

TABLE 17

- 5:00** CLABSI Prevention in Adult Oncology: A Quality Improvement Initiative
- 5:10** Improving Trainee Comfort with Initiating Rapid Responses for Bronchiolitis
- 5:20** In Situ Simulation of Extracorporeal Membrane Oxygenation (ECMO) Cannulation for Identification of Latent Risk Threats in the Emergency Department
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CLABSI Prevention in Adult Oncology: A Quality Improvement Initiative

Fiza Alam, Kendall Lin

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CLABSI Prevention in Adult Oncology

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DEFINING THE PROBLEM

- **Central Line-Associated Bloodstream infections (CLABSIs)** increase mortality, hospitalization and healthcare costs
 - **National Goal:** Maintain $\geq 95\%$ bundle compliance to reduce CLABSI risk
 - **Our Site Compliance (UMMC):** not clearly defined prior to intervention
 - **Aim:** Identify barriers to compliance and improve adherence in adult oncology
- 

METHODS

Unit 5A CLABSI Bundle Basic Audit

Routine Audit:

Hospital: Unit: MRN:	Date and time of observation: Type of line (circle): Dialysis Catheter; Accessed Implanted Port; Non-tunneled CVC; Tunneled CVC; PICC <2.6 Fr; PICC ≥ 2.6 Fr; Umbilical Catheter
Is the dressing current, clean, dry, and intact? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA: no dressing; dressing not changed at routine frequency	Is an antimicrobial disk present and placed correctly? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA- Antimicrobial disk contraindicated
Is the IV tubing current? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA- no tubing	Is the tubing and medication bag dated per policy (date and time changed)? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA- no tubing or medication bag
Are Curo caps in place on all un-accessed needless connectors? <input type="checkbox"/> Yes <input type="checkbox"/> No	Was a CHG bath completed within the last 24 hours? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Patient refused <input type="checkbox"/> NA- Contraindicated
Was the central line documented daily? <input type="checkbox"/> Yes <input type="checkbox"/> No	Comments:

