

and practice of TS. Ultimately, T-SPARC seeks to advance broader goals of reducing longstanding challenges in the translational research process and improving health outcomes.

<sup>†</sup>The abstract has been updated since original publication. A notice detailing the change has also been published at doi: [10.1017/cts.2025.10093](https://doi.org/10.1017/cts.2025.10093)

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### Evaluation of the effect of probiotic *E. coli* Nissle 1917 on *Campylobacter jejuni* infections

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**OBJECTIVES/GOALS:** *Campylobacter* is a foodborne pathogen, causing gastroenteritis in humans. Untreated infections can cause colorectal cancer. With rising antibiotic resistance, alternative therapies like *E. coli* Nissle 1917 (EcN) are urgently needed to control infections in humans. Our study aims to evaluate the effect of EcN supernatant on *C. jejuni* in vitro. **METHODS/STUDY POPULATION:** The efficacy of EcN CFS on the growth of *C. jejuni* was evaluated in LB and minimal media (M63) using agar-well diffusion assay. We also evaluated the impact of these supernatants on the biofilm formation and pre-formed biofilms, as well as on the adhesion, invasion, and survival of *C. jejuni* in human colorectal adenocarcinoma cells. Additionally, we examined the effects of EcN CFS on the expression of genes associated with virulence factors, biofilm production, and quorum sensing of *C. jejuni* using real-time polymerase chain reaction. Each of the experiments was repeated at least twice, and the results were evaluated using two-way analysis of variance. **RESULTS/ANTICIPATED RESULTS:** Our results showed that EcN supernatants grown in both LB and M63 media exhibited a high zone of growth inhibition of *Campylobacter* in agar media. The EcN CFS significantly inhibited *C. jejuni* growth when co-cultured in liquid media. The supernatants also demonstrated a significant reduction of pre-formed biofilms by up to 82% and inhibited biofilm formation by 75%. Pretreatment of HT-29 MTX human intestinal cells with EcN supernatants led to a significant (p **DISCUSSION/SIGNIFICANCE OF IMPACT:** Our study demonstrates that *E. coli* Nissle 1917 cell-free supernatant significantly inhibits *C. jejuni* growth and virulence. This suggests that EcN-derived bioactive compounds could be promising antibiotic alternatives to combat *C. jejuni* infections. This study will bridge the gap between basic and translational research.

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### An environmental scan of translational science storytelling in a Clinical Translational Science Award Hub

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**OBJECTIVES/GOALS:** This study illuminates the efforts of a Clinical and Translational Science Award (CTSA) Hub to share stories of its aspirations, challenges, successes, opportunities, and impact when pursuing its complex goals, and how storytelling contributes to the narrative of the translational science work (via storytelling strategies, products, and benefits). **METHODS/STUDY POPULATION:** We utilized an environmental scan of a CTSA Hub (University of Minnesota Clinical and Translational Science Institute (CTSI)), including case study vignettes of its storytelling practices and products. We triangulated data from diverse data sources: grant applications, reports, and publications; public stories/news related to CTSI activities and impact; scientific publications; organizational/policy documents; and interviews with CTSI stakeholders featured in published sources. **RESULTS/ANTICIPATED RESULTS:** TS storytelling uses and strategies include communicating the essence of research translation, promoting program utilization, engaging community, reporting to stakeholders, and evaluating for accountability, learning, and improvement. Storytelling challenges include complexity of translation; balancing the scientific rigor with an engaging narrative; identifying appropriate stories that resonate with diverse stakeholders and are at an appropriate level of maturity; and building capacity using storytelling. Facilitators include supportive infrastructure to integrate stories; leadership endorsement of storytelling as a valuable strategy; capable cross-functional teams of communicators, administrators, and researchers to facilitate the integration of data into storytelling. **DISCUSSION/SIGNIFICANCE OF IMPACT:** The environmental scan provides evidence and lessons learned on leveraging storytelling as a useful tool for communicating CTS goals, actions, and findings, engaging stakeholders, building a narrative around scientific discoveries, evaluating and improving programs, and addressing health disparities in translational science.

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### Optimizing the transition of cancer survivorship care from oncologists to primary care providers (PCP)

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**OBJECTIVES/GOALS:** Aims are to identify the gaps and discrepancies between cancer care teams at Princess Margaret (PM) and primary care providers (PCPs). To ensure the transition from hospital care at PM into the community integrates the expressed needs of PCPs and cancer specialists. To ensure PCPs have the necessary resources to provide high-quality care to patients. **METHODS/STUDY POPULATION:** Phase 1 is the preparation phase, which consists of searching the literature and conducting contextual inquiry with experts in relevant fields, such as cancer survivorship and primary care. This phase is crucial to the planning of this project as the information gathered will be used to define the problem space and outline the scope of the project. Next (phases 2 and 3) we aim to create and distribute surveys to PCPs to gather data on current protocols and resources. We plan to distribute this survey by emailing PCPs and accessing PCP networks. Upon completion of the survey, we will review the data and assess which areas need further investigation. Then, we will create an interview guide keeping in mind the areas that need to be supplemented and aiming to validate the need. **RESULTS/ANTICIPATED RESULTS:** A resource that presents

