

**[Dr. Emily Hollis, Resident Physician – Radiation Oncology, Dr. Ashley Weiner,  
Attending Physician and Clinic Director – Radiation Oncology] ISP Application**

03/12/2025

<b>Project Lead/Key Contact</b>
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<b>Why are you interested in the Improvement Scholars Program?</b>
<p>Dr. Emily Hollis: During my residency training in radiation oncology, I have found our field to be particularly focused on streamlining operations and optimizing care quality. Our field is highly multidisciplinary; that is, our nurses, administrative staff (e.g. intake specialists), medical physicists, medical dosimetrists, radiation therapists, and physicians each have critical roles in the implementation and delivery of radiation therapy to each of our patients. The planning and delivery of radiation is a multidisciplinary and multi-step process that is prone to errors, which may be in part due to the multiple steps and handoffs between teammates. It has been estimated that creating and initiating a modern radiation plan has approximately 54 steps and 15 handoffs.<sup>1</sup> We have incorporated several “checkpoints” with many differently trained eyes to ensure accuracy and safety before passing on to the next teammate. The prior quality initiatives with which I have been involved have provided great insights into the processes and operations that shape radiation oncology and medicine in general, many of which I would likely have not been exposed to had I not been a part of these deeper dives into quality initiatives. This knowledge and insight, as well as the skills needed to identify and analyze errors with a quality improvement lens will be invaluable during my future career as a physician and leader. I seek to find practical solutions to reduce or prevent future errors and deliver high-quality care to our patients. I feel that the IHQI program will provide the perfect background and educational springboard for me to gain a deeper appreciation for interdisciplinary systems and how these are optimized to improve patient care and outcomes.</p> <p>Dr. Ashley Weiner: I am currently an Assistant Professor of Radiation Oncology at UNC and serve as the Medical Director and leader of our departmental Quality and Safety Committee (QSC). I share the sentiment that our department is dedicated to an infrastructure that promotes quality improvement and patient safety. During my time at UNC, I have been involved in multiple QI projects within our department; however, have not had formal training in these processes. Over time, I have developed a passion for improving and streamlining processes and communication within the complex radiation oncology workflow. The IHQI Improvement Scholars Program would be a significant asset to my professional development as I continue to learn to build and lead a team to accomplish this initiative. This would also provide formalized training outside of the department and allow me to bring my skills back to this critical leadership position. We are both hoping that the IHQI scholars’ program will enable robust mentorship in QI, development of leadership skills, and better understanding of QI processes/metrics that will be important for our success in departmental projects and our careers moving forward. In addition, we hope that the completion of this project will result in an improvement in our current programs and initiatives and spearhead subsequent quality improvement projects.</p>
<b>Problem Statement: What is the problem you are looking to solve?</b>
<ul style="list-style-type: none"><li>• <i>What is the problem?</i></li></ul> <p>Our department participates in a daily departmental huddle involving multidisciplinary peer review of cases planned to receive radiation. This huddle is generally effective and well-received; however, it can also be inefficient and subject to poor participation with suboptimal or unclear handoffs. As such, the problem we seek to address is the lack of a formalized structure for the peer review huddle and associated handoff between the many teams participating in this huddle (physicians, dosimetrists, and physicists). In other words, we aim to ensure all key aspects of the case undergo peer review, and that the resultant exchange of information between the huddle participants is unambiguous. An effective huddle relies on buy-in and engagement from all teammates to offer feedback for radiotherapy plans generated. With the more recent shift to remote huddles, as well as the need to have multiple centers from various locations across the state, including Hillsborough and Rockingham, a virtual format is necessary. However, it is critical that we find a way to develop a</p>

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focused and systematic structure to maintain the integrity of discussion and achieve the ultimate goal of this huddle: ensuring high quality care. Thus, while our department has a strong tradition of multidisciplinary peer review, the process by which this occurs could benefit from an improved system in place to ensure structure, clear communication of key details, and engagement of all stakeholders through a hybrid in-person/virtual format.

- *What happens?*

Every case planned for external beam radiotherapy in Chapel Hill, Hillsborough, and Rockingham is presented at our daily huddle. The indications for radiotherapy, radiation doses, treatment fields and/or volumes, and dose constraints for adjacent normal tissues, are presented and discussed in a multidisciplinary format. While our huddle allows for a broad multidisciplinary discussion on each case (e.g. including comments, questions, suggestions, concerns, and educational components), there is currently no formal system for documenting these suggestions or comments, or ensuring proper follow-up occurred from the appropriate parties. These recommendations from peers are the primary driver for having the meeting in the first place, and without a formalized structure for documenting and ensuring follow up on modifications, there is a gap in communication that can lead to delays in treatment or even errors. Inconsistent physician involvement in the meeting can also lead to variable quality and/or quantity of the peer feedback received – for example, in the virtual format, it can be uncertain if silence means agreement with a plan with no modifications or is purely a result of disengagement. When key stakeholders are missing or disengaged, they are unable to answer questions about plans, clarify reasoning in real time, and provide valuable feedback to the team. As a result, there is increased time spent on huddle, a need to follow up on feedback separately (after the huddle), a reduction in sheer number of peers who may be providing quality review, and potentially a decreased likelihood of catching errors or encouraging additional review.

