

**Nelly Bellamy, Project Lead**  
**Danielle Aldrich, Project Lead**  
**Ann Marie Kumfer, Project Lead**  
**ISP Application**

02/15/2026

<b>Project Lead/Key Contact</b>
<ul style="list-style-type: none"> <li>• Nelly Bellamy, Project Lead (<a href="mailto:nbellamy@unc.edu">nbellamy@unc.edu</a>, 704-497-6203)</li> <li>• Danielle Aldrich, Project Lead (<a href="mailto:daldrich@email.unc.edu">daldrich@email.unc.edu</a>, 901-409-7753)</li> <li>• Ann Marie Kumfer, Project lead (<a href="mailto:Ann.Kumfer@unchealth.unc.edu">Ann.Kumfer@unchealth.unc.edu</a>, 214-208-0548)</li> </ul>
<b>Why are you interested in the Improvement Scholars Program?</b>
<p><i>From Concept Proposal</i></p> <p>The Improvement Scholars Program would give us formal mentorship and guidance to improve the Safety Awareness for Everyone (SAFE) reporting at UNC and improve safety for all patients. Further, the program will teach us about quality improvement so that in the future we will have the skills to lead and implement quality improvement projects to improve the systems at UNC Hospitals.</p>
<b>Problem Statement: What is the problem you are looking to solve?</b>
<p><i>From Concept Proposal</i></p> <p>The SAFE reporting system is an important tool in identifying errors, near misses and unsafe conditions which jeopardize patient care at UNC Health. Unfortunately, SAFE reporting is underutilized by inpatient physicians. In a review of all inpatient SAFE reports from 2/2025 to 8/2025, nurses completed roughly 40% of reports. Inpatient attending physicians accounted for 5% and resident physicians and advanced practice providers (APP's) were even fewer (&lt;5%). Similar trends have been seen in other academic institutions.<sup>1</sup> During the same period, outpatient attending physicians accounted for 9% of SAFE reports, almost twice that of inpatient attendings. The SAFE system can be difficult and time-consuming without formal training. Further, physicians are often frustrated by the perceived lack of action or delays in action after submitting a SAFE report. Physicians are typically provided with few details when a report is closed. Though SAFE reports are reviewed within the units, service lines, and departments, the physician who submitted the report may not be contacted and each service line uses different methods to review reports submitted by physicians, residents and APPs. In a review of the inpatient Department of Medicine (DOM) SAFE reports from 1/2025-12/2025, physicians (attending, fellow, and residents) and APPs submitted around 200 reports and the most common category (42%) was "Diagnosis/Treatment". Importantly, about 33% of the reports were classified as causing patient harm (severity level 2, 3, 4 which are "temporary harm", "permanent harm", and "death"). This contrasts with nursing reporting, where only 13% of the reports resulted in patient harm. Published data supports the same conclusion that physicians are more likely to document an event that caused patient harm compared to nursing reports.<sup>1</sup> Improving attending and resident physician SAFE reporting will ultimately lead to more patient safety concerns being reported and reviewed, resulting in safety issues being caught and improved more expeditiously. Ultimately, improved physician engagement in patient safety initiatives will lead to overall improved care and decreased mortality and morbidity for our patients.</p>
<b>Importance Statement: Why is this project important?</b>
<p><i>From Concept Proposal</i></p> <p>Studies have shown that more effective SAFE reporting results in lowering rates of high-priority patient safety events due to more informative reports, enabling leaders to understand problems, and designing system-base solutions more effectively.<sup>2</sup> Similarly, improving physician SAFE reporting at UNC will increase the amount of patient safety issues addressed and improved, thus ultimately resulting in decreased harm for patients. Multiple institutions have successfully increased physician error reporting through formal training, implementing reminders, scheduled reflection time, and monthly progress reports.<sup>1,3</sup> This problem has also been successfully addressed by the UNC</p>

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Department of Surgery. Through formal division training for Trauma Surgery, Burn Surgery, and Surgical Oncology, as well as weekly loop-closure emails, and recognizing physicians with frequent reporting, the physician SAFE reporting in the Department of Surgery has significantly increased. Importantly, this increase in SAFE reporting has been sustained over time. In implementing similar strategies, we propose to improve physician SAFE reporting for the inpatient Med M (MDM) General Medicine Inpatient Service at UNC Hillsborough and empower physicians to be engaged in the UNC culture that prioritizes patient safety.

