

# Commentary: Achieving Health Equity – The Role of Learning Health Systems

## Commentaire : Atteindre l'équité en santé – Le rôle des systèmes de santé apprenants

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### Abstract

Achieving health equity, for decades a domain of high-performing health systems, has been elevated to a priority and recognized as a central objective of health system transformation and quality improvement efforts. By prioritizing health equity; developing, implementing and evaluating models of care that optimize individual and population health; developing strong partnerships with patients and communities; conducting research to generate evidence on the effectiveness of interventions across diverse populations; implementing strategies to integrate clinical care, public health and social care; and participating in multisector collaborations to address social needs, learning health systems can play a pivotal role in eliminating health inequities.

### Résumé

Atteindre l'équité en santé, une notion qui pendant des années a été le fief des systèmes de santé très performants, est devenu une priorité et un objectif central dans le cadre des efforts de transformation du système et d'amélioration de la qualité des soins. Les systèmes de santé apprenants peuvent jouer un rôle central dans l'élimination des inégalités en santé, et ce, en accordant la priorité à l'équité en santé; en élaborant, en mettant en œuvre et en évaluant des modèles de soins qui optimisent la santé des personnes et des populations; en établissant de solides partenariats avec les patients et les collectivités; en menant des recherches pour

produire des données probantes sur l'efficacité des interventions dans diverses populations; en mettant en œuvre des stratégies pour intégrer les soins cliniques, la santé publique et les soins sociaux; et en participant à des collaborations multisectorielles pour répondre aux besoins sociaux.

## **Introduction**

The COVID-19 pandemic raised awareness of pervasive inequities in health and healthcare and the considerable shortcomings of our health systems. In response, achieving health equity, for decades a domain of high-performing health systems, has been elevated to a priority and recognized as a central objective of health system transformation and quality improvement efforts. The original triple aim, enhancing patient experience, improving population health and reducing costs, first expanded to the quadruple aim: addressing clinician burnout. The quintuple aim, once more extended, now includes advancing health equity (Nundy et al. 2022). Despite heroic efforts, the failure of health systems to mount an adequate response to the pandemic has focused attention on the critical role of learning health systems (LHSs) in achieving these aims. Lee-Foon and colleagues (2023) argue that LHSs need to prioritize health equity and develop a consensus definition that they can then operationalize in partnership with the people and communities they serve to ensure the delivery of more equitable care.

## **Equity in Health and Healthcare**

Inequities in healthcare contribute to and exacerbate health inequities. The social determinants of health (SDoH) are primary drivers of health inequities, greatly increasing the risk of developing illness, disability and premature aging (weathering) (Hooten et al. 2022) among socio-economically disadvantaged individuals and populations and racial and ethnic groups experiencing bias, discrimination and racism. Inequities in access to and quality of care have been well documented, contributing to an increased burden of illness and widening health inequities. Eliminating health inequities will require addressing the socio-economic, environmental and societal factors, including structural racism that produces them, and should be a primary goal of health system transformation. LHSs can play a central role in efforts to achieve health equity by developing, implementing and evaluating models of care that optimize individual and population health and tailoring interventions to improve the health, functional status and well-being among those with a higher burden of health and disability due to SDoH and discrimination.

## **Learning Health Systems and Health Equity**

LHSs improve quality and outcomes of care through a continuous cycle of evidence synthesis, implementation and generation (Institute of Medicine 2015). Large integrated health systems, community and safety net hospitals, practice networks and individual practices can all function as LHSs. By bringing together the caring and learning functions of healthcare

delivery, they can make progress toward the quintuple aim, including improving patient experience (e.g., respectful care for all) (Montori et al. 2019). By seamlessly integrating research into care delivery, LHSs are uniquely positioned to generate critical real-world evidence about the effectiveness of clinical interventions as well as evidence for models of care and interventions to advance health equity. They can answer the critical questions of what works, for whom and how we make it work. The increasing availability of data from multiple sources to foster research, coupled with innovative study design and analytic methods (e.g., agile implementation, rapid-cycle evaluation, natural language processing), can accelerate learning.

