

## Translational Research Day 2022: The Impact and Promise of Learning Health Systems

### Presenter Biographies and Abstracts



**Gordon R. Bernard, MD**

Executive Vice President for Research and Chief Research Officer  
Vanderbilt University Medical Center (VUMC)

**Closing Keynote:**

*Learning Healthcare Systems: The Value of Pragmatic Randomized Trials*

#### Biography

Dr. Bernard joined the faculty at Vanderbilt in 1981 as a physician scientist and became Medical Director for the Medical Intensive Care Unit and Director for Pulmonary and Critical Care research programs in 1983. His research has primarily focused on improving the care and outcomes of critically ill patients with sepsis and the acute respiratory distress syndrome (ARDS), and he established the Vanderbilt Coordinating Center in 1987 to support the large multi-institutional and international clinical investigations he was leading. Dr. Bernard is a member of the American Association of Physicians and has written or co-authored more than 350 original articles and book chapters. He currently serves as Executive Vice President for Research at Vanderbilt University Medical Center (VUMC). Dr. Bernard also serves as the Director of the Vanderbilt Institute for Clinical and Translational Research, and PI of Vanderbilt's Clinical and Translational Science Award (CTSA), an NIH-funded program that is supported by one of the largest single grants in VUMC history, greater than \$140M over the first 15 years. In these roles, Dr. Bernard oversees the extensive, multifaceted clinical and translational research programs of VUMC including the establishment of the Learning Healthcare System, an infrastructure built to encourage and support pragmatic clinical trials embedded in hospital operations.

#### Abstract

Dr. Bernard will share how Vanderbilt University Medical Center leverages pragmatic trials within their learning healthcare system. Pragmatic trials offer a practical approach to conducting research and can be a favorable study design for hospital systems eager to implement real-world findings into care.



**Helen Boucher, MD, FACP, FIDSA**

Interim Dean, Tufts University School of Medicine  
Chief Academic Officer, Tufts Medicine

*Leading Learning Health Systems Panel Discussion*

#### Biography

Dr. Boucher previously served as Chief of the Division of Geographic Medicine and Infectious Diseases at Tufts Medical Center (Tufts MC), as well as Director of the Stuart B. Levy Center for Integrated Management of Antimicrobial Resistance (Levy CIMAR), a collaborative, cross-disciplinary initiative between Tufts University and Tufts MC with a mission to deliver innovative solutions to combat antimicrobial resistance through research, policy, and education. She was also Director of Tufts MC's Heart Transplant and Ventricular Assist Device Infectious Diseases Program, and Professor of Medicine at Tufts University School of Medicine.

Dr. Boucher's clinical interests include infections in immunocompromised patients and *S. aureus* infections. Her research interests focus on *S. aureus* and the development of new anti-infective agents. She is the author or coauthor of numerous abstracts, chapters, and peer-reviewed articles, which have been published in such journals as *The New England Journal of Medicine*, *Antimicrobial Agents and Chemotherapy*, *Clinical Infectious Diseases*, and *The Annals of Internal Medicine*; she is Associate Editor of *Antimicrobial Agents and Chemotherapy*. Since 2009, Dr. Boucher has been included in Best Doctors in America, a nomination-based list that is limited to about 5% of practicing physicians in the US each year. In 2011, she was elected Fellow and Member of the Board of Directors of the Infectious Diseases Society of America. She was also elected to the American Board of Internal Medicine Infectious Disease Exam Writing Committee in 2012 and to the American Board of Internal Medicine Infectious Diseases Subspecialty Board in 2014.



**Rob Chamberlin, MD, MBA**

Chief Medical Officer  
MaineHealth ACO

*How Do Primary Care Staff Spend Their Time? Preparing for Changes in Primary Care Reimbursement*

**Biography**

Dr. Chamberlin is a practicing primary care internist. His leadership in health care has focused on performance improvement and primary care transformation. Currently he serves as the CMO of the MaineHealth ACO, which manages value-based contracts for over 250,000 patients. Prior to his current position, he led Maine Medical Partner's primary care group which serves 80,000 patients in the greater Portland region. Dr. Chamberlin received his medical degree from Boston University and completed his residency at Brigham and Women's Hospital. Before entering medical school, Dr. Chamberlin served as a Peace Corps volunteer in Haiti, worked in the finance department at a Fortune 500 company, and conducted operations management at an international health care non-profit organization.

