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Closing the Gap in Bladder Cancer Survivorship: Systematic Integration of Tobacco Treatment into High-Frequency Outpatient Clinical Encounters

Project Lead/Key Contact
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Why are you interested in the Improvement Scholars Program?
<p>As a Urologic Oncologist, I recently led an inpatient tobacco cessation pathway for radical cystectomy patients. While successful, this pilot demonstrated that clinical expertise alone is insufficient for system-wide implementation. To move from isolated success to scalable change, I am eager to formally learn and apply iterative quality improvement frameworks, particularly the Plan-Do-Study-Act (PDSA) cycle, to test, refine, and embed interventions within complex clinical workflows. I am seeking the IHQI Improvement Scholars Program's specialized mentorship and infrastructure to bridge the gap between localized interventions and broad-scale execution. I am particularly interested in leveraging IHQI's guidance on data integration and equity prioritization to ensure our protocols reach UNC's diverse patient population effectively, transforming experiential pilots into a rigorous, data-driven institutional standard.</p> <p>My immediate goal is to apply this formal training to the non-muscle invasive bladder cancer (NMIBC) outpatient setting, replacing ad-hoc provider intervention with standardized, scheduled treatment cycles. Long-term, I aim to serve as a quality improvement leader in surgical oncology, developing measurable, systemic interventions that address critical care gaps across the inpatient and outpatient continuum. Participation as an Improvement Scholar will provide the foundational skills, methodology, and collaborative network necessary to translate these clinical objectives into sustainable, large-scale improvements in patient care.</p>
Problem Statement: What is the problem you are looking to solve?
<p>Bladder cancer is the sixth most common cancer in the United States. Non-muscle invasive bladder cancer (NMIBC) comprises approximately 75% of initial bladder cancer diagnoses, with tobacco smoking serving as its leading modifiable risk factor.¹ Smoking directly contributes to 50% of all cases and significantly worsens oncologic outcomes, yet a critical implementation gap persists at the point of care.² The problem I am looking to solve is the systematic failure to leverage mandatory, high-frequency clinical encounters specifically during intravesical treatments and surveillance cystoscopies, to provide consistent, protocol-driven smoking cessation support. While patients identify urologists as their most influential resource for cessation, surpassing even primary care providers, this potential remains untapped.^{3,4} National guidelines mandate tobacco counseling as a standard of quality care; however, without a structured pathway, these recommendations go unfulfilled, creating a significant disparity between evidence-based best practice and routine clinical execution.^{5,6}</p> <p>This gap in care occurs throughout the entire NMIBC treatment trajectory, beginning at the moment of diagnosis and continuing through years of intensive surveillance. It is a recurring failure that happens during every clinic visit where a patient who smokes is seen for treatment or follow-up but is not offered a standardized intervention. We have previously demonstrated the severity of this provider-level gap, showing that over half of urologists never discuss smoking cessation and only 7% offer active counseling to their patients who smoke.⁷ The scale of this problem is substantial, and the opportunity for system-wide impact is immense. Locally, our urologic oncology practice manages several hundred new NMIBC patients annually, accounting for approximately 1,100 intravesical instillation treatments and 1,200 bladder cancer surveillance cystoscopies at our primary site. While these 2,300 local encounters are significant, the potential for scalability across the broader UNC Health system is even more compelling: annually, there are over 2,600 bladder cancer cystoscopies and an estimated 2,400 intravesical treatments performed across all UNC sites. Currently, in the absence of an integrated outpatient pathway, these 5,000 annual touchpoints represent thousands of "teachable moments" that are systematically lost.</p>
Importance Statement: Why is this project important?
<p>Smoking cessation is the single most effective intervention to improve outcomes for bladder cancer patients who smoke.⁸ For the patient, the benefits are profound: a 30-40% reduction in cancer recurrence, decreased risk of</p>

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disease progression, and an approximate **30% reduction in overall mortality**.² Despite these stakes, up to **75% of bladder cancer patients continue to smoke after diagnosis**.⁹ This persists due to a staggering awareness gap: while the link between smoking and lung cancer is widely known, only 25% of bladder cancer patients recognize smoking as a primary risk factor.¹⁰ This profound disconnect underscores why proactive, clinician-led education and support are essential. To systematically address this, **the proposed project will implement a novel Uro-Teachable Moment (UTM) Pathway, a bundled intervention designed to integrate evidence-based cessation support directly into the procedural workflow of NMIBC care.** The potential downside for patients is minimal, primarily the brief addition of a sensitive screening question to the clinic intake; our protocol is designed to be patient-centered and supportive to avoid stigma, ensuring benefits far outweigh this minor time investment. For providers, a potential implementation challenge is the need to incorporate the new cessation micro-script and its mandatory documentation into procedural records, which may be perceived as an additional administrative step. We will mitigate this perceived burden through focused training, seamless EHR integration, and standardizes tobacco cessation as a critical component of cancer patient care.

