

9th Annual Lean Healthcare Research Symposium

CLEAR

Center for Lean Engagement & Research in Healthcare

Devoted to a mission of conducting timely, relevant, and actionable research on Lean in healthcare.

Register here: <https://cvent.me/aEGW1V>



9:30am-4:30pm ET | March 4, 2025



In-Person (\$250): Renaissance Atlanta Waverly Hotel & Convention Center, 2450 Galleria Parkway, Atlanta, Georgia, 30339, USA

Virtual (\$75): Live stream of presentations, web link sent in advance

- 9:30-9:45 **Welcome**
Dorothy Hung, Ph.D., M.A., M.P.H., Director, Center for Lean Engagement and Research, University of California at Berkeley
- 9:45-10:30 **Becoming a Learning Organization: The Role of Human Decision Intelligence**
Tomás Aragón, M.D., Dr.P.H., State Public Health Officer and Director, California Department of Public Health
- 10:30-11:15 **Multi-Organizational Process Redesign for Adapting Clinical Guidelines for the Digital Age**
Kevin Larsen, M.D., FACP, Senior Vice President, Clinical Innovation, Optum;
Former Senior Health IT Advisor, Chief Technology Office, U.S. Department of Health and Human Services
- 11:15-12:00 **A Cross-Organizational Lean Deployment in an Italian Regional Healthcare System**
Olivia McDermott, M.Sc., M.B.A., D.Phil., Associate Professor, School of Biological & Chemical Science, University of Galway, Ireland
- 12:00-1:00 **Lunch (Catered)**

For general inquiries or interest in the
Lean Action Research Learning Collaborative,
contact CLEAR@berkeley.edu

1:00-1:45 **Post-Pandemic Response, Financial Performance, and Impact of Staff Shortages on Patient Care in U.S. Physician Practices**

Dorothy Hung, Ph.D., M.A., M.P.H., Director, CLEAR, University of California at Berkeley
Thomas Rotter, Ph.D., CLEAR Scholar, Associate Professor, Queens University, Canada
Agustin Perez-Araos, Ph.D., CLEAR Scholar, Associate Professor, Monterrey Tech, Mexico
Catalina Quach, CLEAR Associate, University of California at Berkeley

1:45-2:45 **Lean Action Research & Learning: Capability Development for Continuous Improvement in Pediatric Care**

Stanford Medicine Children's Health's (SMCH) Strategy for a Lean Transformation: The PQMS Capability Development Framework

Terry Platchek, M.D., Vice President and Associate Chief Quality Officer, SMCH;
Clinical Professor of Pediatrics and Medicine; Executive Director, Stanford Medicine Center for Improvement

Sheri Nakamura, R.N., M.S.N., C.N.S., Capability Development Manager, SMCH

Rick Majzun, M.H.A., Executive Vice President and Chief Operating Officer, SMCH

2:45-4:00 **Lean Enterprise Transformation: Lessons from the Veterans Health Administration**

Achieving Transformation to Lean Management Systems

Martin Charns, D.B.A., M.B.A., Emeritus Professor, Dept. of Health Policy & Management, Boston University; Investigator, Center for Healthcare Organization & Implementation Research, VA Boston Health Care System

Engaging Patients in the Veterans Health Administration's Lean Enterprise Transformation

Caroline Gray, Ph.D., M.A., Investigator, Center for Innovation to Implementation, VA Palo Alto Health Care System

4:00-4:30 **Breakout Sessions & Networking (In Person)**



Dorothy Y. Hung, Ph.D.
Director, CLEAR

Greetings from CLEAR! I am pleased to present our 9th Annual Lean Healthcare Research Symposium to be held on March 4, 2025 in Atlanta, Georgia, with livestreaming of the event. We are delighted to be hosted by Catalysis and Lean Enterprise Institute as part of the Annual Summit's Healthcare track.

For the first time, CLEAR will highlight lean transformations and organizational learning in the public arena. Dr. Tomás Aragón, Public Health State Officer and Director of the California Department of Public Health, will deliver a Keynote message on the crucial role of human decision intelligence and rapid learning in response to crisis events. Next, Dr. Kevin Larsen, former U.S. Dept. of Health & Human Services (HHS) Senior Health IT Advisor and current Senior Vice President of Clinical Innovation at Optum, will discuss how federal agencies adapted Kaizen to support the redesign of national health IT initiatives. Speaking from a public health perspective in Europe, Dr. Olivia McDermott, Associate Professor at the University of Galway in Ireland, will present findings from a large case study of a multi-organizational, cross-regional Lean deployment in Italian public hospitals.