34 Audit Weeks

450 individual audits

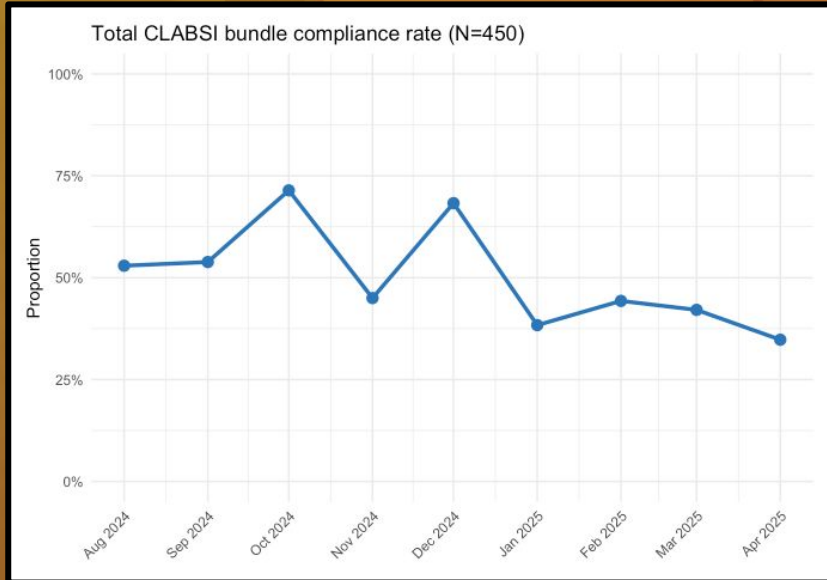
All-or Nothing Audit

One non-compliant
criterion = failure

Educational Intervention

Failed audits led to
education sessions

RESULTS



12%
Dressing

5%
Antimicrobial
Disk

14%
Tubing
Current

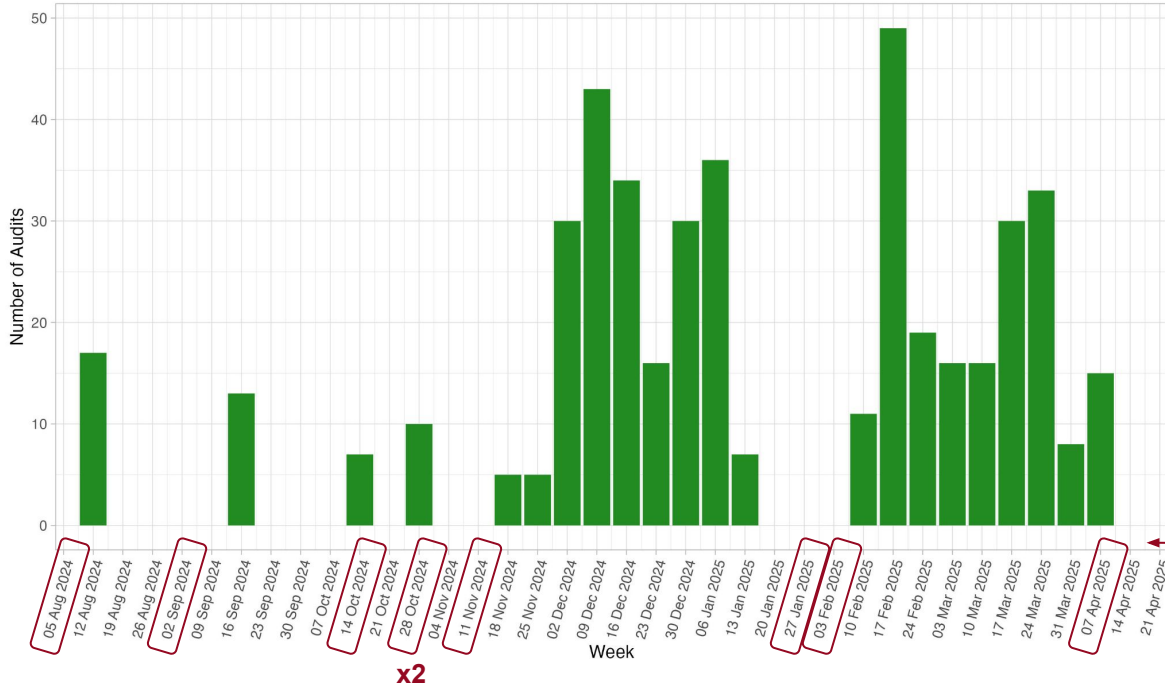
20%
Tubing and
Bag Dated

6%
Curoc Caps

26%
CHG Bath

4%
Line
Necessity

Total CLABSI Bundle Audits By Week



	Benchmark	Unit 5A
CLABSI Rate*	0.80	1.72
Bundle Compliance	95%	50.00%

*Infection rate per 1000 line days

9
CLABSI cases

CLABSI cases



- Central Line Defect Form
- CHG Bathing Interventions
- System Challenges Identified
- Team Collaboration & Impact

Future Directions & Interventions



Improving Trainee Comfort with Initiating Rapid Responses for Bronchiolitis

Tolu Oshiba-Fowode, Ellen Townley

Improving Trainee Comfort with Initiating Rapid Responses for Bronchiolitis

Gregory Hooks, MD; Tolulope Oshiba-Fowode, MD, MS, MPH; Ellen Townley, MD; Jordan Marmet, MD

Introduction

- Pediatric trainees enter residency with varied levels of comfort escalating care for patients with bronchiolitis in the hospital setting.
- Since bronchiolitis accounts for 18% of hospitalizations among children ≤ 2 years old, residents benefit from early proficiency in management of bronchiolitis.
- Initial survey of current residents highlighted discomfort with knowing available treatment options and when to contact the PICU via an RRT.
- Project aims to improve resident comfort with employing management options and articulating rationale for calling a Rapid Response (RRT) for children with signs of worsening bronchiolitis.

