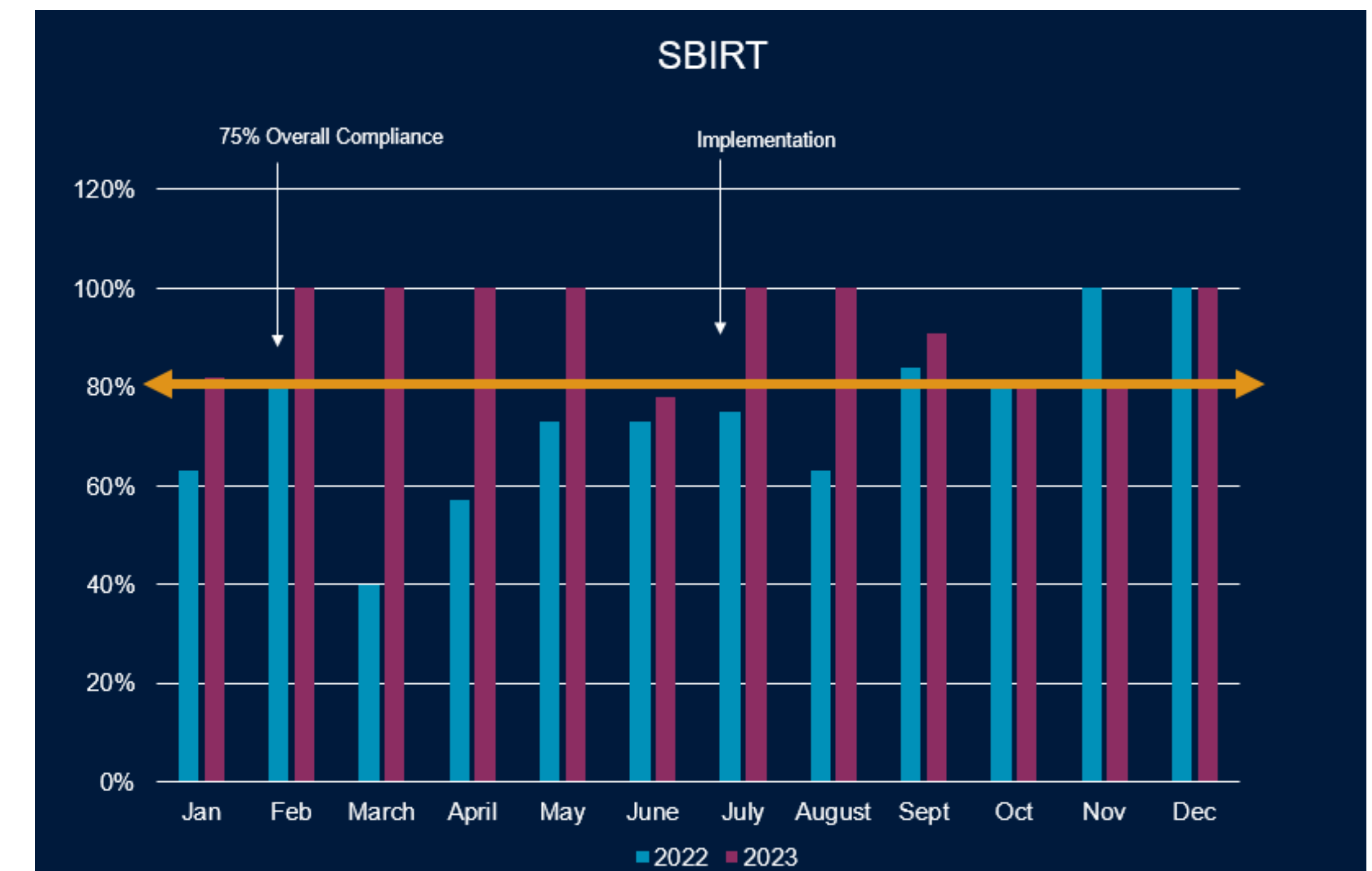


Figure 1b



SBIRT Communication Log - Header

Registrar	Trauma #	Medical Record #	ED Arrival	Name	Age	Value	Pt Type	Total In-House LOS (Hrs)	SBIRT Patient Assessment Tool	CRAFT Tool	Referral to Treatment Issued	Notes	SW Enc Date	SW Enc Time
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Conclusions

In Trauma Center's with an opportunity for improvement in SBIRT, development and implementation of electronic communication tools may significantly enhance efficiency, streamline processes, and prove efficacious in achieving compliance.



Implementing Best Practice for PTSD Screening and Intervention in Pediatric Trauma Patients: A Proactive Approach

Melissa Nash APRNa, Chance Basinger PA-Ca, Kelsea Peterson PA-Ca, Kacey L. Barnes BSNa, Robert Swendiman MD MPP MSCEb, Brooks Keeshon MDb, Katie W. Russell MDb
 aPrimary Children's Hospital bDivision of Pediatric Surgery, University of Utah

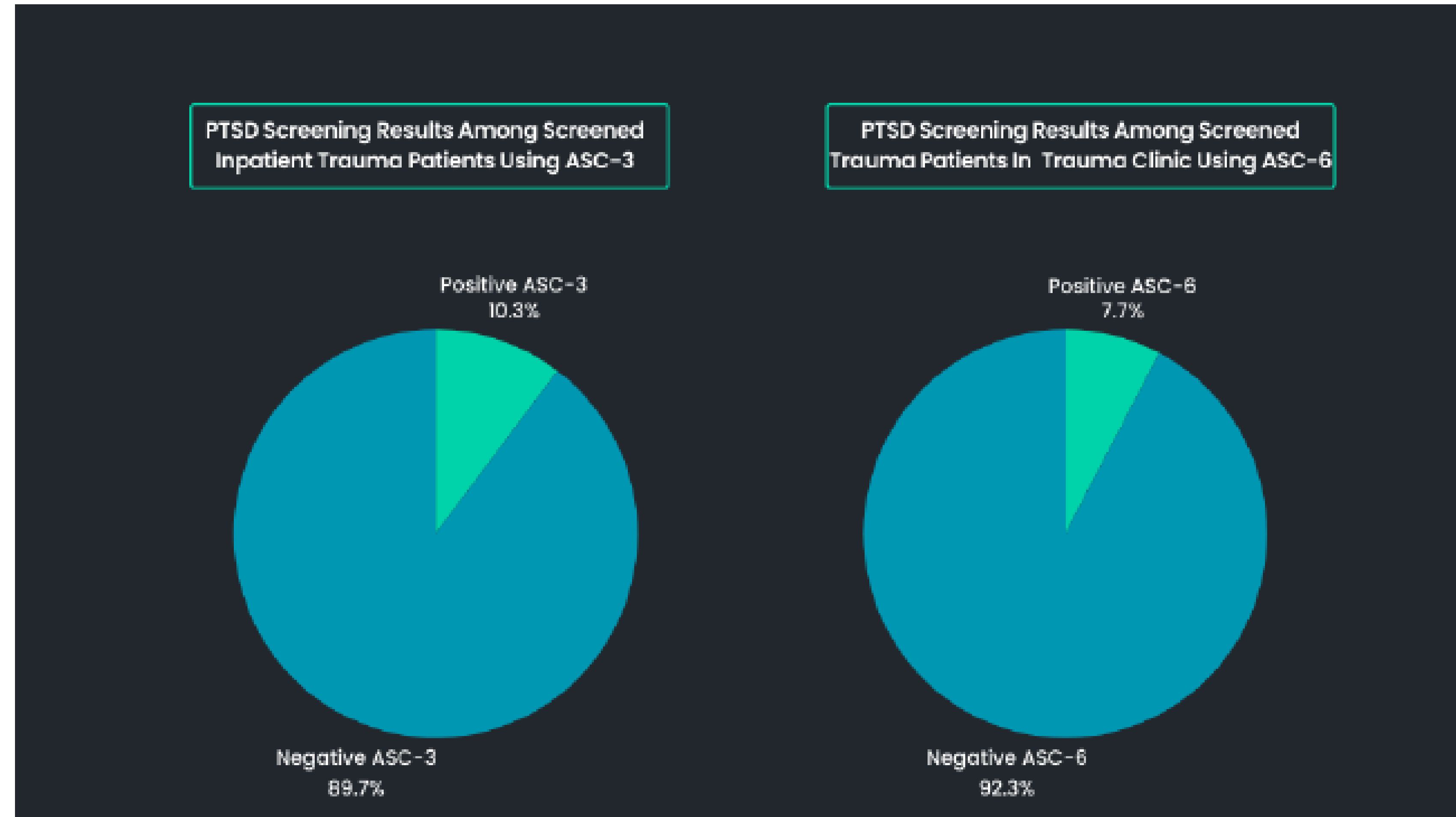
Background

- PTSD is a mental health condition that develops following a traumatic event characterized by intrusive thoughts about the incident, recurrent distress, flashback and avoidance of similar situations.
- Pediatric trauma patients are vulnerable to the development of post-trauma stress disorder (PTSD) after a traumatic event.

Methods

- Retrospective review of trauma patients from February 2024-June 2024.
- Pediatric trauma patients are screened using the ASC-3 tool by the trauma advanced practice providers (APPs).
- Positive screens prompt a referral to the APP trauma outpatient clinic.
- Patients are re-screened using ASC-6 tool.
- Persistent positive screens result in referral to behavioral health.

Results



Out of 58 inpatient trauma patients screened, six scored positive on ASC-3.

26 patients followed up in trauma clinic and were re-screened with ASC-6. Two of these patients score positive.

Conclusions

- The approach of inpatient screening with close follow up in the outpatient trauma clinic has caught patients needing further intervention.
- By identifying at-risk patients early in their hospitalization, we aim to optimize their long-term psychological well-being.

Implications

- Future implications to practice include the training of trauma APPs to feel empowered and educated to provide immediate support and bridge the gap in care to inpatient trauma patients.

Disclosures

Nothing to disclose.