This year we also present new CLEAR research conducted on a national sample of U.S. physician practices. In this study, we identify several associations between lean implementation and post-pandemic outcomes, including COVID-19 response activities, financial performance, and impacts of workforce shortages on patient care. Study findings will be shared by members of our research team, including CLEAR Scholars, Dr. Thomas Rotter from Queens University in Canada and Dr. Agustin Perez-Araos of Monterrey Tech in Mexico, along with CLEAR Associate Catalina Quach.

We also feature the innovative work of Stanford Medicine Children's Health (SMCH), a member of CLEAR's Lean Action Research Learning Collaborative. This will be presented by Dr. Terry Platchek, Vice President and Associate Chief Quality Officer; Sheri Nakamura, Capabilities Development Manager; and Rick Majzun, Executive Vice President and Chief Operating Officer. These health system leaders will discuss SMCH's Lean journey using the Packard Quality Management System to foster scalable improvements in pediatric care.

We conclude our Symposium with two national studies of Lean transformation in the Veterans Health Administration. Dr. Marty Charns, Emeritus Professor at Boston University and Investigator at VA Boston Health Care System, will be joined by Dr. Caroline Gray, Investigator at the VA Palo Alto Health Care System. Dr. Charns and Dr. Gray will present a pair of research studies based on the VA's Lean Enterprise Transformation initiative. These studies reveal factors and organizational capabilities that enabled successful Lean implementation in VA medical facilities, including benefits and challenges of engaging patients in system-wide transformation.

Please join us in Atlanta or online to explore innovations in organizational learning, workforce capability development, and Lean deployment at scale.

Becoming a Learning Organization: The Role of Human Decision Intelligence

*Tomás Aragón, M.D., Dr.P.H., State Public Health Officer and Director
California Department of Public Health*

The COVID-19 pandemic underscored the critical role of public health in safeguarding communities. As we face increasing threats from communicable diseases, extreme weather events, behavioral health crises, and misinformation, it is imperative to strengthen and modernize our public health systems. The California Department of Public Health (CDPH) is taking proactive steps to address these challenges and ensure a resilient and effective public health infrastructure for the future.

Decision-making is your most important daily activity! A decision is a choice between two or more alternatives that involves an irrevocable allocation of resources. Decisions drive vision, strategy, policy, and change. Every decision has causal assumptions, predictions, trade-offs, and an opportunity cost—the lost benefit of the better option(s) not chosen or not considered. Human decision intelligence is applying ethics, science, and technology to support team and individual decisions to solve problems, improve, and innovate in the face of uncertainty, time constraints, and trade-offs.

This keynote presentation will explore CDPH's transformation into a modern public health system and how human decision intelligence can be applied to public health practice. By harnessing the power of human decision intelligence, we can enhance disease surveillance, optimize resource allocation, and develop targeted public health strategies to protect and improve community health.



Dr. Tomás Aragón has served as the Director of the California Department of Public Health and the State Public Health Officer since January 4, 2021. As CDPH Director who strives to embody and promote the universal values of dignity, equity, and compassion, he works through collaborative partnerships to mobilize communities and institutions to transform policies and systems towards a culture of equity, antiracism, healing and health for all people. As State Public Health Officer, he exercises leadership and legal authority to protect health and prevent disease.

Prior to coming to CDPH, he was the Health Officer for the City and County of San Francisco and Director of the Public Health division for 10 years. He has served in public health leadership roles for more than 20 years (communicable disease controller, deputy health officer, health officer, community health and chronic disease epidemiologist), including directing a public health emergency preparedness and response research and training center at the University of California, Berkeley School of Public Health. Dr. Aragón graduated from University of California, Berkeley (B.A., Molecular Biology; Dr.P.H., Epidemiology), Harvard Medical School (M.D.), Harvard School of Public Health (M.P.H.), and Stanford University (certification in Strategic Decision and Risk Management in Healthcare). He completed his clinical and research training at University of California, San Francisco (San Francisco General Hospital Primary Care Internal Medicine; Clinical Infectious Diseases; and Traineeship in AIDS Prevention Studies).