Methods

In the first quarter of 2025, the QI team and PICU advisors designed a curriculum for peer-to-peer education including the following:

- Review of bronchiolitis pathophysiology
- Tests, treatments, and guidelines available on the general pediatrics floor
- How to respond to escalating respiratory needs
- Criteria for admission to the PICU

The study team held an education session (ES) at noon report during each rotation block for 2 consecutive blocks. After each ES, residents and medical students completed a short survey

- Questions 1-6 compared, on a scale of 1-5, pre and post ES comfort and perceived knowledge about calling an RRT.
- Answers were averaged to determine baseline comfort and knowledge levels and change following the ES.



Results

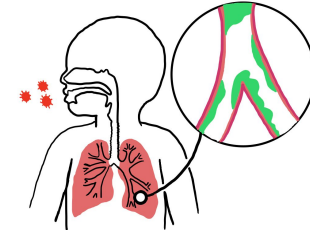
Results were gathered from 2 ESs with a total of 9 completed surveys. Data showed:

- 76.2% increase in comfort managing escalating respiratory needs.
- 48% increase in comfort calling an RRT.
- 50% increase in the comfort explaining one's clinical rationale for the RRT.
- 100% of respondents felt that the ES improved their comfort with calling an RRT (Avg 4.78) and clinical knowledge (Avg 4.67).

Assessment	Pre (Mean)	Post (Mean)	Change after session, Δ
Comfort in responding to worsening resp needs	2.56	4.33	1.78, 76.2% increase
Comfort calling an RRT on a respiratory patient	2.78	4.11	1.33, 48.0% increase
Comfort explaining rationale for calling the RRT to PICU team	2.67	4.00	1.33, 50.0% increase


Conclusions

- Education appears to be effective at improving trainees comfort and perceived knowledge about calling RRTs for bronchiolitis.
- Nearly 50% of trainees expressed discomfort with calling a RRT.
- Following the ES, trainees reported notable increases in comfort in managing escalating needs, comfort in calling an RRT, and comfort with explaining medical rationale to PICU team members.
- Results suggests formal ESs could be a step toward improving resident management of patients with worsening bronchiolitis.
- As more ESs are planned, the primary endpoint of this study remains to track perceptions of impact to resident comfort and knowledge base.



References

1. Fujjogi M, Goto T, Yasunaga H, Fujishiro J, Mansbach JM, Camargo CA, Hasegawa K. Trends in bronchiolitis hospitalizations in the United States: 2000–2016. *Pediatrics*. 2019 Dec 1;144(6).
2. Quinonez R, A., & Ralston, S. L. (2014, November 13). Bronchiolitis: The rationale behind the new AAP guideline. *Medscape*.
3. Ralston, S. L., Lieberthal, A. S., Meissner, H. C., Alverson, B. K., Baley, J. E., Gadomski, A. M., Johnson, D. W., Light, M. J., Maraga, N. F., Mendonca, E. A., Phelan, K. J., Zorc, J. J., Stanko-Lopp, D., Brown, M. A., Nathanson, I., Rosenblum, E., Sayles, S., Hernandez-Cancio, S., Ralston, S. L., Hernandez-Cancio, S. (2014). Clinical practice guideline: The diagnosis, management, and prevention of Bronchiolitis. *Pediatrics*, 134(5).
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**In Situ Simulation of Extracorporeal
Membrane Oxygenation (ECMO)
Cannulation for Identification of Latent
Risk Threats in the Emergency
Department**