This initiative is designed to leverage the unique clinical pathway of NMIBC, where patients are already engaged in frequent, mandated care. **The scheduled nature of intravesical instillations (once per week for 6 consecutive weeks) and surveillance cystoscopies (every 3 months) creates a series of predictable clinical touchpoints.** This framework allows for the systematic integration of a standardized **intervention**, augmented by support, directly into the existing treatment schedule. To exploit this opportunity, we will integrate a standardized protocol directly into the urologic oncology workflow through a **dedicated collaboration** with the **UNC Department of Family Medicine Tobacco Interventions Program**. By embedding their behavioral expertise into these routine touchpoints, the UTM Pathway is specifically designed to overcome the critical barriers of low patient awareness and inconsistent provider action, transforming routine care into a consistent therapeutic intervention.

This project aligns with critical national and institutional priorities. In January 2026, the American College of Surgeons Commission on Cancer mandated that all cancer centers offer evidence-based tobacco treatment to maintain accreditation.¹¹ Successfully implementing this protocol positions our institution to not only meet but exceed this forthcoming accreditation requirement with a disease-specific model. Furthermore, it directly supports UNC Health's "Forward Together 2030" strategic initiative to integrate standardized clinical pathways into the EHR to improve care quality, population health, and value.

Our feasibility for success is already proven. We recently completed a pilot initiative within the UNC Department of Urology in collaboration with the Tobacco Treatment Program.¹² By implementing a mandatory inpatient tobacco treatment consultation for radical cystectomy patients with bladder cancer who smoke, we **increased consultation rates from 20% to 100%** ($p < 0.01$), significantly **reduced daily cigarette use** (13 to 7 cigarettes per day, $p = 0.001$), and achieved a **29% quit rate** with high patient and provider satisfaction. This project has the full support of UNC Department of Urology leadership, including mentorship and EHR care pathways design from Dr. Matthew Nielsen, Dr. Hung-Jui Tan and Dr. David Friedlander. In addition, it has a broad multidisciplinary approach with collaboration from Dr. Adam Goldstein (Director of UNC Tobacco Intervention Programs), Dr. Michael Baca-Atlas (Associate Medical Director of UNC Tobacco Treatment Program), Julie Hartzell, LCSW, NCTTP (Tobacco Treatment Specialist), and Susan Trout LCSW, MSPH, NCTTP (Associate Director for the Outpatient Tobacco Treatment Clinic). This project will report to the Department of Urology, where initial feedback has been highly supportive of utilizing NMIBC surveillance as a prototyping ground for broader oncology-wide tobacco treatment integration. Critically, this scalable model is designed for dissemination across **all UNC urology clinical sites**, extending beyond bladder cancer to other smoking-related urologic malignancies, and ultimately **across surgical services enterprise-wide, establishing a template for system-level tobacco cessation integration that reaches patients throughout the continuum of surgical and oncologic care.**

Project Scope

Closing the Gap in Bladder Cancer Survivorship: Systematic Integration of Tobacco Treatment into High-Frequency Outpatient Clinical Encounters

Bladder cancer is the sixth most common cancer in the United States, with an estimated **84,530 new cases** projected for 2026.¹³ NMIBC is the most frequent presentation, accounting for approximately **75% to 80%** of these new diagnoses.¹⁴ In North Carolina, the disease burden is notably high with approximately **2,481 to 2,860 new cases** annually.¹⁵ Furthermore, the age-adjusted incidence rate in North Carolina is **19.3 per 100,000 people**, which exceeds the national average.¹⁵ Because NMIBC requires lifelong surveillance and frequent intravesical treatments, it remains one of the most expensive cancers to manage over a patient's lifetime.

This project will focus specifically on **NMIBC patients who currently smoke**, a critical sub-population given that smoking is the leading modifiable risk factor for the disease. Up to **50% of NMIBC patients** actively smoke at the time of their diagnosis.¹⁶ Locally, our urologic oncology practice manages several hundred new NMIBC patients annually, accounting for approximately **1,100 intravesical instillation treatments** and **1,200 bladder cancer surveillance cystoscopies** at our primary site. The intervention setting will be the **outpatient urology clinics**, specifically during high-frequency clinical encounters such as **surveillance cystoscopies and intravesical treatments**. This specific patient population, those who smoke and require active treatment and long-term monitoring, is the primary focus of this project. The immediate project scope includes these 2,300 local encounters, ensuring that routine visits for NMIBC are transformed into high-quality, structured clinical opportunities.