- *When does it happen?*

This daily peer review happens in our departmental radiation oncology huddle *every morning*, typically scheduled for 20 minutes from 8:40 AM to 9:00 AM to allow for participants to return to clinical duties.

After the peer-review discussions, the huddle ends with a review of more-general departmental operational issues (e.g. radiation machine malfunctions, pending actions that are delaying operations, staffing issues, anticipated challenges for the day, announcements).

- *How often/how much?*

The department huddle occurs *daily* within the ~20-minute time slot noted above. However, on most days, the meeting extends past the allotted time for discussion. When the meeting extends past the planned 9 AM end time, disengagement is increased by competing obligations such as clinic or subsequent meetings.

- *To whom (which patients and or providers) does it happen?*

The meeting involves all members of the department at UNC – Chapel Hill Radiation Oncology (residents, attendings, dosimetrists, physicists, students) as well as UNC Hillsborough and UNC Rockingham attendings. Members of the meeting are expected to be present and engaged for this time each day either in person or virtually. The purpose of the meeting is to peer review patient cases for quality and safety and provide feedback prior to starting treatment. Nearly all patients who will be treated with radiation in the above departments will be presented.

**Importance Statement:** Why is this project important?

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- *How will the improvement benefit patients?*

Improving the structure by which patients are presented during our multidisciplinary huddle (i.e. ensuring critical and standardized details are shared), ensuring all teammates are engaged (i.e. assigning leadership roles, documenting feedback, tracking attendance and/or engagement), and creating and formalizing a method of closed-loop communication and timely follow-up to peer feedback, will benefit all patients that are reviewed. This is a major opportunity for providing feedback and catching potential errors. This is also the *only* formal opportunity for peer review *prior* to treatment planning in these departments and the importance of this meeting cannot be understated. Since treatment planning is a multi-step process taking days to weeks, data shows that peer review *prior* to treatment planning is more likely to lead to action being taken based on peer suggestions compared to review of cases after initiation of radiation treatment. At UNC, we are proud of our unique approach to pre-treatment peer review huddles, but, as noted above, we need to improve our processes to make our huddles optimally effective.

- *What is the potential downside of this effort for patients?*

As we iteratively modify our huddles in the early phases of this effort (e.g. with multiple PDSA cycles), the huddles may take longer, which could delay transition to other clinical duties or obligations after the huddle. However, over time as the effort matures, and our processes become more standard and well-integrated, we anticipate that our structure and agenda will ultimately save time during huddles and reduce post-huddle efforts. Also, one could theorize that recommendations for changes to radiation plans could cause delays in patient start dates for radiotherapy treatment. However, typically these suggested changes are still completed within a reasonable time frame (1-2 days) to allow the patient to start on time. This initiative will additionally improve communication of recommendations from peer review which could facilitate implementation in a timely fashion. Finally, if substantial enough alterations to the radiotherapy plan are recommended that could delay treatment (i.e. resimulation, acquisition of supplemental imaging, etc.), it would likely be a worthwhile delay to improve the quality of the patient's radiation plan and reduce the likelihood of a patient safety event. Thus, a more-consistent huddle with improved communication between peers and multidisciplinary stakeholders could facilitate higher quality radiation plans to be implemented in a more-timely fashion.

- *What background information (data/analysis/literature) supports the choice of this effort?*

With this project in mind, I have been starting to observe our daily huddle with a quality improvement lens. Over the course of 5 days of observation of our current daily huddle and peer review, 45 patient cases were reviewed. The average time spent per day was ~27 minutes with the longest day being 37 minutes (nearly double the allotted time). The average amount of physicians engaged and commenting on other plans was ~5 out of 14 physicians in the department. The average number of comments made was ~3 with an average of ~3 questions, and the average number of changes or suggestions offered was ~2. These observations support a hypothesis that there is engagement (though limited in terms of number of physicians participating); however, point to a lack of efficiency in the process.