Emily Ferrari

INTRODUCTION				RESULTS							
<p>Latent risk threats (LRTs) are concealed factors within a system that inadvertently foster errors and increase the likelihood of human mistakes, with the potential to compromise patient safety. In situ simulation (SIM) refers to simulated patient scenarios that occur in the actual workplace, with employees of that workplace as participants. This differs from typical SIM that transpire at a separate center. In situ SIM not only fosters experiential learning but is also an important part of accreditation with The Joint Commission and helps identify LRT within the workplace. With more than 200 ECMO cannulations since the induction of the program, and a large percentage of them occurring in the Emergency Department, it is critical to evaluate and mitigate risk for a procedure with high stakes for both patient and provider.</p>				Problem Category	Identified Threats	Source	Suggested Solutions	Problem Category	Identified Threats	Source	Suggested Solutions
				Policy/ Procedure	Pit boss did not know logistics of shocking- sync or not, joules	Department Staff (DS)	Further education	Policy/ Procedure	ED staff found lead walls and wearable lead – though left in STAB walkway	SS and DS	Education to ED staff – leave lead rack in hallway outside STAB
				Equipment	VL light did not work properly – delay in intubation	DS	Follow up – addressed by maintenance	Policy/ Procedure	Slow to move patient to fluoro bed (15 min after activation, 10 min after cannulator arrival)	SS and DS	Education and checklists, additional “fluoro in use signs”
				Process Issue	Pit boss hit head on ultrasound machine	Sim Staff (SS) and DS	Further follow up w/ STAB committee	Policy/ Procedure	Fellow and cannulator did not know how to open drape or supplies	SS and DS	Provider education
				Process Issue	RT did not come to case initially after overhead page – needed vocera page	SS and DS	Attributed to SIM environment	Policy/ Procedure	Slow to prep patient cannulation sites, slow to start	SS and DS	Provider education
				Policy/ Procedure	Delayed time to check temperature – required prompting 15 min after patient arrival	SS and DS	Education	Policy/ Procedure	ED staff did not get GU cart for sterile field	SS and DS	Education and checklist
				Policy/ Procedure	Unclear to follow ACLS after determination of hypothermic arrest	SS and DS	Education	Policy/ Procedure	Staff did not communicate patient scenario to ECMO staff – unclear case leadership, communication quiet during case, ED staff and pit boss not involved after ECMO activated	SS and DS	Education regarding patient hand off/sign out, red bonnets to identify ECMO team. Identification of each team member
				Policy/ Procedure	Activation page did not include “ECMO” – ECMO lead called for verification, no call back number	SS and DS	HCA education – page needs to state “ECMO” Paging process revamp Radiology response based on page – correct equipment	Policy/ Procedure	Prompting needed for lead wearing, or for others to step away	SS and DS	Education and need for crowd control, labeling who needs and wears lead. Rads to communicate when fluoro exam started
				Policy/ Procedure	Two activation pages sent	All	Delay in “message sent” notification - Education given	Policy/ Procedure	Prompting of lead wall	SS and DS	Education and checklist
				Process Issue	Delay in Radiology response (19 min)	SS and DS	Radiology not aware of need for C-Arm for ECMO – followed up with Radiology leaders	Policy/ Procedure	ECMO checklist not in STAB room	SS and DS	Education and checklist
Policy/ Procedure	Cannulator and ECMO nurses did not communicate ECMO settings after connection to the pump	SS and DS	Education and checklist	Policy/ Procedure	“Fluoro in use” sign not available, homemade one used	SS and DS	Checklist				
<p>OBJECTIVES</p> <p>Our primary objective was to improve safety in the care of hypothermic cardiac arrest patients by identifying as many LRTs as possible during an in situ SIM of extracorporeal membrane oxygenation (ECMO) in the emergency department (ED) at Hennepin County Medical Center (HCMC).</p>				<p>DISCUSSION</p> <p>Performing this SIM in the ED facilitated the identification of hazards that likely would not have been found with the use of traditional center-based SIM. Process issues including trouble with the intra-hospital paging system would be infeasible to identify in other settings. Recognizing these problems with simulated rather than real patients allows for improvement without negatively affecting patient outcomes. In situ SIM also allowed medical staff, including trainees, to practice with a high acuity, low frequency medical scenario, yielding better individual preparedness for this situation in the future. Post-SIM discussion of the scenario facilitated invaluable problem solving between the involved departments. Expanding the use of in situ SIM sessions will enable improvement and knowledge among other departments within the hospital which in turn can improve safety for patients.</p>							
<p>METHODS</p> <p>Simulation center and emergency department educators developed an interactive SIM case centered around a patient suffering from hypothermic cardiac arrest. The in situ SIM occurred in the stabilization room of the ED at HCMC on October 25, 2024. It utilized high-fidelity mannequins, real emergency equipment, real ECMO equipment and simulated medications. Physicians, nurses and health care assistants from both the primary ED team and consulting ECMO specialist teams were involved; all members were unaware that the case was simulated prior to arrival in the ED – save one cannulator. They were instructed to proceed as though it were a real patient. Immediately following the case, simulation educators facilitated a debrief to identify LRTs, which were then stratified into one of three categories (policy issues, equipment issues, or process issues) by an independent reviewer.</p>											