**Abstract**

As population-based payment in primary care increases, there will be opportunities to change how care is delivered. To optimize this opportunity, it is necessary to analyze how best to allocate the population-based payments across care team members. MaineHealth Primary Care and the MaineHealth Accountable Care Organization were interested in identifying a methodology for cost-accounting for primary care staff time providing care for a panel of patients. After a review of the literature and a feasibility assessment, we chose Time-Driven Activity Based Cost Accounting using direct observation as our data collection method. We piloted this method in three primary care practices. We will report on our findings and what was learned from this pilot.



**Michael J. Dandorph, MHA**

President and CEO  
Tufts Medicine

*Leading Learning Health Systems Panel Discussion*

**Biography**

Michael J. Dandorph was appointed President and CEO for Wellforce (now Tufts Medicine) in January 2020. As a seasoned and accomplished health care executive, he understands the intricacies of academic medicine, community medicine, health systems, and managed care. He is a collaborative and innovative leader, known for spearheading transformational change, creating cutting-edge partnerships, and developing high-performing teams. Prior to joining Tufts Medicine, Mike served as the President of the Rush University System for Health in Chicago, where he was responsible for the integrated operations and strategies of the System's hospitals and clinical practices, as well as leading the system's growth and direction since 2016. Under his leadership, Rush more than doubled its ambulatory footprint, improved financial performance to all-time highs, and established the Rush Leadership Academy with an emphasis on developing diversity among its leadership ranks. As Executive Vice President for Clinical Affairs and Chief Operating Officer, Mike quickly elevated Rush's focus on safety, quality, and patient experience resulting in Rush being consistently ranked among the top five in hospital quality among leading academic medical centers in the United States every year since joining the organization in 2013.

From 1996 to 2013, Mike played several instrumental roles in the development of the University of Pennsylvania Health System's prominence in the Philadelphia region and strengthening the organizations financial footing during challenging economic times in late 1990s. During his last decade at Penn, as Chief Strategy and Business Development Officer, Mike led the health system's clinical integration efforts, with an emphasis on developing several key service lines across the network, developed innovative provider-payer partnerships, and led several major transactions leading to the rapid growth of Penn Medicine.



**Michael K. Gould, MD, MS**

Professor, Department of Health Systems Science  
Kaiser Permanente Bernard J. Tyson School of Medicine

**Morning Keynote:**

*Embedded Research in the Learning Healthcare Systems at Kaiser Permanente*

**Biography**

Dr. Gould is a pulmonologist and health services researcher with a major interest in learning healthcare systems and implementation science. As a Professor in the Department of Health Systems Science in the Kaiser Permanente Bernard J. Tyson School of Medicine, his research is deeply embedded in the delivery system at Kaiser Permanente Southern California, where he conducts both externally funded and operationally focused studies of care delivery for patients with cancer and respiratory disease.

**Abstract**

In this two-part talk, Dr. Gould will first discuss efforts to define the core functions of the learning health system, the various forms they may take, and possible approaches to measurement. He will describe the extent to which structures have been built, resources have been garnered, and processes have been implemented to execute core LHS functions.

In part two, he will describe several distinctive components of the learning health system at Kaiser Permanente Southern California, including the Care Improvement Research Team, a mature research-operations partnership in which embedded researchers work closely with operational leaders to identify, understand and rectify gaps in care while creating generalizable knowledge to share in the public domain.



**Neil Korsen, MD, MS**

Physician Scientist, Center for Outcomes Research and Evaluation  
Maine Medical Center

*How Do Primary Care Staff Spend Their Time? Preparing for Changes in Primary Care Reimbursement*

**Biography**

Dr. Korsen's research experience includes work on depression in primary care, behavioral health integration, shared decision making, and practice redesign. His work has often focused on the interface between research and practice, and on the translation of research findings into clinical practice.

