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BRIEF REPORT

Learning Health Systems

2023 Inaugural Healthcare Delivery Science: Innovation and Partnerships for Health Equity Research (DESCIPHER) Symposium

Allison Z. Orechwa[1,2] | Anshu Abhat[3,4] | Lilyana Amezcua[5] | Bernadette Boden-Albala[6] | Thomas A. Buchanan[2,5] | Steve Chen[7] | Lauren P. Daskivich[3,8,9] | Brett Feldman[5] | Michael K. Gould[10] | Wei-an Lee[3,5] | Christopher Lynch[3] | Carolyn C. Meltzer[5] | Brian S. Mittman[11,12,13] | Margarita Pereyda[3] | Evan Raff[3,4] | Jehni Robinson[5] | Sonali Saluja[14] | Barbara J. Turner[5] | Breena R. Taira[3,4] | Rebecca Trotzky-Sirr[3,5] | Linda Williams[15,16,17,18] | Shinyi Wu[12,17] | Hal Yee Jr.[3] | Amytis Towfighi[1,2,3,5]

[1]Southern California Healthcare Delivery Science Center, Los Angeles, California, USA

[2]Southern California Clinical and Translational Science Institute, Los Angeles, California, USA

[3]Los Angeles County Department of Health Services, Los Angeles, California, USA

[4]Departments of Medicine, Radiological Sciences, and Emergency Medicine, University of California Los Angeles David Geffen School of Medicine, Los Angeles, California, USA

[5]Departments of Neurology, Medicine, Family Medicine, Radiology, Psychiatry and The Behavioral Sciences, University of Southern California Keck School of Medicine, Los Angeles, California, USA

[6]Program in Public Health, University of California Irvine Susan & Henry Samueli College of Health Sciences, Irvine, California, USA

[7]Titus Family Department of Clinical Pharmacy, University of Southern California Alfred E. Mann School of Pharmacy and Pharmaceutical Sciences, Los Angeles, California, USA

[8]College of Medicine, Charles R. Drew University of Medicine and Science, Los Angeles, California, USA

[9]USC/Roski Eye Institute, Los Angeles, California, USA

[10]Department of Health Systems Science, Kaiser Permanente Bernard J. Tyson School of Medicine, Pasadena, California, USA

[11]Division of Health Services Research and Implementation Science, Kaiser Permanente Southern California Department of Research and Evaluation, Pasadena, California, USA

[12]Department of Adult Mental Health and Wellness, University of Southern California Suzanne Dworak-Peck School of Social Work, Los Angeles, California, USA

[13]University of California Los Angeles Clinical and Translational Science Institute, Los Angeles, California, USA

[14]Healthcare in Action, Long Beach, California, USA

[15]Department of Neurology, Indiana University School of Medicine, Indianapolis, Indiana, USA

[16]VA Center for Health Information and Communication, Indianapolis, Indiana, USA

[17]Daniel J Epstein Department of Industrial and Systems Engineering, University of Southern California Viterbi School of Engineering, Los Angeles, California, USA

[18]Center for Health Services Research, Regenstrief Institute, Inc, Indianapolis, Indiana, USA

Correspondence
Amytis Towfighi, Southern California Healthcare Delivery Science Center, Keck School of Medicine of USC, 1540 Alcazar Street, Suite 209, Los Angeles,

Abstract

Introduction: This article provides an overview of presentations and discussions from the inaugural Healthcare Delivery Science: Innovation and Partnerships for Health Equity Research (DESCIPHER) Symposium.

CA 90089-0080, USA.
Email: hds@usc.edu

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Methods: The symposium brought together esteemed experts from various disciplines to explore models for translating evidence-based interventions into practice.
Results: The symposium highlighted the importance of disruptive innovation in healthcare, the need for multi-stakeholder engagement, and the significance of family and community involvement in healthcare interventions.
Conclusions: The article concluded with a call to action for advancing healthcare delivery science to achieve health equity.

KEYWORDS
disruptive innovation, evidence-based interventions, health equity, healthcare delivery science, multi-stakeholder engagement

1 | INTRODUCTION

In the ever-evolving landscape of healthcare, the pursuit of improved healthcare delivery remains a constant challenge. In this report, we summarize the proceedings of a symposium held on June 29, 2023, which brought together visionary leaders and experts in the field of healthcare delivery science (HDS). The speakers shared their insights, experiences, and aspirations for a healthcare system that is more accessible, of higher quality, and more equitable. The audience included community members, patients, students from a broad range of disciplines, quality improvement experts, academicians, HDS researchers, public health experts, and healthcare system leaders. The complete agenda in shown in Figure 1.