The potential for scalability across the broader UNC Health system is even more compelling: annually, there are over **2,600 bladder cancer cystoscopies** and an estimated **2,400 intravesical treatments** performed across all UNC sites. Currently, in the absence of an integrated outpatient pathway, these **5,000 annual touchpoints** represent thousands of "teachable moments" that are systematically lost. This project aims to capture these moments to improve patient education and outcomes across the entire health system.

Out of scope for this project are patients with muscle-invasive or metastatic disease, as well as inpatient surgical encounters or acute hospitalizations, as the pathway is specifically designed for the unique high-frequency cadence of the outpatient NMIBC surveillance and treatment population.

Measures: (Process, Balancing, Structure)

Measure Name	Measure Type	Measure Calculation	Measure Exclusion	Data Source	Baseline	Goal	Collection Frequency
Referral Success Rate	Outcome	(Number of current tobacco users who complete a first TIP counseling session / Total current tobacco users identified and referred) x 100	Patients are already enrolled in TIP.	TIP Referral Logs integrated with EHR	0% (New Process)	60%	Monthly
Screening Fidelity	Process	(Number of cystoscopy/treatment visits with tobacco status documented / Total number of outpatient		EHR Reporting Tool (e.g., SlicerDicer)	<50% (Estimated)	95%	Monthly

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		cystoscopy/treatment visits) x 100					
Referral Efficiency	Process	(Number of current tobacco users with an automated "Opt-Out" TIP referral generated / Total current tobacco users identified in clinic) x 100		EHR Reporting	0% (New Process)	95%	Monthly
Micro-script Completion Rate	Process	(Number of eligible encounters with "UTM Script Delivered" note completed / Total eligible encounters with current tobacco users) x 100	Encounters where patient declines.	EHR audit (note operative template)	0% (New Process)	80%	Monthly
Provider Burden	Balancing	Mean score on survey item "Ease of delivering the tobacco cessation script" (5-point Likert scale).	N/A	Anonymous Staff Survey		≥ 4	Bi-annually

Root Cause Analysis

The failure to systematically leverage the **5,000 annual NMIBC touchpoints** across the UNC Health system for tobacco cessation is a multifaceted problem rooted in provider, patient, and systemic barriers. At the provider level, our research has previously revealed significant obstacles to consistent intervention: **56% of urologists report they never discuss smoking cessation** with their patients. This inaction is driven by a variety of underlying causes, including a belief held by **41% of providers** that cessation may not alter the course or outcome of the disease, and **38%** who do not feel qualified to provide formal smoking cessation counseling.⁷ Additionally, clinicians cite a lack of time and the perception that such counseling falls outside the role of a urologist as reasons for these lost opportunities. These findings suggest that the demands of outpatient cystoscopies and intravesical treatments often supersede behavioral counseling, leading many providers to defer these critical conversations.

From the patient perspective, a profound lack of awareness regarding the pathophysiology of bladder cancer serves as a major barrier to behavioral change. While the link between smoking and lung cancer is nearly universal, only about **25% of patients with bladder cancer** identify smoking as a primary risk factor for their specific malignancy.¹⁰ Furthermore, up to **75% of patients continue to smoke** after a bladder cancer diagnosis, often using tobacco as a coping mechanism for the stress associated with frequent surveillance and high recurrence rates.⁹ Without a direct clinical intervention that explicitly connects their smoking habit to their cancer outcomes during routine visits,

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patients remain in a cycle of tobacco use that is reinforced by a lack of targeted intervention and education in the clinic setting.

Systemically, the absence of an EHR-supported pathway prevents the seamless transition of patients who smoke from urology to specialized cessation services. Compounding this is inconsistent documentation: although clinicians are responsible for updating smoking status, which is a discrete field in the EHR, at each visit, the social history is often passively "reviewed" rather than actively verified, leading to inaccurate EHR data. This fragmentation ensures that even frequent clinical encounters fail to trigger a timely, bundled intervention when patients may be most receptive to change.

Ideas for Improvement

The core of our improvement strategy leverages the unique, high-frequency cadence of NMIBC care to create a series of predictable intervention points. We will capitalize on the scheduled nature of intravesical instillations (weekly for six weeks) and surveillance cystoscopies (every three months) to deliver a bundled intervention directly within the existing procedural workflow (Figure). This approach transforms these routine encounters into "teachable moments" by integrating a **brief, scripted provider dialogue, a 30-second "micro-script", tailored specifically to bridge the awareness gap among bladder cancer patients** by explicitly connecting their smoking to cancer outcomes and treatment efficacy.