**Project Scope**

**In Scope:**

- *What is the specific patient population your project will impact?*
- *How many patients are in the population?*
- *In what setting(s) would this problem be addressed? (e.g., hospital unit, outpatient practice setting, non-clinical setting, etc.)?*

**Out of Scope:**

**In Scope:**

The patient population impacted will be the patients on the MDM General Medicine Inpatient Service, located at UNC Hillsborough. At a given time, there are around 14 patients on the team and there is high turnover, with about 70-80 discharges per month over the last 6 months. The SAFE reporting process addressed on MDM would affect patients on the inpatient hospital units at UNC Hillsborough. We will work closely with the nursing unit manager of the UNC Hillsborough Critical Care Unit (CCU) to review SAFE reports and implement changes, as we anticipate that the higher acuity intermediate and intensive care patients would benefit the most from rapid review of SAFE reports and may have a higher number of diagnosis/treatment related reports. However, starting on a single team will enable us to review all physician-submitted SAFE reports on MDM.

**Out of Scope:**

While upgrading the SAFE software to make it more user-friendly would make our project more sustainable, it is out-of-scope. Our nursing, surgery, and outpatient colleagues have been successful in utilizing the SAFE system, so we anticipate increased physician utilization with training and education on the nuances of the system.

Certain types of SAFE reports will be out-of-scope including categories already being addressed by existing systems (such as Medication Related reports, which are thoroughly evaluated by pharmacists) and categories such as Safety/Security/Conduct. However, the largest category of physician or APP submitted SAFE reports are "Diagnosis/Treatment", which would be included. Once our project is successfully implemented and revised through Plan-Do-Study-Act (PDSA) cycles, we would like to implement the project on other inpatient medicine teams at UNC Hillsborough and main campus, though that is out-of-scope for our current project. Currently, only attending physicians and residents provide care on MDM so we will utilize "physicians" in this proposal but would ultimately include physicians and APP's when expanded to services with APP's.

Though the project focuses on MDM at the UNC Hillsborough campus, there may be spillover impact on other medicine services since the attendings on MDM also work on the MDX, MDH, MDU, and MDL services.

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Although we wish to have a patient representative on the project, risk management does not approve patients or patient representatives participating in reviews of the SAFE system or in submitting SAFE reports.							
<b>Measures: (Process, Balancing, Structure)</b>							
<i>Please describe the anticipated outcome measure(s), 2-3 process measures, and one balancing measure. Please do not include more than 5 measures total.</i>							
Measure Name	Measure Type	Measure Calculation	Measure Exclusion	Data Source	Baseline	Goal	Collection Frequency
MD SAFE reporting rate	Outcome	Number of SAFE reports per month submitted by physicians	SAFE reports submitted by staff, physicians outside the DOM	SAFE system	<5/month	10/month	Monthly
Weekly team safety huddles on MDM	Outcome	Percent of weeks with at least one team safety huddle	None	Attending physicians	0	75%	Monthly
Physicians trained in SAFE reporting	Process	Number of physicians who receive formal training of SAFE reporting via a presentation	Physicians already trained in SAFE system	Qualtrics survey after presentation	0%	80%	Monthly
Percentage of SAFE reports with loop-closure	Process	Proportion of SAFE reports with loop-closure (email or comment in SAFE system)	SAFE reports not directly related to patient care	SAFE system and physician committee	0%	80%	Monthly
Provider perception of workload after implementation	Balancing	Physician perception of the workload related to training and	None	Qualtrics survey of providers on MDM and members of	5-point Likert scale of effect on workload: (1) no impact on workload to	5 mins	Monthly

