

Call to Make Equity Actionable in Frontline Practice in Learning Health Systems Using Implementation Science



Michelle S Wong, PhD¹, Jennifer L. Bryan, PhD^{2,3,4}, Evelyn T. Chang, MD, MSHS^{1,5}, Mackenzie L. Shanahan, PhD^{2,3,4}, Donna L. Washington, MD, MPH, FACP^{1,5}, and Derrecka Boykin, PhD^{2,3,4}

¹HSR Center for the Study of Healthcare Innovation, Implementation & Policy (CSHIIIP), VA Greater Los Angeles Healthcare System, Los Angeles, CA, USA; ²Center for Innovation in Quality, Effectiveness and Safety, Michael E. DeBakey VA Medical Center, Houston, TX, USA; ³VISN 16 South Central Mental Illness Research, Education, and Clinical Center, Michael E. DeBakey VA Medical Center, Houston, TX, USA; ⁴Menninger Department of Psychiatry and Behavioral Sciences, Baylor College of Medicine, Houston, TX, USA; ⁵Division of General Internal Medicine and Health Services Research, Department of Medicine, David Geffen School of Medicine, University of California Los Angeles, Los Angeles, CA, USA

ABSTRACT

Advancing health equity is the fifth and newest addition to the Quintuple Aims guiding learning health systems (LHS). A promising way to achieve this goal is by applying an equity lens to implementation science—a foundational LHS method. Despite a recent proliferation of equity-focused implementation theories, models, and frameworks, there is a dearth of guidance on practical applications of equity-focused implementation science in frontline practice. This perspectives article provides recommendations on actionable steps to build broader capacity for health equity in front-line clinical practice using implementation science. It presents two quality improvement projects within the Veterans Health Administration, a national LHS. The first project incorporated a health equity adaptation to Evidence-Based Quality Improvement, an implementation strategy fostering multi-level, inter-professional engagement. This adapted method was applied to implement evidence-based practices into primary care to manage Veterans at high risk for hospitalization. The second project leveraged clinical operations partnerships and an equity-focused implementation framework to improve equitable delivery of a skills-based psychotherapy group for Veterans with a history of any sexual violence in their lifetimes. The article concludes with recommendations as to how researchers can structure their intervention programs and implementation strategies to prioritize equity at the frontlines of care in LHS.

KEY WORDS: veteran health affairs; health equity; implementation science; learning health systems

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INTRODUCTION

Learning health systems (LHS) leverage continuous improvement and innovation to deliver high-quality, safe care to patients. However, LHS can inadvertently exacerbate disparities if underserved patient groups (e.g., rural-residing, older, or racial and ethnic minoritized patients) are less likely to access or benefit from innovations/improvements compared to other groups.^{1,2} Applying an equity lens to implementation science, a foundational LHS method,³ is a promising way to advance health equity^{4–11}—the newest addition to the Quintuple Aim model guiding LHS.¹²

Explicit attention to equity in implementation science has been accompanied by a proliferation of equity-focused implementation theories, models, and frameworks (TMFs).^{13–16} These TMFs are largely theoretical as they either have not been operationalized yet or were operationalized in a limited context.¹³ While they provide valuable theoretical foundation to advance equitable implementation (such as identifying contextual factors that drive health disparities), LHS need more practical guidance and examples on how to apply these TMFs in clinical settings.

This perspective's article provides two real-world examples describing processes for integrating an equity-focused TMF into frontline practice. These examples come from the Veterans Health Administration (VHA), a national LHS leader with health services researchers embedded within its integrated healthcare system. Both projects were informed by the Health Equity Implementation Framework (HEIF).¹⁴ This framework provides three broad domains known to affect equity: culturally relevant factors, clinical encounters/patient-provider interactions, and societal context (Fig. 1).¹⁴ The HEIF is applicable to diverse settings because it can be applied to existing implementation TMFs.¹⁷ This article concludes with practical recommendations for embedded researchers, leaders, and frontline clinicians within LHS on ways to incorporate equity considerations into the design and implementation of evidence-based practices (EBPs). Local VHA Research and Development Offices designated both projects as quality improvement (QI), and thus exempt from Institutional Review Board oversight.