To ensure these interventions are applied consistently and equitably, we will shift from ad hoc clinician-dependent discussion to a **system-driven, automated "opt-out" referral** within the EHR for any patient identified as currently smoking during clinic intake. This structural change is specifically designed to promote health equity by removing provider bias and overcoming the documented barrier where 56% of providers never discuss cessation with their patients.

To ensure this standardized cessation micro-script is reliably delivered, **we will embed a discrete, mandatory field within both the cystoscopy operative report and the instillation procedure note to document its completion.** By providing clinicians with this concise, evidence-based script and a simple mechanism to record its use, we directly address the finding that 38% of urologists do not feel qualified to provide formal cessation counseling while creating a measurable check on intervention fidelity.

We will then initiate **small-scale PDSA cycles** within a single clinic pod or a limited cohort of providers. These rapid-cycle tests will allow us to assess real-world feasibility, measure initial screening and referral fidelity, and, most importantly, gather real-time feedback on what is working and what remains burdensome. Based on these learnings, we will iteratively adjust the workflow, revise the micro-script's language, timing, and delivery format for clarity and efficiency, and fine-tune EHR trigger parameters to minimize alert fatigue while maximizing capture of eligible patients. Only after achieving reliable performance and strong user acceptance in this controlled pilot will we proceed to broader departmental rollout.

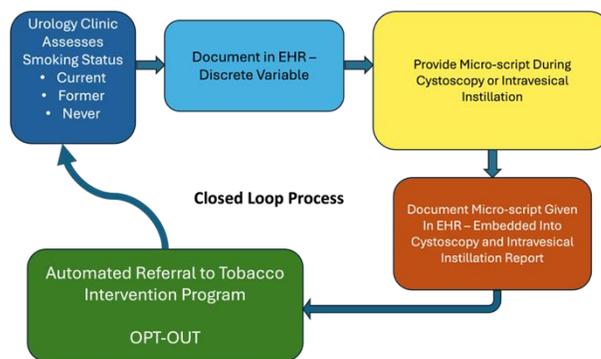


Figure: Uro-Teachable Moment (UTM) Pathway Workflow

Finally, the project will implement a **closed-loop communication system** between the Tobacco Interventions Program and the urologic oncology team. TIP counselors will send a structured progress note back to the urology team confirming patient contact and the treatment plan, thereby integrating cessation support into the longitudinal cancer care trajectory and providing positive feedback to the referring team. **We will collaborate closely with a representative from UNC's ISD to build these three core EHR components, the mandatory micro-script**

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documentation field, the automated opt-out referral trigger, and the closed-loop progress note template, ensuring seamless integration into existing clinical workflows.

Following the initial IHQI-supported pilot and iterative refinement, this project is uniquely positioned for **rapid scalability** across the broader UNC Health system due to the existing clinical footprints of our team. I (Dr. Bjurlin) can lead implementation at UNC Wayne and UNC Lenoir; the clinics of Dr. Tan and Dr. Nielsen provide a direct conduit to UNC Rex; and Dr. Pham's clinics at UNC Chatham offer an ideal replication site. By expanding the UTM Pathway to these affiliated sites, we can capture the approximately 5,000 annual NMIBC touchpoints currently being lost, transforming this pilot into a sustainable, system-wide standard for urologic oncology.

By implementing this pilot through an iterative, user-centered PDSA framework, we will create a single **adaptable blueprint for the entire system** that can also be tailored to other surgical oncology specialties managing diseases with high smoking-related risk, such as head and neck cancers, where active treatment similarly requires frequent visits.

Risks and Opportunities

Several key factors will foster the improvement and long-term success of the UTM Pathway. Primarily, this project leverages the therapeutic imperative to treat tobacco cessation as a specific oncologic intervention rather than a general lifestyle suggestion. By framing cessation as a necessary component of the treatment plan for NMIBC, equivalent to Bacille Calmette-Guérin or chemotherapy instillations themselves, we tap into the high patient motivation inherent in a cancer diagnosis. Furthermore, the timing of our implementation provides a unique institutional tailwind; we are positioned to serve as the system's primary solution for the upcoming 2026 Commission on Cancer tobacco mandates. This external requirement transforms our project from a localized "good idea" into an essential institutional asset, ensuring continued administrative prioritization and resource support.