2 | WELCOME REMARKS

The symposium commenced with welcome remarks from Amytis Towfighi, the Founding Director of the Southern California HDS Center, and Allison Orechwa, the Managing Director. They emphasized that the center is a partnership committed to collaboratively developing, implementing, and evaluating innovative interventions that enhance access, quality, and outcomes within healthcare. The center engages key stakeholders (including patients, frontline staff, operational leaders, and academicians) to identify healthcare system gaps; set priorities, develop, test, and disseminate effective interventions; train research teams; and foster collaborations. Through collective efforts, the center aims to drive meaningful change and ensure the delivery of high-quality care to all (Figure 1).

Carolyn C. Meltzer, Dean of the Keck School of Medicine of USC, emphasized the importance of shared responsibility among stakeholders in overcoming barriers to achieve optimal healthcare outcomes. She remarked on the collaborative nature of healthcare delivery and the need for diverse stakeholders to work together toward a common goal.

Delving into the importance of collaborations, Thomas A. Buchanan, Vice Dean for Research at Keck School of Medicine of USC, and Director of the Southern California Clinical and Translational Science Institute, reflected on partnering with the Los Angeles County Department of Health Services (DHS), one of the largest public healthcare systems in the United States, with the most diverse population. He underscored the transformative power of even modest investments in revolutionizing healthcare practices.

Hal Yee, Jr., the Chief Deputy Director of Clinical Affairs at the Los Angeles County DHS, delivered the keynote address, "Disruptive Innovation in Healthcare Delivery: A How-to Guide." Yee explained that disruptive innovation occurs when innovative solutions expand the market to previously ignored populations and subsequently become mainstream. Yee provided the example of electronic consultations between primary and specialty providers, a solution he designed that has now permeated into mainstream healthcare.

3 | PATIENT PANEL

The next session focused on hearing patients' voices. First, a video, "Health Equity in Cardiovascular Disease," produced by Everyone Can Eat Productions, featured the stories of four individuals with prior stroke. These individuals described the challenges they faced in receiving healthcare. A patient panel then followed, providing the audience with insight into patients' experiences and challenges, including lack of language and culturally concordant care, difficulty with healthcare access, and adverse social determinants of health (SDOH).

4 | LECTURES AND BREAKOUT SESSIONS

The symposium was structured around four themes: (1) models for translating evidence-based interventions into practice; (2) multi-stakeholder engagement and the collaborative approach of team science; (3) the impact of SDOH; and (4) disruptive innovations aimed at enhancing healthcare. These sessions served as platforms for valuable in-depth discussions, highlighting the collective expertise of the participants and their commitment to driving positive change within the healthcare industry.

5 | SESSION 1: MODELS FOR TRANSLATING EVIDENCE-BASED INTERVENTIONS INTO PRACTICE

Michael Gould and Linda Williams shared insights on embedded research within Learning Healthcare Systems (LHS) as a model for implementing evidence-based interventions.

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Innovation and Partnerships for Health Equity Research

2023 DESCIPHER Symposium Agenda

Time	Session	Speakers
7:30am	***Registration & Breakfast***	--
8:15am	**Welcome & Opening Remarks**	Amytis Towfighi, MD; Allison Orechwa, PhD, MBA; Carolyn Meltzer, MD; Thomas Buchanan, MD
8:40am	**Keynote Address**	Hal Yee, Jr., MD, PhD
8:58am	**Health Equity Video & Patient Panel**	Patients
9:30am	**Session 1: Models for Translating Evidence-based Interventions into Practice** *Moderators: Anshu Abhat, MD, MPH & Amytis Towfighi, MD*	
	Embedded Research in the Learning Healthcare System at Kaiser Permanente: The Care Improvement Research Team	Michael Gould, MD, MS
	Expanding Expertise Through E-health Network Development (EXTEND) QUERI Program	Linda Williams, MD
10:30am	**Session 2: Multi-Stakeholder Engagement and Team Science** *Moderators: Barbara Turner, MD, MSED, MA, MACP & Allison Orechwa, PhD, MBA*	
	Community and Family Engagement in Healthcare Interventions	Bernadette Boden-Albala, MPH, DrPH
	Healthcare in the Juvenile Justice System	Margarita Pereyda, MD
	Cancer Navigation	Wei-an (Andy) Lee, DO
	Health Systems Engineering to Address Health Equity	Shinyi Wu, PhD
11:30am	***Lunch***	
12:30pm	**Session 3: Social Determinants of Health and Health Equity** *Moderators: Jehni Robinson, MD & Sonali Saluja, MD, MPH*	
	Social Care Integration	Breena Taira, MD, MPH
	Community Health Equity Solutions	Lilyana Amezcua, MD, MS
	Street Medicine	Brett Feldman, MSPAS, PA-C
	Substance Use Disorders Interventions	Rebecca Trotzky- Sirr, MD
1:30pm	**Session 4: Disruptive Innovations to Enhance Healthcare** *Moderators: Evan Raff, MD, MHA & Brian Mittman, PhD*	
	Teleretinal Screening	Lauren Daskivich, MD, MSHS
	Safer at Home	Christopher Lynch, MD
	California Right Meds Collaborative	Steve Chen, PharmD
2:35pm	**Breakout Meetings** Models for Translating Evidence-based Interventions into Practice Multi-stakeholder Engagement and Team Science Social Determinants of Health and Health Equity Disruptive Innovations to Enhance Healthcare	
3:50pm	***Wrap-Up, Networking & Refreshments***	

