

# Trust the Process

## A Templated, Centralized, and Protocolized Patient Safety Pilot Project to Improve Outside Admissions

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### Introduction

Transfers are high-risk. Intra-hospital transfer processes research has improved protocols used nationally.<sup>1</sup> Outside-hospital admissions remain without standards ensuring the transfer of the right information to the right clinician at the right time; presently, patients can arrive at a new hospital with limited-to-no information.<sup>2</sup> We trialed a novel process for outside (hospital, provider, or skilled nursing facility) admissions to a single academic medical center's resident-and-hospital-medicine-attending-based ("teaching") medicine services.

### Methods

After reviewing literature, the "Epic UserWeb," and seeking clinician input we:

- Established a new intra-hospital communication flow (Fig. 1)
- Created a templated note to centralize documentation (Fig. 2) that:
  - Is used by attendings while speaking with an outside clinician to capture critical clinical information
  - Incorporates "nudges" to encourage:
    - Asking new standard-of-care questions
    - Following a new intra-hospital communication checklist to advise the appropriate clinicians of pending admissions
- Educated residents and attendings regarding the new process electronically and in person
- Obtained a priori subjective resident and attending outcomes through an electronic pre-post survey administered one-week prior and 90-days post intervention
- Obtained a priori objective patient outcomes through 90-day pre-post chart review
- Institutional Review Board Approval #19E.157