Improving Care for Pediatric Burn Patients: Treating Trauma First

Kacey Barnes MSN RN^a, Alexandria White DNP PNP^a, Annette Newman MS RN^{b,c}, Chance Basinger PA-C^a,

Julia Smith CPNP^a, Hilary Hewes MD^{a,b}, Giovanni Lewis MD^{b,c}, Katie Russell MD^{a,b}

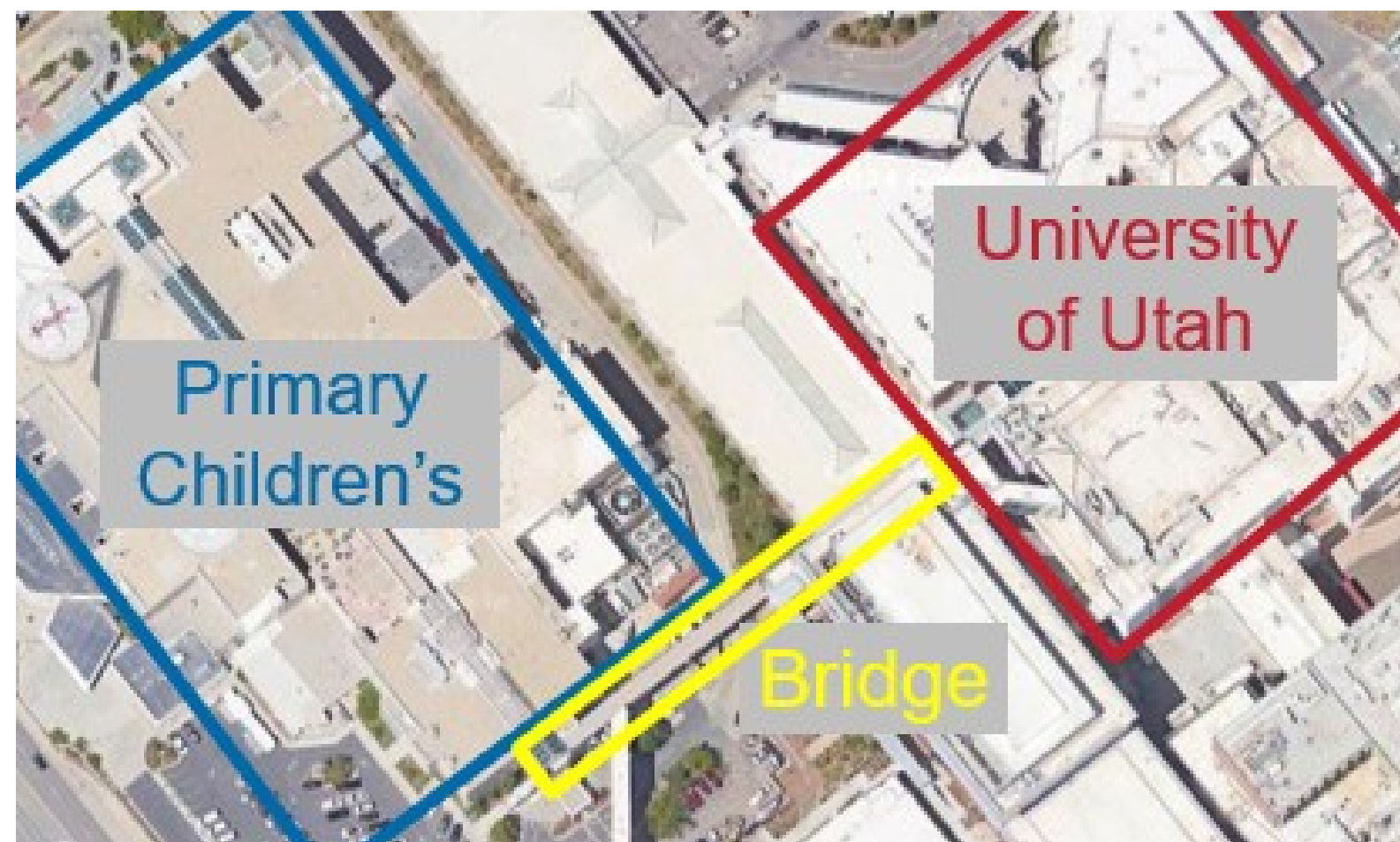
^aPrimary Children's Hospital – Intermountain Health

^bUniversity of Utah Health

^cUniversity of Utah Burn Center

Background

Primary Children's Hospital (Level 1 Pediatric Trauma Center) is located on same campus as the University of Utah (Level 1 Adult Trauma Center and Verified Burn Center)



- Historically, all burn patients were routed to the University of Utah (even pediatrics)
- University of Utah Emergency Department cares for low volumes of pediatrics overall
- Burn Center initiated a collaboration to change transfer decisions
 - Pediatric burn patients to be seen first at Primary Children's
 - Able to directly admit to University Burn Center after trauma eval

Pediatric Burns and Trauma
In collaboration with University of Utah Burn Intensive Care Unit (UUHC BICU)

TRAUMA 1

Does the patient have?

- > 15% TBSA
- Facial burns, >15% TBSA burn, inhalation injury or GCS < 8 (concern airway involvement)
- Known or suspected trauma w/ burn
- High voltage electrical injury (>1000V)

PCH ED will give the UUHC BICU a heads up prior to patient arrival. BICU #801-581-2700 "pediatric burn trauma activation"

PCH ED to send smartweb page for Pediatric Burn Trauma activation to the Burn ATTENDING on-call directly include ETA, Trauma LEVEL 1, and location and attending will respond

Depending on mechanism and acuity; burn MD may recommend sending photos vis MedPIC for evaluation.

<https://amcomwb.med.utah.edu/smartweb/>
Operator 801-581-2121

Can also use UofU MedPic App in app store- see pg 3

Patient's hand = 1% Total Body Surface Area

PRIMARY SURVEY

AIRWAY

- 100% O2 via NRB
- Consider airway involvement
- Monitor for possible inhalation injury
 - Burned while in a closed space
 - Hoarse voice, hypoxia or stridor
 - Carbonaceous sputum
- Early intubation:
 - Patients with burns to head & face
 - Patients with concern for inhalation injury
- In patients with burned face, secure ETT with ties not tape
- NG/OG on all intubated patients

BREATHING

- Evaluate breath sounds, pulse ox, WOB, or signs chest trauma
- Monitor chest expansion in circumferential torso burns

CIRCULATION

- Large bore IV or I/O (priority >10-15 % TBSA) Full set labs
- Ensure adequate pulse all extremities, Evaluate vital signs
- Start IV fluid (LR) at initial fluid rate per age** for burns that appear > 15% TBSA

DISABILITY

- Assess GCS and AVPU to determine neurological status

ENVIRONMENT

- Expose / keep warm & dry = use warm or mylar blankets
- Remove all clothing and jewelry
- Do not use wet dressings
- Do not blanket or Bair hugger directly to skin: cover k-thermia pad first

SECONDARY SURVEY

HEAD TO TOE EXAM

- XRAY pm
- Calculate %TBSA
 - use burn diagram and burn descriptions
 - 1st degree burns are not included in calculations
 - BICU team can also assist with TBSA estimation
- Transition to Resuscitation fluid rate
- BICU attending to direct wound care and management
- Any eye injury : ophthalmology consult and fluorescein exam

GIVE MEDICATIONS

- Check tetanus status
- Pain medications pm : small doses IV and reassessment
- Prophylactic antibiotics not indicated for burn alone
- Do not give steroids

TESTS: EKG for patients with electrical injury

LINES: Consider OG/NG and Foley for patients receiving fluids

OBTAIN HISTORY: AMPLE

Pediatric Burns and Trauma

In collaboration with University of Utah Burn Intensive Care Unit (UUHC BICU)

COMPLETE TRAUMA RESUSCITATION
TRAUMA HUDDLE & PLAN

DISPOSITION

- PCH vs UUH BICU admission = joint decision between the Trauma Surgeon, PICU Attending, and BICU Attending
- If transferring to BICU: APP to call UUH transfer center 1-877-236-4828 to confirm bed and create MRN, doc to doc if need
- PCH TCN call for nurse -nurse 801-581-2700
- Consider Air /ALS Crew →UUH transport
- If patient will be discharged from PCH; BICU will direct outpatient treatment plan

First version of protocol created through collaboration between Burn Center, Primary Children's Emergency Room, and Trauma Team

Methods

- Education:
 - PCH Emergency Department
 - Referring Centers
 - EMS Agencies

Any pediatric patient with an estimated Total Burn Surface Area (TBSA) of >10% should be sent to Primary Children's, regardless of mechanism

TRAUMA BEFORE BURNS

Results

Burn patients now receive care from **PEDIATRIC SPECIALISTS**

- Pediatric Trauma Workup
- Advanced Airway Needs
- Pediatric Resuscitation
- Child Abuse Screening

Working Under Pressure: Evidence-Based Risk Assessment and Pressure Injury Prevention in the Pediatric Intensive Care Unit (PICU)

James A. Hutcheson IV, DNP, CPNP-AC; Allyson Matney Neal, DNP, PMHNP-BC, Child & Adolescent Psychiatric CNS-BC, PNP

BACKGROUND

- **Global problem**
 - Up to 43% prevalence
 - Up to 27% incidence
 - Significant costs (financial, physical, emotional)
- **Milieu problem**
 - PICU patients > 2.5 times at risk than other wards
 - Task-heavy setting
- **Population problem**
 - Physiology: Smaller head size in younger children & immature dermatologic physiology
 - Compromised tissue perfusion & nutrition status
 - Neuromuscular blockade, sedation, exposure to technology and devices (medical and respiratory-related)

LOCAL PROBLEM

- **Project Site-specific**
 - 20-bed general PICU in urban free-standing children's hospital
 - Upward trend in hospital-acquired pressure injuries (HAPIs) in 2021, 2022, & 2023
 - Upward trend in device-related pressure injuries (nearly 50% injuries in 2023 caused by medical devices)
- **Current practice**
 - Risk assessment according to policy (Braden Q Scale within 24 hours of admission and once every 24 hours)
 - Wound Ostomy Continence Nurse (WOCN) consult for Braden Q scores ≤ 15
 - "Evidence based" bundled care for those at risk

METHODS

- Project framework: Evidence-based Practice Improvement process model (Levin et al., 2010)
- Literature search, critical appraisal, and synthesis congruent with need for pressure injury reduction, highlighting utilization of the Braden QD Scale as best tool for HAPI risk assessment
- Braden QD Scale utilized in parallel with Braden Q Scale (current practice) in series of PDSA cycles over period of 3 months from October 23, 2023, to January 23, 2024

The Braden QD Scale better predicts pressure injury risk in critically-ill children than The Braden Q Scale

Braden Q and Braden QD Cut-Off Points

	Pressure injury present				All	
	0		1		Count	Col %
	Count	Col %	Count	Col %	Count	Col %
Braden Q cutoff at ≤ 15 or at risk	51	89.47	3	100.0	54	90.00
0				0		
1	6	10.53	.	.	6	10.00
Braden QD cutoff at ≥ 13 or at risk	36	63.16	.	.	36	60.00
0						
1	21	36.84	3	100.0	24	40.00
				0		
All	57	100.0	3	100.0	60	100.0
			0	0		0

Note: Pressure injury present: 0 = response of no; 1 = response of yes. Col = column.