A critical opportunity to mitigate anticipated challenges lies in **collaborative pre-implementation design**. Rather than deploying a fully finalized intervention, we will conduct structured **pre-implementation feedback sessions**, including dedicated lunch-and-learns and huddle-based demonstrations, with urology nurses, APPs, and physicians to solicit direct input on the proposed cessation micro-script, "opt-out" referral logic, and EHR alert design. This participatory process will allow us to identify perceived barriers, refine language to ensure it feels authentic and feasible in a fast-paced procedural setting, and build essential frontline buy-in before any go-live date. By involving care providers in the development of the tools they will use daily, we transform potential resistors into active collaborators.

Despite this strong foundation, we anticipate two primary challenges. **Clinical inertia** is particularly prevalent in high-volume intake settings where nursing staff may feel they lack time to conduct a meaningful smoking status assessment. This may lead to documentation drift, where staff simply click "reviewed" in the EHR rather than actively updating the status, a critical gap for NMIBC patients, whose smoking status is often fluid. Our pre-implementation feedback sessions will directly address this by co-designing an intake workflow that feels both efficient and clinically meaningful. **Alert fatigue** represents a second major challenge. To combat this, our feedback sessions will guide the design of EHR triggers that are non-disruptive, population-specific (firing only for NMIBC encounters), and perceived as helpful rather than punitive. By streamlining the process into a 30-second micro-script and an automated background referral, and by iteratively refining these tools based on direct user input, we minimize the friction that usually leads staff to bypass vital interventions.

Stakeholders and Project Team Members

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The multidisciplinary project team is led by me, **Marc Bjurlin, DO, MSc**, who serves as the Principal Investigator and Team Lead, and is co-led by **Dr. Brandon Wilson, MD**, Urologic Oncology Fellow. Dr. Bjurlin possesses extensive clinical and research expertise in urologic oncology, with a specific focus on the intersection of tobacco use and bladder cancer outcomes. Dr. Wilson will provide essential support as a co-lead, attending key meetings and ensuring project continuity by being available when the primary lead cannot. Under this leadership, the team will design and execute a specialized outpatient tobacco cessation pathway, ensuring the intervention is seamlessly integrated into the high-frequency clinical workflows of the outpatient urologic oncology setting.

The core team includes a multidisciplinary group of urologists, tobacco cessation subject matter experts, tobacco cessation counselors, a collaborator from Information Services Division (ISD), and a dedicated **Patient Advocate** (David Langham, bladder cancer survivor and former smoker) to ensure the patient perspective is central to the pathway design. Key executive leadership from the UNC Department of Urology ensures institutional alignment and sustainable implementation. **Dr. Matthew Nielsen, MD**, Chair of the Department of Urology, provides vital mentorship and strategic oversight and will serve as **Executive Sponsor**. Dr. Nielsen brings a distinguished background in quality improvement, having served as the Associate Director at the UNC Institute for Healthcare Quality and Improvement (IHQI) and currently serving as Chair of the American Urological Association Science and Quality Council. He is joined by **Dr. Hung-Jui Tan, MD, MSHPM**, who will serve as the **Sponsor**. As the Division Chief of Urologic Oncology at UNC, Dr. Tan provides additional departmental leadership and expertise to ensure the project meets rigorous safety and quality standards. Dr. Tan also possesses significant experience in quality improvement, serving as IHQI faculty and on the Advisory Committee for the Prostate MR Image Quality Improvement Collaborative. **Dr. David Friedlander, MD, MPH**, a urologist and clinician-scientist with expertise in quality improvement, care pathway design, and development of EHR-embedded clinical decision support tools, will provide expert guidance on pathway development, workflow integration, and implementation feasibility.

Operational leadership and clinical integration are spearheaded by Urology Clinic Nurse Managers **Elizabeth Weber** and **Meghan Floersch**. They are supported by a dedicated team of Urology Nurses, including **Lisa Waterman, Alisa Brady, Shiny George, Shonita Burns, and Jackie Henderson**, who provide essential frontline smoking status assessment and workflow coordination.

To provide the necessary behavioral health infrastructure, the project incorporates senior leadership and subject matter expertise from the UNC Tobacco Interventions Program (TIP). **Dr. Adam Goldstein, MD, MPH**, Director of TIP, serves as a primary collaborator to align the urologic pathway with established institutional tobacco treatment protocols. **Dr. Michael Baca-Atlas, MD**, Associate Medical Director of the Tobacco Treatment Program, provides clinical expertise in the design of evidence-based cessation protocols tailored for cancer patients. The operational success and sustainability of the program are supported by **Julie Hartzell, LCSW, NCTTP**, and **Susan Trout, LCSW, MSPH, NCTTP**, who serve as key stakeholders and implementation experts. Rather than providing direct patient-facing care, Ms. Hartzell and Ms. Trout will facilitate the institutional implementation of the pathway, review and refine clinical counseling strategies, and provide high-level support to ensure urology-based resources are integrated efficiently into the broader UNC outpatient network. We will include a collaborator **representative from ISD** who will assist in developing EHR-based tools, automated referrals and closed loop operationalization, and best practice alerts (BPAs/OPAs), to enable systematic identification and tracking across clinical settings.