guidelines for PCPs to assist in them taking on follow-up care responsibilities for low-risk cancer survivorship patients. These guidelines may include information such as communication pathways between PCPs and the PM Cancer Care team, expected follow-up care measures, and timeframes for follow-up care. The development of this guideline will assist in alleviating the burden on the PM Cancer Centre system as it will facilitate low-risk patients transitioning back to family care. **DISCUSSION/SIGNIFICANCE OF IMPACT:** There is an increasing demand for oncology services post-cancer treatment at the PM Cancer Centre and the current cancer model follow-up care is not sustainable by oncologists alone. There is a need to explore innovative personalized pathways to follow-up care based on an individual's needs and integrate family doctors.

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### **Demonstrating health equity and public health impacts of translational science at the Clinical and Translational Science Collaborative (CTSC) of Northern Ohio: A mixed-methods approach using the Translational Science Benefits Model**

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**OBJECTIVES/GOALS:** The Translational Science Benefits Model (TSBM) offers a key framework for demonstrating the real-world health outcomes of research. This study uses a mixed-methods approach combined with the TSBM to show how researchers from Case Western Reserve University's Clinical and Translational Science Collaborative (CTSC) have advanced health equity or improved public health in the USA and globally. **METHODS/STUDY POPULATION:** Using the TSBM indicators, we surveyed 72 former CTSC KL2 Program trainees and 469 CTSC Pilot Program awardees for documented evidence that their research led to demonstrated health benefits. We used purposive sampling of the survey responses to obtain examples highlighting research that led to advances in health equity as well as international public health improvements. We conducted in-depth interviews with six investigators to assess the populations impacted and the scope of their contributions. For each investigator, we examined how their publications informed both national and international policy. Through this approach, we will present specific case studies highlighting research that led to advances in health equity as well as international examples of public health improvements. **RESULTS/ANTICIPATED RESULTS:** Among KL2 Scholars, we achieved a 40% response rate (29/72), with 90% (26/29) reporting 86 significant benefits across the four TSBM areas. For Pilot Program awardees, 18.5% responded (87/469), with 40% documenting 136 benefits. Several different types of translational science benefits resulted in improved health and health equity for several diverse national and international beneficiaries, including racial and ethnic minorities (e.g., Blacks, Hispanics), potentially vulnerable populations (e.g., pregnant women, victims of intimate partner violence, individuals on Medicaid, infants), international populations (e.g., people from low-resource countries with genetic disorders or parasitic infections), as well as people from rural areas and professions at high risk of developing cancer. **DISCUSSION/SIGNIFICANCE OF IMPACT:**

Leveraging KL2 and Pilot Grant successes, the TSBM shows how research improves public health and health equity for underserved populations. It streamlines outcome reporting, enabling researchers to demonstrate their societal impact while providing funders and policymakers with clear, data-driven evidence of the value of translational science.

## **Health Equity and Community Engagement**

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### **Community perspectives on hospital accountability to equity**

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**OBJECTIVES/GOALS:** Our objective is to examine patient and community perspectives on hospital actions that signify accountability to healthcare equity; part of our overall goal is to identify equity measure concepts representative of community perspectives and priorities for future hospital accountability programs. **METHODS/STUDY POPULATION:** We conducted a qualitative thematic analysis of secondary data – 32 focus group transcripts from our hospital's Community Health Needs Assessment (CHNA). A tri-annual CHNA is required of nonprofit hospitals to maintain tax exemption. Diverse participants were recruited from our hospital's large catchment area. Coding focused on responses to 6 pertinent questions. We adapted the National Committee for Quality Assurance, "Health Equity Measurement Framework for Medicaid Accountability" which consists of 5 domains (access, clinical, experience, structure, and social) to guide the development of our a priori coding tree and subsequent analysis. Two coders double-coded 25% of transcripts. The multidisciplinary research team, including community partners, met iteratively to extract and refine themes. **RESULTS/ANTICIPATED RESULTS:** We organized our analysis by our conceptual framework's 5 measurement domains. The "access" and "experience" domains were the most salient for participants. We defined "access" by four sub-domains: financial access, physical access, communication access, and navigability; and "experience" by two subdomains: inclusivity and accommodation. Beyond discussing concepts within these measurement domains, participants debated the "scope" of the hospital's role with regard to healthcare equity. While some did not think "it was the hospitals" responsibility to give people access to good jobs or fair pay, education..., "other participants felt that healthcare involves not just addressing peoples' physical health but their housing... because how can someone take care of their health when they are homeless?" **DISCUSSION/SIGNIFICANCE OF IMPACT:** When asked about hospital accountability to healthcare equity, "access" and "experiences" of care are the most salient measurement domains for patients and communities. The "scope" of the hospital's role is debated. Policy and health system