

2026 Distinction Abstracts

Distinction in Bioethics

Mitsu Patel

Death by Neurologic Criteria: Practical and Ethical Considerations in New Jersey ICUs

Project Mentor: Karthik Kota, MD

Objective: Death by neurologic criteria (DBNC) is a medically and legally recognized determination of death; however, it remains ethically and socially complex. In New Jersey, a unique “conscience clause” permits families to refuse DBNC determinations based on religious or moral beliefs. We developed an educational initiative for ICU personnel to clarify DBNC criteria, outline New Jersey’s legal framework, and provide practical communication strategies for interacting with families who decline DBNC.

Methods: In collaboration with the hospital bioethics committee, we designed a structured educational presentation for ICU teams. The curriculum reviews the historical development of DBNC, American Academy of Neurology examination and apnea testing protocols, pediatric considerations, New Jersey’s statutory exemption, and institutional resources including bioethics, palliative care, chaplaincy, administration, and legal services. Emphasis was placed on case-based discussion and communication strategies to strengthen the therapeutic alliance with attention given to navigating situations in which families invoke New Jersey’s exemption and decline DBNC testing or determination.

Results: These discussions highlighted the complexity of managing discordant perspectives regarding DBNC and informed the development of a Discordant Care Pathway to guide institutional response. The collaborative framework of this pathway supports early involvement of interdisciplinary resources, including ethics, hospital leadership, legal counsel, and supportive care services, to ensure coordinated, compassionate communication and conflict mitigation.

Conclusion: Educational engagement regarding DBNC and New Jersey’s legal exemption enhances clinician preparedness and promotes ethically grounded, patient-centered care. Structured pathways and proactive bioethics collaboration may reduce conflict and improve support for families during end-of-life decision-making.

Distinction in Climate Health and Environmental Sustainability

Radhika Kadakia

Planetary Health and Sustainable Quality Improvement Assessment in Internal Medicine Residents

Project Mentor: Catherine Chen, MD

Planetary health (PH) and sustainable healthcare education (SHE) have been increasingly incorporated into undergraduate medical education, though integration at the graduate level remains limited. We evaluated internal medicine residents’ understanding of PH and SHE within a longitudinal quality improvement (QI) curriculum comprising six one-hour workshops that reviewed content on SHE, PH, and residents’ own improvement ideas. Residents across all PGY years in AY2024 completed a 12-question assessment (6 QI, 3 SHE, 3 PH; 8 multiple-choice and 4 open-ended) before and after the curriculum. Open-ended responses were independently coded by two reviewers. Post-curriculum, residents cited a significant increase in trigger education to reduce respiratory exacerbations and for community-level advocacy, but a decrease in natural disaster prevention (wildfires in pre-test and floods in the post-test) as an intervention. There were no significant differences in other sustainable preventive medicine practices (lifestyle medicine, individual practices) or climate health recommendations (environmental history, general counseling) between the pre- and post-tests. A significant difference ($p = 0.0389$) in PGY years was observed on the pre-test for examples of patient-facing preventive practices that

reduce healthcare's climate impact, with PGY1s having the most, but this difference was not significant on the post-test ($p = 0.061$). No significant pre–post differences were observed in the definition of planetary health or of sustainable value care. This assessment shows that current clinical experiences do not increase understanding of PH or SHE. Though there were some improvements, a more robust ‘*Sustainable QI*’ curriculum can integrate existing educational requirements with the practical needs of addressing climate change in medical practice.

Ming Wu

Climate Change and Health at a Crossroads: A Review on Evolving Policy and Call to Action for U.S. Clinicians

Project Mentor: Catherine Chen, MD

The opening months of 2025 were marked by catastrophic wildfires in Los Angeles, flooding in Texas, and deadly mudslides across Southern California; these events displaced hundreds of thousands, disrupted healthcare delivery, and exposed fragile emergency preparedness systems. Against the backdrop of record-breaking global temperatures, these disasters underscore the accelerating intersection of climate change and human health. Our findings review the current state of climate-related health harms, synthesizing evidence on pollution-attributable mortality, particulate matter–associated cardiopulmonary disease, wildfire-related respiratory morbidity, and emerging threats such as microplastic exposure. Drawing on Global Burden of Disease estimates and recent U.S. projections, we contextualize climate change as a leading driver of preventable death, disability, and healthcare expenditure.

Concurrently, federal retrenchment including withdrawal from international climate commitments, removal of public-facing environmental health tools, and reversal of regulatory authority over greenhouse gases, threatens to stall mitigation and adaptation efforts. We argue that such policy shifts heighten the ethical and professional responsibility of clinicians to act. Importantly, the healthcare sector itself contributes an estimated 5–8.5% of global greenhouse gas emissions, with U.S. healthcare representing a disproportionate share.

We synthesize emerging literature on healthcare decarbonization strategies including supply chain reform, waste reduction, inhaler substitution, reusable medical equipment programs, and standardized greenhouse gas reporting, and highlight scalable interventions that improve both sustainability and cost-effectiveness. Framing climate change as a public health emergency, we call upon physician providers to integrate climate-informed care, institutional sustainability leadership, emergency preparedness, and policy advocacy into professional practice. In an era of political uncertainty, safeguarding patient health requires safeguarding planetary health.

Distinction in Global Health

Aafreen Azmi

Performance of the MOST Score for Severe Traumatic Brain Injury: First External Validation in Resource-Limited Neurosurgical Systems

Project Mentor: Anil Nanda, MD, MPH

Background: Prognostic models can assist neurosurgeons in making early decisions for patients with severe traumatic brain injury (TBI), yet most have been developed in high-resource trauma systems. The MOrtality Score for TBI (MOST) simplifies prediction using readily available clinical variables. Its performance in resource-limited settings remains unknown. Our objective was to externally validate the MOST score in a resource-limited neurosurgical environment and to compare its performance with the CRASH and IMPACT models.

Methods: We performed a multicentric retrospective cohort study of adults with severe TBI (Glasgow Coma Scale [GCS] < 9) admitted to two neurosurgical referral centers. Demographics, injury characteristics, incident-to-presentation time (minutes), imaging, and corrected MOST/CRASH/IMPACT scores were collected. Primary outcome was in-hospital mortality; secondary outcomes included Glasgow Outcome Scale (GOS) at discharge. Discrimination was assessed with ROC AUCs and pairwise DeLong tests; calibration with Brier scores. Multivariable logistic regression identified independent predictors of mortality and poor functional outcome ($GOS \leq 3$).

Results: Among 1,105 patients, overall mortality was 12.1% and 94.8% had $GOS \leq 3$ at discharge. Median incident-to-presentation time was 360 minutes (IQR 180–540); rural patients arrived later than urban patients (480 vs 180 minutes, $p < 0.0001$). In adjusted models, higher MOST scores were associated with increased mortality (OR 1.60, 95% CI 1.37–

1.86), while higher GCS was protective (OR 0.59, 95% CI 0.42–0.83); IMPACT showed a modest inverse association (OR 0.87, 95% CI 0.78–0.97). MOST showed the best discrimination for mortality (AUC 0.85) versus CRASH (0.79) and IMPACT (0.82) (all pairwise $p \leq 0.026$) and the lowest Brier score (0.187).