Multi-Organizational Process Redesign for Adapting Clinical Guidelines for the Digital Age

*Kevin Larsen, M.D., FACP, Senior Vice President, Clinical Innovation, Optum
Former Senior Health IT Advisor, Chief Technology Office, U.S. Dept. of Health & Human Services*

The need for a novel method to support complex, multidisciplinary processes led multiple U.S. federal agencies to adapt the traditional Kaizen to redesign health IT initiatives among participating organizations. First, the Centers for Medicare and Medicaid Services (CMS) and the Office of the National Coordinator for Health IT (ONC) adapted Kaizen to support federal agency processes for developing electronic clinical quality measures. Later, the Centers for Disease Control and Prevention (CDC) further modified this adapted Kaizen during its Adapting Clinical Guidelines for the Digital Age initiative. Each organization came with its own unique leadership and priorities. This presentation documents the successful adaptation of Kaizen by the federal government, with implications for future use with complex initiatives involving multiple stakeholders and health IT innovations.



Dr. Kevin Larsen is Senior Vice President of Clinical Innovation at Optum. He leads the clinical and informatics team in building and deploying provider enablement technologies, including clinical decision support integrated through electronic health records. He joined Optum from the U.S. Department of Health and Human Services (HHS), where he was Senior Health IT Advisor at the office of the Chief Technology Officer. Kevin established and led the Centers for Medicare and Medicaid Services strategic planning and transformation team where he convened stakeholders across CMS and its partners to develop strategies and execute enterprise program improvements. He also served at the Office of the National Coordinator for Health Information Technology as the Medical Director of Meaningful Use where he led ONC's work on quality policy, measurement and improvement, including clinical decision support and social determinants of health. Kevin was previously CMIO and Associate Medical Director of Hennepin Health System and is affiliated faculty at the University of Minnesota School of Medicine. He has worked in academic, hospital and government settings, focusing on innovation through data and analytics, research, policy, and developing and implementing novel programs at scale.

A Cross-Organizational Lean Deployment in an Italian Regional Healthcare System

*Olivia McDermott, M.Sc., M.B.A., D.Phil., Associate Professor
School of Biological & Chemical Science, University of Galway, Ireland*

This study is one of the largest cross-regional, multi-hospital case studies conducted to date and explores how Lean was deployed in several hospitals in the Apulia region in Italy over 3.5 years. The presentation will highlight three key elements of the implementation stages of Lean: introduction, spontaneous and informal dissemination, and strategic level implementation, and will discuss critical success and failure factors that emerged for each of these stages. Lean culture can spread to allow many projects to be conducted spontaneously, but the Lean paradigm can struggle to be adopted strategically. This research finds that Lean in healthcare can fail because of a lack of alignment with leadership in healthcare including their strategic vision, a lack of employees' project

management skills, and crucially, the absence of a Lean steering committee. The presentation will also describe how absences of managerial expertise and a will to support Lean implementation do not allow for systemic adoption of Lean.



Dr. Olivia McDermott is an Associate Professor at the University of Galway in Ireland in Operational Excellence. She manages a large team of industry-based researchers focused on Operational Excellence and Regulatory Affairs. She has published and co-authored over 120 peer-reviewed journal articles and conference papers. She has received several awards for her published work, and she is on the Editorial Advisory Board of the International Journal of Lean Six Sigma (IJLSS), as well as the Editorial Review Board of the TQM journal and the Technological Sustainability journal.