Impact on the Quintuple Aim

The **Uro-Teachable Moment (UTM) Pathway** is designed to transform tobacco cessation from an elective clinical suggestion into a core oncologic priority, directly supporting all five pillars of the Quintuple Aim. To drive **Improved Health**, this project bridges the implementation gap for NMIBC patients by treating cessation as a physiological intervention; quitting tobacco provides a **wealth of health benefits**, most notably a **30-40% reduction in cancer recurrence** and a decrease in overall mortality. We prioritize an **Enhanced Patient Experience** by moving away from stigmatizing lectures toward a supportive, evidence-based "**opt-out**" **referral model** that leverages the high motivation inherent in a cancer diagnosis. To ensure an **Enhanced Clinician and Staff Experience**, we utilize

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automated EHR workflows and concise "**micro-scripts**" that reduce the cognitive and administrative burden on high-volume clinics, allowing staff to provide gold-standard care without disrupting patient flow.

The pathway is a critical tool for **Health Equity**, as it standardizes life-saving resources across all demographics and clinical sites including rural locations like **UNC Wayne, Lenoir, and Chatham** thereby removing the risk of unconscious provider bias in who receives cessation support. Finally, the initiative targets **Reduced Costs** by capturing the **5,000 annual touchpoints** across the UNC system to drive significant **downstream cost savings**. By reducing **smoking-related morbidities**, such as surgical site infections and disease progression, we decrease the need for expensive repeated intravesical treatments and hospitalizations. This alignment with the **2026 Commission on Cancer tobacco mandate** ensures that high-quality, cost-effective tobacco treatment becomes a permanent, institutionalized standard of care.

Sustainment Plan

Sustainability is a critical consideration of this project, and several key factors will support ongoing improvement beyond the project's initial implementation. To ensure the UTM Pathway remains a permanent standard of care, the project will transition from a clinician-dependent model to a system-driven, automated workflow within the EHR. By utilizing an automated "opt-out" referral mechanism, the intervention becomes a structural requirement of the clinic intake process, effectively removing individual provider bias. To actively monitor and address the human-factor element of sustainability, we will administer a brief "Ease of Delivering the Tobacco Cessation Micro-Script" survey, using a 5-point Likert scale, to nurses and providers at key intervals. This direct feedback on perceived burden will guide real-time refinements to the scripting and documentation process, ensuring the workflow is sustainable for frontline staff. Long-term sustainability is further reinforced by the project's alignment with the January 2026 American College of Surgeons Commission on Cancer mandate, which requires accredited centers to provide evidence-based tobacco treatment. This institutional necessity, combined with the "Forward Together 2030" strategic initiative, ensures that the UTM Pathway will be maintained as a core component of UNC Health's population health and quality improvement goals.

Following the initial IHQI-supported pilot, this project is uniquely positioned for **rapid scalability across the broader UNC Health system** due to the existing clinical footprints of the project team members. Expansion will leverage the established clinical footprints of our team: Dr. Bjurlin will direct implementation at UNC Wayne and UNC Lenoir, the clinics of Dr. Tan and Dr. Nielsen provide a conduit to UNC Rex, and Dr. Pham's clinics at UNC Chatham offer an ideal replication site. This phased scaling will capture approximately 5,000 annual NMIBC touchpoints currently lacking intervention, transforming the UTM Pathway into a permanent, system-wide standard of care. If successful, we will then aim to extend the intervention to UNC Health urology clinics at Nash, Southeastern, Pardee, and Caldwell.

Carolina Quality Tools

To drive and sustain the UTM Pathway, we will integrate **Carolina Quality tools**, specifically **weekly huddles, visual management boards, and Gemba rounding**, to ensure the project remains a dynamic, team-led effort.

Weekly huddles will serve as a structured forum for real-time assessment, bringing together nursing staff, nurse management, myself, and my project co-lead to maintain high situational awareness. During these sessions, we will evaluate weekly performance by asking critical questions: Are we consistently screening every patient for smoking status? To what extent have providers engaged with the 30-second micro-script? Most importantly, the huddles will offer a dedicated space to discuss unanticipated barriers, such as documentation drift during high-volume shifts or specific EHR technical hurdles. By having nursing leadership and the lead team members present, we can immediately troubleshoot workflows and ensure staff feel supported rather than burdened by the new protocol.

