Tufts CTSI Tufts Clinical and Translational Science Institute

Translational Research Day 2021: Translational Research Across the Spectrum

Presenter Biographies and Abstracts

Dana M. Cairns, PhD

Research Associate
Tufts University Graduate School of Biomedical Sciences

Team Niclosamide: From Treating Microcephaly in Chickens to Treating COVID-19 Patients

Biography

Dr. Cairns received her PhD in cell, molecular and developmental biology at Tufts Graduate School of Biomedical Sciences, focusing on early development and embryonic patterning. She is currently pursuing postdoctoral training at Tufts in the Biomedical Engineering Department, using human neurons to develop innervated tissue engineered systems as well as humanized *in vivo* models of neurological disorders.

Abstract

We chronicle the true “bench-to-bedside” journey of Team Niclosamide. Niclosamide is an inexpensive drug that has been used for decades to treat common tapeworm infestations in developing countries. Given its potent antiviral activity against single-stranded RNA viruses in multiple preclinical studies, Niclosamide was proposed as a potential therapeutic for SARS-CoV-2 infection. What started as a laboratory-based drug repurposing screen that identified Niclosamide as an effective treatment against Zika virus quickly evolved into a large-scale effort to combat the ongoing COVID-19 pandemic. Tufts CTSI assembled a talented and passionate multidisciplinary team that may uncover a low-cost solution for eradicating this deadly disease.

Thomas W. Concannon, PhD

Co-Director, Stakeholder and Community Engagement (Tufts CTSI)
Policy Researcher (RAND Corporation)

Decision Making about Health Care Resources in a Pandemic

Biography

Dr. Concannon is a Policy Researcher at the RAND Corporation, Assistant Professor of Medicine at Tufts University School of Medicine and Tufts CTSI’s Co-Director of Stakeholder & Community Engagement and Associate Director of Comparative Effectiveness Research (CER). His research is focused on patient care in emergency, acute and post-acute settings. Dr. Concannon’s work in health care over 20 years has consistently included engagement with patients, consumers, communities, and other stakeholders. He currently serves on the Health Planning Council for the Commonwealth of Massachusetts and the Board Quality Committee for Fenway Health, a community health center serving lesbian, gay, bisexual, and transgender populations. He earned a PhD in Health Policy at Harvard University in 2006 and MA in Political Science at McGill University in 1991.

Abstract

The COVID-19 pandemic has sharpened the tension clinicians and health systems face in balancing patient-centeredness while addressing public health needs. Resource allocation and infection control policy decisions are ad hoc or absent or rely on clinicians as sole decision makers. With a goal of improving decisions, we convened health system leaders, patients and consumers, disability advocates, and bioethicists. The result is a Core Guidance Checklist to support decisions that are clear and consistent, current, collaborative, and context-sensitive. The Checklist includes a Responsibility Grid which reorients allocation policy from a system-centric focus to a public health focus, ensuring that affected communities are part of decision making.

Jonathan Davis, MD

Associate Director and Director of the Trial Innovation Liaison Team (Tufts CTSI)
Vice Chair of Pediatrics and Chief of Newborn Medicine (Tufts Medical Center)
Professor of Pediatrics (Tufts University School of Medicine)

Scientific Talks: Session Chair, Part 1

Biography

Dr. Davis is Vice-Chair of Pediatrics and Chief of Newborn Medicine at the Floating Hospital for Children at Tufts Medical Center and Professor of Pediatrics at Tufts University School of Medicine. His research has focused on neonatal drug development, including optimizing approaches to treat neonatal abstinence syndrome. He is currently funded by NIH and FDA to develop better biomarkers and outcome measures for clinical trials and new and existing therapeutics to improve neonatal outcomes. Dr. Davis is Chair of the Neonatal Advisory Committee in the Office of the Commissioner at FDA and Associate Director of Tufts CTSI. He is Co-PI of a recent $8M NIH award to Tufts Medical Center to fund a national clinical trial studying the integration of targeted genomic sequencing into neonatal diagnosis and care.

