[Jessica Curcio] Transitions of Care for Patients with Limb-Threatening Ischemia Through a Multidisciplinary Standardized Pathway

3/1/2026

Project Lead/Key Contact

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Why are you interested in the Improvement Scholars Program?

The Improvement Scholars Program aligns closely with my professional role and long-term goal of leading systems-level improvements in vascular care delivery. As an Advanced Practice Provider working across both inpatient and outpatient vascular surgery settings, I regularly manage transitions of care for patients with limb-threatening ischemia (LTI), including coordinating inpatient care, discharge planning, and outpatient follow-up. For the purpose of this proposal, LTI includes both acute limb ischemia and chronic limb-threatening ischemia from peripheral artery disease and/or diabetes. These patients often present with painful non-healing wounds and require urgent, coordinated inpatient and outpatient management. They remain one of the highest risk patient populations with some of the longest hospital length of stay (LOS), high readmission rates, and delays in access to follow up care among any other cardiovascular disease cohort. Patients with LTI frequently have multiple comorbidities and aside from their vascular surgical care, also interact with multiple parts of our health system while inpatient: general medicine, cardiology, endocrinology, infectious disease, and podiatry. Inefficiencies in coordination can result in delays in care, prolonged LOS and fragmented transitions to successful outpatient care. Through my work, I have seen both what effective care coordination looks like and the consequences when key elements are missed: delayed discharges, fragmented follow-up, and preventable readmissions for medically and socially complex patients.

While I have been involved in operational and clinical improvement work within our division, I am seeking structured training in improvement science to more effectively design, measure, and implement sustainable system changes. I am currently enrolled in the UNC graduate certificate program for in Improvement Science and Implementation. The Improvement Scholars Program offers an opportunity to build these skills while working on a project that directly benefits patients and strengthens multidisciplinary collaboration across the health system. I hope to use this experience to develop as a clinical leader in quality improvement and to help advance coordinated care models for patients with complex vascular disease. My goal is to design, test, and implement a standardized multidisciplinary pathway that can meaningfully reduce the LOS while improving outcomes and patient experience. The IHQI Scholars program would provide me with structured support with a dedicated team to learn and hone the skills needed to more efficiently identify and responsibly remove barriers to implementation and sustainment of a program designed to improve consistency, safety, and efficiency of limb preserving care.

Problem Statement: What is the problem you are looking to solve?

Patients with LTI face multiple barriers resulting in prolonged hospitalization and inconsistent transitions to outpatient care, which places them at high risk for readmission.

Peripheral artery disease (PAD) is an increasingly prevalent condition that impairs blood flow to the lower extremities, affecting approximately 15% of adults in the United States. Since PAD often develops due to years of inadequately controlled medical comorbidities, there is significant variability in comorbidity profiles and cardiac risk for patients who require an operation for lower extremity revascularization (Gornik HL). Increasingly, people with diabetes are developing PAD alongside their diabetes complications – 25% of people with diabetes will develop a foot ulcer in their lifetimes – which increases the number of ways

patients with threatened limbs enter our system (Skrepnek, Mills and Armstrong).

Ongoing medical comorbidity management is critical to optimizing surgical outcomes and survival in patients with PAD. Despite this, only 50-70% of patients take any cardiovascular risk-reducing medications, and only one third of patients adhere to all medical therapy guidelines, putting them at up to a four-fold risk of major amputation and death (Chung). Furthermore, it is estimated that less than 15% of patients achieve the ideal surgical result of an uncomplicated bypass, maintenance of ambulatory and domiciliary status, symptom relief, and no re-interventions (Taylor SM).

Surgical outcomes and recovery are worse for minorities, in particular Black and Hispanic populations, when compared to White patients (McGinigle KL) (McDermott MM). Minority populations have higher morality rates, higher amputation rates, and less access to post operative care and rehabilitation which results in worse functional outcomes (Osborne Z) (Cichocki M) (Lavanga E). Factors that contribute to this include implicit bias and lack of culturally competent care (W. B. Kalbaugh CA). Clinical pathways have the potential to reduce disparities by standardizing high value, evidence-based care for all patients to minimize variations in care based on race/ethnicity or other non-clinical factors (Fereydooni A) (Cichocki M) (Henry).

Currently we have no standardized pathway for inpatients with LTI (whether on the vascular surgery service or a medical service) to address timing of imaging, wound/podiatry care, medical optimization, and surgical evaluation. As part of the discharge planning there can be delayed access to essential outpatient resources including home health, wound care, vascular follow-up, primary and specialty medical care. There is fragmentation in transition of care where discharge plans vary by the managing team and warm handoffs are inconsistent. A structured checklist pathway would ensure that all affected patients leave the hospital with all key components of successful multi-disciplinary care and oversight to reduce missed or inappropriately scheduled outpatient follow-ups and avoidable readmissions. This is particularly important for patients with wounds requiring close wound management, antibiotic coordination, or early follow up for high-risk revascularization.

Importance Statement: Why is this project important?