Conclusions: The MOST maintained robust performance under the system constraints typical of low-resource neurosurgical care, confirming its generalizability beyond high-income trauma networks. These findings highlight the potential role of validated prognostic models in guiding triage and communication in severe TBI.

Faith Blamon-Orlando

Building Sustainable Surgical Capacity Through Longitudinal Global Health Partnerships in Liberia, West Africa

Project Mentors: Dean Charletta Ayers, MD, James Aikins, MD, and Robert Mayson, MD

Access to safe surgical care remains severely limited in low-resource settings, contributing substantially to preventable morbidity and mortality. In response, this project represents a longitudinal, capacity-focused global surgery initiative in Liberia, West Africa, developed through sustained institutional partnerships rather than episodic outreach. Since its inception, the program has coordinated multidisciplinary surgical missions in collaboration with local hospitals, surgeons, nurses, and administrators to address unmet surgical needs while prioritizing systems strengthening and workforce development.

The initiative integrates pre-deployment needs assessments, coordinated supply chain logistics, and on-site collaboration with local providers to deliver general surgical, obstetric, and procedural care while minimizing disruption to existing health systems. Equally central to the project is bidirectional education, including intraoperative teaching, perioperative protocol development, and shared case discussions designed to align with local practice realities. Data collection and structured debriefing have informed iterative improvements in clinical workflows, volunteer preparation, and sustainability planning.

Importantly, this work is intentionally framed as an evolving platform rather than a finite mission. Future directions focus on durable capacity building through targeted skills transfer, development of locally adaptable surgical protocols, expansion of perioperative nursing and anesthesia education, and the creation of standardized systems for patient triage and follow-up. Long-term goals include strengthening local surgical autonomy, supporting training pathways for Liberian healthcare professionals, and establishing scalable partnerships that can be maintained independent of visiting teams. This project demonstrates how longitudinal, relationship-driven global surgery programs can move beyond service delivery to meaningfully contribute to sustainable surgical capacity in resource-limited settings.

Meghana Dantuluri

The Satya Nutrition Foundation: Optimizing the Recovery of Children Facing Malnutrition in South Asia

Project Mentor: Angela Gitau, MD

Satya Nutrition is a global health initiative focused on improving outcomes for children with severe acute malnutrition (SAM) through the development of an innovative Ready-to-Use Therapeutic Food (RUTF) designed to support both physical recovery and cognitive development. While traditional RUTFs address growth and survival, few interventions systematically target the long-term neurodevelopmental consequences of malnutrition. Satya Nutrition aims to fill this critical gap by generating evidence-based strategies that promote holistic recovery in affected children.

My involvement in the project encompassed both foundational research and clinical trial planning. I conducted a comprehensive literature review examining the prevalence and impact of cognitive impairment in children with SAM, evaluating prior interventions and identifying gaps in current approaches. This review directly informed the design of a

randomized controlled trial at Aga Khan University, in which I contributed to defining study objectives, selecting neurocognitive outcome measures, and outlining protocols for monitoring both physical and cognitive recovery.

By integrating evidence from prior research with practical clinical trial design, Satya Nutrition seeks to provide rigorous data on interventions that can enhance neurodevelopment in children recovering from malnutrition. The initiative exemplifies an approach that addresses both the immediate and long-term consequences of SAM, demonstrating how targeted nutritional interventions can contribute to broader global health goals of improving childhood survival, development, and well-being.

Sapir Mashiach

The Influence of Food-Related Social Media on Adolescent Eating Behaviors and Mental Health Outcomes: A Cross-Cultural Study

Project Mentor: Sari Bentsianov, MD

Adolescents spend an average of three hours per day on social media, where exposure to food-related content such as diet trends, “What I Eat in a Day” videos, fitness meal plans, and viral eating challenges is increasingly common. A growing body of literature demonstrates associations between social media engagement and disordered eating behaviors, body dissatisfaction, and anxiety; however, most studies are limited to Western populations and rarely examine cross-cultural or gender-based differences.

This cross-sectional study examines the relationship between food-related social media engagement and eating behaviors, body image dissatisfaction, and self-reported anxiety among adolescents in New Jersey, USA, and Quito, Ecuador. Adolescents aged 14 to 19 are recruited from pediatric clinics and complete a one-time anonymous survey administered via REDCap. The survey assesses time spent online, frequency and type of food-related content viewed, perceived influence of online content on eating behaviors, social comparison tendencies, engagement in restrictive or binge behaviors, and recent anxiety and depressive symptoms. Survey items were intentionally constructed to capture both adaptive dietary changes and maladaptive behaviors associated with disordered eating risk.

By comparing two distinct cultural settings and examining differences across gender identities, including transgender and nonbinary youth, this study aims to identify patterns of vulnerability associated with food-related media exposure. Findings may inform culturally responsive screening approaches, media literacy initiatives, and clinic-based interventions addressing the intersection of social media, nutrition, and adolescent mental health within a global health framework.

Rohit Mukherjee, Mohamed Elrais, Rachel T. Moresky, Mohamed Ali, Ayaga Bawah, Ahmed Zakariah, Sneha Patel, Caesar Agula, Andrews Ayim

Integrating the Continuum of Emergency Obstetric, Newborn Care and Referral Services in Two Municipalities in Rural Ghana: Implementation Research with a Health Systems Approach

Project Mentor: Rachel Moresky, MD

Introduction: The Developing Acute Care and Emergency Referral Systems (ACERS) Program is a four-year initiative that applies context-appropriate, evidence-based learning to the planning, evaluation, and adaptive implementation of a multifaceted Emergency Obstetric and Newborn Care (EmONC) Continuum of Care (CoC). ACERS addresses all three delays in accessing care; this analysis focuses on the second delay. We hypothesized that establishing a National Ambulance Service (NAS) Emergency Dispatch Center (EDC) at the municipal level would improve communication between communities, the Ghana Health Service (GHS), and NAS, thereby strengthening referral coordination.

Methods: Pre-selected implementation research frameworks guided mixed-methods baseline and endline assessments and the implementation process. Routine referral data were collected quarterly from NAS’s Pre-Hospital Information Management System. Additional data came from Lot Quality Assurance Sampling and qualitative and quantitative baseline and endline surveys.

Results: Across two municipalities, qualitative assessments included 776 participants at baseline and 314 at endline. Women's surveys included 3,158 respondents at baseline and 2,754 at endline. Collaboration between GHS and NAS produced an EDC Harmonization Framework to standardize communication and feedback across emergency transport and facility-based care. Early social and behavior change communication strategies supported initial rollout, but key informant interviews revealed readiness gaps. Challenges included inconsistent referral feedback on patient outcomes and follow-up instructions from facilities to communities. After establishing a Referral Coordinator role and full adoption of the Harmonization Framework, implementation of ACERS emergency referral interventions became more efficient and coordinated.