Dr. Korsen graduated from Hahnemann Medical College (now Drexel University School of Medicine) in 1979. He was a resident in Family Medicine at Maine Medical Center from 1979-1982. He spent almost 20 years as a family physician and geriatrician in rural Maine. He left practice to pursue research training in 2001. He graduated from the Master's program at the Center for the Evaluative Clinical Sciences at Dartmouth (now The Dartmouth Institute) in 2002. He has worked in research and quality for Maine Medical Center and MaineHealth for the past 20 years.

**Abstract**

As population-based payment in primary care increases, there will be opportunities to change how care is delivered. To optimize this opportunity, it is necessary to analyze how best to allocate the population-based payments across care team members. MaineHealth Primary Care and the MaineHealth Accountable Care Organization were interested in identifying a methodology for cost-accounting for primary care staff time providing care for a panel of patients. After a review of the literature and a feasibility assessment, we chose Time-Driven Activity Based Cost Accounting using direct observation as our data collection method. We piloted this method in three primary care practices. We will report on our findings and what was learned from this pilot.



**Ronald Kulich, PhD**

Professor and Clinical Psychologist, Tufts University School of Dental Medicine  
Lecturer at Harvard-MGH, Department of Anesthesia, Critical Care and  
Pain Medicine

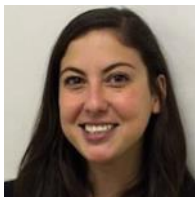
*Development and Evaluation of an Interprofessional Controlled Substance Risk  
Training Program within Dentistry*

**Biography**

Dr. Kulich has published multiple peer-reviewed papers on pain assessment and management, including books on Managed Care and Pain and Controlled Substance Risk Assessment. His responsibilities include development and management of opioid risk assessment protocols for the Massachusetts General Hospital Pain Center and Facial Pain/Headache Center at Tufts University School of Dental Medicine. Other academic responsibilities have included: treatment guideline development for work injury with Massachusetts Department of Industrial Accidents, training committee for the Massachusetts Prescription Monitoring Program; multiple opioid risk guideline committees; and he has been co-chair of the Massachusetts Governor’s Committee for the Curriculum on Substance Abuse assessment for dentistry. Fellowship training responsibilities include supervision of Anesthesia/Pain Medicine and Orofacial Pain Medicine Fellows (Massachusetts General Hospital), as well as contributing to the behavioral sciences curriculum for the School of Dental Medicine and supervision of psychology graduate interns.

**Abstract**

While dentistry contributed to the problem of opioid misuse and abuse early in the opioid crisis, practicing dental clinicians remain a critical resource for mitigating substance use risk. They often see patients with higher frequency than primary physicians, and remain in a unique position to assess, manage, and refer patients at risk. Despite this opportunity, the assessment of substance use risk and effective management of these complex patients face multiple implementation barriers within the field of dentistry. Several on our team were fortunate to assist with efforts in the Commonwealth of Massachusetts in developing criteria for training dentists in risk assessment, and this work was followed by grants from the Coverys Community Healthcare foundation and RIZE Massachusetts to develop a comprehensive interprofessional training program. We developed, disseminated, and evaluated 10 Controlled Substance Risk Mitigation Modules for Dentistry. We utilized the Interprofessional Headache and Pain Rounds to disseminate and test the Modules, a weekly virtual teaching platform with programming that reaches between 50 and 600 clinicians per week, with interdisciplinary attendance from dentists, physicians, psychologists, and researchers. The program is currently managed by faculty from the School of Dental Medicine and Massachusetts General Hospital. A total of 489 module registrations were completed by dentists. Data are presented with respect to outcomes, review of prescription drug monitoring program checks in the dental record, and barriers to implementing controlled substance risks mitigation strategies within the field of dentistry.



**Nicole H. Moraco, MD, MA**

Surgical resident, Beth Israel Deaconess Medical Center  
Clinical Research Fellow, Lahey Hospital and Medical Center

*Filling the ICU Communication Gap*

**Biography**

Dr. Moraco’s research interests include surgical palliative care and resident education. She received her BS in Biochemistry from Bates College; her MA in Bioethics from New York University; and her MD from Geisel School of Medicine at Dartmouth College. She is a member of the Alpha Omega Alpha (AOA) Honor Medical society and the Gold Humanism Honor Society.

**Abstract**

The Remote Communication Liaison Program was established to provide daily updates to families during the first COVID-19 surge in Spring 2020. This presentation briefly describes the creation, implementation, and impact of the program on intensivists, liaisons, and families.