Our department has a robust culture to report errors, and these reported errors are reviewed in our weekly departmental Quality and Safety Committee meetings. Dr. Ashley Weiner leads this meeting and Dr. Emily Hollis has often attended this meeting. A common question regarding many of the errors discussed in this meeting, is "why wasn't this issue caught at our daily huddle?" The reasons issues are missed are multifactorial – lack of engagement, increased complexity of radiation plans (including reirradiation), and missing information at the time of the huddle.

There is immense and rich literature regarding the value of peer review in radiation oncology, including in the "pre-treatment" setting. In 2011, a survey was taken of academic centers in North America noting that the most modified elements by peer review related to normal tissue exposure, prescribed dose/fractionation, target coverage, and technique.<sup>2</sup> In 2013, an executive summary written by Dr. Lawrence Marks of UNC radiation oncology was published

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regarding safety and quality assurance in the field of radiation oncology, which delineated the critical role of peer review with specific strategies by which to achieve these goals, many of which are applied at our institution.<sup>3</sup> The methods by which different institutions employ these strategies and seek to complete and evaluate peer review is varied, but the literature provides several examples. One group prospectively reviewed their “consensus peer review conference” and retrospectively analyzed the rate of “major” or “any” change in plans. The rate of major change was 8.2% and any change 23.3%, and the majority of their plans were presented in 6-10 minutes.<sup>4</sup> Another group analyzed their peer review across 14 cancer centers in Ontario and found 3.3% of plans had changes recommended, 40.2% of which were major, 47.8% minor, and 12.0% missing.<sup>5</sup> In a study from a multisite academic radiation department, daily prospective peer review done prior to the initiation of radiation, as we do at UNC, resulted in higher rates of constructive and actionable feedback compared to weekly retrospective peer review done after the initiation of radiation.<sup>6</sup> Similarly, in a large longitudinal study involving 11,843 cases undergoing prospective peer review, 28% had modifications prior to treatment planning and the overall quality of the radiation plans improved over time.<sup>7</sup> More recently, in 2024, Gogineni et al evaluated prospective pre-radiation peer-review in patients with head and neck cancer, and noted that 9% had minor and 1.4% had major modifications. They also noted that the frequency of major modification requests significantly decreased over time after adopting their systematic pre-radiation peer review.<sup>8</sup> It is clear that peer review is helpful as it consistently identifies changes to treatment plans across institutions, with a variation in the amount of significant compared to minor recommendations.

- *What area or organizational goals does this project align with/support?*

Nationally, this project aligns with the goals of the greater American Society for Radiation Oncology (ASTRO)’s strategic goal of quality and safety.

Institutionally, this also aligns with:

- a. UNC Hospital’s commitment to deliver safe and high-quality care
- b. the UNC Health’s mission to deliver this high-level of care across our state of NC (i.e. our initiative includes some of our state-wide locations and can serve as a model to extend to our other state-wide facilities)
- c. UNC Hospital’s emphasis on improving teamwork including TeamSTEPPS and transitions of care. A healthy peer-review multidisciplinary huddle requires a supportive culture. Our departmental leadership, including our chair Dr. Jean Wright and Dr. Ashley Weiner, have recently attended TeamSTEPPS training. Our past chair, Dr. Marks has participated in this training and now serves as a Master TeamSTEPPS trainer.
- d. UNC Hospital and our UNC Health System have recognized that handoffs are an area where quality and safety issues can arise. Since our daily peer review huddle is essentially a time for information to be shared between our multidisciplinary stakeholders, one might consider it as a “group handoff”.
- e. UNC Hospital has been promoting daily huddles for each clinic. This proposal aims to improve our own departmental daily huddle. The lessons we learn from this initiative will help to inform other initiatives to promote huddles at UNC Hospital. The underlying concepts that we plan to employ as part of our initiative to improve our huddles (e.g. defining standard format, standard ways to communicate and track suggested changes) are *not* specific or limited to radiation oncology. Rather, these same concepts can be scaled up and readily applied in other areas.

Departmentally, this also aligns with our goals to prioritize quality and patient safety. Our department has a long, and strong, commitment to quality assurance. Our prior (Dr. Marks) and current (Dr. Wright) department chairs are actively engaged in our QA/QI initiatives and are supportive of this current proposal. Specifically, our current chair, Dr. Jean Wright,

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has a background and interest in QI and she has expressed her intent to champion this project. She has committed to provide both the necessary time for us (Dr. Weiner and Dr. Hollis) to allocate to the project and the support to implement recommended changes. Additionally, we have the support of Shiva Das, Director of our Therapeutic Medical Physics Division and Talisha Person, Technical Manager of our dosimetry and radiation therapy teams. We have several industrial engineers on faculty in our Division of Healthcare Engineering that can also assist with these sorts of initiatives. We have an active departmental quality and safety committee (QSC) led by Dr. Weiner that meets weekly. We have several well engrained methods of tracking errors and would be able to analyze efficacy of any changes to our peer review process.