McNemar's Test

Chi-Square	DF	Pr > ChiSq
18.0000	1	<.0001

P = 0.05

INTERVENTIONS

- Facility IRB guided project to focus on tool utilization rather than directing patient care
- **Primary intervention:**
 - Implementation of Braden-QD Scale into practice
 - Rationale: Growing body of evidence pointing to medical devices as emerging etiology of pressure injuries
 - Congruent with unit-specific and hospital initiatives
 - Validity & reliability established in pediatric patients (preterm – 21 years)
- **Intervention Process:**
 - Risk assessment per policy (minimal disruption of workflow)
 - Side-by-side comparison of Braden-Q Scale and Braden-QD Scale
 - Risk scoring paradigm shift (Braden-Q ≤ 15 vs Braden-QD ≥ 13)
 - Device tally included in score (Maximum of 8 devices)

RESULTS

- Data from 60 patients (Ages 3 days to 17 years) collected over 90-day period
- 162 side-by-side measurements
 - Braden-Q cut-off met 21 times (**6 patients**)
 - Braden-QD cut-off met 100 times (**24 patients**)
- McNemar's Test utilized
 - p < 0.001 where p = 0.05
 - Clinical significance supporting Braden QD Scale as a better predictor of PI risk over Braden Q Scale

CONCLUSIONS

- Use of most recent evidence-based risk assessment tool for pressure injury reduction should be standard practice along with evidence-based mitigation bundle
- Low cost associated with Braden QD incorporation as facility standard of care
- Work with nursing leaders and stakeholders to implement Braden-QD into system-wide practice
- Expand collaborative efforts with newly formed skin task force to change practice based on Braden-QD risk stratification including RN skin champions



References

Supporting Families through the Creation of a Patient Family Notebook

Alyx Bystrom, MSN, RN, CEN, TCRN; Kati Kiely, MSW, LGSW; Laura Plasencia, MPH, RN, TCRN



Introduction and Background

Both injury and hospital admission are stressful events for children and their caregivers. Throughout 2022-2023, staff requested improved support tools for caregivers of admitted patients, particularly those who underwent a trauma team activation (TTA).

Methods

- A rapid-cycle improvement process was initiated in August, 2023. Consultation was held with Marketing and Communications, as well as a clinical nurse educator who assisted with editing the education tools in the notebook to a 4th grade reading level.
- A pre-survey was distributed via SurveyMonkey in October, 2023. Utilizing a multidisciplinary approach, a spiral-bound patient family notebook was created in November, 2023, which included:
 - A map of the trauma bay and explanation of each responder's role. Responders are represented by generic figures colored according to the uniform colors family members see in the hospital.
 - Journal pages, including space for questions/answers and notetaking.
 - Education, including acute stress management information.
- Based on initial feedback following the use of the notebook by the trauma social worker with patients in the PICU, the following changes were made to the notebook in December, 2023:
 - Pain and palliative care team was consulted, and a page was created identifying questions to help the family educate staff on their child and how to best support them.
 - Colored edges were added to page to help subdivide the different parts of the notebook.
- A second version of the notebook was printed and used with admitted patients and their families in December, 2023. A follow-up survey was completed with the same groups of staff as the pre-survey in February, 2024.

Results

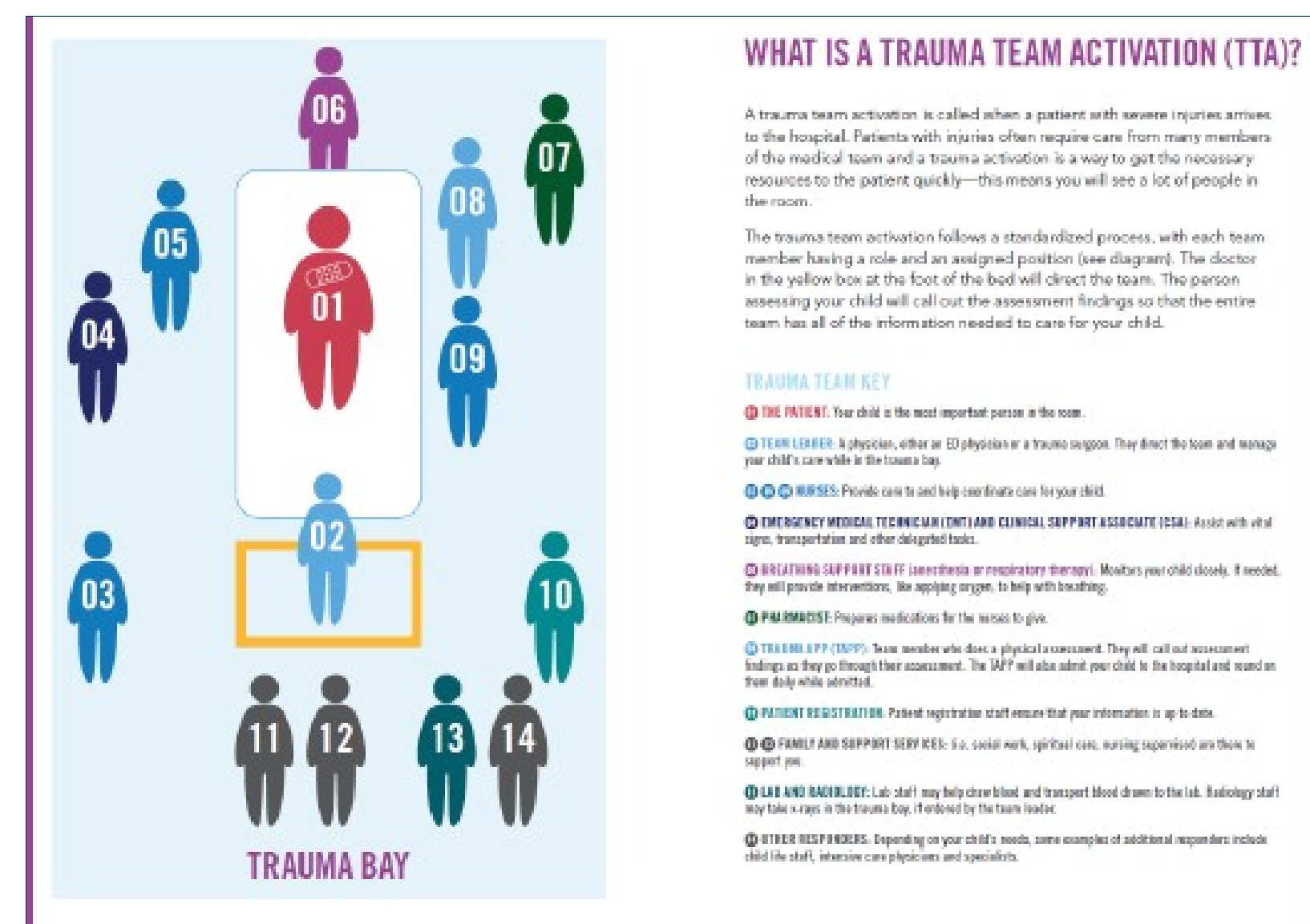
Pre-Survey

The pre-survey included trauma advanced practice providers, nursing supervisors, PICU nursing staff, social workers, and spiritual care chaplains, all of whom respond to trauma team activations. Twenty respondents identified the following gaps:

- Poor understanding of the TTA process and responders' roles by the family
- Families often struggle to retain information shared in the trauma bay
- Information is often shared using the PICU dry erase board, which contributes to difficulty retaining information when the board is erased
- Space for caregivers to introduce staff to their child including their likes, dislikes, and what brings the child comfort.

Post-Survey

Fifteen staff responded to the post implementation survey. Staff perception of the notebook was positive; all staff who had used it found it to be helpful. Comments included gratitude for space to collect information, and interest in utilizing a similar tool with other patient populations. Several families reported wanting to keep the notebook after discharge to reflect back on the injury and hospital course.



GETTING TO KNOW MY CHILD

Their preferred name is: _____

Some of their favorite things are: _____

TRAUMATIC BRAIN INJURIES

FRONTAL LOBE

- Starts many actions
- Controls learned motor skills, such as writing, playing musical instruments and typing, shuffling
- Controls speech, thought, concentration, problem solving and planning for the future
- Controls facial expressions and hand and arm gestures
- Coordinates expressions and gestures with mood and feelings

INJURY (May not be able to):

- Knows difference between right, small, taste, touch and sound
- Knows how to locate and remember parts of the body (right/left)
- Complete simple tasks that need skill (spray)
- Recognize self
- Knows environment or surroundings
- Write

TEMPORAL LOBE

- Generates memory and emotions
- Processing immediate events into recent and long-term memory
- Storing and retrieving long-term memories
- Comprehending sounds and images, enabling people to recognize other people and objects and to integrate hearing and speech

INJURY:

- Hearing changes or problems
- Agitation, irritability, childish behavior
- Difficulty speaking (receptive aphasia)
- Difficulty understanding language and other people's emotions and reactions

PARIENTAL LOBE

- Helps interpret senses like taste, hearing, sight, touch and smell
- Identifies sensations like texture, weight, size and shape
- Helps with math and language understanding
- Stores memories to help people know where they are in space and sense of direction

INJURY (May not be able to):

- Knows difference between right, small, taste, touch and sound
- Knows how to locate and remember parts of the body (right/left)
- Complete simple tasks that need skill (spray)
- Recognize self
- Knows environment or surroundings
- Write

OCIPITAL LOBE

- Processing and interpreting vision
- Coaching people to form visual memories
- Integrating visual perceptions with the spatial information provided by the adjacent parietal lobes

INJURY:

- Loss of vision in the opposite visual field
- Not able to recognize object seen in opposite field of vision

CEREBELLUM

- Fine motor movements
- Posture and equilibrium
- Balance
- Help perform rapid and repetitive actions

INJURY:

- Injury to one side of the cerebellum impacts the same side of the body
- Tremor (shakes)
- Uncoordinated eye movements
- Lack of coordination
- Abnormal and difficulty with walking

BRAIN STEM

- Pass messages back and forth between various parts of the body and the cerebral cortex
- Auditory and visual reflex and ocular movement centers
- Posture: regulates coordinating eye and facial movements, facial sensation, hearing and balance
- Medulla oblongata: regulates breathing, blood pressure, heart rhythms and swallowing
- Pons: regulates breathing, attention to the surroundings/environments and sleep patterns
- 10 out of 12 cranial nerves originate in the brainstem and control hearing, eye movement, facial sensation, taste, swallowing and movements of the face, neck, shoulder and tongue muscles

INJURY:

- Coma or death
- Abnormal breathing
- Eye pupil (black part) changes
- Cranial nerve dysfunction
- Movement abnormalities

SPINAL CORD

- Nerve impulses travel to and from the brain through the spinal cord to a specific location in the body
- Nerves branch off from the spinal nerve roots and travel outside of the spinal canal to the upper extremities, to the muscles of the trunk, to the upper and lower extremities, and to the organs of the body
- Center for operating and coordinating reflex actions

INJURY:

- Complete spinal cord injury (SCI) produces total loss of motor and sensory function below the level of injury
- Incomplete SCI: some function remains below the level of the injury; your child may be able to move one arm or leg more than the other or may have more functioning on one side of the body than the other
- Depending on the location of injury, ability or impaired interpretation of pain, light touch sensation, positional awareness, vibration sense or impaired motor function

SOURCES:

- [Brain and Spine: Spinal Cord, Nerves and Reflexes \(2019\)](#)
- [A Manager's Overview of the Brain's Sensory System](#)
- [Management of Trauma of the Spine and Spinal Cord Injury](#)
- [Anatomy of the Spinal Cord](#)

Children's Minnesota
The Kid Experts™
Level I Pediatric Trauma Center

Future Work

Future work utilizing this notebook includes translation of it into other language, particularly Spanish, Somali, and Hmong. Education included in the notebook includes acute stress management and traumatic brain injuries, due to their prevalence in injured children in the PICU. Additional educational resources on solid organ injury, spinal injuries, and long-bone fractures would also be beneficial for families whose children sustain those injuries.