### **Perrie O'Tierney-Ginn, PhD**

Research Associate Professor of Obstetrics and Gynecology  
Tufts University

*Produce Prescriptions on Maternal and Birth Outcomes: A Food is Medicine  
Intervention Among Pregnant Women*

#### **Biography**

Perrie O'Tierney-Ginn, PhD is a Research Associate Professor of Obstetrics and Gynecology at Tufts University and Principal Investigator in the Mother Infant Research Institute (MIRI) at Tufts Medical Center. Her overall interest is to understand the effect of the maternal nutritional environment on placental function, and fetal nutrient delivery and growth. A self-described "Perinatal Ecologist," Dr. O'Tierney-Ginn is fascinated by the interaction between the mother, baby and placenta, and their environment. Dr. O'Tierney-Ginn's work is funded by the Eunice Kennedy Shriver National Institute of Child Health and Human Development.

You can find out more about her work at [www.placentascience.com](http://www.placentascience.com)

Twitter: @PlacentaSci and @PerrieO

#### **Abstract**

Poor diet quality during pregnancy is associated with an increased risk of pregnancy complications and suboptimal birth outcomes. Our research has shown that population disparities in diet quality have persisted or worsened for the US population for most dietary components. These dietary disparities are major drivers of health disparities for pregnant women and newborns. Growing evidence indicates that healthcare systems can provide a key role in addressing the social determinants of health, including poor nutrition. Produce prescription (Produce Rx) programs are among the most promising interventions, wherein healthcare providers offer guidance on, and economic incentives for, access to healthy foods for patients with food insecurity and diet-related chronic health conditions. In this pilot project, we propose to assess the efficacy of integrating nutrition into prenatal care using produce prescription programs, to improve maternal and birth outcomes among low-income pregnant women. Participants will receive 20 weeks of produce prescriptions delivered to their homes and attend study visits at mid-pregnancy and late pregnancy to evaluate the intervention efficacy on optimizing nutrition, reducing food insecurity and pregnancy complications, and improving cardiometabolic risk factors and birth outcomes. Through virtual meetings, we will engage key stakeholders to align the design of Produce Rx with the needs of clinical implementation, accelerating the adoption of evidence into practice. Conducting research to evaluate produce prescription among pregnant women will generate critical new evidence, informing policy, practice, and further needed research to improve health outcomes, reduce health disparities, and decrease health care costs.



### **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**

Harry P. Selker, MD, MSPH is Dean of Tufts Clinical and Translational Science Institute (CTSI) and Executive Director of the Institute for Clinical Research and Health Policy Studies at Tufts Medical Center. As Dean, he provides leadership for programs and infrastructure that support clinical and translational research at the Tufts University schools and affiliated hospitals, and other academic, community-based, and industry CTSI partners. He also is Executive Director of the Institute for Clinical Research and Health Policy Studies (ICRHPS) at Tufts Medical Center, where he also leads one of its eight research centers, the Center for Cardiovascular Health Services Research. He is Chief of the Division of Clinical Care Research of the Department of Medicine Tufts Medical Center, where he also practices medicine.

Dr. Selker's research focuses on the development of treatment strategies aimed at improving medical care, including the development of "clinical predictive instruments," mathematical models that are used as decision aids. He also has run large national clinical trials and has done research to advance clinical study design and execution, and the repurposing of drugs for major public needs.

Dr. Selker has provided advice about healthcare delivery and medical research to policymakers, including the House and Senate authors of the Affordable Care Act. Dr. Selker has served as President of the Society of General Internal Medicine, the Society for Clinical and Translational Science, the Association for Clinical Research Training, and the Association for Clinical and Translational Science, and is currently Chair of the Clinical Research Forum.