Conclusion: Integrating new health system–strengthening innovations, such as an EDC, into an existing continuum of care is complex. However, coupling an implementation research approach with practical deployment of EmONC services enabled partners to achieve meaningful impact while documenting lessons for future initiatives. These findings support the value of structured coordination mechanisms in improving referral systems and reducing maternal and neonatal morbidity.

Distinction in Inclusion and Diversity

Denay Richards

Looks Like a Surgeon

Project Mentor: Emily van Kouwenberg, MD

Despite women comprising approximately half of medical school graduates in the United States, they remain significantly underrepresented in surgical specialties. This disparity is driven by multiple factors, including negative cultural stereotypes, limited mentorship opportunities, and perceived challenges related to work–life balance. Prior research indicates that women are less likely to express interest in surgical careers during their pre-medical years, experience declining interest during medical school, and demonstrate higher attrition rates during surgical residency. This study focuses on the earliest stage of this trend by examining why female pre-medical students exhibit lower initial interest in surgical careers.

The Women Inspiring Surgical Expansion and Research (WISER) project investigates whether media representation influences career interest among self-identified female pre-med students. A cross-sectional study will be conducted at Rutgers University, assessing participants' interest in surgical specialties before and after exposure to targeted media content. Participants will be randomly assigned to view either gender-neutral surgical career information or media highlighting female surgeons and their professional experiences. Pre- and post-exposure survey responses will be analyzed to determine whether exposure to positive female role models increases interest in pursuing surgical careers.

The primary objectives of this study are to identify factors contributing to women's underrepresentation in surgery, evaluate the socioeconomic implications of this disparity—particularly for women of color—and develop supportive interventions such as workshops or focus groups for female pre-med students. The study is guided by the hypothesis that unconscious bias shaped by stereotypes and limited mentorship discourages women from pursuing surgical careers.

Findings from this research will inform scalable interventions aimed at increasing gender diversity in surgery. Enhancing representation has the potential to promote workforce equity, improve patient care, and advance innovation in surgical practice.

Distinction in Leadership in Academic Healthcare

Fayssal Alqudrah

Evaluation of AAP guideline adherence for the treatment of uncomplicated acute otitis media in pediatric patients: a retrospective review

Project Mentors: Minnette Markus-Rodden, PhD and Amisha Malhotra, MD

Objectives: Acute otitis media (AOM) is among the most common pediatric infections and a leading reason for antibiotic prescribing in children. Although the American Academy of Pediatrics (AAP) provides clear recommendations for diagnosis and management, deviations from these guidelines remain frequent, contributing to unnecessary antibiotic use and antimicrobial resistance. This study assessed adherence to AAP treatment guidelines for uncomplicated AOM in a pediatric

emergency department (ED), examining antibiotic selection, dosage, frequency, duration, use of watchful waiting or the wait-and-see prescription (WASP) approach, and stratifying adherence based on AOM diagnostic criteria.

Methods: We conducted a retrospective descriptive study of children aged 2 to 12 years diagnosed with uncomplicated AOM at a quaternary pediatric ED between June 1, 2022, and July 31, 2023. A total of 251 encounters were analyzed. Data were collected from electronic medical records and assessed for adherence to the 2013 AAP guidelines. Treatment appropriateness was categorized based on antibiotic choice, dosage, frequency, duration, and use of watchful waiting and WASP approach. Adherence was further stratified according to AOM diagnostic criteria

Results: Among 251 children, the mean (SD) age was 5.4 (2.3) years, and 139 (55.4%) were male. The most common AOM presentation was unilateral or bilateral AOM without otorrhea (185 children [73.7%]). Overall, 150 (59.8%) encounters demonstrated appropriate antibiotic management and WASP use. Inappropriate antibiotic selection occurred in 39 children (15.5%), incorrect dosage in 48 (19.1%), inappropriate duration in 3 (1.2%), and incorrect frequency in 4 (1.6%).

Conclusion: Despite established AAP guidelines, inappropriate prescribing remains common, particularly in antibiotic selection and dosing. Targeted interventions are needed to improve adherence and strengthen antimicrobial stewardship for AOM management in pediatric ED settings.

Rohit Mukherjee, Christina McGinnis, Justin Benton, and Andrew Gerard-Baddoo

Provider Perspectives on Emergency Department Telemedicine Integration: A Cross-Sectional Pilot Survey at Robert Wood Johnson University Hospital

Project Mentors: Sara Heinert, PhD, MPH and Robert Eisenstein, MD

Background: Emergency Department (ED) crowding remains a significant challenge nationwide, resulting in increased morbidity, provider burnout, and inefficiencies in care delivery. In New Jersey, one-third of ED visits could be managed in primary care settings, costing over \$400 million annually in avoidable care. As telemedicine expands, models such as the Virtual Visit Track (VVT)—previously piloted at Stanford Healthcare—show promise for improving throughput for low-acuity patients. However, provider perspectives on the feasibility of ED-based telehealth remain underexplored in large, urban academic centers.

Methods: A cross-sectional survey, administered via Qualtrics, was distributed to ED staff at Robert Wood Johnson University Hospital from December 1, 2023, to January 30, 2024. Sixty respondents, including physicians, advanced practice providers, nurses, technicians, and ancillary staff, completed the survey. Descriptive statistics were used to analyze perceptions of factors contributing to ED delays and the feasibility of implementing telemedicine.

Results: Forty-six percent of respondents reported “frequent” delays and another 46% reported “occasional” delays in care for low-acuity patients. Contributors included staffing shortages (67%), high patient volume (69%), laboratory/radiology/consult delays (62%), and electronic medical record documentation (17%). Sixty-two percent of participants viewed ED telemedicine as feasible, and 63% had prior experience with telehealth. Nearly half (48%) supported implementing telemedicine for low-acuity triage, contingent upon addressing concerns related to physical exams, staffing, and security.

Conclusion: This pilot study shows strong provider interest in integrating telehealth for low-acuity ED patients, while also highlighting key operational barriers. The findings support further exploration of Virtual Visit Track models to improve ED efficiency and patient flow.

Distinction in Medical Education

Ipek Gozen Eralp

One Health in Medical Education: Expanding the Scope of Multidisciplinary Medical Education

Project Mentor: Liesel Copeland, PhD

Background: Globalization, climate change, and shifts in ecological conditions have highlighted the interconnectedness of human, animal, and environmental health, underscoring the importance of the One Health framework in medical practice. Despite this, it remains inconsistently integrated into medical education. Our study aims to assess the baseline understanding

of the underlying connections and evaluate their interest in and the impact of an introductory educational intervention on knowledge, confidence, and clinical relevance.