Conclusions

A written resource to help caregivers better understand the TTA process improves the patient caregiver experience. It also improves communication between staff and the caregivers, including information about the patient and education about diagnoses and treatment plans. Caregivers expressed gratitude for the tool, citing the desire to use it to process their hospitalization and injury treatment.

Improving Time to Antibiotics in Open Fractures

Ryan S.¹, Barnes K.², Russell K.², Fife A.³, Rawlings J.¹

¹ Division of Pediatric Emergency Medicine, Department of Pediatrics, University of Utah School of Medicine, Salt Lake City, UT.
² Department of Surgery, University of Utah School of Medicine, Salt Lake City, UT.
³ Intermountain Primary Children's Hospital

INTRODUCTION

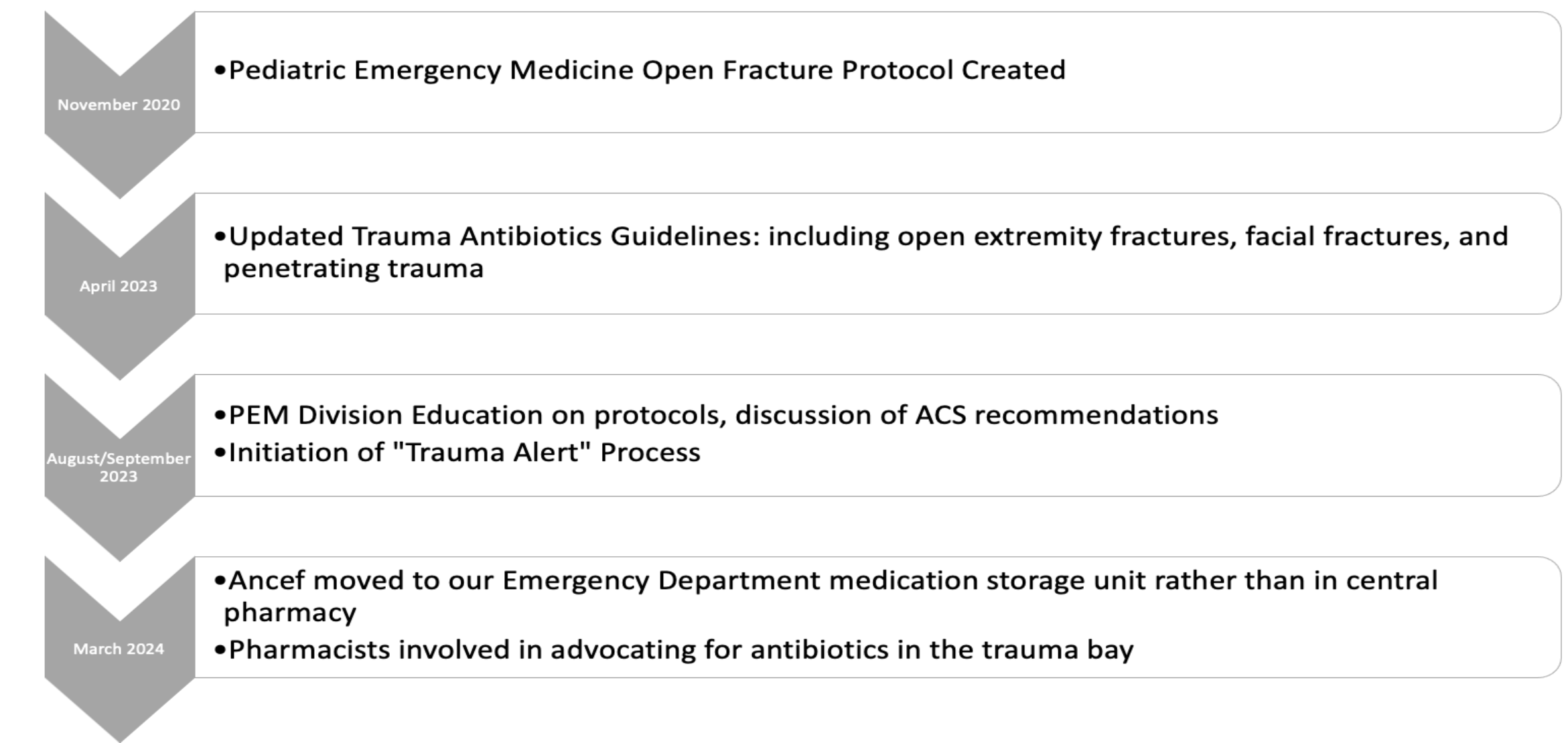
In 2015, the American College of Surgeons (ACS) Trauma Quality Improvement Program wrote a best practices protocol for patients to receive antibiotics within one hour of arrival to the Emergency Department (ED) for an open fracture. This is dictated by grade and site of the open fracture. The goal is to prevent infections in patients with open fractures and improve antibiotic stewardship. We have adopted this same goal to have antibiotics administered within 60 minutes of arrival to the ED with >80% compliance for patients with open fractures.

METHODS FOR IMPROVEMENT

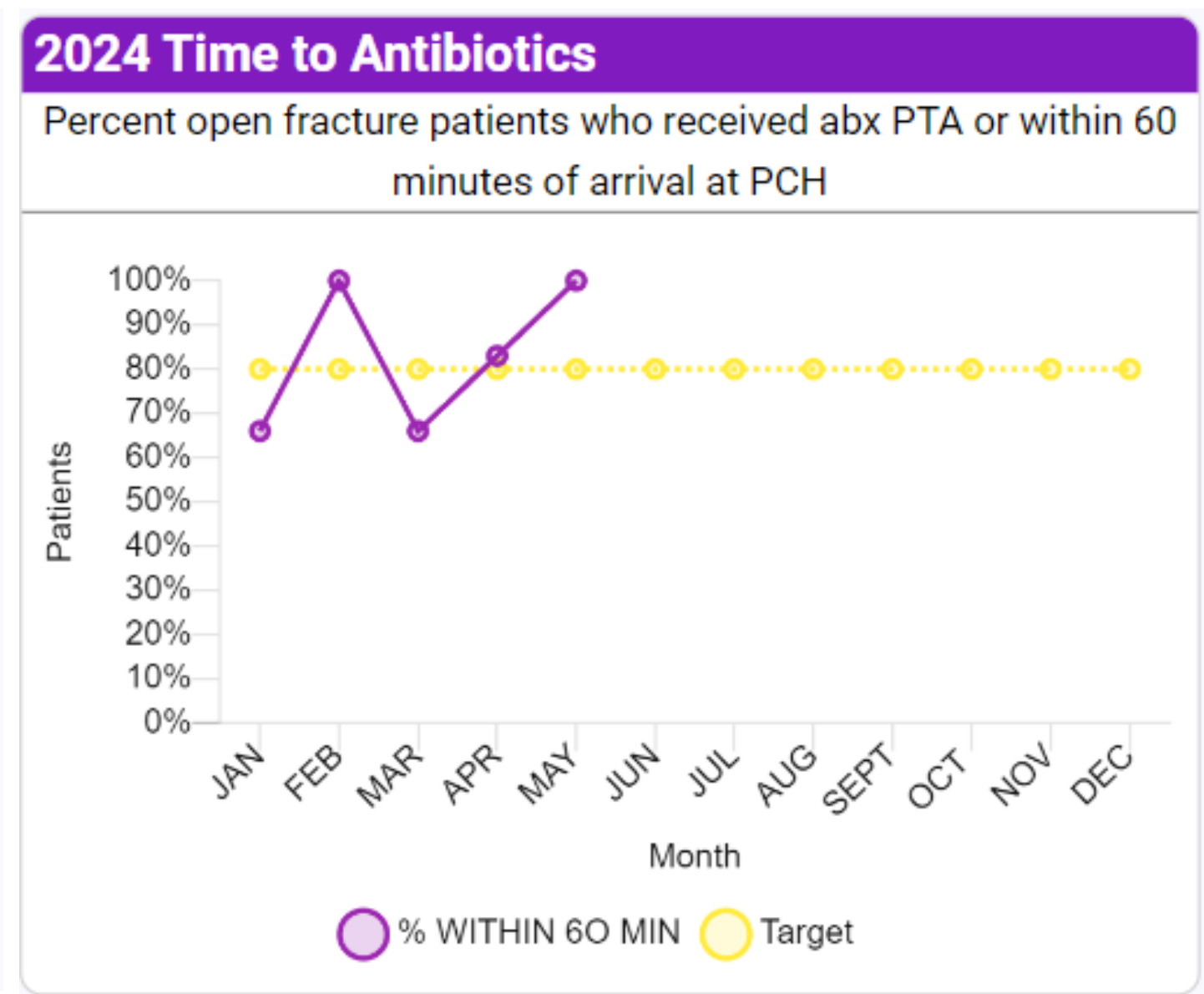
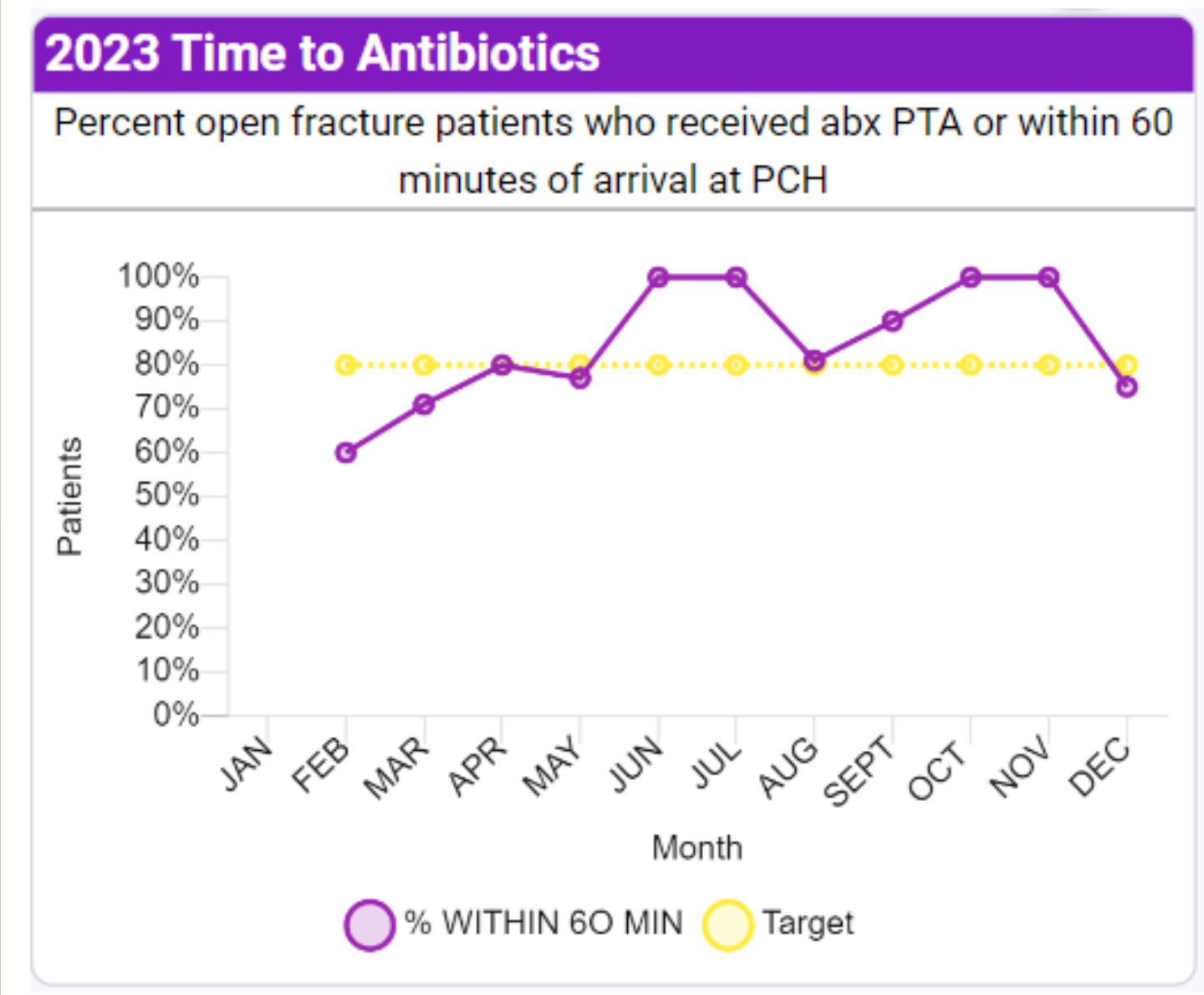
There have been several changes to make improvements in our practice, including:

- Introduction of an ED specific guideline (November 2020)
- Expansion to an updated general Trauma guideline (April 2023).
- Completed educational training (Fall 2023)
- "Trauma Alert" process (Fall 2023)
 - Patients with suspected open fractures are evaluated immediately on arrival to the ED room.
- Recruitment of our pharmacists to arrange for cefazolin (Ancef®) to be stocked in our Emergency Department medication storage unit rather than in central pharmacy (March 2024).

TIMELINE



RESULTS



DISCUSSION

Based on ACS guidelines and improving the care of trauma patients, we have created a specific goal of getting antibiotics to the patient within 60 minutes when there is an open fracture. We have been able educate all stakeholders, including trauma surgeons, trauma advance practice providers (APPs), ED physicians, ED fellows, ED APPs, ED nurses, and ED pharmacists.

As obstacles have been identified during the past year, we have been able to implement additional changes. Some of these changes have included creation of the "Trauma Alert" process after finding that patient evaluation was delaying antibiotic administration. There was also found to be a delay in obtaining antibiotics from central pharmacy and we were able to stock Ancef within the medication storage unit located centrally in the ED, near the patient rooms.

CONCLUSION

We have met the goal of >80% of antibiotics given within the first 60 minutes most months over the past year. We have continued educational reminders nearly every month. One of the challenges has been the growth of the Trauma Division, the PEM Division and the opening of a second pediatric hospital over the past year.

Our goal is now to hit the 80% compliance at both the hospitals with any open fracture every month.

Program at a Freestanding Level 1 Pediatric Trauma Center

Sarah Moultrie MSN CPNP-AC CPEN, Erin Cava MMS PA-C, Rose Tandeta MA CCLS CIMT, Katherine Clelo, RN MSN PNP, Keri Rash LCSW, Alicen Kershaw RN CPNP-AC, Yumi Mitsuya MD, Bethany Johnson-Kerner MD PhD, Aaron R Jensen MD MEd MS, and Jacqueline Hogan-Schlientz, RN, MSN

Background

- The transition back to daily life after major injury is challenging for children and families
- Post-discharge trauma survivorship programs are recommended to address unmet needs

Methods – Program Building / Implementation

- Multidisciplinary stakeholder team
- Partnership with ATS Trauma Survivor Network (TSN)
- Fostered engagement with TSN ‘Race to Rebuild’ walk
- QR Code integrated into discharge After Visit Summary

Acute
Care
Nursing

Child Life

Rehabilita
tion
Medicine

Social
Work

Trauma
Practition
ers



TSN Resources

- Brain Line
- Child Help
- Hope After Head Injury
- Brain Injury Association of America
- National Human Trafficking Hotline
- National Suicide Prevention Hotline
- Youth Violence Prevention Resources
- National Alliance for Grieving Children

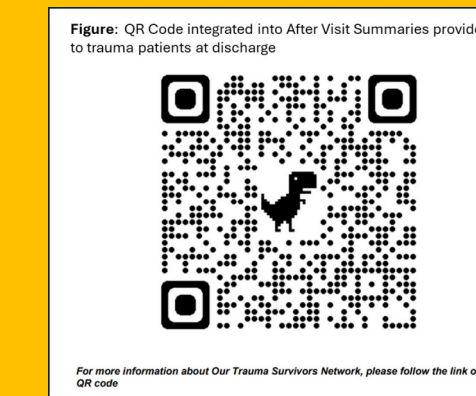


Figure: QR Code integrated into After Visit Summaries provided to trauma patients at discharge

Next Steps

- Create **local** peer-support groups and networks
- Introduce survivorship recognition programs
- Implement community events highlighting the continuous road to recovery



There's No Escaping Education 2.0

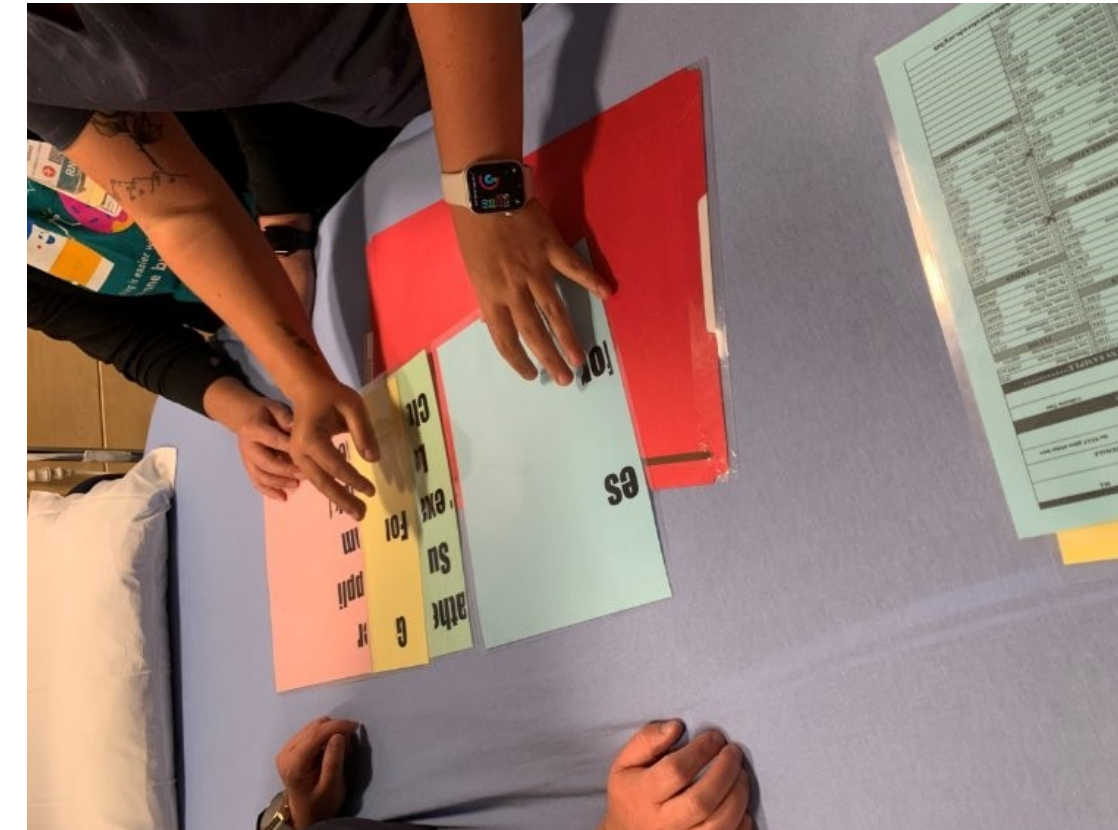
Mary Smith, MSN, RN, SANE-A, Darcy Eckels, MSN, RN, CPN
Childrens Hospital Colorado

Background

- Growth of two network of care locations within a hospital organization demonstrated a need to provide nursing education related to forensic care. Hands on learning models such as gamification, can reinforce didactic learning concepts that generate higher levels of learning as defined in Bloom's taxonomy.
- Five domains of learning should be applied when developing gamified models of learning; social, ecological, personal, fictional, and performance. more learning gain, improved analytical skills, and creativity when they participated in escape room learning compared to their traditional learning counterparts. Escape rooms also improved student engagement, motivation, social interaction, and communication as well (Fotaris & Mastoras, 2019). Creation and development of an escape room style learning began, with various modifications and prior to implementation, staff was surveyed to assess competence and confidence related to various aspects of forensic care.