### **Jenica Upshaw, MD**

**Medical Director, Cardio-Oncology Program; Attending Physician, Advanced Heart Failure, Tufts Medical Center**

**Assistant Professor, Tufts University School of Medicine**

*Reducing Readmissions and Mortality for Patients with Heart Failure*

#### **Biography**

Dr. Upshaw is an Advanced Heart Failure and Transplant Cardiologist, the Medical Director of the Cardio-Oncology Program at Tufts Medical Center, and an Assistant Professor of Medicine at Tufts University School of Medicine. Her research seeks to improve cardiovascular outcomes of patients with cancer who are receiving potentially cardiotoxic cancer treatment. Recent work in cardio-oncology includes research on the cardiac complications of Hodgkin's Lymphoma treatment, changes in echocardiographic measures with breast cancer therapy, analysis of fluoropyrimidine cardiotoxicity trial reporting, and the development of a clinical prediction model for anthracycline cardiotoxicity. She is an active member of the ECOG-ACRIN Cancer Research Group Cardiotoxicity Committee, an Assistant Editor of *JACC: CardioOncology* and editorial board member for the Cardio-Oncology section of ACC.org. Dr. Upshaw is a member of the Heart Failure Society of America's Cardio-Oncology Task Force.

Dr. Upshaw is board certified in Advanced Heart Failure and Transplant Cardiology, Cardiovascular Diseases, and Internal Medicine. She completed medical school at Cornell University, Internal Medicine Training at Massachusetts General Hospital, and Cardiology and Advanced Heart Failure and Transplant Cardiology Fellowships at Tufts Medical Center. She has completed a Master's of Science in Clinical and Translational Science at Tufts University.

#### **Abstract**

Heart failure is the most common cause of hospitalization for patients with Medicare, and approximately 20% of patients are readmitted within 30 days after a heart failure hospitalization. Many patients don't receive the guideline-directed medical therapy that can improve survival, reduce hospitalizations, and improve health status. The Wellforce-wide Initiative in Cardiovascular Care (WINCC) began a process to implement best practices for heart failure care in 2017 and has continued to regularly measure performance. The CardioVascular Service Line is now embarking on a new Patient-Centered Learning Health System initiative with Tufts CTSI to develop a predictive model for 30 day heart failure readmission and mortality using machine learning methods supported by the Tufts Analytic Platform (TAP). The goal is to improve early identification and risk stratification of patients admitted with heart failure.



### **David Weiss, PhD**

**Research Fellow**

**Maine Medical Center Research Institute**

*Addressing Tobacco Use Behavior in Young Adults with Psychosis*

#### **Biography**

Dr. Weiss received his PhD in clinical psychology from The Ohio State University in August 2020 following the completion of his pre-doctoral internship at Yale University. He has obtained extensive research and clinical training in first-episode psychosis and health psychology. Dr. Weiss has delivered individual and group CBT, metacognitive remediation, group social skills training, and tobacco cessation to adults with psychosis. His research and clinical experiences align with his career goal of examining and addressing the health disparities that emerge in young adults with psychosis.

#### **Abstract**

Tobacco use disproportionately affects young adults with psychotic disorders with prevalence rates of 60-78%. Life expectancy is reduced 10-20 years with half of all deaths attributable to tobacco use. These health disparities persist due to the negative impact of psychotic symptoms and may be increasing with the emergence of electronic nicotine delivery systems (ENDS). Coordinated specialty care programs have improved mental health outcomes among young people newly diagnosed with psychotic disorders, though few programs have incorporated services to address physical health disparities. The proposed project aims to address this service gap by: 1) characterizing the tobacco use behavior of young adults with psychotic disorders including those who use combustible cigarettes, use ENDS, or are dual tobacco users; and, 2) by establishing the feasibility and acceptability of a group-based tobacco cessation intervention for young adults with comorbid psychosis psychotic disorder and tobacco use. Expected outcomes will include data to understand the degree to which risk perceptions and mental health symptoms influence tobacco use behavior in addition to feasibility and acceptability data on a group-based tobacco cessation intervention. The proposal represents an early effort to increase our understanding of tobacco use behavior and to build an evidence base to support the use of group-based tobacco cessation interventions in this at-risk population. Addressing tobacco use behavior in young adults with psychosis may be one of the best ways to improve the long-term health of individuals with serious mental illness.



**Alysse Wurcel, MD, MS**

**Assistant Professor, Division of Geographic Medicine and Infectious Diseases (ID)  
Tufts Medical Center**

*Engaging Stakeholders to Improve Inpatient Healthcare for People Who Inject Drugs*

**Biography**

An undergraduate degree in sociology launched Dr. Wurcel into a career as an infectious diseases doctor working clinically and on research to improve the quality of care delivered to people who use drugs and people who are incarcerated. She has published over 60 research articles on important clinical and research topics related to infectious diseases in these populations.