Fig. 1: Communication Flowchart and Example

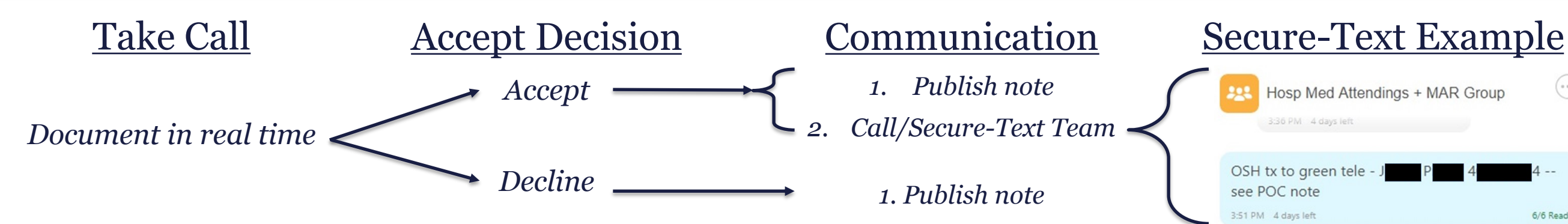


Fig. 3a: Sufficient Documentation on Patient Arrival

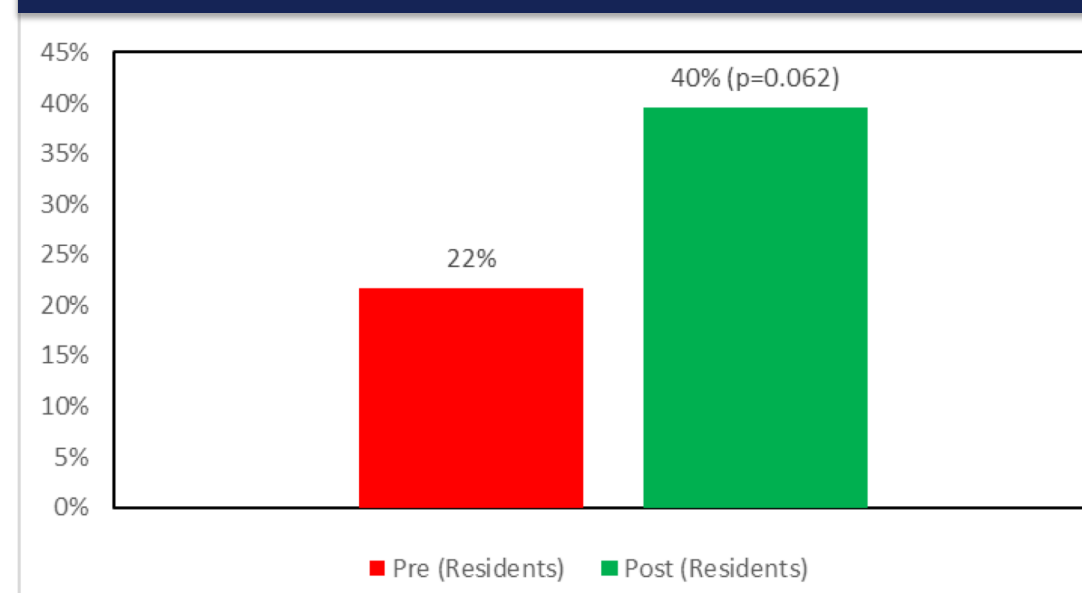


Fig. 3b: Satisfaction with Admission Process

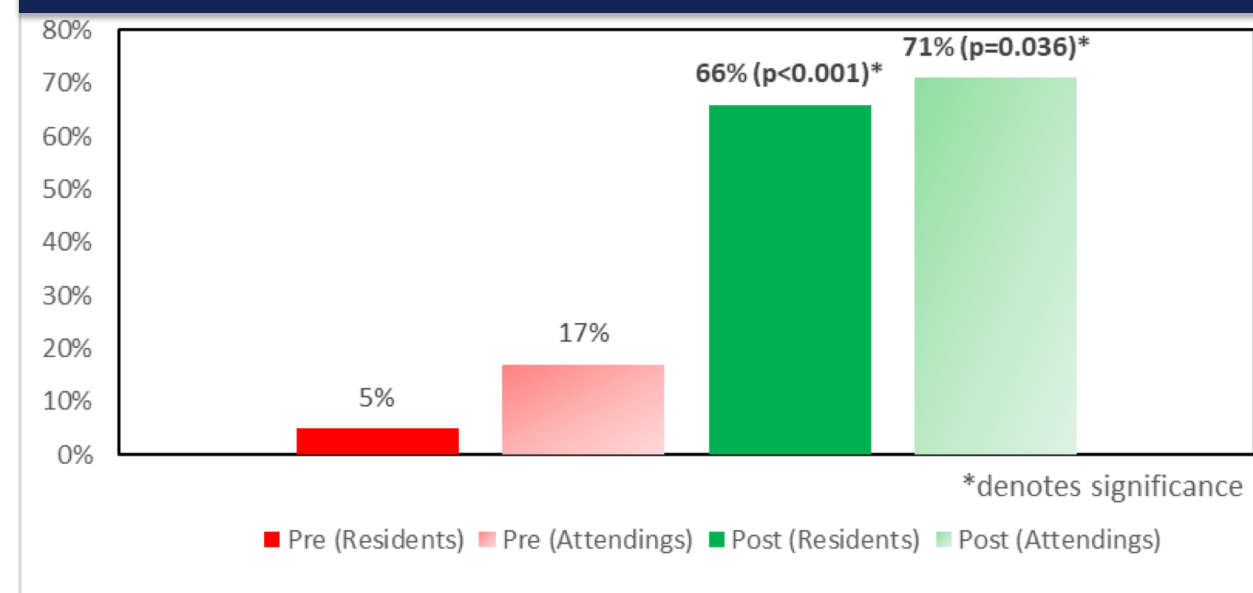


Fig. 3c: Sense of Patient Safety