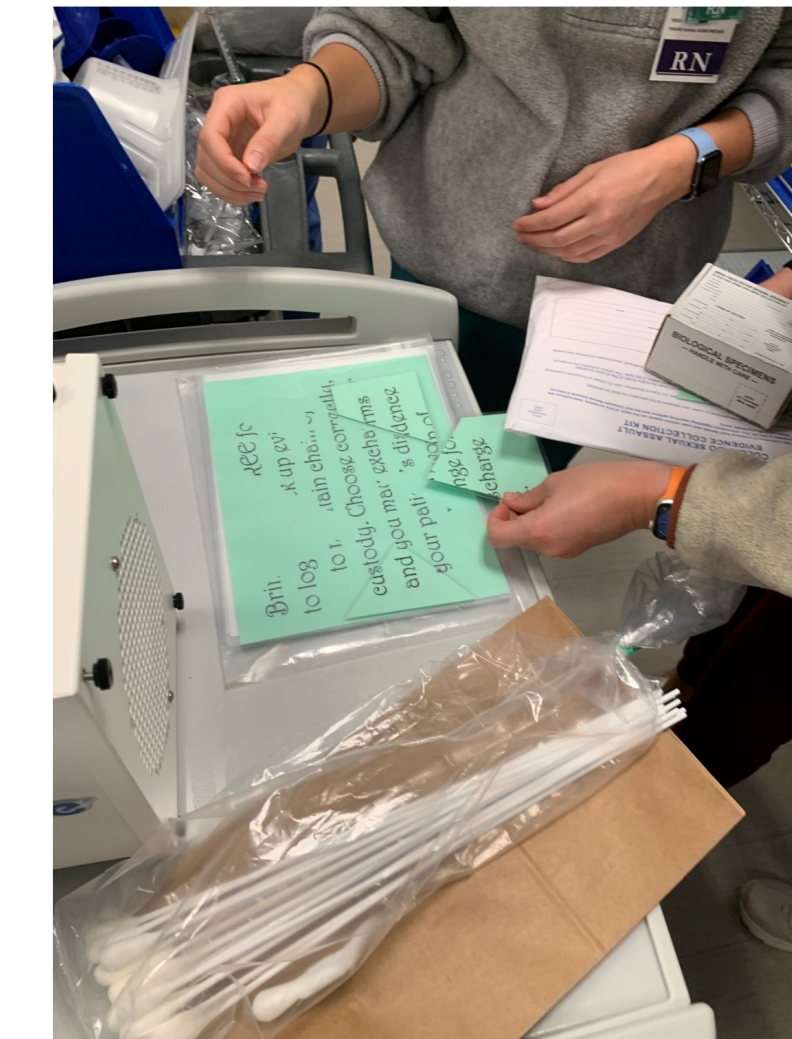
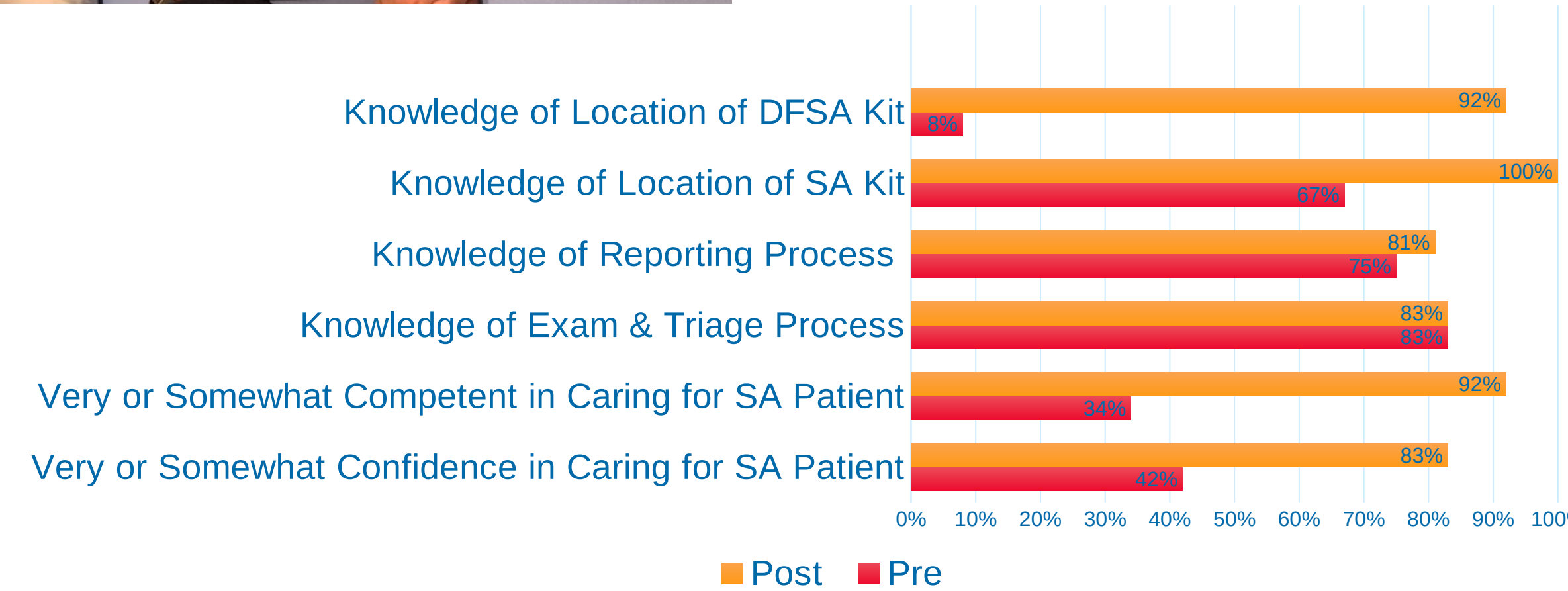
Methods

- Utilization of survey methodology to observe how the intervention of utilization of gamification models of learning can improve outcomes for pediatric emergency room nurses.
- Surveying staff both pre and post intervention of education helped ascertain the impact of gamification via escape room for learning outcomes and objectives related to forensic nursing care.

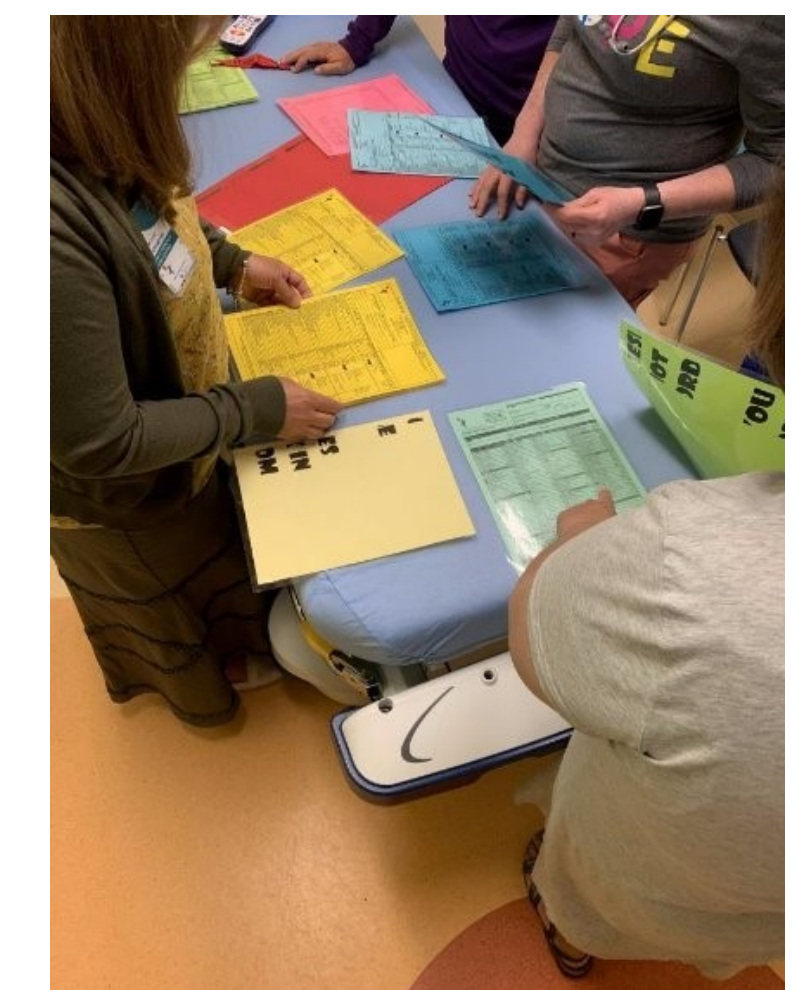


Results

58% of surveyed nurses have not taken care of patients with suspected sexual abuse or assault in the last 6 months, and 9% have taken care of 1-3 patients.
38% of surveyed nurses have not taken care of patients with suspected sexual abuse or assault in the last year, and 46% have taken care of 1-3 patients.
Only 3 surveyed have ever received formal education in caring for forensic patients.
Nurses most frequently identified barriers as "lack of knowledge and/or education" as a barrier to caring for these patients



Key Measures	Definitions	Baseline	Goal	Final	Progress
Outcome	Very or Somewhat Confident in caring for SA patient	42%	60%	83%	41%
	Very or Somewhat Competent in caring for SA patient	34%	75%	92%	58%
Process	Knowledge of triage & exam process	83%	90%	83%	0%
	Knowledge of reporting process	75%	86%	81%	6%
	Knowledge of existing supplies/equipment	67%	75%	100%	33%
	Knowledge of new supplies (DFSA)	8%	50%	92%	4%
Balancing	Ongoing training for new hires as well as incorporating refresher course into annual education requirements is in progress	0%	TBD		
Financial	Cost is 1.3 hours per bedside RN + 0.2 hour per bedside RN for facilitator	1.5 hrs	Maintain		1.5 hrs



Conclusions

- Patients and families experiencing violence and trauma deserve the best possible care. Taking time to educate, via hands on learning, regarding low volume, high risk events such as pediatric sexual assault are imperative to improve patient care outcomes.
- Nursing staff was eager to receive specialized training for this patient population.

Implications

- Research supports that a dedicated role of forensically trained nurses positively correlate with care outcomes, however that dedicated role is lacking (Berishaj, et al, 2020). Increased confidence and competence for forensic medical care can be accomplish with the implementation of specialized education, including mentorship and support. Continued education beyond the basics is essential to increase pediatric knowledge in caring for patients affected by violence (Morris, et al, 2022).

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Berishaj, K., Boyland, C. M., Reinink, K., & Lynch, V. (2020). Forensic Nurse Hospitalist: The Comprehensive Role of the Forensic Nurse in a Hospital Setting. *Journal of Emergency Nursing*, 46(3), 286-293. <https://doi.org/10.1016/j.jen.2020.05.001>

Berishaj, K., Boyland, C. M., Reinink, K., & Lynch, V. (2020). Forensic Nurse Hospitalist: The Comprehensive Role of the Forensic Nurse in a Hospital Setting. *Journal of Emergency Nursing*, 46(3), 286-293.

Morris, A., Goletz, S., & Friona, J. (2022). Indiana Sexual Assault Nurse Examiner Training Initiative: Positive Impacts for Medical Forensic Care. *Journal of Forensic Nursing*, 18(3), 146-155.