Post-Pandemic Response, Financial Performance, and Impact of Staff Shortages on Patient Care in U.S. Physician Practices

Dorothy Hung, Ph.D., M.A., M.P.H., Director, Center for Lean Engagement and Research (CLEAR), UC Berkeley
Thomas Rotter, Ph.D., CLEAR Scholar, Associate Professor, Queens University, Canada
Agustin Perez-Araos, Ph.D., M.S., CLEAR Scholar, Associate Professor, Monterrey Tech, Mexico
Catalina Quach, CLEAR Associate, Molecular & Cellular Biology and Public Health major, UC Berkeley

This study extends CLEAR research on the use of a Lean Daily Management System (DMS) for COVID-19 response and recovery, first published in the American College of Healthcare Executives (ACHE) *Journal of Healthcare Management*. In this presentation, we share new research based on a national sample of U.S. physician practices participating in the National Survey of Healthcare Organizations & Systems. We investigate relationships between pandemic-related outcomes and the use of an expanded set of Lean processes, including A3 thinking and problem solving, value stream mapping, huddles, DMS/standard work, and Kaizen improvement events. Based on multivariate analyses, we examine associations between Lean adoption and COVID-19 response, including participation in incident command systems, activities to address clinician burnout, and occurrence of staff layoffs or reduction in hours. We also identify Lean associations with post-pandemic financial performance and reported impacts of workforce shortages on patient care. Findings will underscore the vital role of Lean improvement practices in supporting emergency preparedness while mitigating future crisis events.



Dr. Dorothy Hung is Director of CLEAR in the School of Public Health at the University of California, Berkeley. For two decades, Dr. Hung's research has focused on system transformations to deliver high quality, high value U.S. health care. This includes a deep research portfolio on Lean performance improvement and its implementation, impact, scaling, and sustainment in acute care and ambulatory settings. Dr. Hung served as Principal Investigator of an R01 award, "Impact of LEAN Management on Primary Care Efficiency, Affordability, and the Patient Experience," funded by the Agency for Healthcare Research and Quality. She also led publicly and privately funded mixed methods evaluations of Lean workflow redesigns

for interdisciplinary teams in the ED, hospital inpatient and outpatient primary and specialty care clinics, and an AHRQ ACTION II (Accelerating Change and Transformation in Organizations and Networks) study of contextual factors impacting the spread of process improvements across a large ambulatory care system. Her recent work includes evaluation of a Lean-designed patient navigation program to support early cancer care, and exploration of Lean leader behaviors and practices to advance health equity. Dr. Hung earned a Ph.D. in Health Services & Policy Analysis and an M.A. in Political Science from UC Berkeley. She also holds a Master's degree in Public Health from the University of Minnesota and a Bachelor's degree from Stanford University.



Dr. Thomas Rotter is a CLEAR Visiting Scholar and currently works at the School of Nursing, Queen's University in Ontario, Canada. He mainly teaches in the Masters and Ph.D. Health Quality Programs. Dr. Rotter's research focuses on clinical pathways – interventions which are aimed at guiding evidence-based practice and improving the interactions among health services. He has worked on pathway projects in Canada and internationally as a way to standardize the care we provide for patients with cancer, pediatric asthma, gastroenteritis, heart failure, and chronic obstructive pulmonary disease (COPD). Other important areas of Dr. Rotter's research program are health quality improvement, patient safety, depression, and suicide prevention. He is currently working with colleagues from the European Alliance Against Depression (EAAD) on an implementation mapping study to increase the uptake and adherence to an internet-based depression self-management program, the iFightDepression[®]-tool.



Dr. Agustín Pérez Araos is an Industrial and Systems Engineer from Monterrey Tech in Mexico. He has a Master's Degree in Manufacturing Systems and a Ph.D. from the University of Manchester UK. Dr. Perez works in the Department of Industrial Engineering at Monterrey Tech Campus Guadalajara, and has taught different courses in the areas of Production Systems and Lean Manufacturing Processes. He carries out continuous improvement projects with the industrial sector in Jalisco, Mexico, focused on the implementation of Lean principles in sectors such as Healthcare, Electronics, Warehouses, Retailing, Beverage/Food production, and Mining. Dr. Perez has provided process improvement support to the Red Cross and Food Bank in Jalisco, and presented at the Healthcare Systems Process Improvement Conference: "Applying Lean Healthcare in Developing Countries. A success case in private hospitals in Mexico."



Catalina Quach is a third-year undergraduate student at the University of California, Berkeley studying Molecular & Cell Biology and Public Health. Her involvement as a volunteer with the American Red Cross and Kaiser Permanente during and after the pandemic exposed her to the inequitable realities of access to healthcare and disaster recovery resources, feeding her interest in studying how Lean implementation can dissolve such barriers in hospitals and outpatient clinics. Catalina is especially passionate about bridging healthcare gaps for immigrant and rural communities, and hopes to pursue a career as a physician assistant after graduation.