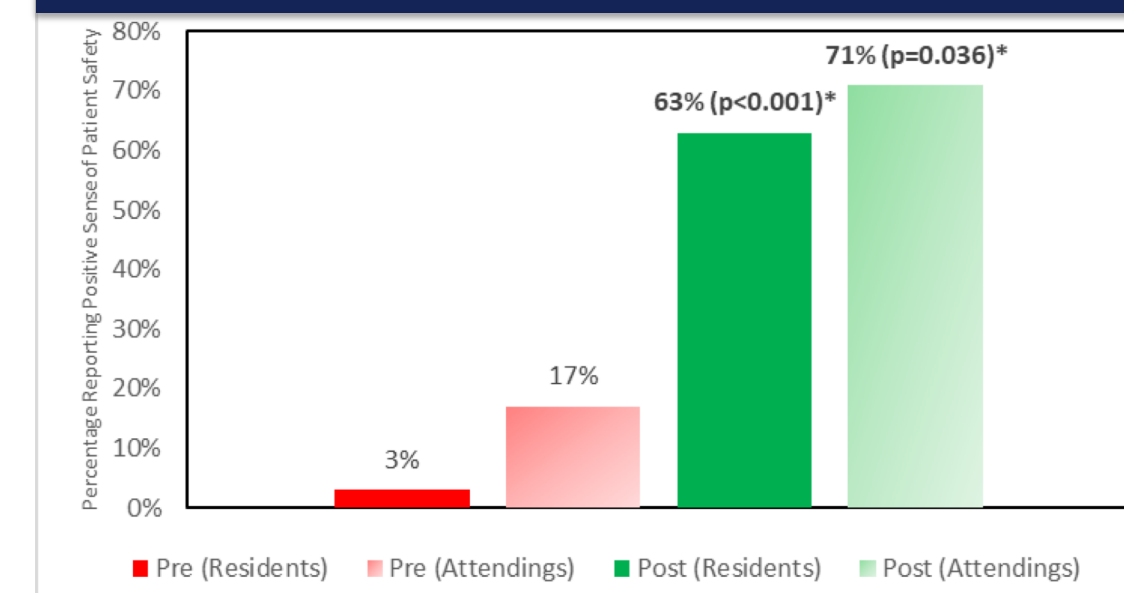


Fig. 4a: Care Escalation within 24 hours of Arrival

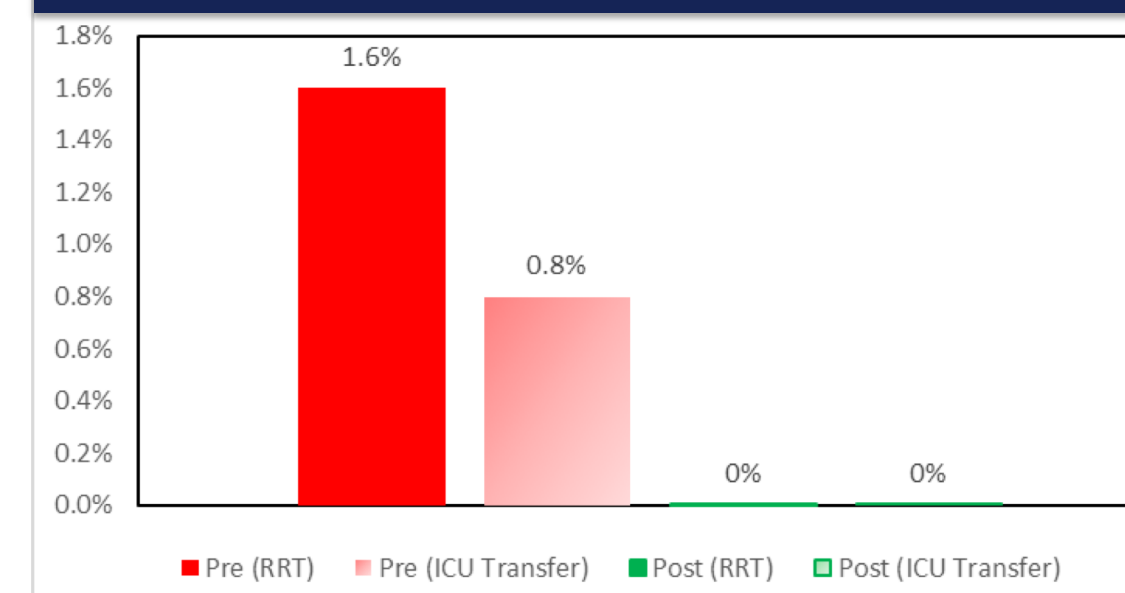


Fig. 4b: 30-Day Readmission and Inpatient Mortality

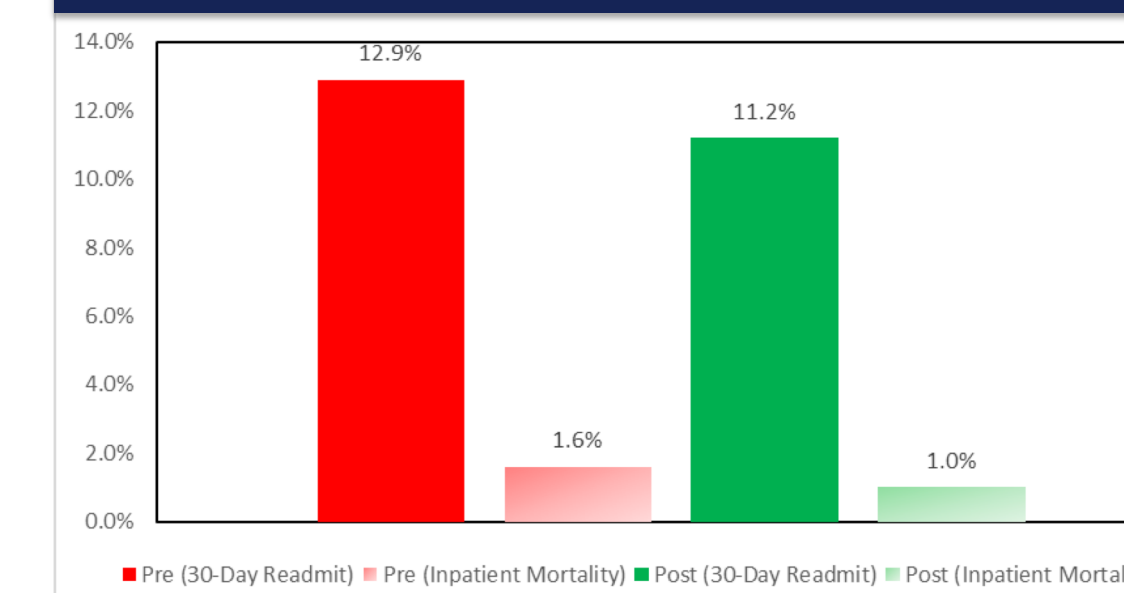


Fig. 4c: Length of Stay

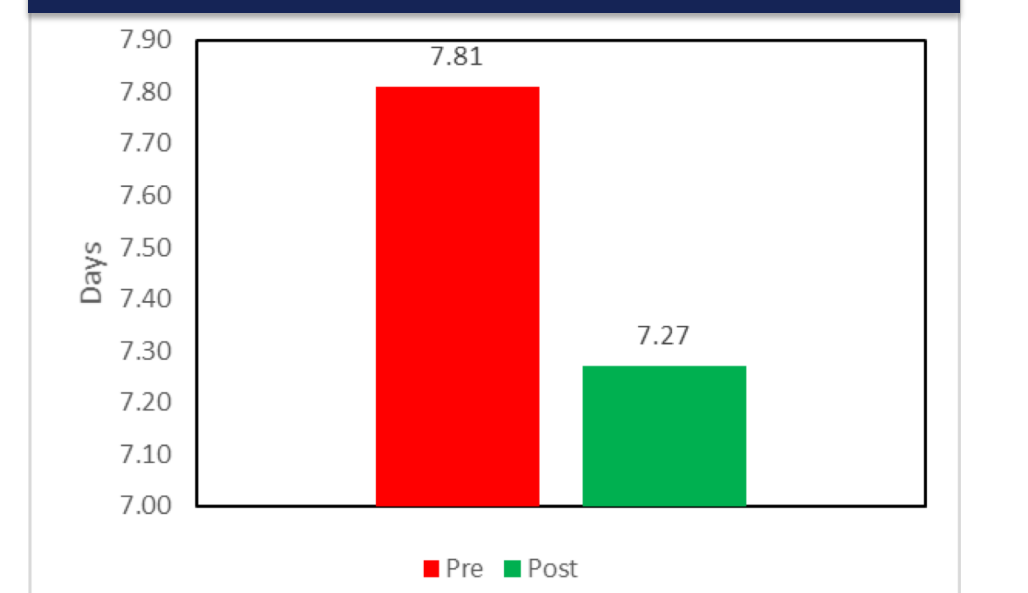


Fig. 2: Refined Outside Acceptance Note Template

**Direct Admission/Transfer Acceptance Note**

**Subjective**  
**Time of Call: 1:46 PM; Accepting Jefferson Attending: Alan Arthur Kubey, MD**  
**Report Provided By: \*\*\*; Facility: \*\*\***  
**Current Floor Monitoring: {Level of care:21077}**