		review of reports		review committee	(5) severe impact on workload		
<b>Root Cause Analysis</b>							
<ol style="list-style-type: none"> <li>1. <i>What do you think are the underlying causes of the problem?</i></li> <li>2. <i>Why do you think the problem is happening?</i></li> </ol> <p>The underlying etiology of low physician SAFE reporting is three-fold:</p> <ol style="list-style-type: none"> <li>1. <u>Lack of training</u> – The current SAFE system seems cumbersome and time consuming for physicians and physicians lack formal training on how to submit a SAFE report. The system is not intuitive so many physicians do not know how to complete a SAFE report correctly or may be concerned about repercussions.</li> <li>2. <u>Inconsistent SAFE report reviewing</u> – Though all SAFE reports are reviewed, the process and time frame for review is not standardized. Efficiently reviewing SAFE reports to understand patterns and quickly address acute safety issues is a complex process with minimal formal training. Without comprehensive training, service line leaders and other physicians reviewing SAFE reports may not have the proper tools to effectively and promptly address SAFE concerns.</li> <li>3. <u>Perceived lack of action</u> – Although all SAFE reports are reviewed and provider are notified that the report has been closed, it may not be closed for several months and few details are provided. This perceived lack of action discourages physicians from submitting SAFE reports.</li> </ol>							
<b>Ideas for Improvement</b>							
<p><i>What ideas do you have for changes that will result in improvement?</i></p> <p>Our ideas for improving the SAFE system as based off the three underlying causes of low physician SAFE reporting:</p> <ol style="list-style-type: none"> <li>1. <u>SAFE training for inpatient providers</u> – We plan to implement educational sessions to explain the process of entering a SAFE report with tips and tricks to make it quicker and more straight-forward. These trainings would also emphasize the non-punitive nature of SAFE reporting as this is a common concern, especially for residents. We anticipate these trainings would include a presentation at noon conference for the residents, a presentation at a hospital medicine faculty meeting, and a tip sheet emailed to both groups and printed for the MDM and hospitalist workroom at UNC Hillsborough. We plan to partner with risk management as well as Dr. Jenn Serfin (Associate Chair of Quality for the Department of Surgery) to amend and update their already-developed resources, as their trainings in the Department of Surgery have already successfully increased physician SAFE engagement. Increased training may also lead to better identification of SAFE reports submitted by physicians as anonymous reporting selects the “not specified” category of reporter, instead of “physician”. Further, it will help reporters better understand what to include in the report and the categories of severity designations, which frequently are not accurately classified as per risk management. Weekly safety huddles on MDM will implement reflection time to</li> </ol>							

identify safety concerns that are appropriate for SAFE reports with attending support for effectively filing the reports.

2. Create a systematic way to review SAFE reports – To improve the inconsistencies in the SAFE review process, we plan to learn from experts and create a volunteer committee of medicine service line leaders to create “best practices” for how service-line leader can successfully review SAFE reports to find actionable items and enact systemic change. We will work with Dr. Serfin and risk management to implement review strategies that have been successful. We also plan to partner with Tracey, the Hillsborough CCU unit manager, to learn and adapt their successful methods of reviewing SAFE reports. Working with CCU nursing leadership will also help address patient safety concerns that overlap between physicians and nursing. Importantly, we have already identified physicians willing to participate in this committee through the duration of the project.
3. Implementation of escalation and loop-closure – The physician committee will also meet regularly to create a systematic plan for safety escalation and loop-closure, which we envision can be adapted to other service lines. Safety escalation will include options such as division-wide emails regarding updates on processes, presenting to DHM and internal medicine residency program M&M, routing to an existing patient safety initiative or QI project, creating ideas for new safety initiatives and QI projects with lists of existing champions, and escalation to the DOM safety leadership. We plan to communicate these plans with the reporting physician and if appropriate, see if they are willing to participate in the selected escalation pathway. We also hope to enact consistent loop-closure either via feedback in the SAFE system or an email directly to the submitter, or via biweekly division emails discussing common trends and action items that are being enacted. This will create more engagement with existing DOM patient safety initiatives and empower more physicians to be involved in these processes.

#### **Risks and Opportunities**

- *What factors do you anticipate will foster improvement?*
- *What are the major challenges you anticipate?*

SAFE reporting, review, and loop-closure have already been implemented by our nursing and surgeon colleagues. Working with both of these groups to implement their strategies and learn from their prior successes and failings will help quickly improve our current workflow. Working with risk management will also be pivotal as they are experts on the SAFE system and have a deep understanding of it and how to analyze it. Finally, we feel that additional physician engagement in the review of physician SAFE reports will promote a culture of patient safety among physicians, improve physician satisfaction and increase momentum and excitement for sustained improvements.

The primary challenge we anticipate is the sustainability of who will review the SAFE reports. Ideally these reports are reviewed biweekly, though reviewing these reports and analyzing them will be time intensive. We are addressing this concern by creating a committee of volunteer service line leaders to review these reports during the project, so they can work together to review reports and develop best practices for reviewing the reports. Importantly, we are starting with a single service so the committee will have adequate time to review all the reports by physicians.

Another potential challenge is for patients if their medical team is spending more time away from patient care to report safety events. However, we hope that through education, we will minimize the amount of time physicians must spend reporting an event. Further, we suspect the effects of increased

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SAFE reporting will be counteracted by the overall improvement in unsafe patient events. Further, it may also improve patient trust after a safety event as a patient will know the problem is being investigated by multiple levels of leadership to prevent it from recurring.

