

Centering Health Equity in Telemedicine

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ABSTRACT

In the wake of the racial injustices laid bare in 2020, on top of centuries of systemic racism, it is clear we need actionable strategies to fundamentally restructure health care systems to achieve racial/ethnic health equity. This paper outlines the pillars of a health equity framework from the Institute for Healthcare Improvement, overlaying a concrete example of telemedicine equity. Telemedicine is a particularly relevant and important topic, given the growing evidence of disparities in uptake by racial/ethnic, linguistic, and socioeconomic groups in the United States during the COVID-19 pandemic, as well as the new standard of care that telemedicine represents post-pandemic. We present approaches for telemedicine equity across the domains of: (1) strategic priorities of a health care organization, (2) structures and processes to advance equity, (3) strategies to address multiple determinants of health, (4) elimination of institutional racism and oppression, and (5) meaningful partnerships with patients and communities.

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INTRODUCTION

Systemic racism in the United States has existed for generations, predates the pandemic, and influences where people live, work, and play.¹⁻³ These systemic influences were magnified in 2020, demonstrated by the disproportionate burden of COVID-19 among people of color^{4,5} and the police murders of George Floyd, Breonna Taylor, and others—resulting in calls for racial/ethnic equity and justice in many intersecting oppressive systems in the United States,⁶ including health care. There is a particular urgency for health equity within medicine, given the long-standing history of unjust mistreatment of patients of color,¹ exclusion of health care workers of color,^{7,8} and clear racial health care disparities in all outcome domains.^{9,10} Although equity intersects with many demographic and social factors within individuals' lives, we focus here primarily on racial/ethnic health equity given the central role of racism in shaping health inequities in the United States.¹⁻³ Furthermore, in order to make equitable change, we consider here a broad range of strategies including resource distribution, policies, practices, leadership, and organizational culture that can directly prioritize health among marginalized and minoritized racial/ethnic groups,¹¹ turning our attention to health care processes and systems.

Here, we focus on health equity with respect to the “telemedicine revolution” spurred by the pandemic, to provide a concrete example of how health equity-focused approaches work across structural, interpersonal, and individual levels within health care settings.¹² Telemedicine, defined as virtual, synchronous clinical medical care, has become a fundamental part of health care during the pandemic,^{13,14} and will continue as such after the pandemic subsides for many specialties, including primary and behavioral care. Although the US health care system had not delivered synchronous virtual medical care at scale before the pandemic (with exceptions like Kaiser Permanente¹⁵ and the Department of Veterans Affairs¹⁶) there is much evidence from prior work on digital health uptake and implementation^{17,18} to suggest that inequities will persist in telemedicine (particularly for video visit access) without proactive strategies to promote health equity.¹⁹ Telemedicine, both before and during COVID-19, has been disproportionately inaccessible to patients facing poverty, people of color, older adults, those with limited English proficiency, and individuals living in underserved neighborhoods^{15,19-24}; yet most patients state a preference for telemedicine access^{24,25} especially due to increased flexibility, comfort, and capacity to maintain work or childcare commitments.

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We recognize that telemedicine will not solve the deep inequities within our health care system and broader society, but we hope the application of a multi-level health equity framework—within which we highlight racial/ethnic health equity—to the use-case of telemedicine will allow more of us within health care settings to reimagine and restructure systems as needed.

Applying a Health Equity Framework to Telemedicine

We apply here the Institute for Healthcare Improvement's "Framework for Health Care Organizations to Improve Health Equity"²⁶ to the multi-level implementation and uptake of telemedicine in the United States. This framework presents an action-oriented structure for health care organizations to make progress on health equity and is built upon 5 major pillars that can structurally, interpersonally, and individually facilitate progress in this space. For our use-case of telemedicine equity, we have directly mapped telemedicine strategies to the original 5 pillars of the framework (Figure 1). The strategies presented in the Figure and text below are interdependent. Although we present these strategies as a list below, all strategies are nonsequential and of equal importance.

1. Make Health and Racial/Ethnic Equity in Telemedicine a Strategic Priority

A key step is to name health equity and racial/ethnic equity²⁷ as strategic priorities of the health care system, including equity in the implementation, delivery, and assessment of telemedicine services. This requires action in at least 3 separate domains.

First, there is a need for committed leaders across the institution who dedicate time, effort, and resources to building organizational competencies and specific initiatives prioritizing racial/ethnic health equity. This is a fundamental step that integrates equity in the entire organizational structure and in all clinical operations, including telemedicine, rather than as a siloed effort without ties to the everyday work and culture of the institution. Committed leadership must apply scrutiny and have the power to change policies, systems, data-gathering infrastructure, and culture that enable inequities to occur.