UNC's Vascular Quality Initiative data indicates that patients admitted for scheduled open bypass surgery have 88% adherence to prescribed medical therapy and **4-day** average LOS – these metrics are among the best in the country. We do not measure or benchmark the care for our patients who undergo endovascular procedures or who are admitted urgently with an ischemic or infected foot. However, we do know that patients admitted from the emergency department needing podiatric surgery in addition to vascular evaluation had a **15-day** LOS. Compared to other cardiovascular diagnoses, LTI patients have some of the longest hospital stays, highest readmission rates, and poorest clinical outcomes. Data from UNC-CMC readmission dashboard show that of the patients readmitted with a LTI consistent diagnosis code **68.5%** were discharged without any scheduled follow-up from their index admission (Appendix A). There is room for significant improvement in the care of this uniquely high-risk patient population. This project benefits patients because it aims to reduce LOS which minimizes risk of hospital associated harm and improved patient experience. A standardized inpatient pathway with predictable communication model to ensure timely evaluation and management would streamline high quality, effective care and reduce unnecessary hospital days and readmission.

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Studies show that standardized pathways that integrate vascular surgery, wound care, and podiatry lead to reduced LOS, decreased time to revascularization, and decreased readmissions (Mudge) (Musuuza J). National guidelines from the AHA/ACC, Society for Vascular Surgery, and International Working Group on the Diabetic Foot strongly endorse coordinated, multidisciplinary management as the standard of care for this population (Gerhard-Herman MD). Earlier revascularization is associated with improved wound healing and reduced mortality, while dedicated care pathways have been shown to decrease length of stay by one to three days and reduce unwarranted variation in clinical management (Conte MS and Group). A multidisciplinary consistent pathway ensures all patients receive appropriate risk factor optimization and follow up to prevent avoidable complications and delays in care (Jones) (Fereydooni A) (Coleman). In addition, structured transitions-of-care interventions reduce readmissions among high-risk vascular and chronic LTI patients. (Mudge)

Consistent guideline directed therapy ensures all patients receive the best standard of care. This facilitates equitable care for medically complex and underserved patients who often struggle to access timely follow up. Therefore, there is a significant need to gain support from key players to create a shared vision, communicate about the importance of changing current practices, remove perceived barriers, and eventually make improvements in our daily work and culture so that our most vulnerable patients can thrive.

Because I work across both inpatient and outpatient settings and round weekly with vascular surgery attendings, including on consult services, I am directly involved in managing transitions of care for patients being treated by my vascular surgeons. In this role, I routinely coordinate follow-up appointments, identify barriers to discharge early, and communicate plans across attendings, fellows, inpatient APPs, residents, and outpatient teams. This has given me a clear view of what effective transitions look like and what happens when they are fragmented or delayed. While these practices occur reliably for some patients, they are not standardized across the hospital, leading to variation in access, prolonged length of stay, and preventable readmissions. This project is designed to translate proven, real-world, individual workflows into a standardized, reproducible pathway that does not rely on a single individual, ensuring that all patients with limb-threatening ischemia receive consistent, high-quality transitional care

Currently, UNC has strong programs organized around clinical pathways (e.g., rapid access DVT, peri-operative spine care, ERAS), but there is no unified inpatient pathway specifically for LTI that facilitates a common language and work up process ahead of surgical decision making and transitions back to outpatient care. This proposal builds on UNC's culture of multidisciplinary care and leverages our already outstanding care processes and outcomes for elective patients. We will focus on the development and ultimately implementation of a standardized clinical pathway to fill the major gap in care transitions for LTI patients who undergo urgent/unplanned interventions.

The project aligns directly with multiple UNC Health system goals. Shortening LOS and timely outpatient follow up leads to fewer complications, fewer readmissions, and improved limb preservation outcomes while reducing cost. A consistent multidisciplinary pathway reduces care variability and ensures equitable care.

The potential downsides or risks could include change stress among team members if not implemented thoughtfully. These changes require training and early buy-in from multiple teams. Implementation could create an increased demand for resources from multiple services including vascular surgery, podiatry, and case management. The downsides could be mitigated through early stakeholder engagement, testing, and clear communication.

