Optimizing Secure Chat Use by Nurses and Physicians to Improve Interprofessional Communication and Experience

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Background and Context for Change

Epic's Secure Chat (SC) was introduced at Trillium Health Partners (THP) in 2020 to enhance interprofessional communication within the electronic health information system (EHIS). The implementation plan lacked specific SC education or guidelines to support its use, leading to inconsistent use, workflow interruptions, and potential patient safety risks. Audit findings revealed messages were often unstructured, inappropriately timed, or used for urgent communication, which are contrary to best practice.

Poor interprofessional communication is a leading cause of adverse events, delays in care, and provider frustration (Nie et al., 2023). Secure messaging can improve communication efficiency, workflow organization, and provider experience when supported by clear guidelines (Chandra et al., 2023; Hoonakker et al., 2017; Kwan et al., 2024). Without appropriate training, technology adoption can exacerbate inefficiencies and stress rather than reduce them. A baseline thematic analysis in 2024 revealed key opportunities to improve message structure, content appropriateness, and understanding of when to use SC versus paging.

Aim Statement

By June 2025, the project aimed to achieve a ≥20% improvement in the proportion of SC messages aligning with new SC Guidelines, the proportion of SC messages using a structured communication framework (SBAR – S: Situation, B: Background, A: Assessment, R: Recommendation), provider satisfaction and confidence in using SC. This initiative focused on two inpatient Medicine pilot units at THP and was measured through pre/post audits, structured message reviews, and provider surveys.

Family of Measures

Measure Type	Indicator	Target / Evaluation Method
Outcome	Provider satisfaction with SC use	≥20% improvement (survey data)
Process	% of SC messages following SBAR format	≥20% improvement (audit)
Outcome	% of SC messages used for appropriate (non-urgent) purposes	≥20% improvement (audit)
Balancing	Paging volume, SC usage rates	No increase or decrease in overall communication flow

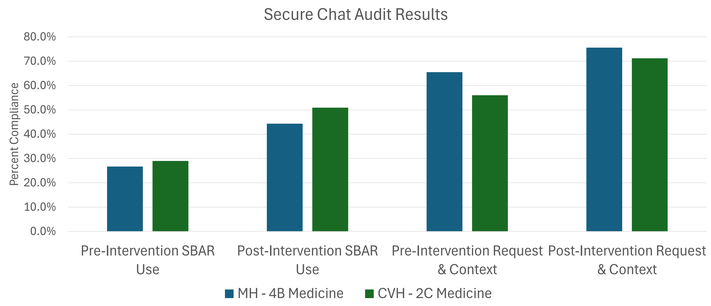
Problem Characterization

A fishbone analysis identified causes of inconsistent SC use on two inpatient Medicine units, including nonstandard workflows, unclear usage policies, and limited Epic training. Additional factors were varied communication styles, high nursing turnover, and workflow barriers from physicians covering multiple wards. Findings emphasized the need for clear guidelines, SBAR-based messaging, and targeted education to enhance efficiency, teamwork, and patient safety.

Intervention

To address identified issues, SC guidelines were developed with pilot units' interprofessional teams. They standardized messaging, escalation, and chat etiquette. A 12-week multimodal education plan supported implementation through tip sheets, case-based huddles, a "Jeopardy" game, and reference tools. A standardized script guided conversations about guideline adherence. The team anticipated that structured education, visual cues, and real-time feedback would improve message clarity, appropriate use, and team satisfaction without disrupting workflow or increasing paging. The ADKAR framework and Technology Acceptance Model (TAM) were employed as change concepts.

Project Results

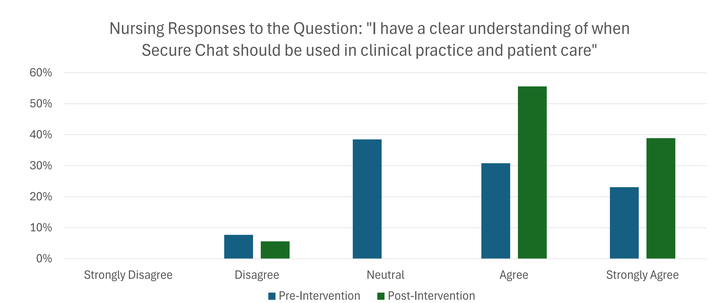


Secure Chat Structure & Content

Pre- and post-intervention audits showed improved message clarity and structure.

SBAR use: 26.7% → 44.3% (4B Medicine); 29% → 50.9% (2C Medicine)

Clear context & requests: 65.5% → 75.6% (4B Medicine); 56% → 71.2% (2C Medicine)



Provider Understanding & Experience Using Secure Chat

Pre- and Post-intervention nursing satisfaction surveys showed an increase in self-reported understanding of best practices and an increase in satisfaction using the tool.

Percentage of nurses "satisfied" with SC: 46.2% → 73.7%.

In the post-intervention survey, nurses reported that "Secure Chat helps make the team communication easier as compared to the use of emails/pagers at other hospitals/sites"

Project Barriers

Implementation and evaluation were challenged by competing clinical priorities, variable engagement, and limited capacity for education delivery. Physician feedback was limited due to low post-survey response rates. Competing patient care demands further hindered data collection.

Project Results (continued)

Project Enablers

Strong motivation from physicians and nurses to improve SC use, along with leadership support, facilitated progress. Both groups recognized unclear asks and overuse as key issues, emphasizing the need for shared guidelines and SBAR-based communication.

PDSA Cycles

Three iterative PDSA cycles guided the development and refinement of the SC Guidelines and education strategy.

Cycle	Plan	Do	Study	Act
PDSA 1	Develop draft SC Guidelines with multidisciplinary input.	Pilot guidelines on two inpatient Medicine units.	Collect baseline data on message use and provider feedback.	Refine guidelines for clarity and alignment with escalation pathways.
PDSA 2	Implement 4-week education rollout.	Deliver interactive education (Jeopardy, case studies, huddles).	Audit pre/post SC messages and survey provider experience.	Adjust educational content and timing for broader rollout.
PDSA 3	Evaluate post-intervention data.	Analyze message quality and satisfaction metrics.	Identify improvement trends and barriers.	Prepare for Medicine-wide scale-up and sustainability planning.

Conclusions

Collaboratively developed SC guidelines and interactive education improved message quality, provider understanding, and user experience. High engagement stemmed from co-design and physician partnership in education delivery and role modeling. The project strengthened communication culture in pilot Medicine units and established a scalable model for digital communication optimization aligned with THP's Learning Health System priorities.

Limitations included a small pilot (two units), competing clinical demands affecting education and evaluation, and manual audit processes. Sustaining progress will require periodic audits and adaptation for other populations and workflows.

Next steps include expanding SC guidelines across Inpatient Medicine, integrating education into onboarding and e-learning, and enhancing EHIS functionality to support appropriate use.

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