Dorothy Dulko, PhD, MS

Clinical Research Nurse and Clinical Research Project Director (Tufts CTSI)
Research Project Director (Institute for Clinical Research and Health Policy Studies, Tufts Medical Center)

Team Niclosamide: From Treating Microcephaly in Chickens to Treating COVID-19 Patients

Biography

Dr. Dulko earned her PhD at the University of Utah in Salt Lake City in 2007. She earned her Master of Science degree in the Women's Health Nurse Practitioner program at Stony Brook University in Stony Brook, New York, where she also went on to earn a post master's certificate as an Adult Health Nurse Practitioner. She also holds a post master's certificate in Bioethics and Medical Humanities from New York University.

Dr. Dulko has over 25 years of experience in oncology practice, research, and practice administration. She holds national certification as an Adult Health, Women's Health, and Oncology nurse practitioner. She is a certified Clinical Research Professional. Dr. Dulko has extensive experience in the field of clinical trials and research operations. Her research work has focused on symptom management and implementation science methodologies that foster evidence-based practice change in health care, including application of technology in the conduct of clinical trials; specifically, leveraging education and technology for expeditious review of data to determine trial eligibility and use of telehealth platforms to sustain clinical trial participation and retention across diverse populations.

Dr. Dulko is a Research Project Director at the Institute for Clinical Research and Health Policy Studies (ICRHPS), Tufts Medical Center. In this role for the niclosamide trial, she works closely with Dr. Harry Selker to provide leadership and guidance to staff, including audit and feedback of study data to facilitate early identification of obstacles to effective trial execution. Dr. Dulko collaborates with all team members to develop and implement processes for site communication, recruitment, and performance improvement.

Abstract

We chronicle the true "bench-to-bedside" journey of Team Niclosamide. Niclosamide is an inexpensive drug that has been used for decades to treat common tapeworm infestations in developing countries. Given its potent antiviral activity against single-stranded RNA viruses in multiple preclinical studies, Niclosamide was proposed as a potential therapeutic for SARS-CoV-2 infection. What started as a laboratory-based drug repurposing screen that identified Niclosamide as an effective treatment against Zika virus quickly evolved into a large-scale effort to combat the ongoing COVID-19 pandemic. Tufts CTSI assembled a talented and passionate multidisciplinary team that may uncover a low-cost solution for eradicating this deadly disease.

Micha Feigin-Almon, PhD, MS
Research Scientist
Massachusetts Institute of Technology (MIT)
Realtime Functional Muscle Imaging

Biography

Dr. Micha Feigin-Almon is a Research Scientist at the Department of Mechanical engineering and the Institute of Medical Engineering and Science (IMES) at MIT. His main research interests lie with inverse problems in acoustic imaging, specifically, medical ultrasound and geophysics, and on the analysis and understanding of movement quality and the information it sheds on the physical condition. To this end, he develops deep learning and analytic techniques and corresponding hardware for the analysis and understanding of raw signals in the ultrasound and RADAR domains.
He earned his PhD in applied mathematics from the School of Mathematical Sciences at the Tel-Aviv University in Israel, working on inverse problems and computer vision in medical imaging and optics. Before coming to MIT, Dr. Feigin-Almon spent several years in the industry with extensive experience working on imaging applications for the medical and defense fields.

Abstract

A plethora of clinical conditions call for the ability to assess muscle function and action and to differentiate between passive motion and active contraction. Applications include assessment of muscle health, nervous system conditions, and analyzing motion quality. There are no imaging solutions available for dynamic muscle function. As such, clinical, electrophysiological, and biomechanical methods are currently used to quantify muscle function in various joint movements. However, none of these methods can quantify the dynamic contributions of each muscle acting in isolation.

We introduce an ultrasound-tomography-based methodology, leveraging deep-learning approaches, capable of recovering speed-of-sound maps in tissue with interactive frame rates. We show that these values correlate with muscle contraction and allow for the assessment of function and action during dynamic motion.

Wenhui Feng, PhD
Assistant Professor of Public Health and Community Medicine
Tufts University School of Medicine
Transforming Science, the Public and Policymakers: A Nationally Representative COVID-19 Survey

Biography

Dr. Feng's research applies policy analysis to a variety of health policies. She primarily focuses on obesity-related policies, including menu labeling, active transportation, and the Supplemental Nutrition Assistance Program (SNAP). She also examines the policies of the health- and social safety net, including the relationship between policy rules and health outcomes. Her current work evaluates the role of local health departments in shaping a system that supports healthy behaviors, as well as the role that dollar stores play in the food retail landscape.