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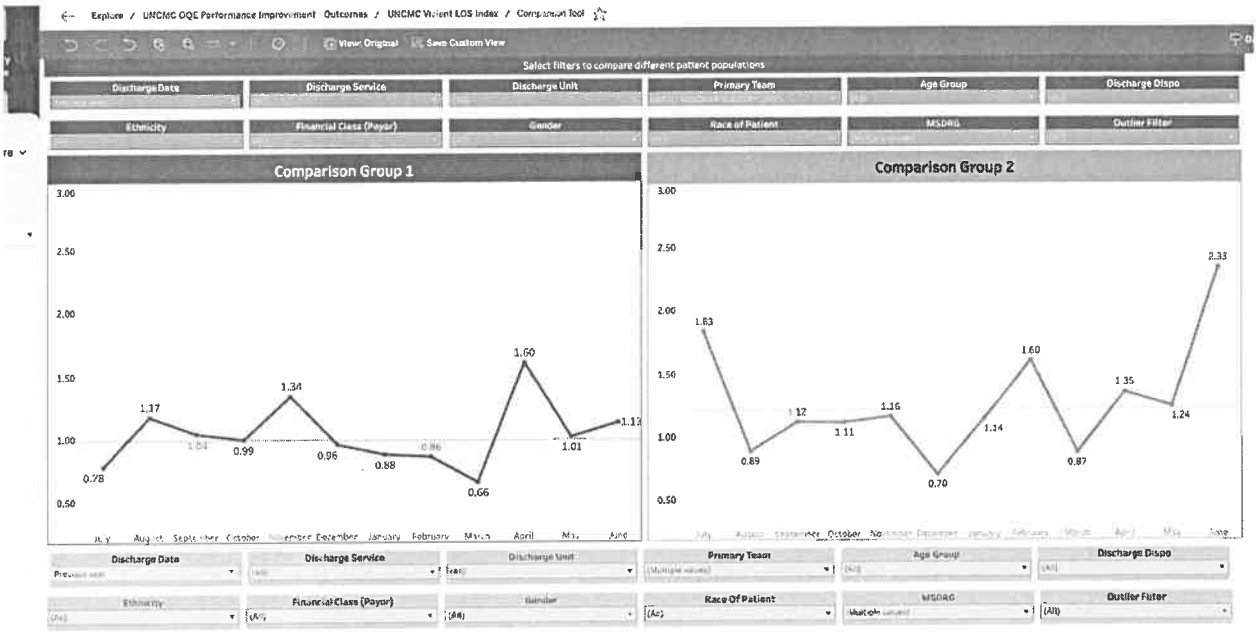
In preparation of the proposal key stake holders in all services- vascular surgery, podiatry, case management, wound care, nursing outpatient, internal medicine, cardiology, EPIC pathways development, scheduling services have all committed to assisting with the process development and implementation. This project will intentionally begin with low-technology, high-reliability tools to allow rapid testing and refinement before possibly pursuing a more complex Epic build. Initial interventions will include creation of a standardized shareable Epic smartphrase checklist to be placed on the inpatient treatment team note and carried forward into the hospital course and discharge summary.



Basic pull off Vizient comparing LOS for patient on vascular surgery service vs other with a diagnosis of peripheral vascular disease, this is fairly limited data at this time. Part of the problem is that LTI has a spectrum of diagnosis codes and it has not been paid adequate attention. Part of the work will need to be defining the types of patients and capturing all LTI spectrum to make more accurate comparisons and benchmarks. Even with this preliminary search it is evident that there is significant variability in LOS for this patient population

Department / Service	Total Cases			Average of Inpatient Length Of		
	FY2021	FY2022	FY2023	FY2021	FY2022	FY2023
Vascular	**419**	**365**	**454**	**5.5**	**5.0**	**6.0**
Heisler, Stephen Christopher, DPM	**157**	**158**	**189**	**7.8**	**6.7**	**9.5**
Podiatry; NO ED visit; Single Surgery; Admit from Periop	63	68	70	0.8	0.4	0.8
Remaining MD volume	94	90	119	12.5	11.5	14.6
Kashefsky, Howard Evan, DPM	**76**	**15**	**7**	**0.9**	**0.7**	**0.0**
Podiatry; NO ED visit; Single Surgery; Admit from Periop	7	1		0.1	0.0	
Remaining MD volume	69	14	7	1.0	0.8	0.0
Patel, Shrunjay R, DPM	**186**	**192**	**258**	**5.5**	**3.9**	**3.6**
Podiatry; NO ED visit; Single Surgery; Admit from Periop	52	61	65	1.3	0.7	1.4
Remaining MD volume	134	131	193	7.1	5.5	4.4