**Reason for Admission/Transfer: \*\*\***  
**Brief History of Primary Issue: \*\*\***

**Objective**  
**Vitals (Include if on O2): \*\*\***  
**Imaging: \*\*\***  
**Labs (CBC, BMP, INR, Other Pertinent): \*\*\***  
**Cultures: \*\*\***  
**Critical Meds (Abx, Drips, AC, etc.): \*\*\***  
**Vascular Access (None, PIV, I/O, CVC, Port, PICC, etc.): \*\*\***  
**Last PO Intake: \*\*\***

**Assessment/Plan**  
**Was Patient Discussed w/ other TJUH Providers (Surgical, Subspecialty, ICU): \*\*\***  
**Management Requested Prior to Admission: \*\*\***  
**Admission Decision: {Blank multiple:21074} \*\*\* service, Level of Care: {levels:31121}**  
**Ensure Med List (w/ Dose Time), Progress Note, Image Disks and Reads Sent: \*\*\***

**Initial Plan at TJUH: \*\*\***  
**I have told MAR (215-█-█; TT: "MAR Medical-Admitting"): {YES/NO/NA:29241}**

*The data above was collected verbally; verify all information upon admission*  
**###ADDENDA TO BE INCLUDED BELOW -- INCLUDE DATE/TIME ###**

### Results

#### Provider Outcomes (Fig. 3a-c)

- 60/38 (pre/post) residents; 12/7 attendings
- Primary** -- Trend toward improved documentation sufficiency on patient arrival (residents):
  - 22% (pre)/40% (post); p = 0.062
- Improved satisfaction with the admission process:
  - 5% (pre)/66% (post); p<0.001 (residents)
  - 17%(pre)/71%(post); p=0.036 (attendings)
- Improved sense of patient safety:
  - 3%(pre)/63%(post); p<0.001 (residents)
  - 17%(pre)/71%(post); p=0.036 (attendings)
- Majority found the templated note "useful" or "very useful":
  - 84% (residents), 86% (attendings)
- Attendings spent less total time on outside admissions

#### Patient Outcomes (Fig. 4a-c)

- 124 pre-intervention and 128 post-intervention patients
  - 98/128 (76.6%) post-intervention patients for whom providers followed the process were included for comparison
- Rapid Response Team (RRT) activation within 24 hours of admission trended from 1.6% (pre) to 0% (post)
- Intensive Care Unit (ICU) transfer within 24 hours trended from 0.8% to 0%
- 30-day readmission trended from 12.9% to 11.2%
- Inpatient mortality trended from 1.6% to 1.0%
- Length of stay trended from 7.81 to 7.27 days

- 95% of residents and 86% of attendings favored implementing the process permanently across all Department of Medicine services; none responded against

### Conclusions

A templated centralization of clinically-relevant outside admission information and protocolized communication process non-significantly improves clinicians' assessment of documentation sufficiency while significantly improving clinician satisfaction and sense of patient safety. We report no significant changes in patient outcomes but note promising trends across multiple patient safety and outcome metrics that deserve further study. Our institution is currently refining the template and process for adoption across all medicine specialties. We encourage inter-institutional collaboration and lesson-sharing on this topic.

### References and Acknowledgments

We wish to acknowledge and thank the medicine residents and hospital medicine attendings whose adoption, execution, and feedback for this project were instrumental to its success and improving the care of the patients we jointly serve

<sup>1</sup>Starmer AJ, Spector ND, Srivastava R, et al. Changes in medical errors after implementation of a handoff program. *New England Journal of Medicine*. 2014;371(19):1803-1812

<sup>2</sup>Herrigel DJ, Carroll M, Fanning C, Steinberg MB, Parikh A, Usher M. Interhospital transfer handoff practices among US tertiary care centers: A descriptive survey. *Journal of Hospital Med Medicine*. 2016;11(6):413-417