Second, also at the strategic priority level of the organization, we need data to robustly understand the current state of telemedicine disparities. There are 3 specific sub-activities that underscore the importance of data infrastructure for advancing equity at an institutional level:

A. High-quality data to identify priority patient subgroups. Specific to telemedicine as an exemplar, deep exploration of data on racial/ethnic, linguistic, and socioeconomic status (eg, insurance type) disparities in telemedicine uptake is needed on a routine basis. While many health care systems have improved their data collection and reporting on patient self-reported race/ethnicity and preferred language within the electronic health record (EHR), this needs to be a universal

standard for every health care system in the country, with mandated review of performance to assess access gaps and intervene accordingly. For example, recent Transformed Medicaid Statistical Information System (T-MSIS) Data shows that 25 states have "high concern" or "unusable" data on patients' race and ethnicity—such as high rates of missing data or large discrepancies between health care system and US Census data on race/ethnicity.²⁸

B. Linkage of patient-reported data to population-level data to broaden understanding of disparities. These EHR data can also be linked to gain further insights on disparities or structural barriers to care, such as using patient addresses and zip codes to gain more insight into the neighborhood-level influences on health outcomes²⁹ and creating equity-focused maps. Specific to telemedicine, we know that broadband access at the census tract level is associated with uptake of digital health tools.³⁰

C. Data to target interventions. Once the right types of data are routinely collected, we must then use these data to drive organizational interventions, such as targeting programs to improve health outcomes overall and within specific priority subgroups. In other words, organizations must be clear about measurement targeting overall improvements in outcomes as well as metric strategies that decrease disparities in that outcome. For example, dashboards or quality improvement indicators that look at overall increases in telemedicine utilization may mask widening gaps by patient race/ethnicity, neighborhood, or other factors.^{31,32} Therefore, we may need additional or new metrics that target disparities reduction explicitly.

Third, telemedicine leaders must also advocate for local, state, and governmental policies regarding telemedicine access, especially since Medicare and Medicaid telemedicine reimbursement policies will be the key determinant to long-term telemedicine access via telephone and/or video visits.³³ This advocacy involves activities such as: providing statements on upcoming bills at the state or federal level (independently or via professional organizations); publicizing equity data in multiple venues (eg, press articles, social media) for wider public knowledge about real-world implementation and barriers; and clarifying the business case for health equity. For example, because safety-net institutions serving more diverse patient populations have had much lower video visit uptake during the pandemic (despite their extensive implementation work in this space), reimbursement policies post-COVID could hinder progress toward equity if they do not support these sites' current rollout of telephone visits.²²

2. Build Structures and Processes to Support Telemedicine Equity

The second domain of this health equity framework calls for structures and processes to support health equity work. At the most fundamental level, this means ensuring more direct input from marginalized patients—including Black patients, Indigenous patients, patients of color, and low-income patients—about their needs, preferences, and barriers to

Figure 1. Strategies for equity in telemedicine implementation and uptake mapped to the Institute for Healthcare Improvement's Framework for Health Care Organizations to Improve Health Equity.



care, and then empowering health care leaders and frontline staff to develop potential solutions to meet those needs.³⁴⁻³⁶ While these processes may vary in each health care delivery system, there are core elements that will likely be fruitful for telemedicine implementation—now and into the future. For example, sites will need ways to collect input from patients about telemedicine uptake and experiences, such as surveys

and screening tools, patient advisory boards, and focus groups. Both utilization data on telemedicine from the EHR as well as experiential data from patients via surveys and group discussions should also be intentionally disaggregated by key patient groups.

Moreover, the structures and processes for telemedicine must provide and/or facilitate the opportunity for all patients

to engage with digital care modalities. First, health care systems must have dedicated ways of screening patients for digital device availability, broadband and data plan access, and patient skills and/or confidence in using technology for health care. These are social needs, akin to the many other social needs screenings already happening within health care systems, and we cannot overlook these critical aspects of patients' everyday lives. Furthermore, for any new digital service or feature offered within a health care system, we must stand up the appropriate technical support within health care settings. This goes beyond call centers with limited hours or capabilities, but rather requires broader education and awareness-building surrounding available digital features and full-service assistance (including in-person support options) for sign-up and registration, review of features and tasks, password and device support, and other major barriers. Finally, we must commit to continually evaluating patients' expectations, experiences, and satisfaction with telemedicine, both overall and via unique patient care pathways such as medical interpreters. We cannot eliminate disparities in telemedicine use and quality without understanding and being responsive to patient preferences and needs in these robust ways.

3. Deploy Telemedicine Strategies to Address Determinants of Health

The third domain of the framework focuses on implementing specific strategies and programs to reach an organization's health equity priorities. These strategies cannot be overly narrow, as the intersection of multiple spheres of exclusion (eg, race/ethnicity, poverty, disability status) requires a broad view of multiple determinants of health, including social factors outside of the walls of the health care delivery system.

Thus, specific to telemedicine, we must first have a strategy for structural barriers—particularly device ownership and the availability and affordability of broadband and data plans—as key determinants of whether and how marginalized groups will be able to use telemedicine in everyday life. These structural barriers persist in urban, suburban, and rural communities throughout the United States and impact older adults and low-income Americans the most.^{25,37,38} Therefore, health care systems must develop new relationships and referral programs to tap into local and national programs to directly provide patients with device and Internet access, such as the Lifeline program,³⁹ as well as community programs for digital literacy support, such as public libraries and community-based organizations offering long-standing digital inclusion programs.^{19,40-43} In addition, as stated above, health care systems should join other social service sectors in advocacy for improvements and meaningful investments in domains such as broadband access, low-cost device ownership, and digital skill-building programs, including the ease of accessing these programs.