Figure 1: Identification and Categorization of Latent Risk Threats (LRTs)



Language-Concordant After Visit Summaries: A Clinic Quality Improvement Project

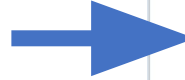
Dzhalal Agakishiev

Language-Concordant After Visit Summaries
A Clinic Quality Improvement Project

D. Agakishiev, M. Harata, H. Akram, M .Wilson, A. Settgast, M. Schnaus

Background

- After clinic visits, patients typically receive an after visit summary (AVS) with manually entered instructions.
- The instructions are provided to patients in English, regardless of the patient's primary language or English proficiency.
- In current state, our EMR can translate the AVS templates into Spanish and Vietnamese, however instructions are still provided in English
- This has created communication barriers for non-English speaking patients, with concerns these communication gaps could impact medication compliance, follow up appointments, and negatively impact our ability to provide care.



RESUMEN DE LA VISITA

4/1/2024 1:30 PM Healthpartners Cer

Instrucciones de Dzhahal Agakishiev

Thank you for visiting us at the Center for International Health today.

As we discussed, our plan is as follows:

- 1) eye drops and pills for your eye symptoms
- 2) hepatitis B vaccine today
- 3) come back in 3 weeks

It is recommended that you follow-up in 3 weeks

Please feel free to call the clinic if you have any additional questions.
Clinic phone number: 651-647-2100
Spanish interpreter: 651-647-2136



Sus medicamentos han cambiado hoy

Ver su lista de medicamentos actualizada para detalles.



Recoja estos medicamentos en WALGREENS DRUG STORE ARCADE ST AT SEC OF ARCADE & MARYLAND

acetaminophen • fexofenadine • ketotifen fumarate

Dirección: 1180 ARCADE ST, SAINT PAUL MN 55106-2629
Teléfono: 651-251-9887

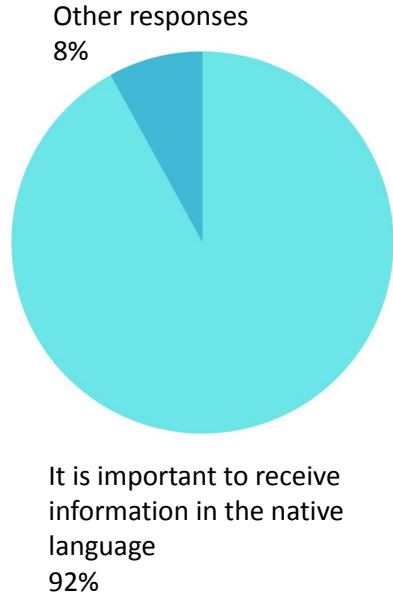


Patient would like to receive their results via: LETTER

Scope and Methods

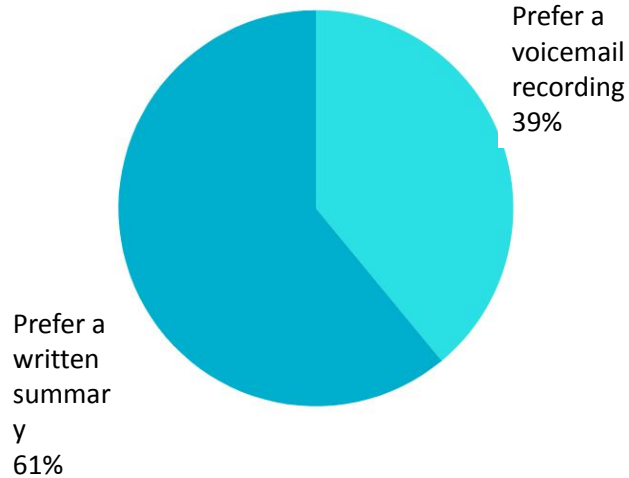
- We embarked on a quality improvement study performed at the Center for International Health (CIH), a Healthpartners affiliated clinic that primarily provides care to non-English speaking immigrants and refugee patients.
- Any patient that selected a language other English as primary means of communication was eligible.
- In the initial phase, a questionnaire was administered assessing patients on the perceived importance of receiving after visit instructions in their native language. Patients were also asked whether they would like their AVS translated in their native language using translation software or receiving a voicemail with the summary interpreted by a certified interpreter.
- After determining the preference for translation, the second phase implemented the written translations using online translation software including large language models. Patient satisfaction was then assessed.
- All translation verified by the certified interpreters
- HealthPartners IRB determined this project to be a quality improvement project.