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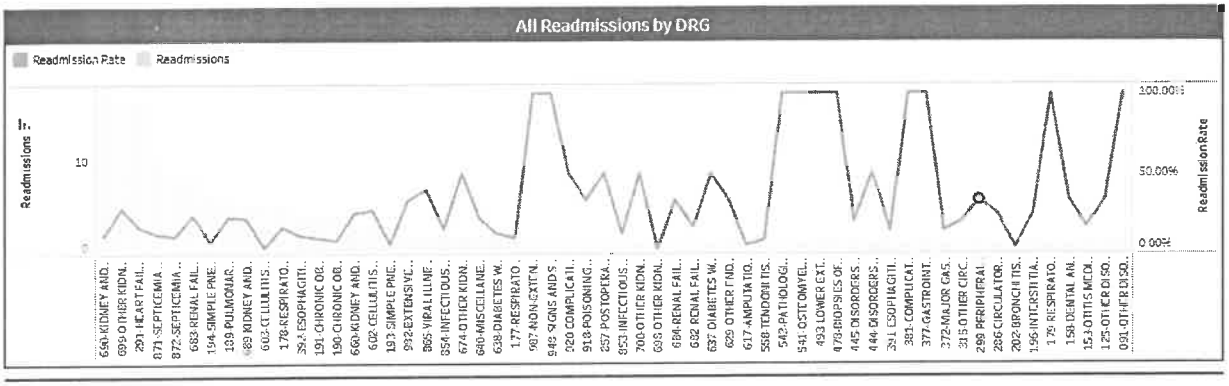
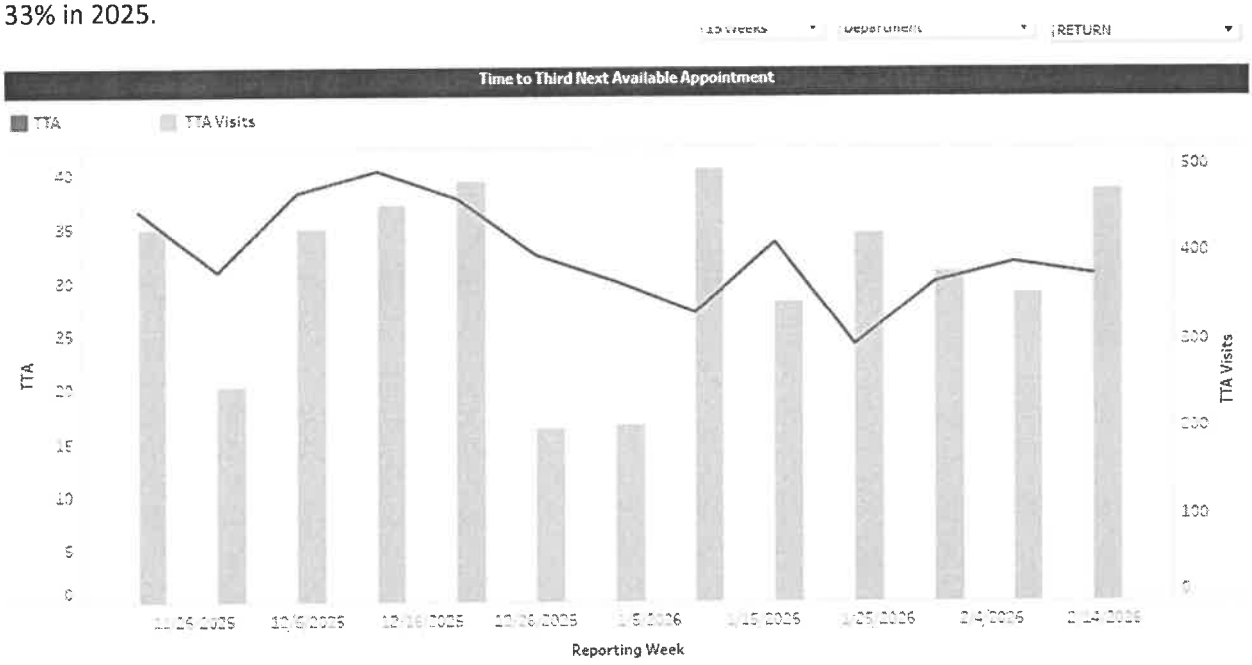
FY23 data show significantly shorter lengths of stay for clinic-originated elective cases compared to ED admissions for both Dr. Heisler (0.8 vs. 14.6 days) and Dr. Patel (1.4 vs. 4.4 days).



Readmission rates for patients with dx of peripheral vascular disease discharged to advance are at home at 33% in 2025.



Select Slicer To Visualize At Different Reporting Levels - Represents Entire Data Set From The Above Graph

TTA Return Category	TTA Return Visits	TTA
UNCH HEART VASCULAR CENTER WOUND MEADOWMONT CHAPEL HILL	530	19
UNCH HEART VASCULAR CTR PODIATRY MEADOWMONT CHAPEL HILL	1,979	24
UNCH HEART VASCULAR CTR SURGERY MEADOWMONT CHAPEL HILL	1,703	51
UNCH VASCULAR AND COMPLEX PODIATRY 430 WATERSTONE DR HILLSBOROUGH	214	29
UNCH VASCULAR SURGERY CHAPEL HILL	481	21

Data for the last 13 weeks regarding time to third for the next available appointment in days

Project Scope

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In Scope: The project will be focused on early identification of barriers to care during hospitalization, standardized multidisciplinary planning, and implementation of a continuity-of-care checklist prior to discharge to improve access, reduce length of stay, and prevent bounce-back admissions.

- *What is the specific patient population your project will impact?* **Adult patients with limb threatening ischemia, including both acute and chronic limb threatening ischemia, presenting with rest pain or tissue loss (including diabetic foot ulcer).**
- *How many patients are in the population?* **PAD affects at least 15% of the adult population in the US, and approximately half of them will require surgery to restore blood flow to their legs. Twenty-five percent of adults with diabetes will develop a diabetic foot ulcer, and half of those will become infected requiring emergency room visits and/or hospitalization.**
- *In what setting(s) would this problem be addressed? (e.g., hospital unit, outpatient practice setting, non-clinical setting, etc.)?* **Inpatient, including those admitted to vascular surgery and also hospital medicine teams. Early outpatient settings including vascular surgery follow-up, wound care clinics, podiatry clinics, PCP clinics and HH coordination.**

Out of Scope: Patients without LTI, long-term outpatient disease management beyond initial 30-day post discharge period. Care outside of UNC health system during initial phase.

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.