Visual management boards will serve as the physical centerpieces of this improvement effort. The **Front-of-Clinic Board**, located at patient check-in, will display a run chart tracking screening fidelity, the percentage of patients whose smoking status was actively updated rather than simply marked as "reviewed." It will also feature a problem-solving section regarding intake bottlenecks. The **Cystoscopy Suite Board**, positioned in the high-traffic clinical core,

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will focus on clinical impact and team recognition. This board will include a success counter showing the number of opt-out referrals sent to TIP and a shout-out section to provide encouragement and praise for specific team members who navigated difficult patient conversations or maintained perfect screening streaks. By making our progress visible, these boards transform abstract data into a shared mission, fostering a culture of accountability and collective pride.

Critically, we will supplement these structured forums with **Gemba rounding**. On a recurring basis, Dr. Wilson and I will be physically present in the clinic during active patient encounters to directly observe how nurses, medical assistants, and providers interact with the new EHR documentation fields, the opt-out referral trigger, and the cessation micro-script delivery. These Gemba walks will allow us to see the workflow as it actually unfolds, not as it was designed on paper. We will observe where clinicians encounter friction, how they naturally adapt the micro-script language, and whether the Epic tools are functioning as intended under real-world time pressures. These observations will generate immediate, actionable insights that we can bring back to our weekly huddles and PDSA cycles, ensuring our improvement efforts are grounded in frontline reality rather than retrospective report review.

References

- Sponsor letters – Mark Gwynne, DO, FAAFP
1. Freedman ND, Silverman DT, Hollenbeck AR, Schatzkin A, Abnet CC. Association between smoking and risk of bladder cancer among men and women. *JAMA*. 2011 Aug 17;306(7):737–745. PMID: PMC3441175
 2. Rink M, Crivelli JJ, Shariat SF, Chun FK, Messing EM, Soloway MS. Smoking and bladder cancer: A systematic review of risk and outcomes. *Eur Urol Focus*. 2015 Aug;1(1):17–27. PMID: 28723350
 3. Bassett JC, Gore JL, Chi AC, Kwan L, McCarthy W, Chamie K, Saigal CS. Impact of a bladder cancer diagnosis on smoking behavior. *J Clin Oncol*. 2012 May 20;30(15):1871–1878. PMID: 22529264
 4. Bassett JC, Matulewicz RS, Kwan L, McCarthy WJ, Gore JL, Saigal CS. Prevalence and correlates of successful smoking cessation in bladder cancer survivors. *Urology*. 2021 Jul;153:236–243. PMID: 33450283
 5. Holzbeierlein JM, Bixler BR, Buckley DI, Chang SS, Holmes R, James AC, Kirkby E, McKiernan JM, Schuckman AK. Diagnosis and Treatment of Non-Muscle Invasive Bladder Cancer: AUA/SUO Guideline: 2024 Amendment. *J Urol*. 2024 Apr;211(4):533–538. PMID: 38265030
 6. Schaeffer EM, Srinivas S, Adra N, An Y, Barocas D, Bitting R, Bryce A, Chapin B, Cheng HH, D’Amico AV, Desai N, Dorff T, Eastham JA, Farrington TA, Gao X, Gupta S, Guzzo T, Ippolito JE, Kuettel MR, Lang JM, Lotan T, McKay RR, Morgan T, Netto G, Pow-Sang JM, Reiter R, Roach M, Robin T, Rosenfeld S, Shabsigh A, Spratt D, Teply BA, Tward J, Valicenti R, Wong JK, Shead DA, Snedeker J, Freedman-Cass DA. Prostate cancer, version 4.2023, NCCN clinical practice guidelines in oncology. *J Natl Compr Canc Netw*. 2023 Oct;21(10):1067–1096. PMID: 37856213
 7. Bjurlin MA, Goble SM, Hollowell CMP. Smoking cessation assistance for patients with bladder cancer: a national survey of American urologists. *J Urol*. 2010 Nov;184(5):1901–1906. PMID: 20846679
 8. Cinciripini PM, Kypriotakis G, Blalock JA, Karam-Hage M, Beneventi DM, Robinson JD, Minnix JA, Warren GW. Survival outcomes of an early intervention smoking cessation treatment after a cancer diagnosis. *JAMA Oncol*. 2024 Dec 1;10(12):1689–1696. PMID: PMC11528342
 9. Ostroff J, Garland J, Moadel A, Fleshner N, Hay J, Cramer L, Zauber A, Trambert R, O’Sullivan ME, Russo P. Cigarette smoking patterns in patients after treatment of bladder cancer. *J Cancer Educ*. 2000;15(2):86–90. PMID: 10879897
 10. Bjurlin MA, Cohn MR, Freeman VL, Lombardo LM, Hurley SD, Hollowell CMP. Ethnicity and smoking status are associated with awareness of smoking related genitourinary diseases. *J Urol*. 2012 Sep;188(3):724–728. PMID: 22818131
 11. Cancer Programs News: August 7 | ACS [Internet]. [cited 2025 Dec 26]. Available from: <https://www.facs.org/for-medical-professionals/news-publications/news-and-articles/cancer-programs-news/080725/>
 12. Trivedi H, Kay H, Reines K, Hartzell J, Newcomer E, Myers S, Matulewicz RS, Goldstein AO, Shoenbill KA, Bjurlin MA. Efficacy of Inpatient, Evidence-Based Tobacco Use Treatment of Patients With Bladder Cancer After Radical Cystectomy. *Clin Genitourin Cancer*. 2025 Feb;23(1):102252. PMID: PMC11757068
 13. Bladder Cancer — Cancer Stat Facts [Internet]. [cited 2026 Feb 1]. Available from: <https://seer.cancer.gov/statfacts/html/urinb.html>
 14. Burger M, Catto JWF, Dalbagni G, Grossman HB, Herr H, Karakiewicz P, Kassouf W, Kiemeny LA, La Vecchia C, Shariat S, Lotan Y. Epidemiology and risk factors of urothelial bladder cancer. *Eur Urol*. 2013 Feb;63(2):234–241. PMID: 22877502
 15. NCDHHS: DPH: NC SCHS: Statistics and Reports: Cancer [Internet]. [cited 2026 Feb 1]. Available from: <https://schs.dph.ncdhhs.gov/data/cancer.cfm>
 16. Cumberbatch MGK, Jubber I, Black PC, Esperto F, Figueroa JD, Kamat AM, Kiemeny L, Lotan Y, Pang K, Silverman DT, Znaor A, Catto JWF. Epidemiology of bladder cancer: A systematic review and contemporary update of risk factors in 2018. *Eur Urol*. 2018 Dec;74(6):784–795. PMID: 30268659