- *How has this problem been addressed successfully at UNC or elsewhere?*

A radiation oncology practice in Alabama reviewed their process for improving communication workflow during their peer-review conference. This involved ensuring conference feedback was acknowledged by the treating physician and plans with high-priority recommendations were then re-routed for additional review. They found that the treatment plan was revised in 16% of cases receiving what they defined as level 2 feedback and in 61% of cases receiving level 3 feedback, and that across all cases with feedback, the median time to acknowledge feedback was 1 day.<sup>9</sup> This could offer an example for several of the issues we face in our own institution.

At our own institution, we have previously conducted a prospective observational cohort study of physician compliance with daily early pre-radiation peer review recommendations. In the 1,271 cases reviewed, 26% received peer-based recommendations for changes, and of these recommendations, 37% were considered minor, 36% moderate, and 27% major.<sup>10</sup> We also analyzed whether these changes were subsequently implemented and noted that overall compliance was around 59%.<sup>10</sup> Of note, in the 6-7 years since this data was collected, our department has undergone significant changes in composition including new leadership, the addition of at least 7 new attending radiation oncologists, as well as new dosimetrists, physicists, and residents/students, as well as the natural transition to a hybrid meeting format that occurred after 2019. Thus, comparing this previous data to newer and more relevant data within our current department would be of great interest and utility.

**Project Scope**

In Scope:

- *What is the specific patient population your project will impact?*

This project will specifically impact nearly all patients who are treated at UNC Chapel Hill Radiation Oncology, UNC Hillsborough Radiation Oncology, and select cases from UNC Rockingham Radiation Oncology. Most patients excluding those receiving certain regimens of short-course palliative radiation, procedural radiation such as brachytherapy, or rapid turn-around cases are reviewed. For this project, the specific patient population will involve patients receiving external beam radiotherapy (including Cyberknife) in Chapel Hill and Hillsborough.

- *How many patients are in the population?*

On average, we treat 85-100 patients daily, with each patient receiving a median of 12 fractions of radiotherapy. Roughly 40 simulations for external beam radiotherapy occur weekly with >95% of the simulations being presented at the daily simulation review huddle. An average of 9 patients are presented at each daily huddle; most are pre-planning evaluations, while a small subset are plan reviews for stereotactic radiotherapy cases.

- *In what setting(s) would this problem be addressed? (e.g., hospital unit, outpatient practice setting, non-clinical setting, etc.)?*

Majority of the patients treated in our radiation oncology department are being seen and treated in the outpatient practice setting, but there is a minority of patients who are simulated and treated as inpatients at UNC hospitals or UNC Hillsborough.

Out of Scope:

There are patients treated at UNC facilities who do not participate in this huddle. These facilities have their own processes for QA and, more specifically, patient case review, but they will not be included in the scope of this analysis. In addition, some Rockingham patients are presented at a separate huddle in collaboration with McCreary Cancer Center. Finally,

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brachytherapy patients are discussed at a separate weekly huddle, while urgent same day “sim-and-treat” patients undergo offline peer review outside of the standard huddle. While the other sites are not currently involved in the process, this work could lay the foundation to disseminate our process across the system

**Measures: (Process, Balancing, Structure)**

*Please describe the anticipated outcome measure(s), 2-3 process measures, and one balancing measure. Please do not include more than 5 measures total.*

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Measure Name	Measure Type	Measure Calculation	Measure Exclusion	Data Source	Baseline	Goal	Collection Frequency
Stakeholder Satisfaction with Huddle Quality and Efficiency	Outcome	Change in likert scale of satisfaction for attending physicians, resident physicians, dosimetrists, and physicists over time	NA	Survey (Qualtrics) of before and after processes below are initiated	Will have exact data, but anecdotally, currently seems most feel room for improvement	Improvement in satisfaction	Baseline (pre project) then every 6 months
Participant Engagement	Process	Total attendance virtually and in person in huddle	Exclude non-stakeholder attendance (huddle guests)	Zoom attendance, tracked attendance sheet in conference room	Tracking current attendance for the next X months until project commencement	Increase attendance	Daily
MD to Dosimetry Communication	Process	Time between MD contour complete and sim review complete	Exclude non-business hours	Mosaiq (departmental electronic health record)	Baseline communication assumes ready within 48 hours but often is delayed	Decrease time spent opening and discussing cases prematurely	to be completed with every case, Metric to be reviewed monthly
Standardize Clinical Treatment Planning Documentation	Process	Number of clinical treatment planning notes	NA	Mosaiq (departmental electronic health record)	Baseline will be zero notes are formatted this way (currently no standard)	>50% of clinical treatment planning notes are completed within proposed	Daily (per patient case)