Measure Name	Measure Type	Measure Calculation	Measure Exclusion	Data Source	Baseline	Goal	Collection Frequency
Inpatient LOS	Outcome	Mean LOS in days for adults with LTI	Patients who expire during admission	EPIC LOS Quality Dashboard	2023 LOS table above **14 days** if ED admit 2025-Avg LOS patients admitted with dx of PVD with consults to SRV and Podiatry **15.65 days**	Reduce LOS by 10-15%	Monthly

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LOS index	Outcome	Predicted LOS/actual LOS	Patients who expire during admission	Vizient LOS comparison tool	SRV – 1.03 NonSRV – 1.27	Reduce variability between services	monthly
30 day all cause readmission	Outcome	LTI patients readmitted to UNC within 30 days of discharge	Planned readmissions	EPIC readmission dashboard	Preliminary data **33% readmission** rates	Reduce 30-day readmission by 10%	Monthly
Complete LTI care checklist prior to DC	Process	% LTI patients with completion of checklist prior to DC	Patients that leave AMA Patients who expire	Epic dc readiness documentation. CM reports	True baseline is 0% will be compared post intervention	>90% of eligible LTI discharges	Monthly
% LTI readmits with follow-up arranged prior to initial DC	Process	% of patients with follow up scheduled on DC within 7-21 days	Patients that leave AMA Patients who expire Patient who discharge with hospice	Readmission Dashboard	**31.5%** of patients readmitted to CMC in 2025 with LTI had scheduled follow-ups in outpatient clinic	>80% LTI patient discharged with follow up scheduled before dc	Monthly
Outpatient access lag time	Balancing	Time to third next available appt	New patient slots	Epic Cadence Scheduling Data	Current Time to Third next available return as per chart above. Approximately 4 weeks	No sustained increase >10% from baseline	Monthly

Root Cause Analysis

LTI patients are a medically complex patient population that requires multidisciplinary care and often face significant barriers from social determinants of health. There is not a standardized inpatient pathway to coordinate evaluation, treatment, and discharge planning. As a result, certain critical steps in evaluation and management often occur sequentially rather than in parallel, which contributes to prolonged LOS. Additionally, barriers to outpatient access are often identified later in hospitalization, including limited

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availability for imaging, wound care/podiatry clinic visits, PCP visits, and transportation challenges. Further variability exists as patients are admitted across multiple services. Variations in discharge processes and the absence of a checklist contribute to the inconsistent transitions and bounce-back readmissions. Competing clinical priorities due to high acuity patient census and limited understanding of outpatient capacity make it challenging for teams to proactively coordinate care for this high-risk patient population. These factors create avoidable delays, variation in care, and fragmented transitions for patients with LTI.

Ideas for Improvement

1. Create an LTI continuity of care checklist (using IPASS handoff tool): to be completed prior to discharge to ensure key elements are in place, including all appropriate outpatient follow-up scheduled, wound care plan documented, medications reconciled, and home services arranged.
2. Improve access to outpatient resources: Work with existing limb preservation center outpatient clinics (vascular surgery, wound care, and podiatry clinics) to establish reliable post-discharge appointment windows for recently hospitalized LTI patients. We will partner with UNC Health wound care, podiatry and vascular clinics across the system to support patients for whom travel to Chapel Hill is a barrier to follow-up. When appropriate, discharge planning will prioritize connecting patients to local outpatient wound and vascular care while maintaining clear, direct communication pathways with our tertiary limb preservation team. These partnerships will include defined mechanisms for rapid communication re-access to higher-level care at UNC when clinical status worsens, wounds fail to progress, or revascularization needs change. This approach supports improved continuity of care closer to home, while ensuring patients and clinicians retain timely access to specialized services when needed.
3. Early identification of discharge and outpatient access barriers: work with CM team to develop a structured early hospitalization assessment plan to identify outpatient care needs such as wound care follow-up, home health, antibiotics, DME, transportation, and social barriers.
4. Implement a standardized inpatient LTI pathway: develop a pathway that has clear triggers for early and parallel rather than sequential multidisciplinary evaluation, ultimately a pathway that could be built into EMR, though the initial goal is develop reliable care processes that improve coordination for patients with LTI regardless of the specific technology used to support them.

Risks and Opportunities

Opportunities

To foster improvement several factors play critical roles in early identification of barriers to care during hospitalization, standardized multidisciplinary planning, and implementation of a continuity-of-care checklist prior to discharge to improve access, reduce length of stay, and prevent bounce-back admissions.

1. **Strong multidisciplinary foundation**: There is a strong, existing collaboration among vascular surgery, wound care, hospital medicine, podiatry, peripheral vascular lab, nursing and case management providing a pathway for development and implementation.
2. **Alignment with UNC Health priorities**: The project directly supports system goals related to access, quality, value-based care, and reduction of unwarranted variation, increasing the likelihood of leadership support.
3. **Scalability:** A successful inpatient-to-outpatient pathway for LTI patients could be adapted for other complex surgical or medical populations.

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Risks:
Though a clear need exists to establish pathways for this high-risk population, several challenges need to be anticipated and addressed proactively.

1. **Operational complexity:** Coordinating workflow changes across multiple disciplines and care settings and resistance to change, as well as change fatigue may slow implementation.
2. **Outpatient constraints**: Limited availability in imaging, vascular surgery, wound care, and podiatry clinics may limit timely follow-up.
3. **EHR**: Integration of new tools (pathways, checklists) may be limited by competing IT priorities. Much work can be accomplished to improve this process without a formal epic pathway build.
4. **Patient Non-adherence:** Patients with LTI often have multiple comorbidities such as diabetes, heart disease, complex wounds, poor health literacy, and high SDOH needs. This can limit their ability to understand the importance of critical follow up.