To advance health equity, LHSs can build upon a large body of literature, including quantitative, qualitative and mixed-methods research on the epidemiology of health inequities, their root causes and interventions to address them. Quantitative data can provide information on the patterns and magnitude of inequities and the effectiveness of interventions. Qualitative studies and meta-syntheses can provide insights into the experience of individuals and communities as well as potential solutions, as was done in understanding barriers to accessing care and strategies to overcome them among diverse groups of women in Ontario (Angus et al. 2013; Lombardo et al. 2014). A mixed-methods approach strategically integrates quantitative and qualitative methods to produce more robust findings that produce nuanced results and broaden the applicability of smaller-sample qualitative findings. Including patients, caregivers, communities, front-line clinicians and health system staff in the co-design of interventions and the co-development of evidence will increase the probability of success of LHS efforts to advance health equity. Learning collaboratives among LHSs could support shared learning on how to effectively incorporate a health equity lens as a routine component of quality improvement efforts and on how to overcome the many obstacles in realizing the objectives of a well-functioning LHS.

### Embedded Research and Health Equity

Embedded research within LHSs fosters collaboration with stakeholders to produce novel insights and evidence that can be rapidly implemented and continually improved to optimize outcomes of individuals, populations and overall health system performance (Forrest et al. 2018). The promise of embedded research is in its nimbleness and ability to be responsive to health system priorities (Gould et al. 2020). As Lee-Foon et al. (2023) and others have noted, there is a need for shared definition for equity and positioning equity as a foundational pursuit coupled with meaningful, person-centred equity metrics, developed to achieve and sustain equity (Coley et al. 2022; Parsons et al. 2021). Equity-centred research must intentionally focus on centring both people and process simultaneously (Parsons et al. 2021). This ensures that *all* voices, particularly those from historically marginalized populations and communities, are included, heard and valued equally through participatory and user-centred design methods such as co-development, an explicit focus on power and resources distribution in the research and reaching beyond the traditional walls of the healthcare system to engage new partners.

The call for the integration of equity into embedded research has influenced training and mentoring programs to develop the LHS workforce (Lozano et al. 2022; Yano et al. 2021). In 2016, the Agency for Healthcare Research and Quality (AHRQ) recommended requisite competencies for LHS science; however, health equity was not a domain (Coley et al. 2022; Forrest et al. 2018). In 2021, through a consensus-based process, the AHRQ LHS competencies were updated to include a “Health and Healthcare Equity and Justice” domain (AHRQ 2022). AHRQ, in partnership with the Patient-Centered Outcomes Research Institute (PCORI), supported the training of embedded researchers to conduct patient-centred outcomes research within LHSs. The Learning Health System Centers of Excellence K12 program was launched in 2018 with more than \$40 million in awards over five years to 11 institutions to grow and foster the next generation of embedded researchers (AHRQ 2022). The K12 Learning Collaborative fostered collaboration, distilled learnings and shared best practices among the Centers. To strengthen the integration of health equity across the continuum of training, the scholars and trainees within the K12 program developed recommendations to help operationalize efforts to centre equity to inform future training efforts (Coley et al. 2022). The recommendations focused on the integration of equity within each competency domain; the development of training and mentorship focused explicitly on equity in an LHS context, evaluation of training and impact, recruitment of diverse scholars and ensuring that communities are partners in research. Leveraging the recommendations and evaluation findings from the K12 program, AHRQ and PCORI, in the winter of 2023, will launch a new P30 Learning Health System Embedded Scientist Training and Research (LHS E-STaR) program (<https://grants.nih.gov/grants/guide/rfa-files/RFA-HS-23-001.html>) to build new models of LHS infrastructure to strengthen institutional research training and explicitly centre health equity.