Methods: We conducted a pilot educational intervention consisting of a brief didactic introduction followed by an interactive, case-based discussion emphasizing zoonotic diseases and environmental determinants of health. Participants anonymously completed pre-lecture and post-lecture surveys assessing knowledge, attitude, and self-reported confidence in applying principles. Responses were measured using a four-point Likert scale and open-ended questions. Quantitative data were summarized using descriptive statistics, while qualitative responses were analyzed thematically.

Results: Participants demonstrated substantial improvements in One Health knowledge and reasoning. Mean confidence increased from 1.0 at baseline to 2.67-3.17 on a four-point Likert scale, reflecting improvement by ~1.67-2.17 points across multiple domains. Paired analyses of matched pre- and post-lecture responses demonstrated statistically significant improvements across all domains, with large effect sizes, indicating a strong educational impact and an anticipated benefit for future studies. Qualitative responses indicated increased awareness of the interconnectedness and greater confidence in incorporating them. The case-based format was perceived as clinically relevant and enjoyable.

Conclusions: An introductory One Health educational intervention delivered during preclinical years can significantly enhance knowledge, confidence, and perceived relevance of multidisciplinary health concepts.

Linda Jung

A Pilot Study Evaluating an Interactive Diagnostic Imaging Module for Emergency Medicine (EM) Clerkship Students

Project Mentors: Grace Pinhal-Enfield, PhD, Laryssa Patti, MD, Daniel Polvino, MD, Amanda Esposito, MD, Kristen Coppola, PhD

Objective

In this study, we evaluated the utility of administering an interactive, focused imaging curriculum to EM clerkship students on clinical knowledge and confidence in interpretation.

Design and Methods

In this pre-test/post-test study, all EM clerkship students enrolled between April–August 2025 were invited to participate (N=57). Sixty-five percent completed the module, containing Radiopaedia images emphasizing X-ray and CT interpretation in common ED presentations. Students reviewed normal wrist x-ray anatomy and worked through a wrist pain case which prompted them to order imaging. They then identified normal/abnormal findings and received feedback for incorrect selections. Additional common pathological extremity X-rays were included. A similar case-based structure was used for abdominal CTs. The module concluded with cases integrating both imaging modalities with similar questions and immediate feedback.

Pre- and post-tests administered through RedCap assessed students' knowledge gains through image identification and case-based questions, using different images from those in the module. A follow-up survey gauged students' confidence gains and module perception.

Results

Students' scores significantly improved from pre-test (M=36.6% correct image identification) to post-test (M=45.3% correct image identification), $t(49)=-2.104$, $p=.041$ (N=37, N=27, respectively). Following the module, 93% of students reported feeling neutral or comfortable with image interpretation. Most students (78%) rated the inclusion of an imaging curriculum in medical school as very important.

Conclusion

A focused imaging curriculum enhanced EM clerkship students' foundational interpretation skills and confidence. Asynchronous, case-based learning offers a practical approach to reinforcing clerkship learning. Despite a modest sample size, strong engagement from time-limited clerkship students underscores their strong perceived value of integrating such curriculum.

Jasmine Lee

An Interactive Online Module Introducing Diagnostic Imaging to First-Year Medical Students

Project Mentors: Kristen Coppola, PhD, Grace Pinhal-Enfield, PhD

Objective

To evaluate the efficacy of administering an interactive, focused imaging curriculum to preclinical medical students on knowledge, experience, and confidence in interpretation.

Design and Methods

In this pre-test/post-test study, first-year medical students (N=41) voluntarily completed a module containing Radiopaedia images with a focus on X-ray, CT, and MRI. In this interactive module, students received a primer on the principles underlying each imaging modality, were oriented to the anatomical landmarks of a normal chest X-ray, abdominal CT, and brain MRI, and were presented clinical vignettes with associated pathological imaging. The module concluded with an introduction to ultrasound fundamentals.

A pre- and post-test, administered through RedCap software, assessed students' knowledge through image identification and case-based questions. A 6-month follow-up survey gauged longitudinal confidence gains and module perception.

Results

Students' scores significantly improved from pre-test (M=27.3%) to post-test (M=67.45%), $t(56)=-9.705$, $p<.001$ (N=41 and N=17, respectively). Knowledge gains did not differ by modality (X-ray, CT, MRI) $F(1.74, 26.02) = 2.77$, $p = .088$, $\eta^2_p = .16$. Students reported increases in comfort interpreting imaging after completing the module (67% felt comfortable or very comfortable). All students indicated that an imaging curriculum is important or very important in medical school education.

Conclusion, Limitations, and Significance

The focused imaging curriculum increased knowledge as early as in the first year of medical school. Early exposure may scaffold clerkship learning by providing a foundation for applying imaging in the clinical environment. Despite limitations of modest sample size and partial follow-up, these findings underscore the value of a self-paced imaging module in enhancing students' exposure to radiologic interpretation.

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Ryan Stadler

Can Video Transcripts Enhance Medical Education? Investigating the Effects of Closed Captions on Student Learning and Problem Solving

Project Mentor: Kristen Coppola, PhD

Introduction: Closed captions are commonly implemented within educational videos and may benefit learners regardless of disability or English as a second language (ESL) status. Prior studies suggest closed captions may improve student recall ability, but this has not yet been investigated in the medical education setting.

Methods: A randomized experimental study was conducted in a sample of 38 undergraduate pre-medical students and first-year medical students. Participants completed a 20-question test on cardiovascular physiology before and after watching a 7-minute video lecture, with or without closed captioning. Question types were divided into recall and application subtypes. The primary outcome was change in test score from baseline. Participants also answered survey questions on their usage and perceptions toward captioning.

Results: Both groups significantly improved from pre-test to post-test in their overall scores and recall question sub-scores. Only students who viewed the lecture without captions demonstrated significant improvements in application question sub-scores. However, between-group differences in all score improvements were not statistically significant. Students reported frequently engaging with the captions and felt they were generally helpful.

Conclusion: The addition of closed captions did not appear to have a clear benefit in short-term learning outcomes for pre-medical and first-year medical students overall. However, captions were widely used and generally well-perceived among participants. With the growing reliance on digital learning for medical education, closed captions represent a simple intervention worthy of further study in this setting.

Distinction in Medical Humanities

Seisha Marcelina Centeno

Another Horizon: Designing a Collective Role-Playing Game as Resistance to Institutionalized Apathy

Project Mentor: Colleen Donovan, MD

As many healthcare institutions continue to prioritize efficiency and profit over the wellbeing of patients and providers, apathy has emerged as a concerning feature of contemporary medical practice. Trainees are immersed in this environment throughout their education, contributing to high rates of burnout, moral distress, and emotional exhaustion [1]. In response, wellness programming has become increasingly visible within medical training; however, critiques from trainees frequently describe these interventions as performative, prescriptive, or inaccessible, raising a fundamental question: how else might trainees meaningfully cope with the pervasive apathy of the systems in which they are learning and working [2][3].