Stakeholders and Project Team Members

Name	Role
Katharine McGinigle, MD MPH Julie Johnson, PhD	*Sponsor(s)*
Jessica Curcio, PA-C	*Team Lead*
Katharine McGingle, MD MPH Julie Johnson, PhD	*Subject Matter Experts*
Luigi Pascarella, MD, Vascular Surgery, Division Chief Daniel Calderon, MD, Vascular Surgery William Marston, MD, Vascular Surgery/Wound Care Ehsan Benrashid, MD, Vascular Surgery Stephen Heisler, DPM, Podiatry Deepali Darji, DPM, Podiatry Chris Bergen, DPM, Podiatry Howard Kashefsky, DPM, Podiatry Peter Sheng, MD Cardiology Nelly Bellamy, Internal Medicine Jennifer Belgum, FNP, Vascular Surgery Jessica Mullis, ANP, Vascular Surgery (APP supervisor and inpatient APP) Heather Johnson, DNP, Wound Care/Vascular Kate Neece, PA-C, Podiatry Inpatient Brett Schulz, Division Administrator	*Supporters/ stake holders*
	Data Lead
Brittney Killingsworth, RN; Anna Lamoreaux, RN, LaToya Walters, RN (Outpatient Vascular),	Vascular Surgery RN's, Inpatient RN, Outpatient Wound/Podiatry clinical coordinator

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Melissa Jobes, RN (Outpatient wound/podiatry clinical coordinator)	
Letrianna Demps-Scott, MSW Phoebe Natale, MSW Nicole Vertiz	Social Worker Outpatient Social Worker Inpatient HCS OP Access Ctr Ops Supervisor - Scheduling

Impact on the Quintuple Aim

Standardized care for patients with LTI focusing on timely evaluation, early revascularization, improved coordination and reliable transitions to outpatient are expected to reduce complications and support limb preservation. Patient experience is enhanced by reducing LOS and ensuring patients have dedicated follow-up and clear care instructions. A standardized checklist pathway enhances clinician and staff experience by reducing uncertainty, duplication in effort and care variation. This is expected to decrease frustration and support efficient workflows to enhance teamwork. In terms of health equity, a pathway has the potential to reduce disparities in care by providing standardized, evidence-based interventions that can be applied universally, regardless of a patient's background. The financial benefits of LTI pathway are substantial, as shorter hospital stays and fewer readmissions lead to significant cost savings for healthcare systems.

Sustainment Plan

Sustaining improvements in the implementation of LTI pathway is critical to ensuring long-term success and better patient outcomes. Because this requires ongoing efforts to maintain high standards, adapt to evolving evidence, and foster continuous improvement we will include this in the Department of Surgery Pillar 3 quality mission, which is departmental infrastructure to sustain improvements, continuous education, regular audits, strong leadership, and essential collaboration across the department and with other disciplines. By embracing a culture of continuous improvement, staying adaptable to new evidence, and ensuring financial and organizational support, healthcare systems can maintain the benefits of pathway in the long term, ultimately leading to improved patient outcomes and overall efficiency. Sustainment will focus on embedding successful changes into standard clinical workflows rather than relying on individual effort. Ideas that I propose would be sustainable for future as well include:

Data Monitoring and Continuous Feedback: Data monitoring helps to track indicators, such as length of stay, patient satisfaction, readmissions and checklist completion. Continuous feedback loops and the IPASS handoff tool allow for early identification of issues and enable corrective actions. Ideally, we could utilize a tracking system and real-time dashboards to monitor outcomes and compliance rates and address gaps as part of routine quality review that exists as part of the division of vascular surgery limb preservation program.

Multidisciplinary Team Meetings: We will hold biannual multidisciplinary team meetings to review patient progress, discuss potential barriers or improvements, and continue to foster a collaborative, patient-centered approach aligning all team members in their goals and actions. These meetings will be linked to the currently scheduled weekly peripheral artery limb salvage (PALS) meetings.

PALS brings together vascular surgeons, podiatrists, wound care experts, residents, inpatient and outpatient APPs, nurses, and case managers to review individual patients with LTI. These discussions address wound status, revascularization plans, and follow-up recommendations making PALS a natural platform for identifying system gaps that contribute to prolonged length of stay or failed transitions. PALS is firmly based in a culture of safety and existing team members speak up about barriers, handoff failures, access challenges,

and gaps in follow-up without fear of blame. This psychologically safe environment encourages high-yield ideas from across disciplines and supports constructive feedback when current processes are not effective. The shared focus of all members is on improving systems of care rather than individual performance, aligning closely with Just Culture principles. This built-in safety and trust make PALS an ideal setting to test improvement ideas and engage frontline team members for initiating and fine-tuning QI interventions. Performance data and lessons learned can be reviewed in this setting, allowing the team to rapidly identify failures, adapt workflows, and build shared ownership across disciplines. Leveraging PALS in this way ensures that process improvement is embedded in existing clinical practice, supports multidisciplinary collaboration, and creates a scalable model that does not rely on any single individual. Lessons learned through plan-do-study-act (PDSA) cycles will inform refinements and spread to additional inpatient units or related vascular populations. Results and best practices will be shared with relevant quality and operations councils to support adoption as standard practice.