Finally, health equity work within health care settings can look for opportunities to address multiple social determinants of health across their initiatives. For example, programs such

as food banks within clinics or medical-legal partnerships may offer additional opportunities to further understanding of the digital divide among patients. Thus, a holistic view on social determinants of health combined with ease of social needs screening and referrals accompanying any interaction with the health care system can further strengthen our health equity approaches.

4. Eliminate Institutional Racism in Telemedicine Provision

In the next pillar of the health equity framework, we must address other institutional practices, such as hiring and promotion practices and equitable investment in fundamental services. For example, hiring can be used to intentionally transform the health care workforce to reflect the diversity of the patients served. Diverse clinicians/providers and staff have been shown to have better cultural, linguistic, and other congruency with patients, which—specific to telemedicine—may help them better understand patients' needs, build trust, and personalize virtual care in real-time.^{44,45} Similarly, prioritizing investment in fundamental services like medical interpretation can improve telemedicine care by ensuring seamless non-English telemedicine visits, rather than ad hoc or multi-step processes.

Health care systems' strategies must also take into account marginalized patients' justified mistrust in the medical system, borne from decades of systemic racism and oppression, causing mistreatment and abuse as well as current inequities in health care access, treatment, and outcomes.⁴⁶ Even the most well-intentioned strategies to improve telemedicine uptake among marginalized populations will not succeed if they do not address building trust and authentic 2-way communication between the health care system and patients who have been historically and presently excluded and disrespected by health care leaders and clinicians. Similarly, at the interpersonal level between clinicians and patients, health care clinicians must implement strategies that uphold best practices for patient communication. Not only do we need to ensure we respect patient decisions about what type of visit is best according to them, but we also have to acknowledge biases in these relationships. Clinicians must ensure we are not making assumptions about whether a patient would or would not want telemedicine based on their sociodemographic background. For example, among respondents with low incomes in a recent study, 71% reported they would always like the option for telephone or video visits, and 63% reported that they would likely choose a telephone or video visit over an in-person visit whenever possible.^{47,48}

Finally, we must address the inherent bias built into the digital platforms themselves. Currently, we offer online patient portals and telemedicine platforms that are not available in the languages spoken by our patient populations, with instructions and content at high reading levels and full of medical jargon that most patients cannot easily understand, and with fundamental barriers to usability such as poor navigation to access core features. We must demand the design

and implementation of better products that do not exclude so many patients from the outset.

5. Partner with Patients and Community Organizations to Implement Telemedicine

Although listed last, the patient and community pillar within this framework is a key component of equity applicable to all other pillars. Health equity approaches are likely to be unsuccessful without partnerships and collaborations with patients, community leaders, and organizations whose primary mission is to support and serve marginalized populations.

Community-based organizations, such as neighborhood-based non-profits that assist clients with obtaining housing, employment, or other social and medical needs, understand the structural and person-level obstacles for their communities, and they are effective advocates for prioritizing which strategies need the most immediate attention. More specific to telemedicine, community-based and municipal organizations have been working on digital inclusion strategies for many years, such as public libraries and other organizations (many of which are a part of organizations such as the National Digital Inclusion Alliance).⁴⁹ Health care organizations can serve as referral sites to connect patients with these services as well as directly advocate for these organizations and their work. In the longer term, incorporating community priorities and engaging community members in health care leadership decisions is a key goal to ensure that health care provision, including telemedicine services, is conducted in partnership with communities rather than "for" or "about" them.

CONCLUSION: VISION FOR THE FUTURE OF TELEMEDICINE

Our vision for telemedicine equity is not distinct from our vision for other digital health equity interventions—such as patient portal access and uptake, which has become a central tool in COVID-19 vaccine rollout in health systems across the country—or our vision of health equity more broadly. In order for us to succeed with telemedicine and many other digitally enabled care options, the equity and innovation efforts within our institutions must be integrated. The COVID-19 pandemic is a unique moment in which the foundation for the future of telemedicine provision is rapidly forming, and we must be more purposeful about equity in the structure, processes, and outcomes of this work.

In addition, as the US health care system continues to move toward value-based and population-level reimbursement for care, equity must be core to new payment and business models.^{50,51} More specifically, this means that investment in health equity within our health care systems (such as the examples outlined above that will require hard dollars to implement) must be embedded in the reimbursement structures and subsequent programming in our setting, not apart from or secondary to quality and safety. We cannot make meaningful population-level improvements in health

outcomes (nor cost savings attached to these gains) without addressing the needs of patients who are marginalized and therefore face a highly disproportionate burden of illness and higher medical costs within our country. Moving through the health equity framework presented here may illuminate proactive steps for health care systems to enhance equitable care, with a systematic approach that centers patients and communities to improve health.

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Key words: systemic racism; telemedicine; health equity; health systems; primary care; race/ethnicity; patient-engagement

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