Initially presented as a podium presentation at the 2025 Health Humanities Consortium Conference, this project examines the development of an original tabletop role-playing game (TTRPG) designed as a narrative-based reflective practice for medical students. The game creates a collaborative, non-clinical space in which participants can collectively and curiously engage with the difficult emotional experiences of medical training. Drawing on principles from visual and written narrative medicine, play theory, and simulation-based learning, the design uses structured mechanics to externalize emotional experiences into a shared fictional context [4][5][6]. Gameplay is also anchored to trainees' lived experiences through a facilitated pre- and post-game debrief protocol that supports reflection and meaning-making. Using a semi-structured interview approach, early implementation with a cohort of medical students suggests that this format fosters emotional processing, shared vulnerability, and connection among trainees.

Ultimately, this TTRPG represents a novel and adaptable approach to engaging with the emotional realities of medical training. Grounded in medical humanities, it offers an alternative pathway for reflective practice centered on agency, relationships, and connection while supporting resilience and growth without re-inscribing the individualizing logics that often are critiqued by existing wellness interventions.

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Courteney Ly

“Mommy’s Scars and Me”: A Children’s Book About Intergenerational Trauma

Project Mentor: Shawen Ilaria, MD

My Distinction in Medical Humanities project was inspired by a conversation I had with someone who had recently undergone a divorce in which young children were involved. She explained the difficulty in discussing this new, complicated family dynamic to her children. She told me that she found significant utility in using children’s books about divorce, which explored the difficulties of parental separation, and children’s frequent worries and fears that arise in the aftermath. This opened me up to the rich world of bibliotherapy, a form of therapy that utilizes books to help both children and adults develop coping skills, safely explore difficult emotions, learn healthy communication skills, and more. Many studies have shown significant psychological improvements with the use of bibliotherapy, focusing on a variety of indications in children including abuse and neglect, death and bereavement, natural disasters, and more. Although bibliotherapy has been shown to be effective in direct trauma therapy, I found a lack of resources discussing intergenerational trauma, which is a topic of particular interest to me, given my family’s personal experiences in the Vietnam War. I have written and illustrated a children’s book which follows the story of young Amy and her mom (May) and their shared journey in understanding and overcoming Mom’s past traumatic experience with dogs. Through the book, we see the ways that May’s unprocessed negative experience affects the way that she and Amy engage with the world around them. However, we also see how supportive relationships, exposure, and self-awareness can help heal these patterns of behavior. The intent of this project was to create a book that could connect with parents and children who have experienced intergenerational trauma, help them communicate through this difficult topic in a relatable, accessible format, and provide insight into ways of breaking generational patterns of behavior.

Julia London Sirota

Hope and Heartbreak: A Musical Album Exploring the Emotional Landscape of The Hospital

Project Mentor: Meigra Chin, MD

This Distinction in Medical Humanities project emerged as an extension of my interest in musical theater songwriting. Upon beginning my clerkships, I turned to songwriting to process the complex emotions and challenging situations I witnessed in patients and their loved ones, as well as those I experienced myself. Themes of love, longing, grief, and hope predominate. My background in musical theater writing made me comfortable exploring scenarios from perspectives other than my own. So, while all of the songs represent my own processing of the situations I experienced, not all of them are written with me in the first person. My hope is that this album gives a glimpse into the depth and breadth of emotions that healthcare workers both witness and experience. For listeners who work in healthcare, I hope they feel reflected in and affirmed by this album. For listeners outside the field, I hope the album is insightful. For everyone, I hope listening is both thought-provoking and artistically enjoyable. Furthermore, I hope it inspires other healthcare workers to harness their own preferred artistic outlet to process and share their experiences.

Distinction in Medical Innovation and Entrepreneurship

Ojas Chinchwadkar

The Application of Neural Networks to Predict In-Hospital Mortality in a Large, Multi-Center Perioperative Dataset

Project Mentor: Paul Weber, MD, RPh, MBA

Artificial Intelligence (AI), and specifically deep learning, is increasingly being explored in perioperative medicine to improve clinical decision-making and risk prediction. This study applied a neural network model to the INSPIRE dataset—the largest publicly available perioperative dataset, consisting of 130,000 surgical cases—to predict in-hospital mortality using demographics, case characteristics, and preoperative labs, vitals, and medications. The model achieved a strong predictive performance, with an AUC of 0.93, accuracy of 0.94, and sensitivity of 0.81 on an independent test set of 19,644 patients. Data imbalance was addressed using class weighting and early stopping. The Adams Optimizer was used as the learning function, and Binary Cross-Entropy function was used to calculate loss. These findings demonstrate the potential clinical utility of neural networks for peri-operative risk stratification. Future work should focus on demonstrating clinical utility and integrating artificial intelligence models into current clinical workflows.

Ipek Gozen Eralp

The I.D. Guide: A Helpful Tool in Reducing Misdiagnosis Rates

Project Mentor: Paul Weber, MD, RPh, MBA

Infectious diseases are increasingly recognized and important due to climate change, urbanization, globalization, etc. Many communicable or non-communicable contagious diseases endemic to some regions of the world are being seen around the globe. As such, it is essential to be aware of mimicking diseases and recognize minute differences to diagnose correctly. Understandably, this is challenging given the ample symptoms and diseases known to date. Briefly, we wanted to create a mobile application to provide trainees (or any healthcare provider who may be interested) with easy access to key information on typical (or endemic; not familiar here/the U.S.) infectious diseases from various countries represented by immigrants or travelers in our community. While there are many widely used resources like the Yellow Book (CDC), our vision is to create a comprehensive and user-friendly app that will help locate key information easily to reduce time spent on search engines, which is very valuable in settings like the emergency room or busy clinics. This app will include sources used for information relayed through hyperlinks for widely used resources in clinical care. It will be user-friendly and rapidly guide users to comprehensive yet concise information.

Casey Kozak

Pharmaceutical Stewardship: Reduction of IV Acetaminophen Overutilization

Project Mentor: Payal Parikh, MD

Background/Aim: Pharmaceutical stewardship is an underrecognized component of resource utilization. Using the Vizient database, we identified intravenous (IV) acetaminophen as a significant outlier of overuse at our academic medical center (RWJUH-NB) compared with peer institutions. This improvement initiative aimed to reduce IV acetaminophen utilization from a baseline of 6,800 doses per month (Oct–Dec 2023 average) toward benchmark levels at comparable academic medical centers (~2,500 doses/month) through data-driven, multidisciplinary engagement.

Methods: Vizient benchmarking and local Pyxis data were used to identify utilization trends and drivers of overuse. A pharmaceutical stewardship task force was formed, including pharmacy leadership, nursing, hospitalists, APPs, pediatricians, surgeons, emergency physicians, trainees, and the P&T committee. Evidence-based appropriate-use guidelines were developed and paired with education on clinical indications and cost. An Epic-based dashboard provided ongoing transparency by department, NPO status, and ordering practices. To address concerns regarding opioid substitution, oral acetaminophen, IV and oral opioids, and IV ketorolac were tracked as balance measures. Additional interventions included review of ERAS protocols, surgical order sets, and implementation of EHR best practice alerts and order-set modifications.