FIGURE 1 Symposium agenda.

Gould introduced the concept of the LHS, which utilizes data from within and outside the healthcare system to generate evidence and drive transformative healthcare practices. Gould's presentation described the embedded research at Kaiser Permanente Southern California (KPSC). KPSC has established a robust health system-based and inwardly focused ecosystem, which generates locally relevant knowledge while contributing to the public domain. KPSC's comprehensive electronic medical record system serves as a valuable resource for embedded research, utilizing real-world data.

Linda Williams, the Co-PI of the Veterans Affairs EXTEND Quality Enhancement Research Initiative (QUERI), described how collaboration between operational, clinical, and research leadership could be leveraged to improve healthcare systems. With a history of over 25 years, the QUERI Program has funded various centers dedicated to generating scientific evidence and implementing evidence-based practices. Williams' discussion shed light on the program's achievements and the importance of integrating research and practice to drive meaningful advancements in healthcare delivery.

The breakout session fostered a vibrant discussion, exploring the essence of being an LHS and the challenges associated with implementing changes and disseminating knowledge on a larger scale. The

significance of infrastructure, particularly data and electronic health record systems, emerged as a crucial enabler for LHS.

The breakout session identified key action items to advance the field: investing in implementation science researchers, facilitating access to data for innovative use, and fostering communication and collaboration among individuals with diverse perspectives.

6 | SESSION 2: MULTI-STAKEHOLDER ENGAGEMENT AND TEAM SCIENCE

The session highlighted the critical role of involving diverse stakeholders, such as families, communities, and complex healthcare systems, in promoting positive health outcomes and advancing health equity.

The first speaker, Bernadette Boden-Albala, shed light on the evolving perspectives regarding optimizing behavior change to promote health equity. Social networks were discussed as complex structures, which can influence positive or negative health outcomes. The evidence emphasized the significance of social networks and support, such as the impact of obesity prevalence among mutual friends and the correlation between the number of friends and stroke survival rates.

The next speaker, Margarita Pereyda, addressed healthcare in the juvenile justice system, where prioritizing family and community support are alternatives to incarceration for justice-involved youth. The discussion revolved around evaluation and improvement efforts, particularly in specialized and high-risk populations, such as foster care youth. The critical role of re-entry programs and the need to connect high-risk youth to specialty care were underscored, highlighting the considerable resources and strategic planning required for their success.

Wei-An (Andy) Lee's presentation on cancer navigation in the Los Angeles County DHS system shed light on the significance of engaging stakeholders in system redesign, particularly in settings with limited resources, to ensure equitable and consistent care delivery. Establishing a robust infrastructure and metrics to monitor program effectiveness were identified as crucial steps. Challenges associated with implementing the cancer navigation model across diverse facilities were acknowledged, as variations in processes and stakeholders were encountered. The vital role of stakeholders, including medical case workers and various specialists, in providing comprehensive care was emphasized.

The session concluded with Shinyi Wu, a dedicated systems engineer with a focus on underserved communities, sharing her insights on applying engineering principles and methodologies to address challenges within large-scale healthcare systems. She emphasized the importance of designing systems that effectively integrate and embed stakeholder needs and constraints, highlighting their vital role in achieving equitable and efficient healthcare outcomes.

Overall, the breakout session underscored the importance of inclusive stakeholder engagement (including patients, advisory councils, community-based organizations, foundations, frontline staff, and health system leaders) and explored strategies to foster meaningful patient involvement in shaping healthcare practices and policies. Action items included addressing ethical considerations when engaging vulnerable populations in research and innovation, exploring opportunities to innovate patient engagement through technology and design firms, establishing partnerships with technology companies, and creating safe spaces for testing ideas in collaboration with patients.