Integrating LTI care pathway into EPIC: Standardized pathways and checklists ensure consistency and adherence. These tools serve as reminders and guides to ensure key steps are followed at every stage of the patient journey. It would be ideal if we could develop electronic checklists or digital pathways integrated into the hospital's EHR as part of routine admission and discharge processes, to ensure real-time monitoring of compliance. It would also be ideal to designate champions or leads within the hospital to oversee protocol implementation and ensure adherence across teams. While development of an Epic-based pathway may ultimately support standardization, the proposed improvement work does not rely on a single technology solution. Many drivers of delayed discharge and fragmented follow-up occur at the level of communication, workflow clarity, and early identification of barriers to care. Initial interventions will focus on low-technology, high-reliability approaches, including standardized discharge planning checklists, structured communication within treatment team notes using dot phrases, and multidisciplinary review of complex patients through existing forums such as the PALS conference. These interventions can be implemented and iteratively refined through PDSA cycles without requiring a formal Epic build. If successful, insights from these early cycles may later inform development of a more formalized electronic pathway, but meaningful improvement in care coordination can occur independent of that step.

Carolina Quality Tools

We will create Epic smartphrase checklist that will be structured using TeamSTEPPS IPASS communication principles to promote clear, consistent communication across inpatient and outpatient teams and to ensure that key elements of follow-up, wound care, vascular access, case management and specialty referrals are reliably addressed prior to discharge. PDSA cycles will be applied to test and refine the checklist with frontline team members, allowing rapid identification of barriers, usability issues, and workflow misalignment. Once effective processes are validated, the project could progress toward a more formal Epic pathway build, developed in partnership with an experienced quality improvement and informatics expert. This staged approach ensures that the intervention is feasible, reproducible, sustainable, and scalable.

Just Culture: We will support a learning environment where staff can report near misses or workflow challenges related to LTI patient transitions without fear of blame.

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SAFE Reporting: Staff will be encouraged to use SAFE reporting to capture safety concerns, delays in care coordination, or gaps in follow-up access for LTI patients. These reports will help the project team monitor risk, identify recurring system issues, and implement targeted interventions.

TeamSTEPPS: All UNC employees must complete TeamSTEPPS training. Therefore, we will apply these principles to inform communication among vascular surgery, hospital medicine, case management, wound care, podiatry, scheduling, and pharmacy teams. Structured communication tools such as SBAR and check-backs will support consistent handoffs (e.g., IPASS), and efficient coordination of care.

Huddles: Daily Communication and Patient Planning (CAPP) rounds can be used as huddles to review LTI patients' status, anticipate discharge needs, and confirm that continuity-of-care checklist items are progressing on schedule.

Visual Management Boards: Our boards will be patient-specific and displayed in each patient room. It clearly will display the problem we are addressing and the progress made for each patient. We can use this to track LTI patient progress, checklist completion, pending consults, and follow-up. We will analyze this simple visual metric and involvement with it and learn from errors and redesign of the system. We will utilize this to drive continuous improvement in line with PDSA philosophy.

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- Sponsor letters – acknowledgement of support for this project

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Appendix A

Dashboard Data on patients readmitted to CMC with LTI Diagnosis 2025	**111**
Patients readmitted with LTI without scheduled follow up on DC	
E11.621 | Type 2 diabetes mellitus with foot ulcer	21
I70.201 | Unspecified atherosclerosis of native arteries of extremities, right leg	1
I70.202 | Unspecified atherosclerosis of native arteries of extremities, left leg	2
I70.211 | Atherosclerosis of native arteries of extremities with intermittent claudication, right leg	2
I70.212 | Atherosclerosis of native arteries of extremities with intermittent claudication, left leg	1
I70.219 | Atherosclerosis of native arteries of extremities with intermittent claudication, unspecified extremity	1
I70.221 | Atherosclerosis of native arteries of extremities with rest pain, right leg	11
I70.222 | Atherosclerosis of native arteries of extremities with rest pain, left leg	14
I70.223 | Atherosclerosis of native arteries of extremities with rest pain, bilateral legs	4
I70.238 | Atherosclerosis of native arteries of right leg with ulceration of other part of lower leg	1
I70.261 | Atherosclerosis of native arteries of extremities with gangrene, right leg	1
I70.262 | Atherosclerosis of native arteries of extremities with gangrene, left leg	3
I70.263 | Atherosclerosis of native arteries of extremities with gangrene, bilateral legs	1
I70.312 | Atherosclerosis of unspecified type of bypass graft(s) of the extremities with intermittent claudication, left leg	1
I73.9 | Peripheral vascular disease, unspecified	3
T82.856A | Stenosis of peripheral vascular stent, initial encounter	9
	76
Patients readmitted with LTI with scheduled follow up on DC to anywhere	
E11.621 | Type 2 diabetes mellitus with foot ulcer	2
I70.221 | Atherosclerosis of native arteries of extremities with rest pain, right leg	1
I70.221 | Atherosclerosis of native arteries of extremities with rest pain, right leg	1
I70.202 | Unspecified atherosclerosis of native arteries of extremities, left leg	1
T82.856A | Stenosis of peripheral vascular stent, initial encounter	1
E11.621 | Type 2 diabetes mellitus with foot ulcer	1
E11.621 | Type 2 diabetes mellitus with foot ulcer	1
E11.621 | Type 2 diabetes mellitus with foot ulcer	1
I73.9 | Peripheral vascular disease, unspecified	1
I70.221 | Atherosclerosis of native arteries of extremities with rest pain, right leg	1