Questionnaire Results (70 patients assessed)



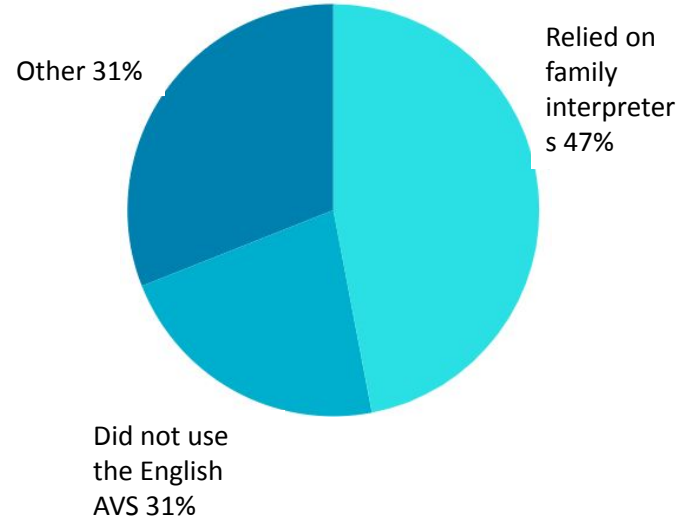
Importance

- A significant percentage of patients within our clinic feel it is important to get after visit instructions in their native languages.



Mechanism

- A majority of patients prefer receiving after visit instructions in written form rather than voicemail

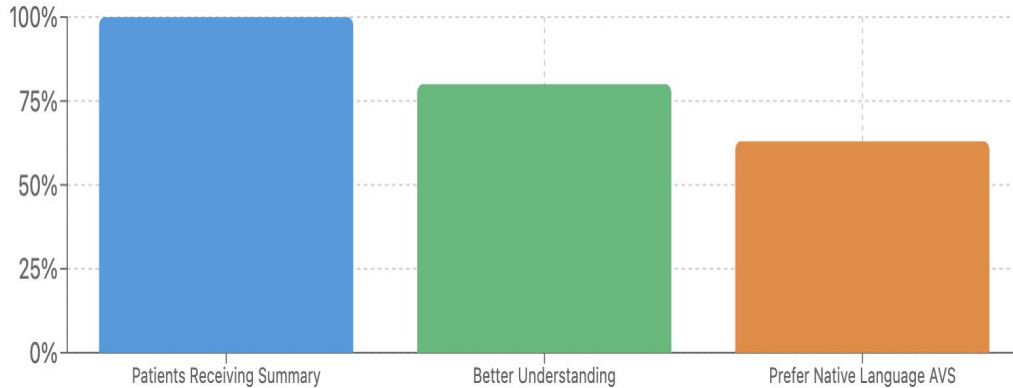


Current State

- Patients frequently relied on family to interpret their AVS or instructions.
- Other such as google translate

Language Intervention Study Results

> 60 patients



- Newly arrived immigrants reported the highest satisfaction, primarily because they often lacked family members for translation and potentially were likely to keep translated summaries for social workers coordinating their care.
- Intervention can be reliably integrated into workflow of a clinic visit

RESUMEN DE LA VISITA

4/1/2024 1:30 PM Healthpartners Cer

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As we discussed, our plan is as follows:

- 1) eye drops and pills for your eye symptoms
- 2) hepatitis B vaccine today
- 3) come back in 3 weeks

It is recommended that you follow-up in 3 weeks

- 1) gotas y pastillas para los ojos para los síntomas oculares
- 2) La vacuna contra la hepatitis B en la actualidad
- 3) Vuelve en 3 semanas

Please feel free to call the clinic if you have any additional questions.