Abstract

The Tufts Priority Area Research Group (PARG) on Equity and Tufts CTSI are partnering on COVID-19 research.
A signature project of the PARG is a nationally representative survey of the US population focused on dimensions of equity and inequity in wealth, health, and civic engagement. Respondents (n= 1,267) were surveyed in May/June 2020, and most are being re-contacted in May 2021 along with new oversamples of African Americans and Latinos. In addition to the PARG's own questionnaire, these individuals had answered many other surveys. The Tufts research team purchased those prior responses and added information from public datasets about the ZIP codes in which these respondents live. As a result, the dataset will include more than 1,000 variables for each respondent, spanning two phases of the COVID-19 pandemic and touching on many aspects of life. The dataset is used for scientific research and publication and for accessible communications to the public and policymakers via an innovative website. It therefore exemplifies T4 in the clinical and translational science spectrum, "From Health Care Delivery to Impact on the Community, on the Public's Health, and on Public Policy." Selected findings related to vaccine readiness will be shared.

Lori Frank, PhD, MA

Senior Behavioral Scientist
RAND Corporation
Decision Making about Health Care Resources in a Pandemic

Biography

Dr. Frank is a Senior Scientist with the RAND Corporation. She is currently President of the International Society for Quality of Life Research, and she serves on the Board of the Personalized Medicine Coalition and the Medical, Scientific, and Memory Screening Advisory Board of the Alzheimer's Foundation of America. She completed her Health and Aging Policy Fellowship at the National Institute on Aging, through the Congressional Fellowship Program. She founded and served as Program Director, Evaluation and Analysis Program at the Patient-Centered Outcomes Research Institute (PCORI). Prior to joining PCORI she served as Executive Director of the Center for Health Outcomes Research, MEDTAP International/ United BioSource Corporation, where she led the international Center's scientific and financial performance. She founded the Cognition Initiative with the Critical Path Institute Patient-Reported Outcome Consortium. Her career has focused on patient-reported outcomes measure development and the psychological, ethical, and legal aspects of memory screening and medical treatment decision-making. Prior positions include the Georgetown University Department of Psychiatry, the National Institute on Aging, and Medimmune/AstraZeneca. Her postdoctoral training was in Mental Health Services Research with the VA Health Services Research and Development program. Her PhD is in Human Development/ Gerontology, Pennsylvania State University and her MA is in Biopsychology from the Johns Hopkins University.

Abstract

The COVID-19 pandemic has sharpened the tension clinicians and health systems face in balancing patient-centeredness while addressing public health needs. Resource allocation and infection control policy decisions are ad hoc or absent or rely on clinicians as sole decision makers. With a goal of improving decisions, we convened health system leaders, patients and consumers, disability advocates, and bioethicists. The result is a Core Guidance Checklist to support decisions that are clear and consistent, current, collaborative, and context-sensitive. The Checklist includes a Responsibility Grid which reorients allocation policy from a system-centric focus to a public health focus, ensuring that affected communities are part of decision making.

Jonathan Garlick, PhD, DDS

Director of Science Communications (Tufts CTSI)
Director, Tufts Initiative in Civic Science (Tufts University School of Dental Medicine)
Professor (Tufts University School of Dental Medicine, School of Medicine, School of Engineering)
Building Trustworthiness and Vaccine Confidence through Dialogue in COVID-19-Vulnerable Communities

Biography

Dr. Garlick leads the Tufts Initiative in Civic Science (TICS) at Tufts University School of Dental Medicine to empower inclusive public participation in science. As Professor at Tufts Schools of Dental Medicine, Medicine, and Engineering, he has developed the use of stem cells for tissue engineering to support development of new treatments for oral health, scleroderma, cancer and complications of diabetes. He is the Director of Science Communications for Tufts CTSI.

Dr. Garlick helps his students explore the impact of science as a bridge towards moral responsibility and social action. His Civic Science initiative works to humanize how scientists and citizens work together on divisive and complex issues. He trains scientists to respond to existing or emerging science-related challenges by engaging a broad spectrum of stakeholders. He received his DDS and PhD from Stony Brook School of Dental Medicine and his Oral Pathology training from Tel Aviv University and Long Island Jewish Medical Center. Dr. Garlick was inducted into Monticello High School Hall of Distinction in 2016 for public service. He has been awarded Stony Brook School of Dental Medicine's Distinguished Alumnus Award, the President and Chancellor's Award, the State University of New York's highest teaching honor and a Tufts Distinction Award for his work in community dialogue.