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		completed per proposed template guidelines  Vs those in free format				standardized format	
Total Time in Huddle	Balancing	Time spent in huddle from start to finish	Also track # of patients reviewed to account for daily difference in case presentation	Conference transcript	20 minutes	Decrease over time	Daily and per patient
	Other						

**Root Cause Analysis**

- *What do you think are the underlying causes of the problem?*
  - *Lack of engagement:*
    - *Virtual format with diffusion of responsibility discourages active participation.*
    - *Historical inconsistencies (non-standard treatment planning note, unclear communication regarding when contours are ready) and delays during huddle can promote distraction and disengagement, which further lengthens total time of huddle*
    - *Longer time in huddle can extend meeting into clinic time which may lose participation due to other*
- *Why do you think the problem is happening?*
  - *The problem is likely happening due to unclear structure of the huddle and the components of the huddle itself which leads to inefficient huddles, discussion, follow ups, and treatment planning.*

**Ideas for Improvement**

- *What ideas do you have for changes that will result in improvement?*
  - *Standardized clinical treatment planning note*
    - *Develop disease site specific templates for clinical treatment planning note with input from attendings, dosimetrists, physicists*
    - *Focus only on important and relevant details necessary for case/contour review and treatment planning (including dose constraints, should be*
    - *Decrease time spent creating/formatting clinical treatment planning note*
    - *Decrease time spent reading note by reducing excess/nonessential details*
    - *Decrease total time in huddle by decreasing length of note to review and ideally reducing number of follow up questions*

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- With all key information ready at time of huddle, all key information should be available for treatment planning to begin following contour review (reduce delays to treatment planning)
- Place treatment planning note in EPIC (allowing standard templates) instead of Mosaiq (radiation oncology specific EMR that does not allow templating)
- *MD contour complete QCL (Quality Check List)*
  - *QCLs are customized checklists in Mosaiq. Completion of a QCL triggers a subsequent QCL for a different team in the treatment planning process. In the current state, our dosimetry groups and physics groups rely heavily on these QCLs, while there are no physician-specific QCLs. As such, MDs do not have a list of their patients (and what phase of the treatment planning process they might be on).*
  - *In the current state, when an MD has contours ready for sim review, they place their initials within the treatment planning software. This results in a dosimetrist having to manually open multiple plans to see which are ready for sim review on a given date.*
  - Departmental roll out of MD Contour Complete QCL to be completed when attendings finish approving contours for case, information is accurate and includes treatment planning goals in clinical treatment planning note, and all components of case are ready for simulation review huddle and then treatment planning immediately thereafter (without needing additional input from MD team)
  - Provides clear communication (in one standardized location) when cases are ready to be shown
  - Decreases time spent preparing for simulation review by dosimetrists (will not prepare cases that are not yet ready)
  - Decreases time spent in simulation review by total participants (will not review plans that are not yet ready)
  - QCL will be a metric to allow for data tracking:
    - Query QCL due date and QCL completion date, % done on time (within due date selected)
    - Can track time between “MD contour complete QCL” and “Sim review (huddle) complete” QCL with any time >24 hours (except for non-business hours) suggesting that the MD Contour Complete QCL was completed prematurely or that follow-up items for simulation review were not addressed in a timely fashion
- *Engagement in huddle*
  - Tracking of Zoom attendance (number of people logged into huddle zoom link, daily)
  - Tracking of conference room attendance (number of people present in person for huddle, daily)
  - Tracking number of different physician attendings commenting on and/ or approving cases
  - Tracking lapses of time/gaps in communication (time spent in delays during huddle) -- could indicate lack of engagement or lack in accurate treatment planning note (see above)
- *Time*
  - Tracking average total time in huddle (daily, minutes)
  - Tracking average time per case (will account for days that have greater number of patient cases regarding metric above)
    - Number of cases presented per day
- *Survey*
  - Acquire stakeholder (attendings, residents, dosimetrists, physicists) satisfaction with peer review huddle process (before and after above changes are implemented)
  - Identify system successes and flaws or suggestions for changes