Dr. Wurcel grew up outside New Haven, CT, and spent time as a high school student volunteering at Yale-New Haven Hospital. Following undergraduate school at Tufts University and medical school at the University of Pennsylvania, she did an internal medicine residency at Massachusetts General Hospital, and an ID fellowship at Columbia-Presbyterian Hospital in New York City and Tufts Medical Center. She started working at the intersection of incarceration and infectious diseases in 2001, as a research assistant and phlebotomist at the Lemuel Shattuck Hospital in Boston. In addition to her work as an inpatient ID doctor, Dr. Wurcel has an outpatient clinic at Tufts Medical Center where she specializes in HIV, HCV and substance use disorder care. Dr. Wurcel provides HIV and HCV care at six county jails in eastern Massachusetts. She is interested in the barriers and facilitators to care for people who are at risk for HIV and HCV, especially people who use drugs and people who are incarcerated. She is an international expert on injection-drug use associated infections, including bacterial endocarditis. Dr. Wurcel has a K08 grant from the Agency of Human Research and Quality to improve HCV testing access in jails. In April 2020, she was appointed as ID Liaison to the Massachusetts Sheriffs Association, and has been advising the county jails on COVID-19 prevention, mitigation, and vaccination strategies.

**Abstract**

The goal of this implementation science project was to use an HIV-testing implementation framework to engage key stakeholders at the hospital to improve HIV testing in people who inject drugs.



**Fang Fang Zhang, MD, PhD**

Associate Professor and The Neely Family Professor  
Friedman School of Nutrition Science and Policy at Tufts University

*Produce Prescriptions on Maternal and Birth Outcomes: A Food is Medicine  
Intervention Among Pregnant Women*

**Biography**

Dr. Zhang is an Associate Professor and The Neely Family Professor at the Friedman School of Nutrition Science and Policy at Tufts University. She is a nutrition and cancer epidemiologist conducting population-based studies to investigate the role of nutrition in cancer prevention and control. Her research focuses on identifying dietary intake patterns in association with survival and health in children and adults diagnosed with cancer, and conducting and evaluating nutrition intervention programs to improve the health outcomes of cancer survivors. Dr. Zhang’s research interests also include quantifying preventable cancer burden associated with suboptimal diet and assessing the cost-effectiveness of population strategies to improve diet and reduce cancer burden and disparities in the US. Her research has been highlighted in the 2019-2020 NIH Director’s Blog and 2021 NIH Research Matters. Dr. Zhang is a recipient of the Eileen O’Neil Citation for Excellence in Teaching and an inaugural recipient of the Miriam E. Nelson Tisch Faculty Fellow from Tufts University.

**Abstract**

Poor diet quality during pregnancy is associated with an increased risk of pregnancy complications and suboptimal birth outcomes. Our research has shown that population disparities in diet quality have persisted or worsened for the US population for most dietary components. These dietary disparities are major drivers of health disparities for pregnant women and newborns. Growing evidence indicates that healthcare systems can provide a key role in addressing the social determinants of health, including poor nutrition. Produce prescription (Produce Rx) programs are among the most promising interventions, wherein healthcare providers offer guidance on, and economic incentives for, access to healthy foods for patients with food insecurity and diet-related chronic health conditions. In this pilot project, we propose to assess the efficacy of integrating nutrition into prenatal care using produce prescription programs, to improve maternal and birth outcomes among low-income pregnant women. Participants will receive 20 weeks of produce prescriptions delivered to their homes and attend study visits at mid-pregnancy and late pregnancy to evaluate the intervention efficacy on optimizing nutrition, reducing food insecurity and pregnancy complications, and improving cardiometabolic risk factors and birth outcomes. Through virtual meetings, we will engage key stakeholders to align the design of Produce Rx with the needs of clinical implementation, accelerating the adoption of evidence into practice. Conducting research to evaluate produce prescription among pregnant women will generate critical new evidence, informing policy, practice, and further needed research to improve health outcomes, reduce health disparities, and decrease health care costs.