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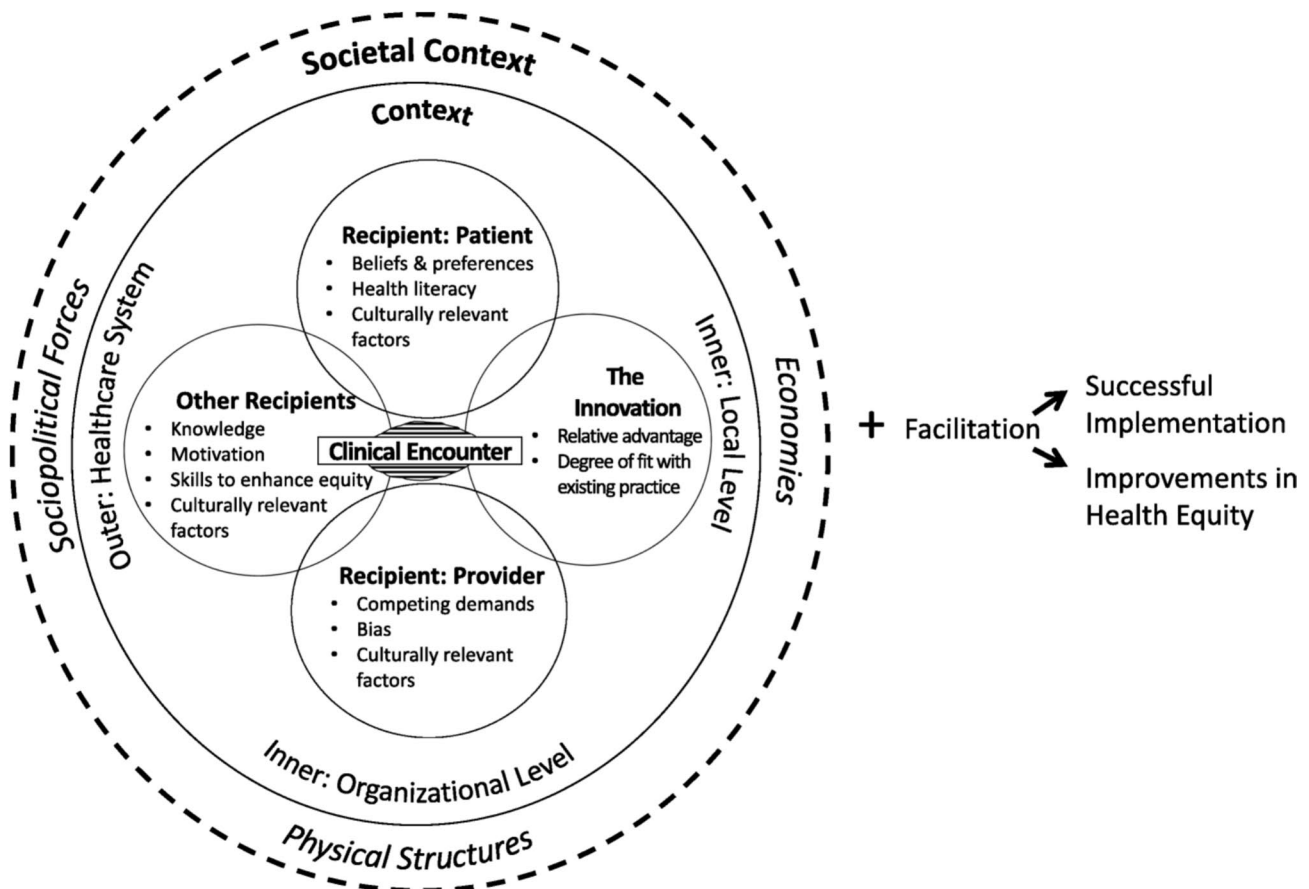


Figure 1 Health Equity Implementation Framework and description of domains known to affect health disparities. Framework image reproduced from Woodward et al. (2021),¹⁴ which is licensed under a Creative Commons Attribution 4.0 International License: <http://creativecommons.org/licenses/by/4.0/>.

Case Example #1: Improving Care for High-Risk VETERans in Primary Care (RIVET initiative)

The RIVET initiative compared two variants of the Evidence-Based Quality Improvement (EBQI) strategy to implement EBPs to manage patients at highest risk for hospitalization (hereafter, “high-risk patients”) in primary care settings.¹⁸ High-risk patients included Veterans from underserved groups disproportionately affected by disparities (e.g., older, unhoused).^{8,19–21} RIVET’s EBPs were the Comprehensive Assessment and Care Planning and the Medication Adherence Assessment. These EBPs help primary care teams address modifiable risk factors for high-risk patients^{22–24} that align with social determinants of health experienced by underserved patient populations, e.g., housing insecurity.^{19,20} They can also strengthen care coordination and patient-centeredness to increase patient trust with clinicians.¹⁸ Both EBQI strategy variants used in RIVET provided QI training and practice facilitation to front-line clinical champions from primary care teams, through either individually tailored sessions or group learning environments.¹⁸ This project was funded by VHA’s Quality Enhancement Research Initiative, a crucial component of VHA’s LHS that

supports partnerships among leadership, researchers, clinicians, and Veterans.²⁵

Recognizing the potential of these EBPs to improve equity, the RIVET team incorporated equity into implementation through several avenues:

1. **Equity-informed logic model:** Through an iterative process, the RIVET team applied the HEIF¹⁴ to the project’s overall guiding logic model to identify additional equity-related determinants such as social worker involvement with primary care and travel distance to VA (Fig. 2). This revised logic model informed equity-related data collection and analyses, e.g., collecting patient-reported trust in providers and assessing variation in implementation outcomes by patient characteristics.
2. **Engagement of relevant parties:** The RIVET team harnessed local-level knowledge from frontline primary care clinical champions to identify underserved patient groups within their high-risk population. Clinical champions, with RIVET team support, developed implementation plans to improve EBP access to these underserved high-risk patient groups. For example, several champions accounted for access barriers with rural-residing

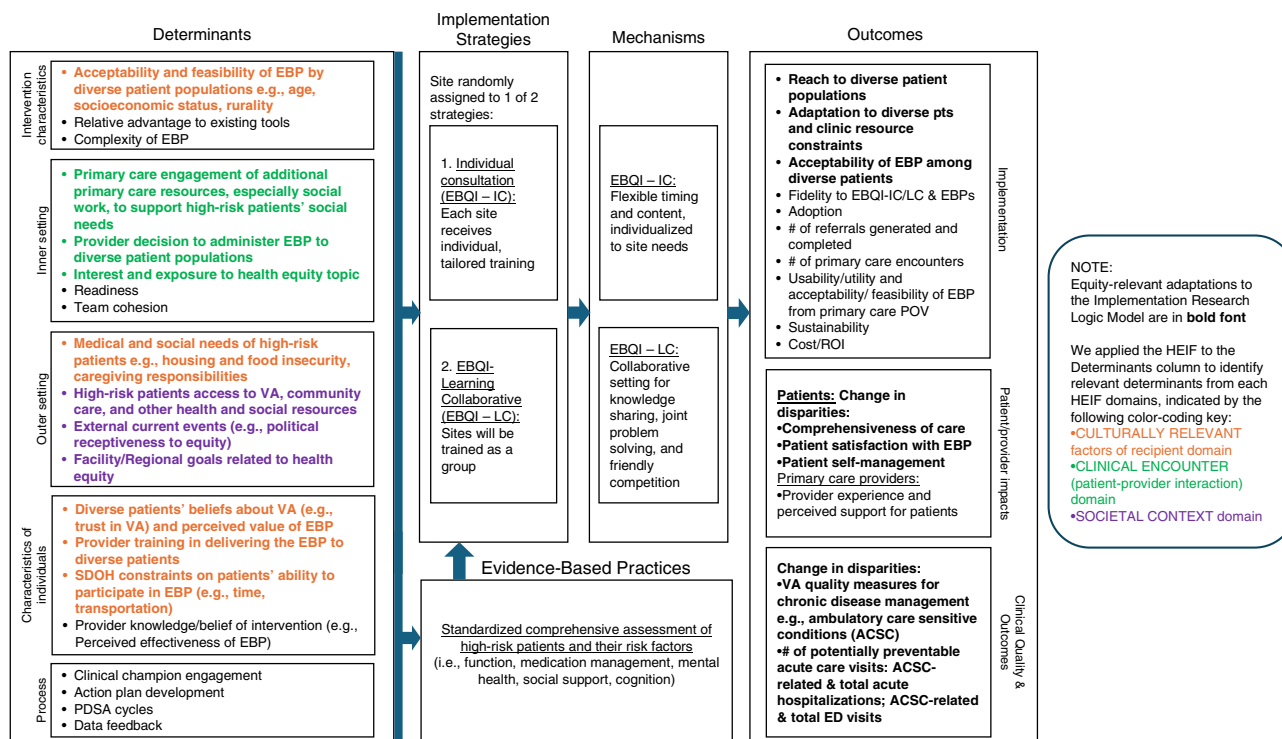


Figure 2 RIVET Implementation Research Logic Model²⁶ adapted based on the Health Equity Implementation Framework (HEIF). EBP, evidence-based practice; PDSA, plan-do-study-act; EBQI, evidence-based quality improvement; IC, individual consultation; LC, learning collaborative; POV, point of view; ROI, return on investment; ACSC, ambulatory care sensitive condition; ED, emergency department.

high-risk patients by delivering EBPs through multiple modalities, including telehealth. The RIVET team also used this information to identify groups to monitor for disparities in their project evaluation.