Lean Action Research & Learning: Capability Development for Continuous Improvement in Pediatric Care

The Lean Action Research Learning Collaborative (LARLC) is convened by CLEAR and supports learning through research and evaluation to advance strategic priorities in member organizations. An important objective of the LARLC is also to produce and share generalizable, actionable knowledge with the global Lean community to accelerate progress in the field. This year we feature Stanford Medicine Children's Health and its learning methods to develop workforce capabilities while facilitating scalable improvement in pediatric care.

Stanford Medicine Children's Health's (SMCH) Strategy for a Lean Transformation: The PQMS Capability Development Framework

Terry Platchek, M.D., Vice President, Associate Chief Quality Officer, SMCH; Clinical Professor, Pediatrics and Medicine; Executive Director, Stanford Medicine Center for Improvement

Sheri Nakamura, R.N., M.S.N., C.N.S., Capability Development Manager, SMCH

Rick Majzun, M.H.A., Executive Vice President and Chief Operating Officer, SMCH

In 2010, SMCH introduced the Packard Quality Management System (PQMS), a Lean-based management system, to increase the value provided to patients and families. PQMS encompasses how we do our work, improve our work, and develop each other in a culture of continuous improvement. To counteract the effects of attrition and top-down executive leadership, SMCH is developing improvement capabilities deeply and broadly. In 2017, SMCH introduced the PQMS Capability Development Framework (CDF) that outlines actions and knowledge to drive PQMS. Based on the Dreyfus model of skill acquisition, learners progress from Novice to Contributor to Champion via a 70/20/10 learning model for organizational development that incorporates learning on-the-job, through others, and formally. This presentation will describe 70/20/10 learning activities and results, with plans for future measurement focusing on engagement and behaviors.



Dr. Terry Platchek serves as the Executive Director of the Stanford Medicine Center for Improvement, in addition to his roles as Vice President for Performance Improvement and Associate Chief Quality Officer at SMCH and Clinical Professor of Pediatrics, Medicine, and Emergency Medicine at Stanford University. Dr. Platchek's career focuses on healthcare improvement with an emphasis on using Lean management to improve quality, safety, service, appropriateness and cost in healthcare delivery. He is co-author of the book *Advanced Lean in Healthcare* and is co-author to dozens of peer reviewed publications describing improvements in healthcare delivery and advocating for higher value models of care. Dr. Platchek has been active internationally in advocating for healthcare system improvement and promoting clinician engagement. He is a founder and co-convener of the Lean Healthcare Academic Conference, has advised health care systems across the US, Australia and the UK on value improvement, and helped found the Stanford Medicine Center for Improvement. Dr. Platchek holds degrees from Georgetown University and the University of Michigan. He completed his residency in Internal Medicine and Pediatrics at the University of Michigan, followed by a Chief Residency in the Department of Pediatrics and Communicable Diseases. He practices as a Pediatric Hospitalist at Stanford.



Sheri Nakamura, R.N., M.S.N., C.N.S., serves as Capability Development Manager for Stanford Medicine Children's Health's Lean management system. For more than 10 years she has been a dedicated Lean practitioner and coach committed to advancing SMCH along its continuous improvement journey. As Capability Development Manager she finds joy nurturing strong relationships and collaboratively developing strategies, programs, and learning experiences to advance improvement capabilities throughout the organization. Drawing from over 7 years of experience as a pediatric Registered Nurse and Clinical Nurse Specialist, Sheri deeply values the power of collaborative teamwork to create supportive environments that optimize patient- and family-centered care. This drives her passion for engaging and empowering team members in Lean mindset and methodologies to foster learning and growth that optimize the delivery of service and care provided for patients, families, and team members. As Capability Development Manager in the Performance Improvement Department, Sheri fosters critical thinking and problem-solving capabilities and champions the development of improvement management systems at all organizational levels. Committed to driving excellence in healthcare through continuous improvement, she aims to improve the quality, safety, service, and cost of healthcare delivery.



