Safer Practices Start Here: Standardizing ICU Transfer Process

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Aim

To assess communication methods that improve adherence to standard procedures designed to improve safety of intrahospital intensive care unit transfers (ICU).

Background

Standardizing the ICU transfer process improves communication and reduces medical errors. However, communication errors are not uncommon as evidence by Tully et al. (2019) who reported medication errors in nearly 50% of patients transferring from ICU to non-ICU settings. To address this, many institutions have adopted structured handoff programs such as I-PASS. In a multicenter study, implementation of I-PASS was associated with a 47% reduction in major and minor handoff-related adverse events (Starmer et al., 2022). Professional organizations, including the American College of Critical Care Medicine, underscore the importance of effective communication between referring and receiving providers during both inter- and intrahospital transfers.

Methods

Study Design: IRB approved Quality Improvement

Setting: 17-bed closed ICU at a community hospital staffed by residents from multiple specialties under critical care fellow and attending supervision

Process Metric: Utilization of the standard transfer note dot phrase.

Interventions:

Passive interventions: This represented the conventional approach to information dissemination within the ICU, which consisted of posted signage in workstations and direct peer-to-peer communication.

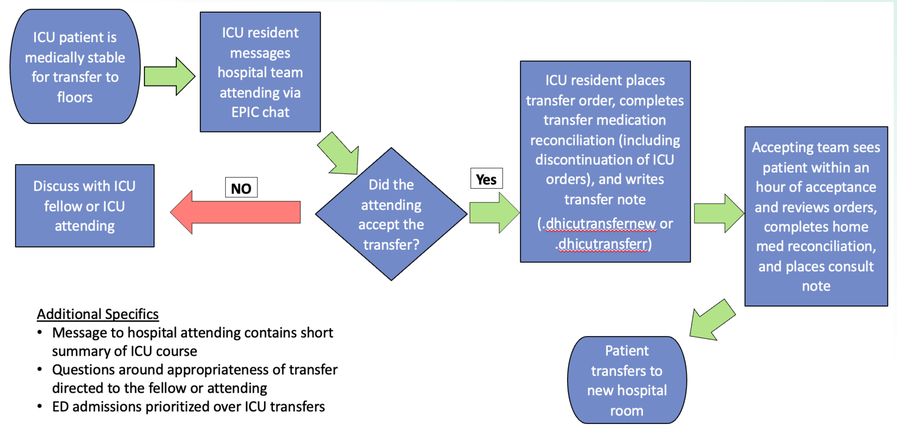
Active interventions: Prior to the start of the academic block, each ICU team member received an email containing reference materials that outlined the details of the transfer process.

Passive interventions were implemented from October 2023 to February 2024, followed by active interventions from March to June 2024. Post-intervention monitoring occurred from July to December 2024. Data were collected in Qlik Sense, with non-utilized transfer note encounters reviewed for improvement opportunities. Chi-square analysis was used to assess statistical significance.

Limitations:

- No baseline compliance data were available prior to the initiation of passive interventions.
- The ability to track adverse safety events and transfer process compliance was limited.
- The study was conducted within mid-sized residency programs with combined class sizes of 18–20 residents.

Standardization Process



Additional Specifics

- Message to hospital attending contains short summary of ICU course
- Questions around appropriateness of transfer directed to the fellow or attending
- ED admissions prioritized over ICU transfers

Transfer Note Example

Critical Care Transfer Note

Date of Admit:
Date of Transfer:
Level of Care:
Code Status:

Synopsis/Perpetual Assessment/Active Diagnosis

(Brief summary)

Active Diagnosis/Recommendations:
(List of diagnoses)

Critical Care Checklist

Steroids: (Yes/No; Plan?)
Analgesia/Plan: (Pain medication; Plan?)
Delirium adjuncts: (Yes/No; Plan?)
Midodrine: (Yes/No)
Home Medication Changes: (medication changes)

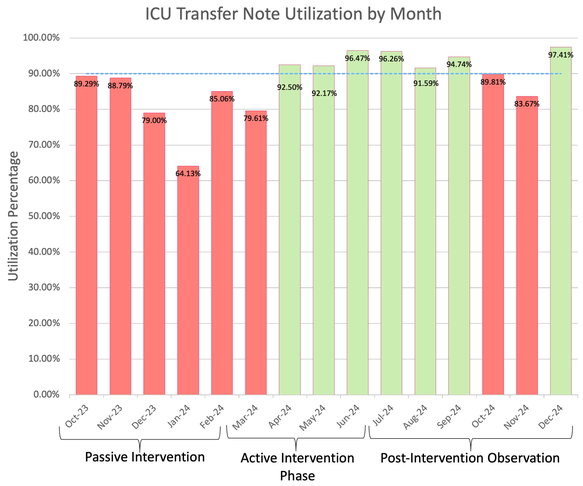
Patient/Family Communication Notes

Emergency Contact:

This patient was cared for by the ICU team today, and has been transferred to the floor. The hospital team (accepting physician) has been notified via (communication method) and I have discussed the transfer of the patient, (name) with Dr. (attending physician) who accepted the patient. The above is a summary of their hospital stay. If there are any question regarding the patient's orders or care please contact the ICU intern at the following pager number: (pager number).

(med credentials)
(time and date)

Results



Phase	Average Utilization
Passive Intervention	85.1%%
Active Intervention	93.20%
Post-Intervention Surveillance	94.30%
Overall	90.50%

- 1,433 ICU Transfers were analyzed
- Active interventions significantly increased transfer note utilization by 8.1% ($p < 0.001$)
- Transfer note utilization did not significantly change after interventions ended ($p = 0.49$)

Conclusions

Relying solely on passive communication, such as signage and peer-to-peer communication, is insufficient to ensure compliance with safety protocols in settings characterized by frequent staff turnover, such as resident-staffed ICUs. Active communication strategies should be incorporated to promote sustained adherence, as consistent utilization of standardized protocols is expected to reduce handoff-related adverse events.

Assumptions:

- Increased adherence to standard protocols results in less adverse safety events.
- Utilizing the transfer note equated to adherence to the entire transfer process

References

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