### **Aligning Forces to Achieve Health Equity**

Although LHSs can play a vital role in advancing health equity, they can’t do it alone. Over a decade ago, after finding significant inequities on multiple measures of access, quality and outcomes of care in Ontario, the Project for an Ontario Women’s Health Evidence-Based Report (POWER) Study produced a Health Equity Road Map (Appendix 1, available online at [longwoods.com/content/27236](https://longwoods.com/content/27236)) outlining 10 steps for achieving health equity in the province (see Table 1 and Appendix 1) (Bierman et al. 2012). These steps, the first being “[e]quity, a major attribute of high-performing health systems and important dimension of health care quality, is key to health system sustainability and needs to be a priority” (Bierman et al. 2012: 29), continue to resonate. The second, “[h]ealth equity cannot be achieved without moving upstream and addressing the root causes of disease in the social determinants of health” (Bierman et al. 2012: 29), underscored the need for health systems to partner with other sectors to advance and sustain health equity. It is not possible to control diabetes if a person is food insecure or control asthma continually exacerbated by substandard housing.

**TABLE 1.** POWER Study: Health Equity Road Map

1.	Equity, a major attribute of high-performing health systems and important dimension of healthcare quality, is key to health system sustainability and needs to be a priority.
2.	Health equity cannot be achieved without moving upstream and addressing the root causes of disease in the social determinants of health.
3.	Prioritize chronic disease prevention and management to improve overall population health and reduce health inequities.
4.	Focus on patient-centredness to improve access to, satisfaction with and outcomes of care for all.
5.	Province-wide, integrated, organized models of care delivery can improve health outcomes and reduce inequities in care.
6.	Coordinate population health, community and clinical responses.
7.	Link community and health services to optimize outcomes and improve efficiency.
8.	Implement a health equity measurement and monitoring strategy and routinely include gender and equity analysis in health indicator monitoring.
9.	Develop strategies for effective implementation by creating learning networks and designing innovations for scale-up and spread.
10.	Create a culture of innovation and learning while building the evidence base for accelerated improvement through rigorous evaluation and research.

POWER = Project for an Ontario Women’s Health Evidence-Based Report.

Strategies to foster cross-sector partnerships are growing. In the US, the Centers for Medicare & Medicaid Services are encouraging screening and referral for health-related social needs. The Department of Health and Human Services, led by the Agency for Community Living, is supporting community hubs to bring together social and community services in a given geographical region and facilitate access to the services that they provide to individuals cared for by health systems and health plans (Chappel et al. 2022). The US Department of Health and Human Services has developed a three-pronged strategy to address social determinants, including (1) better data, (2) improving health and social services connections and (3) whole-of-government collaborations, and has issued a call to action to address health-related social needs (De Lew and Sommers 2022; US Department of Health and Human Services [HHS] 2023). The Biden administration has published the *Social Determinants of Health Playbook*, which provides information on how multiple sectors can come together to address the SDoH (Domestic Policy Council 2023). State multi-sector plans on aging provide an example of holistic approaches to improve the health and well-being of older adults (Ipakchi et al. 2023). LHSs can be a vital partner in tackling inequities in health by addressing SDoH and social needs. Without an explicit focus on social factors, LHSs may fail to reach their full potential of improving health (Palakshappa et al. 2020).

## Conclusion

LHSs are in their infancy and often more aspirational than operational. By prioritizing health equity; developing strong partnerships with patients and communities; conducting research to generate needed evidence on the effectiveness of interventions across diverse populations; implementing strategies to integrate clinical care, public health and social care; and

participating in multi-sector collaborations to address the SDoH, LHSs can play a pivotal role in eliminating long-standing, pervasive and unjust health inequities.

## Disclaimer

The views expressed in this article are those of the authors and do not necessarily reflect the position or policy of the Agency for Healthcare Research and Quality or the United States government.

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## Commentary: Achieving Health Equity – The Role of Learning Health Systems

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