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**Risks and Opportunities**

- *What factors do you anticipate will foster improvement?*
  - *Most stakeholders and meeting participants are motivated to have a more effective and efficient meeting to be able to move on to their daily workflow in a timely fashion while also having quality peer review for their cases.*
  - *Giving a template for treatment planning notes will likely ultimately save time and may help minimize additional follow up questions or tasks for post huddle to allow for treatment planning.*
  - *More efficient treatment planning could allow for faster turnaround times for starting treatment planning, and potentially then for plans to be completed, thus earlier treatment starting dates for patients.*
- *What are the major challenges you anticipate?*
  - *Enforcing the clinical treatment planning note may take time before this is adopted uniformly and unanimously and will take multiple iterations before it is clear that all key components are adequately reflected in each disease site’s unique treatment planning note. Our electronic health system used for the huddle is Mosaiq which is tied to Epic but does not have all the features of Epic, thus there is no “dot phrase” to allow for templates to be automatically imported and will rely on physician/resident pairings to remember to use the correct format. It is foreseeable that EPIC (with better templating capabilities) can be used for this note, however, would be a change in standard workflow.*
  - *There may be challenges in tracking meeting engagement and the way by which to do so, whether this data is acquired from meeting transcription, artificial intelligence software, or simply by a point person in the project. There are many possible solutions, but the most efficient and accessible method is yet to be determined.*

**Stakeholders and Project Team Members**

- *Who are the key stakeholders in your system and processes?*

The key stakeholders in our system and processes include the departmental leadership (Dr. Jean Wright as chair), as well as the radiation oncology physicians and residents who present their patients during simulation review and react to feedback (all physicians and residents in the department at UNCMC, UNC Hillsborough, UNC Rockingham), the dosimetrist/therapist team (lead – Talisha Person), and the physicist team (lead – Dr. Shiva Das).

- *Who are the key project team leaders to design and implement change?*

Dr. Jean Wright, department leadership.

Dr. Ashley Weiner, medical director, attending radiation oncologist, QSC leader

Dr. Emily Hollis, resident radiation oncologist

Talisha Person, lead therapist, technical manager

Dr. Shiva Das, head of medical physics division

<b>Name</b>	<b>Role</b>
Jean Wright	<i>Sponsor(s), Department Chair</i>
Emily Hollis and Ashley Weiner	<i>Team Lead(s)</i>
Talisha Person	<i>Subject Matter Expert –Technical Manager (Radiation Therapy and Dosimetry)</i>
Shiva Das	<i>Subject Matter Expert – Lead Physicist</i>
Emily Hollis	<i>Data Lead</i>

**Impact on the Quintuple Aim**

- *Improved health*
  - *Higher quality peer review could lead to higher quality planning and safer and/or more effective radiation plans for patients.*
- *Enhanced patient experience*
  - *Better communication between MDs and treatment planning team can lead to more efficient treatment planning processes which over time could lead to shorter turnaround time for plan development (faster time to start treatment which is often a concern for patients). In addition, delays in planned radiation start date can be avoided by completing planning steps in a timely fashion.*

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- *More efficient and timely huddles will reduce the amount of time the huddle goes over the allotted time in the morning, which can reduce the number of times physicians are delayed in starting clinic and/or seeing patients. This can improve patient experience and satisfaction.*
- *Enhanced clinician and staff experience*
  - *More efficient and timely huddles will reduce the amount of time the huddle goes over the allotted time in the morning, which can reduce the number of times physicians are delayed in starting clinic and/or seeing patients. This can improve clinician and staff experience and satisfaction.*
  - *Higher quality huddle, more engaged and standardized peer review, and more effective and efficient hand off and communication will likely improve staff experience with the overall process of the huddle.*
- *Health equity*
  - *Nearly all patients treated in the above radiation oncology departments will go through this peer review process. A standardized and structured format could lead to a more equitable process.*
- *Reduced costs*
  - *Reducing time in huddle while also ideally improving peer review processes could in theory reduce delays in clinic or treatment planning, and more effective review could reduce likelihood of errors, which could in part reduce costs.*

**Sustainment Plan**

- *What ideas do you have for sustaining the improvement?*
  1. *The current departmental leadership is highly invested and interested in QI/QA initiatives and has been motivated to focus on improving this huddle. They will continue to support this endeavor over time. There is buy-in from all involved teams that this huddle is critical to our mission, and a strong desire to improve the efficacy and efficiency of the huddle.*
  2. *We can also continue to hand off the huddle improvement point-person role to the rising chief residents in our department who have a key role in our daily morning conference prior to the huddle to ensure that there are multiple lead stakeholders each year with a unified goal, with a guaranteed and dedicated point person from the residency program.*
- *How do you see the work you start with IHQI's support continuing?*
  1. *The huddle has been in place for roughly 15 years at this point and will likely continue as a major part of our program for years to come. Standardizing a format should thus continue in perpetuity until even more efficient mechanisms are created, particularly as radiation plans are increasing in complexity over time.*
  2. *The departmental quality and safety committee (QSC) meets weekly and will continue to come up with ways to improve this work, including development of technical tools for tracking and improving the above processes. This huddle is one of the greatest sources of quality and safety discussion in our department and is a major focus of this meeting, so the support for this work should continue indefinitely.*