7 | SESSION 3: SDOH AND HEALTH EQUITY

The third session explored various initiatives and projects aimed at addressing the impact of social risk factors on health outcomes.

Breena Taira presented the Los Angeles County DHS SDOH Integration Project. The project highlighted the importance of aligning social care with the organizational mission, addressing the complexity of patient disclosure and provider roles in meeting those needs, and the need to incorporate social care into healthcare mandates and ensure that patients' needs are met beyond regulatory requirements. This research underscored the significance of integrating SDOH screening and programs into healthcare practices to improve patient outcomes.

Lilyana Amezcua presented the Community Health Equity Solutions collaborative at USC, highlighting the significance of fostering interdisciplinary collaboration and partnerships with communities. The collaborative emphasizes the importance of translating scientific knowledge into tangible change by bridging the gap between academic researchers and communities, thereby promoting health equity and addressing disparities in healthcare access and outcomes.

Brett Feldman's presentation on Street Medicine described compassionate care to unhoused individuals in their space, to promote health equity. This approach involves providing medical care directly to unsheltered homeless individuals, addressing their health and environmental challenges. Street Medicine not only plays a crucial role in addressing the health needs of this vulnerable population but also contributes to public health efforts, including managing outbreaks.

Rebecca Trotzky-Sirr discussed interventions for individuals with substance use disorders. She focused on the complexities of addressing addiction's underlying issues and emphasized the significance of community engagement and effectively disseminating information as essential components in tackling substance use disorders. She called for comprehensive approaches to address the broader social and psychological aspects of substance use disorders.

During the breakout session, participants discussed partnering with different sectors to address SDOH, the associated challenges, and the definition of healthcare access. Three key themes emerged from the discussions: the importance of sustainable funding for social determinant initiatives, building trust and actively listening to communities, and enhancing awareness and data sharing among organizations working on social determinants. Action items included: gaining a

deeper understanding of community-based resources, providing appropriate compensation, leveraging policy to drive transformative change, and sharing data with policymakers to advocate for specific improvements. It was acknowledged that mandates and comprehensive social data collection would play a crucial role in catalyzing positive transformations, ensuring equitable access to healthcare, and addressing SDOH.

8 | SESSION 4: DISRUPTIVE INNOVATIONS TO ENHANCE HEALTHCARE

The fourth and final session of the symposium explored disruptive innovations aimed at enhancing healthcare delivery. Lauren Daskivich presented a primary care-based teleretinal diabetic retinopathy screening program in the Los Angeles County safety net system. The program aimed to improve screening access by integrating diabetic retinopathy screening into the primary care medical home. Daskivich discussed implementation barriers such as cultural change, logistical considerations, and integrating telemedicine technology with existing healthcare infrastructure. The program yielded numerous benefits, including improved screening rates, decreased wait times, early disease detection, optimized resource utilization, and cost avoidance.

Christopher Lynch presented the Safer at Home program, which aims to extend care into communities, establish a standardized and protocolized approach to out-of-hospital care, and ensure patient safety and satisfaction. The program, an expansion of the COVID-19 home oxygen program, involves a team of nurses and doctors delivering concierge care to patients, including daily phone visits until no longer necessary. The program focuses on preventing hospitalization, minimizing hospital stays, improving patient outcomes, and reducing healthcare expenses.

The last speaker of the session, Steven Chen, presented the California Right Meds Collaborative, where pharmacists provide comprehensive medication management in a pay-for-performance model. This approach encompasses appropriate prescribing, dose optimization, ensuring safety with other medications, affordability, and patient education. He highlighted the vital role of pharmacists in medication management due to their frequent face-to-face interactions with patients and expertise in addressing adherence and literacy issues. The collaborative network of trained pharmacists leverages their accessibility and cultural alignment within society to provide these services.

In the breakout session, participants discussed the key elements necessary for successful healthcare innovation. The consensus highlighted the importance of prioritizing patient needs as the cornerstone of innovation. Investing time in understanding the process, assembling a diverse team with the right mix of capabilities, identifying institutional support, and embracing flexibility and iterations are critical factors for achieving success. Furthermore, the session acknowledged the vital role of the team in safeguarding the project from failure and burnout.

9 | CONCLUSION

In conclusion, the inaugural DESCIPHER Symposium provided valuable insights into promoting health equity through disruptive innovation, evidence-based interventions, and multi-stakeholder engagement. Key takeaways included the importance of collaboration, family and community involvement, and the need to address SDOH. The symposium's collective efforts highlighted a clear call to action for advancing HDS toward achieving health equity.

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CONFLICT OF INTEREST STATEMENT

The authors declare that they have no conflicts of interest.

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