To the IHQI Review Committee-

It is with great pleasure that I write you today in support of Dr Marc Bjurlin's proposal for the IHQI Improvement Scholars Program, "Closing the Gap in Bladder Cancer Survivorship: Systematic Integration of Tobacco Treatment into High-Frequency Outpatient Clinical Encounters." This proposal lays out an exciting and important extension of Dr Bjurlin's longstanding commitment as an internationally recognized leader in tobacco cessation among patients with bladder cancer. In addition to his numerous peer-reviewed publications in this topic area, he has been a passionate advocate and thought leader nationally, delivering webinars and podcasts through the Bladder Cancer Advocacy Network. Locally, he has worked closely with Dr Adam Goldstein since shortly after his arrival to UNC, reflecting his deep commitment to multidisciplinary collaboration, particularly across primary care and his surgical specialty of urologic oncology.

This proposal builds on experience implementing tobacco cessation in hospitalized patients after major bladder cancer surgery. As impressive as that work was, the work laid out in this proposal has, I believe, potential for even more significant impact. The majority of patients with bladder cancer have superficial disease, which has frequent, often lifelong points of contact for surveillance and treatment in the ambulatory setting. Lessons learned from this work could readily scale across the population we serve and even more broadly, given the national reach of Dr Bjurlin and others in his department. I could also envision how this work might create a blueprint for broader implementation of tobacco cessation across other subspecialty areas.

This work aligns very directly with the values and purposes animating the IHQI Improvement Scholars program. Dr Bjurlin brings a tremendous amount of experience, knowledge, and clinical background in this important space. IHQI's structured support and longitudinal training in quality improvement methods and implementation science will benefit not only his professional development, but would propel this work forward in meaningful ways. Dr Bjurlin and his colleagues in the Department of Urology at UNC are ahead of the curve among our surgical specialists in appreciating the challenges and opportunities in population health. We at the Health Alliance see engagement of specialists—in particular surgeons!—in work of this nature as one of the unique strengths of our organization.

Sincerely,

A handwritten signature in black ink that reads "Mark Gwynne".

Mark Gwynne, DO FAAFP
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President, UNC Health Alliance
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