Abstract

The immediate objective of this proposal is to study the impact of community-based dialogues as a novel public health intervention to identify and begin to address barriers that currently limit uptake of COVID-19 vaccination by pursuing the following research questions and specific aims.
Aim 1: To identify barriers to COVID-19 vaccine acceptance among individuals in communities of color including cognitive, affective, and socio-cultural factors.
Aim 2: Develop, implement and estimate the effect size of structured 'community dialogues' (informed by data in Aim 1) designed to increase vaccine intentions of vaccine hesitant community participants by increasing knowledge and improving trust in public health authorities and health care providers.

Yoav Golan, MD, MS, FIDSA

Associate Director, Clinical and Translational Research Center (Tufts CTSI)

Attending Physician (Tufts Medical Center)

Associate Professor of Medicine (Tufts University School of Medicine)

Team Niclosamide: From Treating Microcephaly in Chickens to Treating COVID-19 Patients

Biography

Dr. Golan has spent his more than 25-year career as an infectious disease (ID) medical specialist, most recently serving as an attending physician in the Division of Geographic Medicine and Infectious Diseases at Tufts Medical Center, and as an associate professor at Tufts University School of Medicine. Dr. Golan has conducted extensive research in the ID space, publishing several books and over 50 peer-reviewed studies in journals including The New England Journal of Medicine and The Lancet Infectious Diseases. His research focuses on hospital-acquired infections with emphasis on ICU infections, the impact of antibiotic resistance on outcomes, and development of early culture-independent treatment strategies. Dr. Golan's recent work has focused on C. difficile infections as well as invasive candidiasis. He has been involved in the development of multiple anti-infectives, including fidaxomicin, ceftaroline, and bezlotuximab.

In addition to his work at Tufts, he has held several executive positions at biotechnology companies, including as Chief Scientific Officer of Profility Inc. and as Chief Executive Officer, ExArca Pharmaceuticals. He is on the peer review committee of multiple medical and scientific journals and is a member of numerous medical societies, including the Infectious Disease Society of America and the American Society for Microbiology. Dr. Golan is a graduate of the Hadassah School of Medicine at the Hebrew University in Jerusalem, Israel. He completed a medicine residency and Infectious Diseases fellowship at the Tel Aviv Sourasky Medical Center, followed by a transplant ID fellowship and masters in statistics and modeling at Tufts University School of Medicine.

Abstract

We chronicle the true "bench-to-bedside" journey of Team Niclosamide. Niclosamide is an inexpensive drug that has been used for decades to treat common tapeworm infestations in developing countries. Given its potent antiviral activity against single-stranded RNA viruses in multiple preclinical studies, Niclosamide was proposed as a potential therapeutic for SARS-CoV-2 infection. What started as a laboratory-based drug repurposing screen that identified Niclosamide as an effective treatment against Zika virus quickly evolved into a large-scale effort to combat the ongoing COVID-19 pandemic. Tufts CTSI assembled a talented and passionate multidisciplinary team that may uncover a low-cost solution for eradicating this deadly disease.

Matthew Goodwin, PhD, MA

Associate Professor

Northeastern University

Predicting Challenging Behavior in Minimally-Verbal Youth with Autism Using Wearable Biosensor Data and Machine Learning Classifiers

Biography

Dr. Goodwin is an Interdisciplinary Associate Professor with tenure at Northeastern University jointly appointed in the Bouvé College of Health Sciences and the Khoury College of Computer Science, where he is a founding member of a new doctoral program in Personal Health Informatics and Directs the Computational Behavioral Science Laboratory. He has over 25 years of research and clinical experience working with children and adults on the autism spectrum and developing and evaluating innovative technologies for behavioral assessment and intervention, including video and audio capture, telemetric physiological monitors, accelerometry sensors, and digital video/facial recognition systems. Goodwin received his MA and PhD in experimental psychology and behavioral science, respectively, from the University of Rhode Island. He completed a postdoctoral fellowship in Affective Computing in the MIT Media Lab in 2010.