**Stakeholders and Project Team Members**

- *Who are the key stakeholders in your system and processes?*
- *Who are the key project team leaders to design and implement change?*

Name	Role
Nelly Bellamy MD - Hospitalist	<i>Team Lead</i>
Danielle Aldrich MD - Hospitalist	<i>Team Lead</i>
Ann Marie Kumfer MD - Physician Service Line Leader for MDM General Medicine Service	<i>Team Lead</i>
Tracey Farmer RN - Unit manager of Hillsborough CCU	<i>Subject Matter Expert</i>
Christina Kahl MD - Physician Service Line Leader for MDU General Medicine Service	<i>Subject Matter Expert</i>
Emily Sturkie MD - Associate Chief for Clinical Operations at Hillsborough	<i>Subject Matter Expert</i>
Tom Liu JD - HCS Clinical Risk Manager	<i>Subject Matter Expert</i>
Jennifer Serfin MD - Associate Chair of Quality for the Department of Surgery	<i>Subject Matter Expert</i>
Cassi Frank PA-C - Director of Quality & Patient Safety, Department of Medicine	<i>Subject Matter Expert</i>
Carlton Moore MD - Associate Chief for Research and Quality Improvement	<i>Data Lead</i>
Cristin Colford MD - Executive Vice Chair, Department of Medicine	<i>Executive Sponsor(s)</i>
Stephenie Fenton-Wilhelm JD - Chief Risk Officer UNCMC	<i>Executive Sponsor(s)</i>

**Impact on the Quintuple Aim**

- *Improved health*
- *Enhanced patient experience*
- *Enhanced clinician and staff experience*
- *Health equity*
- *Reduced costs*

This project aligns with UNC's quintuple aim. Our project will improve physician SAFE reporting, which will ensure safety events are reviewed more frequently and timelier to decrease the risk of future patient harm and ultimately decrease length of stay and reduce costs. This will both improve health and enhance the patient experience. Through education of how to submit a SAFE report and in creating a standardized review, escalation, and loop-closure process, physicians will feel their safety concerns are being listened to and improved upon and this will enhance clinical and staff experience.

**Sustainment Plan**

- *What ideas do you have for sustaining the improvement?*

<ul style="list-style-type: none"> <li>• <i>How do you see the work you start with IHQI's support continuing?</i></li> </ul> <p>Addressing sustainability will be the core of ensuring our project will continue after the IHQI support. The main challenge we anticipate is the sustainability of who will review the SAFE reports and how to maximize the efficiency of this process and loop-closure. To address this, we are creating a committee of experienced service line leaders to review these reports, so they can work together to create a standardized review, escalation, and loop-closure process. The committee will include our project leads, and Drs. Christina Kahl and Emily Sturkie and will meet biweekly to review the SAFE reports and determine which reports may require further action. This committee will also work in tandem with our Subject Matter Experts, Tracey Farmer, Dr. Serfin, Tom Liu, and Cassi Frank to optimize the SAFE review processes and create best practices for review, escalation, and loop-closure. Once these best practices have been created and implemented, we will use PDSA cycles to analyze the amount of time it is taking and the effect on workload. We will work closely with risk management to see if some of these processes can be automated to maximize efficiency. At the end of the project, we will have SAFE report training presentations as well as best practices for SAFE review, escalation, and loop-closure, which can be easily utilized throughout the medical center, regardless of the specialty or service line leader.</p>
<p><b>Carolina Quality Tools</b></p> <p><i>How will Carolina Quality tools (Just Culture, SAFE reporting, TeamSTEPPS, huddles, and visual management boards) be used to support the work? Although use of these tools is not required, applications including them will be strengthened.</i></p> <p>Our project will use Carolina Quality tools to support the work. First, we will be primarily improving the SAFE reporting system, which is a Carolina Quality tool. We will implement weekly huddles to analyze and reflect on any safety events on MDM and use that time to place SAFE reports. Through TEAMSTEPPS we will ensure anyone can sound the alarm and report a safety event, no matter how big or small. Several DHM faculty have already completed TEAMSTEPPS and the goal is for all UNC physicians to be trained by the end of the year. The project promotes multiple UNC Health missions including "Carolina Care" and "Leading the Way" through improvements in patient care, as well as "It Starts with Me" by promoting physician involvement in patient safety.</p>
<p><b>References</b></p> <ul style="list-style-type: none"> <li>• Sponsor letters – acknowledgement of support for this project</li> </ul> <p>Please see separate emails.</p>

Resources:

1. Schuerer DJ, Nast PA, Harris CB, Krauss MJ, Jones RM, Boyle WA, Buchman TG, Coopersmith CM, Dunagan WC, Fraser VJ. A new safety event reporting system improves physician reporting in the surgical intensive care unit. *J Am Coll Surg.* 2006 Jun;202(6):881-7. doi: 10.1016/j.jamcollsurg.2006.02.035. PMID: 16735201.
2. Berdahl CT, Henreid AJ, Cohen TN, Coleman BL, Seferian EG, Leang D, Kim S, Diniz MA, Grissinger M, Kaiser K, McCleskey S, Zhu X, Nuckols TK. Comparing the Safety Action Feedback and Engagement (SAFE) Loop with an established incident reporting system: Study protocol for a pragmatic cluster randomized controlled trial. *Contemp Clin Trials Commun.* 2023

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PMC10393596.

3. Marshall TL, Ipsaro AJ, Le M, Sump C, Darrell H, Mapes KG, Bick J, Ferris SA, Bolser BS, Simmons JM, Hagedorn PA, Brady PW. Increasing Physician Reporting of Diagnostic Learning Opportunities. *Pediatrics*. 2021 Jan;147(1):e20192400. doi: 10.1542/peds.2019-2400. Epub 2020 Dec 2. PMID: 33268395.



School of Medicine

The University of North Carolina at Chapel Hill

UNC Department of Medicine

125 MacNider Hall  
Campus Box 7005  
333 S. Columbia Street  
Chapel Hill, NC 27599

919-966-4468 | med.unc.edu

March 9, 2026

Dear Improvement Scholars Program Selection Committee:

I am pleased to write of support for the project that Drs. Aldrich, Bellamy, and Kumfer are proposing to improve physician engagement in Safety Awareness for Everyone (SAFE). The project aims to create physician training for submitting, reviewing, and escalating SAFE reports for the general inpatient medicine team at UNC Hillsborough. As Executive Vice Chair for the Department of Medicine, I recognize the importance of improving physician involvement in SAFE reporting to promote patient safety.

The proposal outlines the current discrepancy between inpatient physician and nursing SAFE reporting, which contributes to clinician safety issues going unreported and thus not addressed. The team intends to improve physician SAFE reporting through training physicians on how to successfully submit SAFE reports, creating a systematic best practice for how inpatient medical directors review SAFE reports, and creating an algorithm for how to escalate and address these safety concerns. Promoting reporting of safety events and improving how they are reviewed and addressed will result in improved patient outcomes. The project team is collaborating with the Department of Medicine's Director of Quality & Patient Safety, Risk Management, and Hillsborough nursing leadership to ensure the project aligns with and is complimentary to the current SAFE review processes.

I believe this initiative will improve the safety and care of patients at UNC. I appreciate the dedication of the project team and look forward to witnessing the project's positive impact on patient care and outcomes.

Sincerely,

A handwritten signature in cursive script that reads "Cristin M. Colford".

Cristin Colford, MD  
Professor of Medicine  
Executive Vice Chair  
UNC Department of Medicine



March 9, 2026

Dear IHQI Selection Committee,

I am writing to express my strong support for the Patient Safety Improvement Project focused on increasing physician reporting of safety events through the SAFE platform. As the executive sponsor of this initiative, I am committed to advancing our shared goal of fostering a safe and transparent healthcare environment for our patients and staff.

#### Project Overview

Timely and accurate physician reporting of safety events is essential to identifying risks, learning from near misses, and continually improving patient care. However, we recognize that opportunities remain for greater physician engagement with the SAFE platform, which may otherwise result in missed chances to prevent harm and strengthen our safety culture.

#### Project Components

- **Training and Empowerment:** The project will provide targeted training sessions for physicians, ensuring they feel confident and equipped to submit safety reports within the SAFE platform. This focus on education will help integrate safety event reporting into daily practice.
- **Systematic Review:** The initiative will establish best practices for service line leaders to regularly and effectively review submitted reports. This structured approach ensures every concern is acknowledged, promoting accountability and continuous improvement.
- **Escalation Algorithm:** A clear, stepwise escalation process will be developed to address safety concerns promptly and appropriately. This algorithm will support timely resolution and provide guidance for when and how to elevate critical issues.

#### Statement of Support

I fully endorse this project and am confident in its potential to enhance patient safety and improve safety culture. My commitment extends to providing the necessary resources, guidance, and advocacy to ensure the project's success. I look forward to collaborating closely with all stakeholders to realize these important improvements.

Thank you for considering this proposal. I appreciate your dedication to advancing patient safety and am eager to support this initiative in every way possible.

Sincerely,

*Stephenie Fenton-Wilhelm*

UNC Health  
Chief Risk Officer