Results: IV acetaminophen utilization decreased by approximately 40%, from 6,800 to 4,100 doses per month over two years, while oral acetaminophen use increased appropriately (22,000 to 32,000 doses/month). No significant changes in opioid or ketorolac utilization were observed.

Conclusion: Leveraging Lean Six Sigma principles, multidisciplinary engagement, transparent data reporting, and EHR-enabled interventions led to substantial and sustainable reductions in IV acetaminophen use, with current medication cost savings averaging \$30,000 per month. Future work includes expanded cost analyses and assessment of patient-reported pain outcomes.

Elyse Mackenzie

Translating TikTok Skincare Trends into Clinically Actionable Insights for Pediatric Dermatology

Project Mentors: Paul Weber, MD, RPh, MBA, Emily Gorell, DO, and Cindy Wassef, MD

Background: Social media platforms have become a major source of health information for adolescents, with TikTok rapidly shaping skincare behaviors through viral products, routines, and ingredient trends. Pediatric dermatologists increasingly encounter patients experiencing adverse reactions or worsening of underlying skin conditions after adopting practices learned online. However, the prevalence and clinical relevance of these social media-driven behaviors among pediatric dermatology patients remain poorly characterized.

Objective: To evaluate the influence of TikTok skincare trends on pediatric and adolescent patients and assess whether trends identified on social media correspond to real-world patient awareness, adoption, and dermatologic outcomes.

Methods: Skincare trends were first identified through systematic extraction of the top 100 TikTok videos under the hashtag #skincare using a newly created account to minimize algorithmic bias. Products, ingredients, and practices mentioned in videos informed the design of a cross-sectional clinical survey. Participants aged 11-21 years were recruited across four dermatology clinical sites in the United States and completed an anonymous REDCap survey assessing skincare product use, information sources, awareness and adoption of TikTok-identified trends, and perceived dermatologic outcomes.

Results: Fifty-eight participants completed the survey. Nearly all respondents (97%) reported using skincare products. TikTok was cited as a source of skincare information by 55% of participants, second only to friends or family (67%). Forty-seven percent reported experiencing adverse effects related to skincare product use, while half reported never discussing skincare practices with a healthcare professional.

Conclusions: TikTok plays a substantial role in shaping skincare behaviors among adolescents, often outside of clinical oversight and frequently associated with adverse effects. These findings validate the clinical relevance of monitoring social media skincare trends and support the development of tools that translate digital trend data into actionable insights for dermatology practice.

Maggie Maniar

A Point-of-Care Lateral Flow Immunoassay Antigen Test for Rapid HPV Oncoprotein Detection in Botswana

Project Mentor: Paul Weber, MD, RPh, MBA

The persistence of cervical cancer in sub-Saharan Africa despite global decline in prevalence and mortality is likely secondary to prevalence of chronic human papilloma virus (HPV) infection and limited access to screening and HPV vaccination. In developed regions of the world, cervical cancer screening programs using cytologic and molecular testing have notably improved cervical cancer incidence and mortality. Given that delay in diagnosis leading to progression of cancer is a primary driver of cervical cancer mortality in Botswana, the development of a point-of-care immunoassay antigen test for rapid HPV diagnosis performed entirely by patients could lead to earlier diagnosis and thus earlier treatment of cervical cancer in Botswana. Here, we propose a rapid test intended to detect HPV E6 and E7 oncoproteins in a self-obtained vaginal swab sample for implementation in Botswana. With successful development, validation, and implementation of the proposed point-of-care lateral flow immunoassay antigen test for rapid HPV oncoprotein detection in Botswana, we believe that the morbidity and mortality burden of cervical cancer in Botswana could be greatly reduced.

Jason Arjun Thiagaram

Using Audiovisual Aids to Reduce of Preoperative Anxiety in Pediatric Patients

Project Mentors: Benjamin Landgraf, MD and Paul Weber, MD, RPh, MBA

Perioperative anxiety is highly prevalent among pediatric patients and has been associated with adverse surgical outcomes, including impaired wound healing, prolonged recovery, and increased postoperative pain medication use. Approximately 75% of children experience significant stress surrounding surgery, most notably in the period immediately preceding anesthetic induction. Although pharmacological anxiolytics and sedatives are commonly used to mitigate anxiety, their

administration—particularly via intravenous routes—may provoke distress, refusal, and negative perceptions of healthcare encounters, in addition to causing undesirable side effects.

Nonpharmacological interventions have been explored as alternatives to reduce perioperative anxiety without these drawbacks. Existing literature suggests comparable efficacy to pharmacological methods; however, results across modalities remain inconsistent. Techniques such as hypnosis and music therapy have demonstrated limited effectiveness, while clown interventions, though moderately effective, are resource-intensive and disruptive to clinical workflow. Educational pamphlets and parental presence have yielded inconclusive or partial reductions in anxiety, particularly in the immediate pre-induction phase.

This project aims to evaluate the efficacy of a custom-designed, child-friendly educational video in reducing perioperative anxiety among pediatric patients undergoing elective surgery at a children's hospital. The intervention is designed using principles from pediatric psychology and child life theory, incorporating age-appropriate language, child-narrated voiceover, and calming visual elements. Video development involves iterative scripting, professional production, and post-production refinement. Anxiety outcomes will be assessed using validated pediatric anxiety measurement tools administered to patients and caregivers.

We hypothesize that this audiovisual intervention represents a scalable, cost-effective, and minimally disruptive approach to perioperative anxiety reduction. By providing quantitative evaluation of its effectiveness, this study seeks to contribute to the standardization of nonpharmacological anxiety management strategies and improve the overall pediatric perioperative experience.

Distinction in Research

Sophia Bhalla

The Use of ctDNA From Paired Blood and Urine to Predict Recurrence After Extirpative Surgery for the Treatment of Urothelial Carcinoma

Project Mentors: Saum Ghodoussipour, MD and Subhajyoti De, PhD

Background:

Circulating tumor DNA (ctDNA) is a minimally invasive biomarker for cancer detection and monitoring. In urothelial carcinoma (UC), plasma-based ctDNA is used for prognostication and recurrence detection but may miss localized disease confined to the urinary tract. Urine tumor DNA (utDNA) provides direct sampling of the urothelial surface and has demonstrated superior sensitivity in detecting UC in some settings. An integrated approach using both blood and urine ctDNA may optimize postoperative surveillance and risk stratification. We hypothesized that combined blood and urine ctDNA at the time of surgery would identify patients at highest risk of early recurrence.

Methods:

We performed a single-institution retrospective study of 23 patients undergoing cystectomy, nephroureterectomy, or distal ureterectomy for UC with paired blood and urine samples collected at surgery. Cell-free DNA underwent low-pass whole-genome sequencing, and ctDNA fractions were estimated using ichorCNA. ctDNA levels were dichotomized at the cohort median. The primary endpoint was two-year recurrence-free survival, analyzed using Kaplan-Meier and Cox regression.