Abstract

Unpredictable and potentially dangerous challenging behavior (aggression to others, self-injury, emotion dysregulation) can create barriers to accessing community, therapeutic, medical, and educational services for individuals with autism. The current line of research evaluates whether peripheral nervous system and physical activity data obtained from a wearable biosensor can be used to predict challenging behaviors before they occur. Iterative results in a sample of 70 psychiatric inpatients with autism suggest that aggression to others, self-injury, and tantrums can all be predicted three minutes in advance with 80% average accuracy using machine learning classifiers. These findings lay the groundwork for the future development of precursor behavior analysis and just-in-time adaptive intervention systems to prevent or mitigate the emergence, occurrence, and impact of challenging behavior in individuals with autism.

Jeffrey K. Griffiths, MD, MPH

Professor of Public Health and Community Medicine
Tufts University School of Medicine

Team Niclosamide: From Treating Microcephaly in Chickens to Treating COVID-19 Patients

Biography

Dr. Griffiths is a Professor of Public Health, and of Medicine at Tufts University School of Medicine, and has adjunct appointments in the Schools of Engineering, Nutrition and Veterinary Medicine. Current work is focused on preventing spillover events in Asia and Africa via the USAID STOP Spillover project, and on a clinical trial of niclosamide against COVID-19.

Abstract

We chronicle the true “bench-to-bedside” journey of Team Niclosamide. Niclosamide is an inexpensive drug that has been used for decades to treat common tapeworm infestations in developing countries. Given its potent antiviral activity against single-stranded RNA viruses in multiple preclinical studies, Niclosamide was proposed as a potential therapeutic for SARS-CoV-2 infection. What started as a laboratory-based drug repurposing screen that identified Niclosamide as an effective treatment against Zika virus quickly evolved into a large-scale effort to combat the ongoing COVID-19 pandemic. Tufts CTSI assembled a talented and passionate multidisciplinary team that may uncover a low-cost solution for eradicating this deadly disease.

Debra Lerner, MSc, PhD

Associate Director and Director, Organizational Impact (Tufts CTSI)
Founder and Director, Program on Health, Work and Productivity (Tufts Medical Center)
Senior Scientist (Institute for Clinical Research and Health Policy Studies)
Professor, Departments of Medicine and Psychiatry (Tufts University School of Medicine)
Scientific Talks: Session Chair, Part 2

Biography

Dr. Lerner has dedicated her career to improving the health and well-being of working people and enabling them to participate fully and productively in the workplace. Dr. Lerner and her colleagues have extensive expertise in survey research and developed the Work Limitations Questionnaire (WLQ), which is used throughout the world and has become a standard of measurement. In addition, Dr. Lerner’s team has developed innovative intervention programs aimed at improving employee functional performance and work productivity. Dr. Lerner has published numerous articles on health and productivity improvement. She has served on many scientific panels and advisory boards including the Health Project, which administers the C. Everett Koop Award to for employer excellence in workplace health promotion. Dr. Lerner received the 2019 Mark Dundon Research Award from HERO, the Health Enhancement Research Organization, and previously the President’s Award from the Institute of Health and Productivity Management (IHPM).

Peter Levine, PhD

Academic Dean and Lincoln Filene Professor of Citizenship and Public Affairs
Tufts University, Jonathan Tisch College of Civic Life

Transforming Science, the Public and Policymakers: A Nationally Representative COVID-19 Survey

Biography

Dr. Levine is the Associate Dean of Academic Affairs and Lincoln Filene Professor of Citizenship and Public Affairs in Tufts University's Jonathan Tisch College of Civic Life. Trained as a moral/political philosopher, he has spent most of his career conducting applied empirical research and organizing professional efforts related to civic life in the United States, including sustained work on civic education, voting rights, public deliberation, social movements, and the measurement of social capital.

Dr. Levine graduated from Yale in 1989 with a degree in philosophy. He studied philosophy at Oxford on a Rhodes Scholarship, receiving his doctorate in 1992. Before coming to Tufts in 2008, he worked for Common Cause, the Institute for Philosophy and Public Policy at University of Maryland, and the National Commission for Civic Renewal and helped to found and then led CIRCLE, The Center for Information and Research on Civic Learning and Engagement, which is now part of Tisch College.