- Equity-focused adaptation to implementation strategy:** The RIVET team adapted both EBQI strategy variants to include a health equity training module as part of the QI facilitation to clinical champions. The training covered the importance of considering equity in QI and RIVET, and provided practical steps for incorporating equity into RIVET (and future QI projects). These steps, which can be flexibly applied to various improvement efforts, include developing equity-focused implementation goals, collecting data to monitor disparities in implementation measures, and examining implementation plans and clinical workflows for opportunities to improve equity.

This case example spotlighted a bi-directional partnership between embedded LHS researchers and frontline primary care clinical champions to develop capacity for equity-focused implementation. This partnership allowed the integration of clinical expertise with technical knowledge that informed adaptations to established implementation strategies. The adapted strategy also presented an opportunity for researchers to educate frontline providers on the importance of integrating health equity into implementation.

Case Example #2: Courage Group Clinical Program

Courage Group is a skills-based psychotherapy group for Veterans with a history of sexual violence. In 2020, leaders from VHA's National Intimate Partner Violence Assistance Program identified Courage Group as a promising practice to support a congressionally mandated pilot project to expand benefits for Veterans who have experienced intimate partner violence and/or sexual violence outside military service. An additional stated goal of the congressional pilot was to address the needs of underserved Veteran populations.²⁷ As directed by VHA operational partners, program evaluation for Courage Group measured feasibility, effectiveness, and equity outcomes with an emphasis on disparities related to sex, race, ethnicity, and rurality. Male survivors of sexual violence are often overlooked and receive insufficient recognition.^{28,29} Racial and ethnic minoritized Veterans experience sexual violence at high rate^{30–32} and, along with rural Veterans, encounter more difficulties to accessing needed care and engaging in treatment.^{33–36}

Partnering with VHA operational leaders afforded the Courage Group team an opportunity to make programmatic changes to promote equitable delivery:

- Partnered program evaluation:** The Courage Group team leveraged its knowledge in implementation science with VHA operations leaders' expertise in organi-

zational structure and legislative priorities to create an equity-focused evaluation plan. The goal of the mixed methods program evaluation was to identify and develop a plan to address equity concerns related to treatment delivery. The evaluation integrated the HEIF¹⁴ with the Reach, Effectiveness, Adoption, Implementation, Maintenance framework^{37,38} to understand potential drivers of inequities in delivery and implementation outcomes. Five important drivers of inequities were identified: (1) group structure/dynamics (e.g., mixed vs. single sex), (2) clinicians' implicit biases about sexual violence survivors, (3) treatment environment (e.g., virtual vs. in-person), (4) clinic location (e.g., Women's Health Clinic, Specialty Mental Health Clinic), and (5) limited sensitivity to cultural differences in trauma experiences.

2. **Intervention adaptations:** Informed by evaluation results, two major changes were made to the clinician manual to incorporate equity considerations. First, information on best practices for determining how to compose groups (e.g., single vs. mixed sex) was added. Second, to address implicit biases toward stigmatized groups (e.g., males), educational components were broadened to include more information about different forms of sexual violence (e.g., childhood sexual abuse, sexual assault, or harassment) and their effects.
3. **Equity-informed refinement to implementation plan:** Modifications to the Courage Group implementation plan included the development of practical strategies and resources to assist frontline clinicians with achieving equitable delivery. The existing implementation plan included expert-led training and consultation sessions with other tools to support delivery (e.g., electronic templated notes). Similar to the clinician manual, experiential activities were added to the training curriculum to facilitate understanding of how different forms of sexual violence impacted mental and social functioning. A supplemental administrative guide was created to help clinicians make informed decisions about how to structure groups to make them feel safe, inclusive, and welcoming to Veterans. Finally, among tools developed to support delivery, the electronic templated notes were revised to allow better evaluation of who is and is not participating or benefiting from the treatment.