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Spanish interpreter: 651-647-2136



Sus medicamentos han cambiado hoy

Ver su lista de medicamentos actualizada para detalles.



Recoja estos medicamentos en WALGREENS DRUG STORE
ARCADE ST AT SEC OF ARCADE & MARYLAND

acetaminophen • fexofenadine • ketotifen fumarate

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Teléfono: 651-251-9887



Patient would like to receive their results via: LETTER



Reducing Interruptions During Emergency Medicine Provider Handoff

David Perez-Molinar

Reducing Interruptions During Emergency Medicine Provider Handoff

David Perez-Molinar MD, Rebecca Allen MSGc, Darby Szabo CCRC, Ryan Bourdon MD MBA

Health Partners Regions Hospital Department of Emergency Medicine

INTRODUCTION

- Emergency provider-to-provider handoff at shift change is critical in conveying information regarding a patient's clinical course and pending evaluation for continuity of care.
- Multiple interruptions can occur during this process including urgent evaluation of ill patients, answering staff/consultant questions, departmental noise levels, etc.
- Interruptions during handoff pose a safety risk to patients and can lead to medical errors (1).
- Attempts to characterize, quantify, and reduce interruptions have been studied, with one paper noting that ED staff only resumed interrupted tasks 87% of the time (2).
- Minimizing interruptions during handoff has the potential to reduce patient safety errors, reduce time spent during sign-out, and improve provider satisfaction.

AIM

Reduce the average number of observed handoff interruptions occurring during handoff in Alpha and Bravo pods from 7.9 to less than 4 by 12/01/2024.

METHODS

Baseline Data Assessment

- Background noise (decibel level) assessment with workspace microphone.
- Research assistant documentation of observed interruptions occurring during handoff.

PDSA Cycle 1

- Implementation of overhead pages indicating the start of shift change to encourage "quiet time" to reduce noise levels and discourage non-urgent staff questions, coordination of call-back numbers for non-urgent discussions with consultants, and redirection of MRCC calls, EKGs, and critical interruptions to outgoing supervising physician.
- Repeat noise and interruption assessment post-implementations.

PDSA Cycle 2

- Addition of light dimming to overhead page to reinforce handoff/quiet time.
- Survey to ED staff to assess opinions on interventions and impact on handoff.

	Before (N=90)	After (N=34)
Handoff Duration	11.8 minutes	12.1 minutes
Total Interruptions per handoff	7.9	6.4
Vocera Interruptions per handoff	1.2	1.1
Code Overhead per handoff	0.3	0.6
Staff Member Interruption per handoff	1.5	1.1
General Noise Interruption per handoff	3.5	2.6
Phone Call Interruption per handoff	0.4	0.4
Request for Repeat per handoff	0.5	0.2
Other Interruptions per handoff	0.5	0.4

RESULTS

- Small decrease in average number of interruptions per handoff.
- Small decrease in average interruptions, though unable to meet goal. Largest reduction in general noise levels.
- Marginal increase in sign out duration.
- Overall positive ED staff view of project interventions and goals with overhead pages being the most well received.

CHALLENGES

- Physical space cost prohibitive to alter to physically reduce ambient noise.
- Difficulty with staff adherence to "quiet time" especially as study progressed and with new staff/residents.
- Consultant dissatisfaction with requiring call back.
- Increase ED volume causing boarding and hallway patients resulting increase noise in the ED.
- Nursing sign-out overlaps provider sign-out prompting increase in care clarification questions during sign out.

CONCLUSIONS

- Handoff interruptions can cause errors in patient care.
- There was a small decrease in average interruptions following implementation of interventions and the project was viewed positively by ED staff.



A3



Survey Data