Disclosures

Nothing to disclose, no payment to declare

Marquelle Rogers DNP, PNP, Chance Basinger PA-C, Melissa Nash DNP, PNP, Kacey L. Barnes MSN, RN, Morgan Gossling BSN, RN, Brooks Keeshon MD, Kelsea Peterson PA-C, Julia Smith MSN, PNP, Marshall Wallace MD, Robert A. Swendiman MD, MPP, MSCE, Katie W. Russell MD
 Primary Children's Hospital, University of Utah Division of Pediatric Surgery

Background

- Utah has a high rate of firearm injuries
- Our facility needed a screening process for PTSD in accordance with ACS requirements
- We hypothesized that implementing a screening protocol for injury prevention and PTSD would improve access to and utilization of injury prevention strategies and identify patients with PTSD symptoms

Methods

- We created a team and developed a screening process for injury prevention and PTSD
- Utilizing REDCap our trauma APPs screen all trauma patients admitted to our facility
- Injury prevention equipment (gunlocks, helmets & car seats) is distributed as needed
- Patients with a positive ASC-3 screen are referred to our outpatient trauma clinic

Results



We'd like to know about your thoughts, feelings, and reactions since _____.

There aren't any right or wrong answers, just how YOU are thinking and feeling. Please put an X in the box that shows how true each of these sentences is for YOU.

For example, if you feel sort of sleepy in the morning or you feel sleepy in the morning some of the time, you would put an X in the middle box.

	Never / Not true	Sometimes / Somewhat	Often / Very true
Example I feel sleepy in the morning.		X	

ASC-3

		Never / Not true	Sometimes / Somewhat	Often / Very true
1	When something reminds me of what happened, I feel very upset.			
2	I want to stay away from things that remind me of what happened.			
3	I feel scared that something bad might happen.			

Injury Prevention Screening Questions

- Do you *always* wear a helmet for activities such as bike riding, skating, scooter, ski/snowboard, etc?
 - Do you have an appropriate fitting helmet?
 - We have free bike helmets available, would you be interested?
- Do you use an age- or weight-based appropriate car seat or booster?
 - Would you be interested in a car seat/booster safety check?
 - We have resources to obtain car seats and boosters, would you be interested?
- Are there firearms in the home?
 - Are firearms locked and stored securely?
 - Would you like a free gun lock or lock box?

Conclusions

- We have successfully identified patients who need injury prevention supplies or follow-up for PTSD with our screening tool

Implications

- Future research is needed to demonstrate if this process improvement has made a difference in outcomes in our state

Disclosures

- None

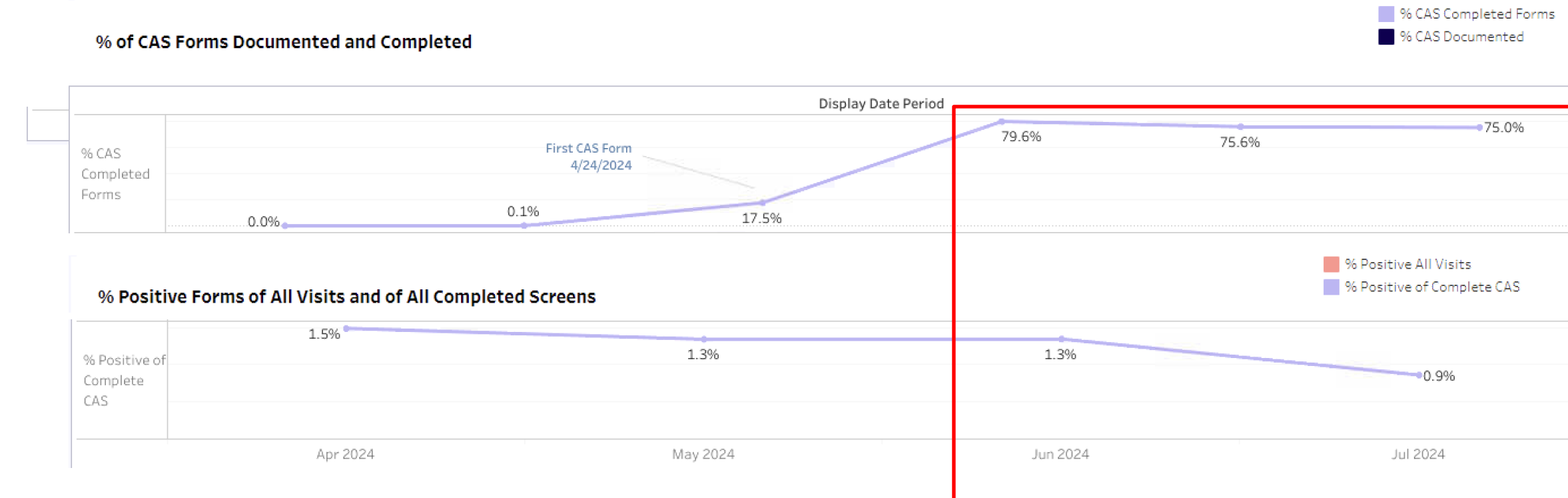
Background

- American College of Surgeons (ACS) mandates trauma centers have policies, procedures and guidelines for universal screening and management of patients at risk for child abuse.
- Joint Commission regulatory requirement PC 01.02.09, to identify patients who may be victims of child abuse and neglect.
- Risks of implementing universal screening for child abuse:
 - Low-quality evidence for accurate detection of child abuse and neglect
 - False positives and false negatives are common
 - Increased reports to child protective services (CPS)
 - Increased racial disparities in CPS reports

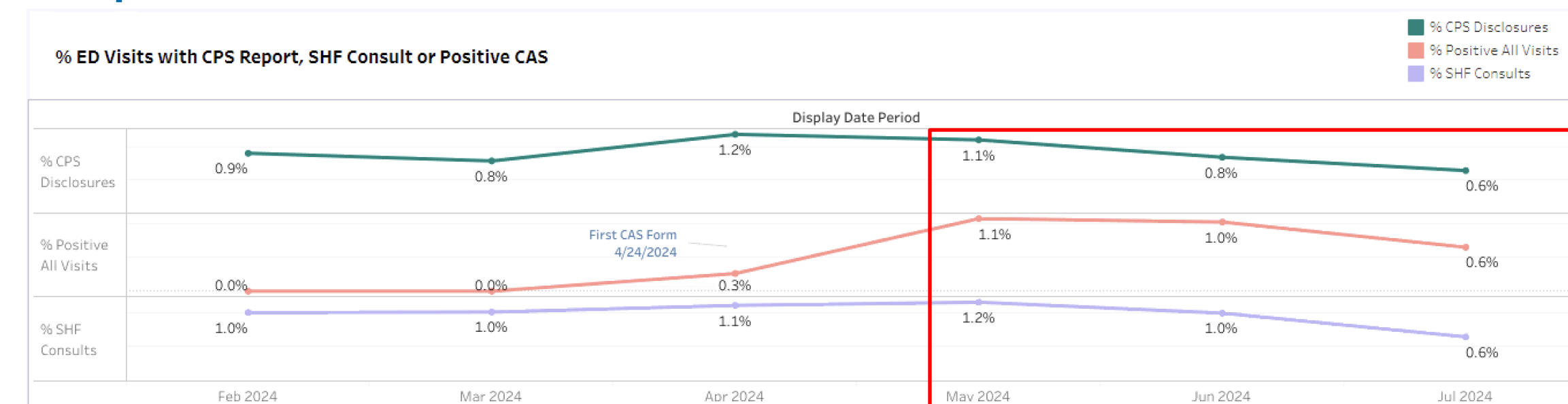
Goal: To improve recognition of and response to child abuse/neglect in the Emergency Department

Early Implementation

CAS completion by RNs
 May= 79.6%, June= 75.5%, (Entry goal =80%)



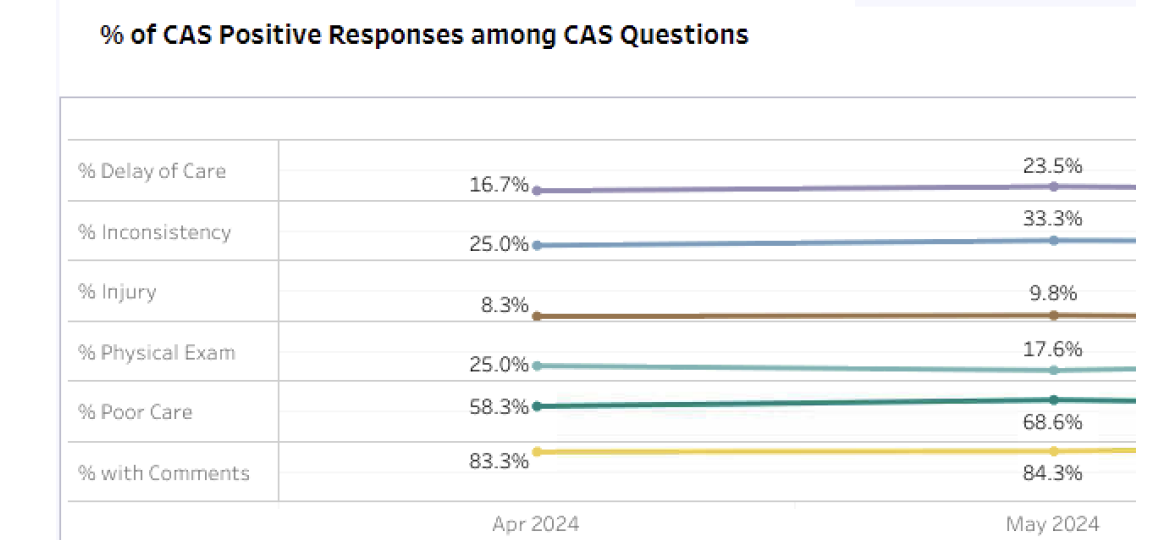
Impact of CAS on CPS or SHF referrals



Early Challenges

- Screener Limitations
 - Gaps in screening content
 - Serious physical abuse
 - Sexual abuse
 - Reliance on RN to document diagnoses
 - Fractures
 - Intracranial hemorrhage
- Process Limitations
 - Multidisciplinary response to positive screen
 - Documentation is challenging
 - Early integration of social work is limited
 - Patient-centered outcomes are missing
 - Patient experience with screening
 - CPS outcomes of referrals is needed

Positive Responses on CAS



Conclusions & Next Steps

- Implementation of child abuse screening with tasked RN forms is feasible
 - Education and just-in-time feedback is critical
 - Ongoing training for new hires requires continuous effort
- Evaluation of outcomes of child abuse screening is ongoing
 - Track equity & disproportionality in screening, evaluation and referral
 - Track disposition of children referred to CPS
 - Monitor for cases of missed abuse
- Adaptation to more robust screening in new EHR
 - Passive screening triggers will distribute tasks across ED team
 - Improves efficiency of referral and follow up process
 - May reduce bias with reliance on specific triggers vs RN assessment

Disclosures None

Funding? Support?