[Jessica Curcio] Transitions of Care for Patients with Limb-Threatening Ischemia Through a Multidisciplinary Standardized Pathway

3/1/2026

I70.221 | Atherosclerosis of native arteries of extremities with rest pain, right leg	1
I70.25 | Atherosclerosis of native arteries of other extremities with ulceration	1
E11.621 | Type 2 diabetes mellitus with foot ulcer	1
E11.621 | Type 2 diabetes mellitus with foot ulcer	1
E11.621 | Type 2 diabetes mellitus with foot ulcer	1
E11.621 | Type 2 diabetes mellitus with foot ulcer	1
E11.621 | Type 2 diabetes mellitus with foot ulcer	1
T82.856A | Stenosis of peripheral vascular stent, initial encounter	1
E11.621 | Type 2 diabetes mellitus with foot ulcer	4
	23
Patients readmitted with LTI with scheduled follow up on DC to vascular/wound or podiatry	
E11.621 | Type 2 diabetes mellitus with foot ulcer	4
I70.211 | Atherosclerosis of native arteries of extremities with intermittent claudication, right leg	1
I70.212 | Atherosclerosis of native arteries of extremities with intermittent claudication, left leg	1
I70.221 | Atherosclerosis of native arteries of extremities with rest pain, right leg	3
I70.222 | Atherosclerosis of native arteries of extremities with rest pain, left leg	1
I70.223 | Atherosclerosis of native arteries of extremities with rest pain, bilateral legs	1
T82.856A | Stenosis of peripheral vascular stent, initial encounter	1
E11.621 | Type 2 diabetes mellitus with foot ulcer	1
I70.212 | Atherosclerosis of native arteries of extremities with intermittent claudication, left leg	1
I70.213 | Atherosclerosis of native arteries of extremities with intermittent claudication, bilateral legs	1
	15

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February 27, 2026

Dear Selection Committe,

I am pleased to express my full support for Jessica Curcio's IHQI project, titled **"Transitions of Care for Patients with Limb-Threatening Ischemia Through a Multi-Disciplinary Standardized Pathway"**.

I am a Research Professor in the Department of Surgery and also an Associate Chair of Quality with a focus on bridging the gap between research and practice. I met Jessica two years ago when I joined the faculty at UNC. Through our regularly scheduled departmental quality meetings, Jessica has demonstrated strong initiative, thoughtful problem-solving, and a clear dedication to improving outcomes. have enjoyed working alongside Jessica for the past two years and I am committed to mentoring her QI project and supporting her interest to learn about quality and how to apply QI in her clinical practice.

I am committed to fostering initiatives that advance patient care, strengthen clinical processes, and promote a culture of continuous improvement. Jessica's project aligns closely with these priorities, and I am delighted to serve as a sponsor.

Please do not hesitate to reach out if you have any questions.

Sincerely,

Julie K. Johnson

Julie Johnson, PhD
Professor
Associate Chair of Quality
Department of Surgery
University of North Carolina at Chapel Hill

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February 28, 2026

Dear Selection Committee,

I wholeheartedly support Jessica Curcio's proposed IHQI project, titled "**Transitions of Care for Patients with Limb-Threatening Ischemia Through a Multi-Disciplinary Standardized Pathway**."

I am a vascular surgeon and federally-funded researcher in the Department of Surgery dedicated to improving the care of patients with limb threatening ischemia. I am also the Director of the Limb Preservation Program, which has just been formally supported by the Medical Center. Her proposal fits perfectly into my vision for expanding and improving the Limb Preservation Program as we gain clinical sites.

I have known Jessica since we recruited her to work in the vascular surgery division as an inpatient-outpatient advanced practice provider in 2020. She has worked alongside me, dedicated to the care of our patients, since her first day here, and I cannot image practicing without her. She is a skilled and caring clinician, and pushes me and our team to provide the best possible care. Her unique role in both the inpatient and outpatient setting allows her to see the large gap in care that occurs during transitions, which is the inspiration for this proposal.

She is a life-long learner, and is always investigating and trying new approaches to improve clinical operations and quality outcomes. In fact, she is pursuing extra education in implementation science this year. I have no doubt that she will benefit from the IHQI program, and that she will achieve the goals set forth in her proposal. She has already made a positive impact on the people of North Carolina who suffer from vascular disease, and I firmly believe that this project will reach those who are most vulnerable and currently not supported well enough.

Thank you for your strong consideration of this proposal. I am honored and proud to work alongside Jessica, and will continue to do everything I can to ensure her success and the success of this project.

Sincerely,

, MD

Katharine L. McGinigle, MD MPH
Associate Professor, Division of Vascular Surgery
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