**Carolina Quality Tools**

*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.*

- *Just Culture: all stakeholders in our department, and more specifically those who actively and frequently participate in the daily huddle, will be encouraged to come forward with suggestions for improvements in our processes and to learn from any errors in our processes with fairness.*
- *SAFE reporting is always encouraged when encountering errors or flaws in the system and SAFE reports regarding this process would be reviewed with any suggestions for improvements being taken into consideration.*
- *Several of the leaders in our department including our chair and immediate past chair and our project lead, Dr. Weiner, have completed training with TeamSTEPPS. This project will both rely on and help foster and improve teamwork and communication. The project will include goal setting, standardization, clear communication and hand offs, and interdisciplinary support.*
- *The use of huddles will be integral to this work as the goal is to improve the current departmental huddle.*

**[Dr. Emily Hollis, Resident Physician – Radiation Oncology, Dr. Ashley Weiner,  
Attending Physician and Clinic Director – Radiation Oncology] ISP Application**  
03/12/2025

- *Visual management boards could be created for the conference room to serve as visual reminders for the standardized treatment planning note format and as a reminder to complete the MD contour complete QCL*

**References**

- Sponsor letters – specifics that leaders agree to. (attached via email)

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Selection Committee  
IHQI Improvement Scholars Program

Dear Members of the Selection Committee,

We are writing to express my strong support for Dr. Emily Hollis and Dr. Ashley Weiner's application for the IHQI Improvement Scholars Program. As the Clinic Director (Amanda Couch), Technical Manager (Talisha Person) and Certified Medical Dosimetrist (Jackie Williamson), we have had the privilege of working closely with both Dr. Hollis and Dr. Weiner on a high-priority initiative aimed at improving the daily simulation review huddle process, which is a critical component for our team.

Our team of dosimetrists plays a pivotal role in preparing radiation contours and fields for all patients undergoing treatment. The daily simulation review huddle is an essential meeting, where dosimetrists, along with other team members, discuss the status of plans and make necessary recommendations. Unfortunately, this ideally 15-20-minute huddle often extends to 30-40 minutes, impacting our overall workflow and efficiency.

Dr. Hollis and Dr. Weiner have proposed a comprehensive plan to improve the effectiveness of this meeting by enhancing communication, documentation, and organization. They plan to overhaul our treatment planning documentation, a critical written document that communicates treatment rationale, technique, and objectives to the planning team of dosimetrists and physicists. By addressing the flow of information—particularly ensuring that dosimetrists are always aware of which treatment plans are ready, and that implementation of appropriate recommendations are communicated effectively—we believe this initiative will bring significant improvements to both the daily operations and team engagement.

This project is of the utmost importance to the performance and efficiency of our department. Streamlining the daily huddle will not only reduce unnecessary meeting times but will also improve overall team collaboration, feedback mechanisms, and documentation. We expect this initiative to increase engagement within the team, allowing us to focus more on patient care rather than time-consuming procedural inefficiencies.

The support from the IHQI Improvement Scholars Program would be invaluable in achieving these goals. Dr. Hollis and Dr. Weiner's expertise, along with their commitment to process improvement, will undoubtedly lead to tangible improvements in our daily operations, which will ultimately enhance the quality of care we provide to our patients.

Thank you for considering their application. We are confident that this project will have a profound impact, and we wholeheartedly support their efforts to improve our processes and team dynamics.

Sincerely,

Amanda Couch  
Clinic Director

Talisha Person  
Technical Manager

Jackie Williamson  
Certified Medical Dosimetrist

Department of Radiation Oncology  
University of North Carolina



THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL  
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April 12, 2024

Selection Committee  
IHQI Improvement Scholars Program

Dear Members of the IHQI Selection Committee:

I write to express my fullest support for the proposed quality improvement initiative as outlined by Drs. Weiner and Hollis aimed at enhancing our daily departmental huddle. As a new Chair of the Department of Radiation Oncology at the University of North Carolina with a strong background in Quality Improvement work, I would like to emphasize the critical value of the proposed project to our department's ability to deliver the safest and highest quality radiation oncology care to our patients. The department's "daily huddle", inclusive of treatment plan quality review, or "peer review" as this is commonly referred to in our field, is widely recognized as the gold standard for quality radiotherapy, and is also notoriously difficult to execute well. The fact that our department has this daily process (as opposed to weekly which is more common across the US) embedded in its culture was a key draw for me in joining this department, and I am grateful the department's prior leaders for establishing this daily practice. This is an incredible asset to the department's culture, and the current process has served us well for over 15 years. In the post-pandemic era, however, we have a greater number of remote participants. As our system grows, we need to engage more fully with colleagues across different campuses. To accommodate these changes, the approach to the daily huddle must necessarily evolve, and become more inclusive for remote participants. This also allows our program to reach more patients across the state who are being treated in some of our community sites. Thus, there is a clear opportunity to refine our process, strengthen individual components, and elevate overall engagement. We need to build a robust and modern format that includes structured, closed-loop communication and capitalizes on technology for standardization. We also need to remain nimble and set up a structure that recognizes the role collaborative peer review plays in promoting clinical excellence, patient safety, and a culture of continuous learning.

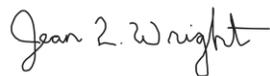
The proposed project, therefore, aligns with my vision for the department to offer the best care to all of our patients and to foster a positive culture for our team. This work will foster our ability to provide a safe environment for constructive comments on plan quality that nurtures our

learners as well as our faculty and other teammates. Key areas of focus within the project—such as optimizing the agenda and case details, clarifying when cases are ready for review, integrating structured feedback mechanisms, and enhancing participation—are well-conceived and evidence-informed. By improving the organization and flow of the huddle, we anticipate not only a more efficient use of time but also richer discussions that could impact patient outcomes and improve engagement/satisfaction for our teammates.

I fully support the project and will ensure departmental resources and leadership support are available throughout its implementation. I view this work as foundational to the function of our department, and also as a framework to disseminate our approach across the system to reach our teams practicing in some of our clinical locations that are not currently participating in our process. I cannot over-emphasize the value I place on this project, and the support that I will offer to Drs Weiner and Hollis to ensure their success.

Please do not hesitate to reach out should you require further endorsement or collaboration from our department.

Sincerely,

A handwritten signature in cursive script that reads "Jean L. Wright".

Jean L. Wright, MD  
Nominated Professor and Chair  
Department of Radiation Oncology



**UNC Radiation Oncology  
101 Manning Dr., CB#7512,  
Chapel Hill, NC 27599-7512**

**Phone: (984) 974-0400  
Fax: (984) 974-8607**

4/8/2025

Dear IHQI Review Committee:

I am writing this letter to strongly support the IHQI project proposal from Dr. Emily Hollis and Dr. Ashley Weiner. I am the Director of the Medical Physics Division in the Department of Radiation Oncology at UNC, Chapel Hill.

This proposal aims to improve the patient peer review process, whereby Physicians, Dosimetrists and Physicians jointly participate to review annotated tumor volumes drawn by the patient's attending Physician and further review the plan of action for the patient's treatment. This peer review process occurs daily at 8:40 am and last for about 30 – 40 minutes. The success of this peer review process is predicated on having a sufficient number of Physicians/Dosimetrists/Physicists in attendance and also on the peer review recommendations being effectively distributed to the necessary individuals/groups in order for them to act on the recommendations. Currently, as outlined in the proposal, the peer review process has drawbacks in that attendance and feedback from Physicians is variable, and feedback communication is largely ad hoc, rather than organized. These failings could result in the patient being treated with a suboptimal radiation therapy treatment plan.

The proposal from Dr. Hollis and Dr. Weiner aims to address the shortcomings of the patient peer review process related to insufficient Physician feedback on the patients being reviewed and inefficient/broken feedback communication handoffs to the specific individuals involved in the patients' radiation therapy treatment planning. This is a crucially important project that will provide direct benefit to the patient in terms of delivering high quality patient care. Moreover, this project is also translatable to other institutions since the same issues are prevalent in Radiation Therapy treatment centers across the country.

Dr. Hollis and Dr. Weiner are a superbly qualified team to lead this project. Dr. Hollis is a stellar resident who has participated actively in just about every peer review meeting in the past couple of years, providing valuable input to improving patient treatment. Dr. Weiner is both the Clinical Director and the leader of the Departmental Quality and Safety Committee (QSC), and hence the most qualified attending Physician to co-lead this project.

The Medical Physics Division plays an important role in Quality and Safety Initiatives in the Department of Radiation Oncology. This project will involve Medical Physics participation, in conjunction with Dr. Hollis and Dr. Weiner, to help with the project processes and results analysis.

In summary, I would like to very strongly endorse this important project to improve the quality of patient care in the Department of Radiation Oncology.

Sincerely,

A handwritten signature in black ink that reads "Shiva K. Das". The signature is written in a cursive style with a long horizontal stroke underneath the name.

Shiva K. Das, PhD, DABR  
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