Methods

- Created EHR-based child abuse screens (CAS) for our reality at PCH ED. CAS based on previously published tools (Escape, P-CAST, TEN-4-FACESp and PIBIS).
- Educated the staff who engage with the CAS: ED RNs, ED LIPs, ED Social Work, Trauma LIPs, and child abuse pediatricians (Safe & Healthy Families (SHF))
- Support response to possible child abuse through evidence-based recommendations for evaluation and real-time, "phone-a-friend" consultation with SHF MDs
- Implemented child abuse screening process of all emergency department patients <18 years old on April 24th, 2024

Streamlining Emergency Transfers: Implementing a Direct-to-OR Protocol

Karli Sibley, MPAS PA-C^a, Julia Smith, MSN, CPNP^a, Chance Basinger, MPA MPAS PA-C^a, Kacey Barnes, BSN RN^a, Wyatt Argyle MSN RN^a, Robert A. Swendiman MD MPP MSCE^b, Katie W. Russell, MD^b
 Primary Children's Hospital, Intermountain Health
 Division of Pediatric Surgery, University of Utah

Background

We recognized a need to streamline our transfer process to help eliminate handoff complications, particularly for patient's requiring emergent surgical intervention. Examples of patients who might benefit from a new protocol include:

- Trauma transfers, most notably including those from our newly built second Children's hospital
- Fetal patients from an adjacent adult center
- Pediatric patients from outside hospitals requiring ECMO cannulation

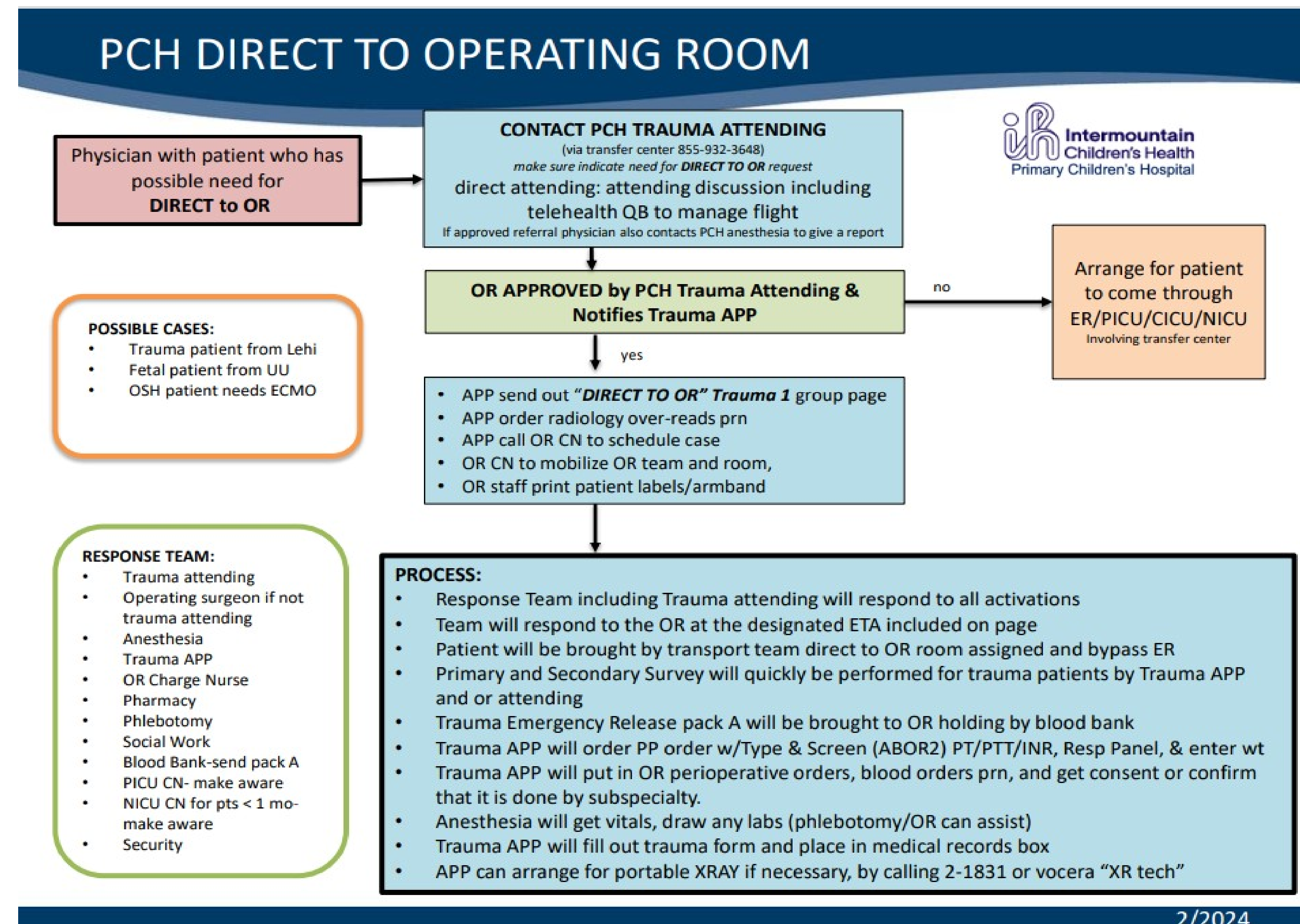
Methods

- After an attending-to-attending conversation takes place to initiate the process, a Trauma APP begins arranging pre-operative patient needs
- "Trauma 1: Direct to OR" page is sent out which prompts the trauma response team to present to the OR holding area
- Transport team is instructed to bring the patient to the OR, bypassing the ED
- Primary & Secondary survey performed by Trauma provider
- Blood Bank brings trauma blood products directly to the OR
- OR staff obtain vitals, draw labs, and prepare patients for surgery

Results

Direct-to-OR Protocol launched February 2024 with 3 utilizations so far:

1. neurosurgical patient requiring craniotomy
2. airway foreign body removal
3. emergent bowel obstruction due to volvulus



Conclusions

- Transitions of care, particularly handoffs, are widely recognized as a primary source of significant medical errors
- Interfacility transfers compound this risk as they necessitate handoffs across different healthcare institutions

Implications

- Through the development and implementation of the Direct-to-OR protocol, our aim is to
 1. mitigate unnecessary handoffs and
 2. expedite emergent life-saving surgical intervention

Disclosures

Nothing to disclose.

Distance Makes the Heart Grow Fonder: Feasibility of a Long-Distance Relationship with a Remote Performance Improvement Coordinator

Cristen J. Rojas-Noto, RN, Lindsay Kifer, RN, Shannon L Castle, MD
Valley Children's Hospital (VCH)

Introduction

- Although traditionally, PI Coordinators work on-site, Valley Children's Hospital's (VCH) innovative practice allowed for a remote role thus prioritizing experience and expertise over tradition to facilitate optimization of their Performance Improvement and Patient Safety (PIPS) Process.
- We describe a model for a remote PI Coordinator and solutions to obstacles encountered in implementing this model.

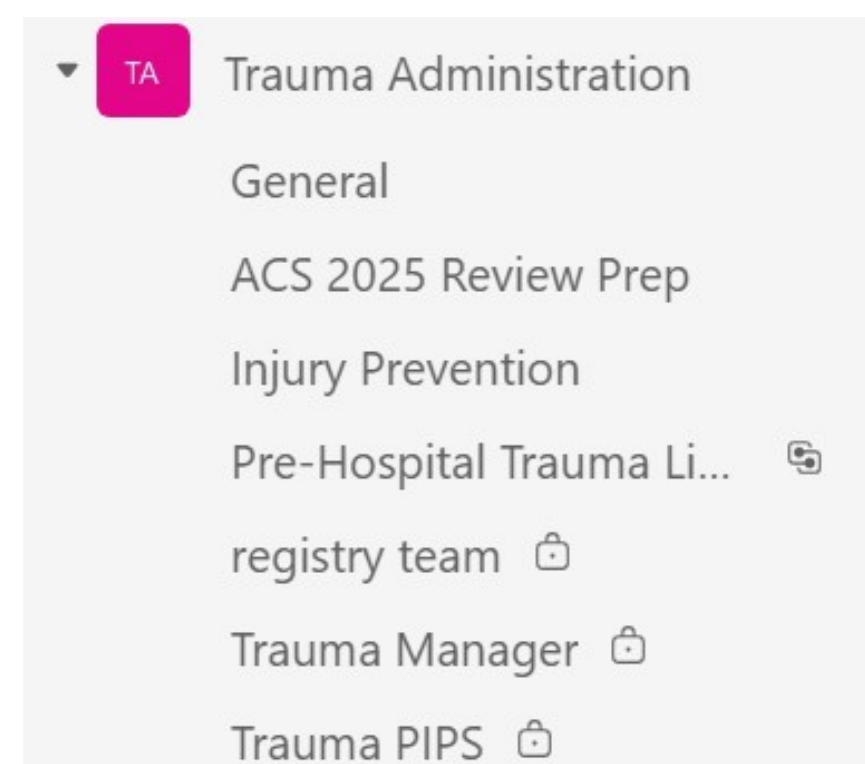
Methods

- Prospective chart reviews, team meetings, root cause analysis (RCA), and feedback mechanisms.

Results

Although our trauma registry was being utilized remotely for registrars, we encountered instability of high-bandwidth programs. Demands on software and virtual networks to execute PI RCA's and reports led to periods of software failure. We worked with IT, familiarizing them with registry software and bandwidth needs, resulting in set up for higher level use.

VCH's Trauma Medical Director (TMD) and Program Manager (TPM) remain on-site facilitating hybrid PI initiatives. Although the remote PI Coordinator is not able to round and meet with patients and providers' in-person, multiple interactive avenues have been successfully established. We complete concurrent chart reviews, effective escalation of reviews from primary to secondary and tertiary review levels, direct communication with multidisciplinary healthcare providers, and identification-implementation of policies and patient care guidelines.



Nurse of the Year 2024 – New Knowledge, Innovations, and Improvement
CJ Rojas-Noto, BS, RN, CEN, CAISS
Trauma Program Quality Coordinator RN
Trauma Administration

Conclusions

- Integration of a remote PI Coordinator has demonstrated success.
- We recommend centers take into consideration their TMD's support, and the PI Coordinator's experience.
- Additionally, working with IT department's to establish network requirements will minimize anticipated downtimes.
- Centers should establish necessary workflows to support their remote PI Coordinator's ability to engage in real-time care issues and interact with the center's Trauma Program - Administration and Organization as a whole.