Abstract

The Tufts Priority Area Research Group (PARG) on Equity and Tufts CTSI are partnering on COVID-19 research. A signature project of the PARG is a nationally representative survey of the US population focused on dimensions of equity and inequity in wealth, health, and civic engagement. Respondents (n= 1,267) were surveyed in May/June 2020, and most are being re-contacted in May 2021 along with new oversamples of African Americans and Latinos. In addition to the PARG's own questionnaire, these individuals had answered many other surveys. The Tufts research team purchased those prior responses and added information from public datasets about the ZIP codes in which these respondents live. As a result, the dataset will include more than 1,000 variables for each respondent, spanning two phases of the COVID-19 pandemic and touching on many aspects of life. The dataset is used for scientific research and publication and for accessible communications to the public and policymakers via an innovative website. It therefore exemplifies T4 in the clinical and translational science spectrum, "From Health Care Delivery to Impact on the Community, on the Public's Health, and on Public Policy." Selected findings related to vaccine readiness will be shared.

John R. Mascola, MD

Director of the Dale and Betty Bumpers Vaccine Research Center
National Institute of Allergy and Infectious Diseases (National Institutes of Health)

Keynote address:

Rapid Response to a Novel Pathogen: COVID-19 Vaccine Development

Biography

Dr. Mascola is Director of the Vaccine Research Center (VRC) at the National Institute of Allergy and Infectious Diseases (NIAID), National Institutes of Health. His background is in infectious diseases, viral immunology, and vaccine research. He provides leadership to the scientific and clinical research activities of the VRC and develops vaccine research programs for diseases of public health importance, including HIV, Influenza, Ebola/Marburg, Malaria, and COVID-19. He serves as a principal advisor to the director NIAID/NIH on vaccines and related biomedical research affairs and as an expert consultant and advisor both nationally and internationally on the development of novel vaccine and prevention strategies. His laboratory research focuses on structure-based vaccine design and antibody-mediated protective immune responses, including studies to understand the genetic and immunological characteristics that guide the development of neutralizing antibodies against viral pathogens.

Abstract

Viral pathogens that cause epidemic disease emerge with an unpredictable cadence, requiring advanced preparation and rapid innovation in order to respond effectively. For much of the last 50 years, the prevailing response to new or reemerging pathogens has lagged behind the pace of viral transmission. Fortunately, modern vaccinology affords us novel tools including advanced vaccine platforms and structure-based vaccine design, which, along with strategic collaboration, accelerate our ability to design effective vaccines. To address the SARS-CoV-2 pandemic, a translational approach enabled the progression of basic research to public benefit with highly effective COVID-19 vaccines developed, evaluated, and deployed in less than one year from identification of a new pathogen.

Alice Rushforth, PhD

Executive Director
Tufts CTSI
Plenary: Report-out and Next Steps

Biography

Dr. Rushforth has nearly two decades of experience in industry and academia. Prior to joining Tufts CTSI in February 2014, she served as the Director of Biotechnology Education Programs at the Massachusetts Biotechnology Education Foundation. She also consulted for, and managed, Emergent Behaviors of Integrated Cellular Systems at MIT, which focused on bringing engineers and biologists together to build biological machines. In those roles, she managed a multi-institutional National Science Foundation-funded Science and Technology Center, coordinated diverse teams, and led strategic planning efforts and day-to-day operations.

Harry P. Selker, MD, MSPH

Dean and Principal Investigator (Tufts CTSI)
Executive Director, Institute for Clinical Research and Health Policy Studies and Director, Center for Cardiovascular Health Services Research (Tufts Medical Center)
Professor of Medicine (Tufts University School of Medicine)
Welcoming Remarks and Closing Remarks

Biography

As Dean of Tufts Clinical and Translational Science Institute (CTSI) and Principal Investigator of the Tufts Clinical and Translational Science Award (CTSA), Dr. Selker provides leadership for the programs and infrastructure that support clinical and translational research at Tufts University Schools, Tufts teaching hospitals, other CTSI academic partners, and community-based and industry CTSI partners. He is also the Executive Director of the Institute for Clinical Research and Health Policy Studies (ICRHPS) at Tufts Medical Center, and Director of its Center for Cardiovascular Health Services Research.