Results:

Eleven patients (48%) recurred within two years. Recurrence occurred in 58% of patients with high blood ctDNA and 55% with high urine ctDNA. All four patients with high ctDNA in both compartments relapsed (100%), compared with 25% recurrence among patients with dual low ctDNA. Dual positivity was associated with shorter RFS, though not statistically significant (HR 1.45, 95% CI 0.38–5.50; $p=0.61$).

Conclusions:

Concurrent elevation of blood and urine ctDNA at surgery was associated with early recurrence. These findings support integrated liquid biopsy approaches for postoperative risk stratification in UC.

Kaitlyn Boyle

Identification of Epigenetic Factors That Influence Crohn's Disease Development in Those at Low Genetic Risk For Disease

Project Mentor: Lea Ann Chen, MD

Background: Despite well-recognized genetic predispositions, the rapid increase in IBD incidence globally suggests that environmental factors such as microbiome changes, antibiotic usage, and epigenetic modifications may also modulate disease development. Our lab has identified several individuals from multiplex Crohn's disease (CD) families who are discordant between their CD status and their genetic risk for disease, as measured by polygenic risk scores (PRS). We hypothesize that epigenetic modifications, which reflect environmental influences, may help explain why certain individuals develop CD despite having low genetic risk for the disease.

Methods: To test this hypothesis, we utilized the Pediatric RISK Initiative, an inception cohort sponsored by the Crohn's & Colitis Foundation, with data available from IBD Plexus. Of newly diagnosed CD patients, 115 had both Illumina Infinium Immunoarray data for PRS calculation and Illumina Infinium MethylationEPIC BeadChip data for methylation screening. The PRS utilized included polymorphisms associated with CD, with added weight given to high-impact CD variants. Low PRS subjects were defined as having PRS ≥ 1 standard deviation lower than the mean of non-IBD controls. An epigenome-wide association study (EWAS) controlled for age, gender, and cell type was conducted using the RStudio packages Minfi and CpGassoc to identify specific CpG sites associated with low PRS CD patients compared to the remaining subjects within the CD cohort.

Results: Patients with CD despite low PRS are differentially methylated at 34 CpG sites. The top 5 statistically significant CpG sites, defined as $p < 0.05$ using both the Holm method and by false discovery rate (FDR) correction, include: cg08340521, cg08602515, cg11418915, cg20235473, cg23975198 (Table 2). cg08340521, which was hypomethylated in low PRS CD patients, is located within the exonic coding region of KHSRP on chromosome 19. KHSRP is more highly expressed in colorectal cancer (CRC) tissue and promotes cell growth, survival, and migration in CRC through multiple mechanisms that are largely mediated by its regulation of microRNAs and mRNA. cg08602515, which is also hypomethylated in low PRS CD patients, is found in the exonic coding region of the SLK gene on chromosome 10. Overexpression of the gene product, Ste20 like-kinase, has been associated with colitis in mouse models.

Conclusion: Individuals who develop CD despite low genetic risk are differentially methylated at specific CpG sites, including some previously associated with colitis and colorectal cancer, as well as some novel sites, for example involving TCMO3 - a gene of unclear function, which may provide added insights into drivers of CD development and identification of modifiable risk factors, which will assist with long-term efforts in disease prevention.

Christian Simon

Modulation of KATP and Kir2.1 Channels by Traditional Folk Medicines and Methanol: Implications for Cantú Syndrome and Methanol Toxicity

Project Mentor: Conor McClenaghan, PhD

ATP-sensitive potassium (KATP) channels are critical regulators of vascular tone and metabolic signaling, with established roles in disorders such as Cantú syndrome and emerging relevance in toxicologic states. Here, we investigated whether traditional botanical medicines and methanol modulate KATP channel activity, and assessed their selectivity relative to the related inward rectifier Kir2.1 channel. Using fluorescence-based thallium (Tl^+) flux assays and whole cell patch-clamp electrophysiology in heterologous expression systems, we examined Kir6.1/SUR2B (vascular), Kir6.2/SUR1 (pancreatic), and Kir2.1 channels.

Screening of 15 vasoactive folk medicine extracts identified Ku Shen (*Sophora flavescens*) and Italian parsley leaf (*Petroselinum crispum*) as concentration-dependent inhibitors of Kir6.1/SUR2B channels. Inhibition was confirmed by patch-clamp electrophysiology and was also observed for Kir6.2/SUR1 channels. Importantly, neither extract inhibited Kir2.1 channels in Tl^+ flux assays; Ku Shen instead modestly enhanced Kir2.1 activity, indicating that these extracts do not act as broad-spectrum potassium channel blockers. In parallel, we show that methanol significantly enhances the activity of pharmacologically activated Kir6.1/SUR2B channels at toxic concentrations, an effect reversible by glibenclamide. Limited data further suggest possible activation of KATP channels under basal conditions. While the underlying mechanism remains unresolved, these findings provide the first direct electrophysiological evidence that methanol augments vascular KATP channel activity and suggest that KATP channels have a role in methanol-associated hypotension. Together, this work

identifies natural product–derived KATP inhibitors and implicates KATP channel modulation as a mechanistically relevant contributor to methanol toxicity, with implications for channelopathies and toxicological pathophysiology.

Distinction in Service to the Community

Sophia Bhalla, Samantha Eng, Jackie Erler, Samisha Khangaonkar

Project RISE-UP: A Medical Student-Led, Sustainable Model for Community-Centered Women’s Health Education and Personal Development

Project Mentor: Gloria Bachmann, MD

Project RISE-UP (Real, Informed, Sensible, and Empowering Conversations to Understand our Power) is a medical student-led community service initiative developed in partnership with the Center for Great Expectations (CGE) as part of the Rutgers Robert Wood Johnson Medical School (RWJMS) Distinction in Community Service Program (DISC) to support pregnant and parenting adolescents. The program utilizes the Centering Model of Care to deliver interactive, participant-centered workshops focused on women’s health education, personal development, and community building. Since its inception in 2023, Project RISE-UP has expanded from a four-workshop pilot to a six-workshop core curriculum, supplemented by experiential learning opportunities including art-based programming, physical wellness activities, and financial literacy sessions. In 2025, the program received national recognition as one of ten medical student-led initiatives awarded the Alpha Omega Alpha Medical Student Service Leadership Project Grant, as well as local recognition through the Service and Advocacy Project of the Year award from the RWJMS Department of Obstetrics and Gynecology. These awards provided \$18,000 in combined funding, enabling program expansion and establishing a financial foundation projected to sustain Project RISE-UP for over 15 years. As founding DISC student leaders graduate, Project RISE-UP will remain medical student-led and transition to the Rutgers Women’s Health Institute (WHI), where institutional mentorship and structured leadership succession will ensure continuity and long-term sustainability.