As Stanford Children's Health's Executive Vice President and Chief Operating Officer, Rick Majzun is responsible for providing executive leadership and direction of the operations of one of the nation's preeminent pediatric and maternal hospitals. He has more than two decades of leadership expertise in academic medical centers, with a focus in pediatrics and women's health. He also has extensive experience in strategic planning and operations, and a strong background in Lean management. He currently serves as an advisor to SteelSky Ventures, a venture capital firm focused on Women's Health with a concentration on the issues impacting women of color and InovCares, a technology startup focused on improving health care for women of color. Prior to joining Stanford Children's Health, Majzun served as president and chief operating officer for Women & Infants Hospital in Providence, Rhode Island; the vice president of operations at St. Louis Children's Hospital; and vice president of Women & Infants for Barnes Jewish Hospital and St. Louis Children's Hospital, and the vice president of strategic planning at BJC Healthcare. Majzun earned a Master's in Health Administration from Washington University and completed an Administrative Fellowship at Henry Ford Health System in Detroit, Michigan. He is an Army veteran and served as a 2011 Eisenhower Fellow.

Lean Enterprise Transformation: Lessons from the Veterans Health Administration (VA)

Achieving Transformation to Lean Management Systems

Marty Charns, D.B.A., M.B.A., Professor, Health Policy and Management, School of Public Health, Boston University; Investigator, Center for Healthcare Organization and Implementation Research, VA Boston Health Care System

This multisite evaluation develops a novel measure of the extent of organization-wide Lean transformation in the VA. Using multivariate coincidence analysis (CNA) to identify key enablers, this presentation will provide insights into why and how some organizations are more successful at transformation than others. Our observational study is based on interview data with leaders and staff at medical centers participating in an enterprise-wide Lean deployment across the VA. For each site we coded and rated seven potential enablers of transformation. The outcome measure was the extent of Lean transformation, constructed by coding and rating 11 markers of depth and spread of organizational change. Findings will highlight the roles of executive leadership and capability development in enabling transformation. Other key findings include the presence of high Veteran patient engagement in sites with high leadership support.



Dr. Charns is Emeritus Professor of Health Policy and Management and Director Emeritus of the VA Center for Healthcare Organization and Implementation Research (CHOIR), a VA Health Services Research and Development center of innovation. He has also served as Acting Director of VA National Health Services Research and Development. His research interests include organization design and transformation, implementation of evidence-based practices, coordination of care, quality improvement, systems redesign and service line management. He has coauthored three books as well as numerous articles, book chapters, and over 60 case studies on organization design and change. Dr. Charns has more than 40 years of consulting experience in health care organization and management, specializing in work with hospitals and health care networks. In addition to Boston University, he has held a faculty position at Carnegie-Mellon University. He has an MBA and DBA from Harvard Business School.

Engaging Patients in the VA's Lean Enterprise Transformation: A Qualitative Study

*Caroline Gray, Ph.D., M.A., Investigator, Center for Innovation to Implementation,
VA Palo Alto Health Care System*

This study focuses on the incorporation of patient engagement strategies into the VA's Lean Enterprise Transformation initiative. Findings are based on a multisite, mixed methods evaluation of Lean deployment at VA medical facilities. The research team conducted semi-structured interviews with stakeholders, including Veterans as patients. Findings show several benefits of a patient-engaged Lean approach that are described as mutually beneficial to both patients and healthcare employees. There are also several reported challenges of engaging patient stakeholders in Lean activities. As the first study to focus on patient engagement in Lean transformation efforts at the VA, this research highlights ways to effectively partner with patients' stakeholders in Lean-based improvement efforts. Lessons learned may also inform optimizations of patient input in quality improvement initiatives more broadly.



Dr. Gray is an investigator and the qualitative lead methodologist at the Center for Innovation to Implementation, part of the VA Palo Alto Healthcare System. She received her PhD in Sociology from Yale University, an MA in Sociology from UCLA, and a BA in Sociology and Gender and Women's Studies from UC Davis. Dr. Gray has a specific interest in how social, organizational, and technological changes impact the practice of medicine and the delivery of care. This includes the examination of telehealth technologies as well as change management strategies, such as Lean healthcare. In addition, she is interested in understanding experiences of care among people with disabilities and ensuring the delivery of equitable and satisfactory care for them and other vulnerable populations.