This case example illustrates use of an operations-research partnership to enhance delivery of Courage Group to underserved Veterans. Meaningful engagement of relevant communities in the research process is highly recommended for addressing health inequities.⁴ Notably, the emphasis on partnered research in LHS makes it an ideal environment to advance equity-focused initiatives.³

KEY RECOMMENDATIONS AND DISCUSSION

These case examples illustrate how to make equity considerations a core component of intervention and implementation efforts. From these case examples, we offer the following practical recommendations that LHS can use to ensure equitable access to and benefit from EBPs for underserved patient populations. We also note some anticipated challenges that can impeded equity-focused efforts.

Recommendation 1: Engage Relevant Parties Within LHS, partnered engagement is essential for aligning improvement efforts with organizational aims (e.g., equity).³ Embedded researchers may engage with various groups based on their professional expertise (e.g., front-line clinicians), responsibilities within an organization (e.g., LHS leadership), and/or lived experiences (e.g., patients, caregivers). Engaging these groups at various project stages can enhance equity goals.³⁹ For example, the RIVET team collaborated with primary care clinical champions who provided crucial insight into which patient groups experience disparities, where implementation barriers existed, and what processes needed improvements. Meaningful engagement may include regular meetings, emails/messaging, and expert panels, which provide ongoing opportunities to receive feedback, share timely updates, address emergent challenges, and build trust, as well as appropriate compensation to non-research partners for their knowledge and time.^{40–42}

Recommendation 2: Identify Drivers of Inequity Capturing relevant, timely data is central to the infrastructure and success of LHS.³ Both case examples took a theory-driven approach to develop equity-focused data collection and analytic plans that were iteratively refined with input from key clinical and operations partners. When feasible, patients and other community members should be engaged in LHS initiatives. The HEIF is among several equity-focused implementation TMFs that can be used to guide data collection. Guided by the HEIF domains, Courage Group's evaluation used a mixed-methods approach to evaluate the clinical impact and potential disparities related to intervention delivery with patient medical records and clinician interviews.

Recommendation 3: Co-create Equity-Focused Practice Improvements Continuous LHS learning cycles contribute to developing actionable steps from newly generated knowledge and collaborations with partners³. In both case examples, researchers worked closely with their respective partners to develop and implement evidence-informed solutions explicitly focused on reducing inequities within an existing intervention program or implementation strategy. Solutions included adapting intervention or implementation processes, enhancing provider awareness and education on how to address disparities in practice, and providing consultation and practice facilitation. Where possible, researchers should

engage patients, clinicians, and LHS leadership throughout the co-creation process that understand the needs and experiences of underserved patient groups to inspire equity-focused changes to interventions and implementation processes.

Recommendation 4: Planning for Sustainment, Scale-Up, and Spread All equity-focused improvement efforts should plan for sustainment and establish an infrastructure to support scale-up and spread beyond the immediate project. Documenting equity considerations in instructional and training materials, as was done with Courage Group, allows future users to replicate these practices. Opportunities to generalize equity content beyond specific QI projects can strengthen sustainment and spread. For example, RIVET's equity-focused QI training provided clinical champions with practical skills to apply lessons to future QI projects.

Anticipated Challenges With any EBP implementation in LHS, there are common challenges that might require additional attention. Across both projects, high rates of burnout, turnover, and understaffing of frontline staff impacted their participation. Expanding partnerships to non-clinical staff involved with direct patient care (e.g., Medical Support Assistants), caregivers, and community organizations (e.g., Veteran Support Organizations) can alleviate some social determinants that precluded underserved patients' ability to receive care in both QI initiatives. Finally, maintaining LHS leadership and operations support is critical to ensuring the long-term sustainment of equity-focused healthcare improvements. Developing rigorous and data-driven approaches guided by equity-focused TMFs is one potential way to underscore improvements to quality.

In sum, building equity-focused processes into intervention programs and implementation strategies not only equips frontline clinicians to address disparities but may also empower them to be change agents beyond a current implementation effort. While equity should be considered at the beginning of intervention development or implementation planning,⁴ these case examples show the value of creating practical strategies to address inequities at any time during EBP implementation.

Corresponding Author: Michelle S Wong, PhD; , HSR Center for the Study of Healthcare Innovation, Implementation & Policy (CSHIIP), VA Greater Los Angeles Healthcare System, Los Angeles, CA, USA (e-mail: Michelle.wong6@va.gov).

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Declarations

Human Ethics and Consent to Participate Declarations Not applicable—both projects described were designated as quality improvement (QI), and thus exempt from Institutional Review Board oversight.

Conflict of interest The authors declare no competing interests.

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