Meghana Dantuluri, Mitsu Patel, Stacey Boakye, Paulina Marino-Ortiz

D.A.N.C.E. (Developing Abilities, Nurturing Community, and Empowerment)

Project Mentor: Caroline Coffield, MD

The D.A.N.C.E. (Developing Abilities, Nurturing Community, and Empowerment) project was developed in partnership with Lakeview School, a specialized educational institution serving children and adolescents with developmental and physical disabilities. The initiative aimed to incorporate structured, adaptive dance workshops into the school’s programming to enhance physical activity, social engagement, and emotional well-being. Medical student volunteers collaborated with physical therapists, physical education teachers, and classroom staff to design inclusive, safe movement sessions tailored to students with diverse abilities.

Over the course of the project, we conducted three to four workshops annually, each involving group warm-ups, guided dance routines, and opportunities for social interaction. Feedback from teachers and therapists consistently highlighted improvements in student mood, enthusiasm, and participation. Staff reported that dance workshops became a preferred form of physical activity, and students were more motivated to engage in physical therapy and other structured activities following these sessions. In addition to benefiting students, the project provided medical student volunteers with meaningful exposure to interdisciplinary collaboration and communication with individuals with diverse physical and cognitive abilities. This experience reinforced the importance of inclusive, community-centered care and helped students develop skills directly applicable to future clinical practice.

Nicole Dib, Anna Dos Santos, Alexandria Raab, Lily Wushanley

Taking Control of Your Health (TaCoH)

Project Mentor: Amanda Esposito, MD

Taking Control of Your Health (TaCoH) is a longitudinal, student-led health literacy initiative developed in partnership with Global Grace Health Be the Change NJ to support underserved and refugee communities in Highland Park, New Jersey.

Over three years, we delivered interactive, culturally responsive workshops at the Reformed Church of Highland Park, addressing topics identified through community feedback, including hypertension, diabetes, nutrition using food pantry–available foods, vision health, and safe use of over-the-counter medications. Our workshops emphasized practical application, empowerment, and trust-building, with Spanish-language interpretation to ensure accessibility. We utilized a discussion-based feedback model and adapted the sessions over time based on evolving community needs. Educational materials were compiled into bilingual print and digital formats and shared through community messaging platforms to ensure sustainability beyond individual sessions. TaCoH strengthened Global Grace Health’s educational capacity while fostering lasting relationships, empowering community members to take greater control of their health, and shaping our development as responsive, community-centered physicians.

Kevin Frederiks and Sruti Pari

Project REACH: Resilience Education for Adolescents and Children

Project Mentor: Shilpa Pai, MD

Program: Project REACH is a student-led initiative partnering with the United Methodist Church in New Brunswick, NJ, to provide resilience-building workshops for youth (grades 2-12). Medical students design and facilitate interactive sessions twice per semester, equipping participants with skills to navigate life’s challenges.

Program Evolution: Despite the COVID-19 pandemic, Project REACH remained in person with minimal disruptions. The program expanded to serve two age cohorts (grades 2-5 and 6-12) and enhanced interactive learning and peer bonding.

Sustainability: Graduating students recruit and mentor new medical student volunteers while maintaining a shared repository of workshop materials. Youth feedback informs curriculum adjustments to meet evolving community needs.

Community Impact: Project REACH has strengthened connections within the church community, providing youth with coping strategies and a sense of belonging. Through ongoing collaboration with our community partner, the program continues to empower participants and create a lasting impact.

Julia Sirota, Andrea Escoto, David Eniola, Dhruti Patel

QueerCare: Healthcare-Related Workshops for LGBTQIA+ Youth

Project Mentor: Sari Bentsianov, MD

QueerCare is a collaborative initiative established in partnership with the Pride Center of New Jersey’s youth organization, the “Youth Drop-In.” The Pride Center of New Jersey has been serving New Jersey’s LGBTQIA+ (Lesbian, Gay, Bisexual, Transgender, Queer/Questioning, Intersex, Asexual, and others) community since 1994.

QueerCare programming consists of three to five health-related workshops each academic year. Topics for the workshops are chosen by Youth Drop-In participants. The DISC Team then creates and facilitates the workshops, sometimes with co-facilitation from a healthcare professional with expertise on the topic.

The primary goal of QueerCare is to increase access to relevant health information among LGBTQIA+ youth and their parents/guardians. The secondary goals of QueerCare are: (1) to help LGBTQIA+ youth feel comfortable accessing healthcare and speaking with healthcare professionals, (2) to help participants understand and navigate various aspects of the healthcare system, and (3) to increase LGBTQIA+ youth’s overall confidence, self-esteem, and self-worth.

Isabel Trenholm, Megha Gupta, Pooja Rao, Sandra Freeman

Health on the Run (HOTR)

Project Mentor: Jill Kropa, MD

Our Distinction in Service to the Community (DISC) Project, HOTR, is committed to promoting lifelong health and wellness among young girls through education and community partnership with Girls on the Run (GOTR). Our project enhances existing programming by providing age-appropriate resources that reinforce healthy behaviors beyond regular season practices while fostering meaningful engagement between Robert Wood Johnson Medical School students and the community.

This initiative includes seasonally distributed educational materials including worksheets and videos focused on physical activity, stretching, and balanced nutrition. Hands-on interactive programming is also essential to our mission. Activities include nutrition-focused workshops that highlight the importance of the five food groups in fueling an active lifestyle, along with a “make your own healthy plate” activity at the end of season 5k. Our DISC project empowers girls to develop healthy habits around diet and exercise, take ownership of their lifestyle choices, and build a foundation for lifelong well-being.

Radha Vyas, Divya Rajput, Shagoon Patel

The SAHELI (South Asian Health Education and Lifestyle Improvement) Project

Project Mentor: Sunanda Gaur, MD

The word saheili, meaning “friend” in Hindi, reflects the core mission of our DISC project: building meaningful, longitudinal, and friendly relationships with the senior residents at AristaCare at Cedar Oaks, a long-term care facility in South Plainfield, NJ. Through bimonthly interactive health education sessions, we provide accessible medical knowledge on topics particularly relevant to older adults, including bone health, nutrition, memory, and vision. Our presentations integrate evidence-based information on disease prevention and management with interactive activities designed to promote engagement, story-sharing, and knowledge retention. Recognizing the facility’s large South Asian population, we prioritize culturally and linguistically inclusive education by translating materials into Hindi and Gujarati and using our own language proficiencies to foster deeper communication and meaningful dialogue. After more than two years of programming, we have become trusted medical education partners for both the residents and facility staff. To ensure the sustainability and longevity of our project, we have merged our beloved initiative with on-campus student-run organizations and expanded our approach to include interdisciplinary learning experiences, such as nutrition presentations paired with cooking demonstrations led by facility chefs. Ultimately, the SAHELI project has aimed to promote health literacy across diverse linguistic and cultural backgrounds while creating a supportive, accessible environment where facility residents can share their lived experiences and learn to integrate health knowledge into their daily routines for overall health improvement.



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