Nationally, he is an active member of the National CTSA Consortium (on the Steering, Executive, and Strategic Goal Committees), was a founder and was second President of the Society for Clinical and Translational Science, and a founder and President of the Association for Clinical Research Training. He also served as President of the Society of General Internal Medicine from 2011-2012.

His research has long focused on the development of treatment strategies, decision aids, methods, and systems aimed at improving medical care, especially emergency and cardiac care. He is particularly known for a series of studies of the factors influencing emergency cardiac care and for development of clinical predictive instruments as decision aids that provide emergency physicians and paramedics with predictions for their patients' likely cardiac diagnoses and outcomes for real-time use in clinical care. Concurrently, he is involved in research to advance clinical study design, data analysis, mathematical predictive modeling of medical outcomes, and comparative effectiveness research. These efforts have been continuously funded by RO1 and U awards for over 25 years.

As Executive Director of ICRHPS and Dean of Tufts CTSI, Dr. Selker continues to actively mentor junior and senior faculty at Tufts Medical Center and Tufts University and beyond. He has also previously mentored four fellows, including three K awardees. For over 20 years he was the PI on a disease-agnostic Clinical Care Research/Health Services Research T32 training grant. During this time, Dr. Selker also founded the Clinical and Translational Science (CTS) Program at Tufts University Sackler School of Graduate Biomedical Sciences, the nation's first MS/PhD program in clinical research at a biomedical graduate school and academic medical center.

Kinna Thakarar, DO, MPH

Assistant Professor of Medicine (Tufts University School of Medicine)
Attending Physician (Maine Medical Center)

Improving Discharge Decision-making among Vulnerable Hospitalized Patients

Biography

Dr. Thakarar is an Assistant Professor of Medicine at Maine Medical Center and Tufts University School of Medicine. She is an infectious disease and addiction medicine physician and has a special interest in health services research related to the ID/substance use disorder syndemic. Dr. Thakarar's Tufts CTSI Project is titled, *Improving Discharge Decision-making among Vulnerable Hospitalized Patients with Injection Drug Use-associated Infections*.

Abstract

We propose to develop and assess a conversation guide that can be used to engage hospitalized patients with injection drug use (IDU)-associated infections in their treatment decisions. The innovation of this proposal derives from applying conversation guide-based decision work in the palliative care field to a stigmatized population--people who inject drugs. In **Aim 1** we will develop a feasible and culturally-relevant conversation guide to help 1) improve patient autonomy, and 2) help patients and their providers make shared decisions about hospital disposition. In **Aim 2** we will pilot test the conversation guide with patients hospitalized at Maine Medical Center with IDU-associated infections and assess patient and provider perceptions and experiences, successes, challenges, and lessons learned.

To accomplish **Aim 1** of the study, we will conduct in-depth interviews with key informants—including patients, community partners, and providers—to identify values and preferences to include in the conversation guide. We anticipate needing to interview 25 stakeholders to reach thematic saturation. To accomplish **Aim 2**, we will pilot the conversation guide with eight hospitalized patients from vulnerable areas. We will also measure outcomes, such as treatment completion and engagement in care. Our proposal addresses the Tufts CTSI Pilot Program goals by developing and translating a conversation guide into clinical practice (T3 translational stage), yielding further knowledge about its efficacy in clinical settings. Our results will provide the pilot data needed to inform development of a larger, multi-site study to assess the efficacy of guide-based decision work for this stigmatized population.

Aim 1: Develop a feasible and culturally-relevant conversation guide to help 1) improve patient autonomy, and 2) help providers and patients with IDU-associated infections make shared decisions about hospital disposition (i.e., remain hospitalized, discharge home with central line, oral antibiotics, discharge home with weekly infusions). To inform the guide, we will conduct semi-structured in-depth interviews with key stakeholders, including patients, community/harm reduction partners and providers at Maine Medical Center.

Aim 2: Pilot test the conversation guide with eight patients hospitalized at Maine Medical Center with IDU-associated infections. The pilot study will determine patient and provider perceptions and experiences, successes, challenges, and lessons learned. Through in-depth interviews and survey methods, it will assess the experiences of the eight patients and four providers, with regard to the conversation guide and treatment-related decisions, determine the feasibility of guide use, and its potential impacts on health outcomes.