The Los Angeles County Department of Health Services *Health Technology Navigators*: A novel health workforce to digitally empower patient communities in safety net systems

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Abstract

Significant disparities in the uptake of digital health tools have been previously described. Studies have found that low perceived confidence to engage with digital health resources among medically underserved patients partially account for this. To address barriers to digital health engagement (specifically around patient portal enrollment and use), the Los Angeles County Department of Health Services (LAC DHS) introduced the Health Technology Navigators program. To our knowledge, this is the first formal digital health workforce implemented in a safety net system. The objectives of the editorial are to describe the evolution and roles of the health technology navigators and their early effects within LAC DHS, the second largest safety net health system in the United States.

"I saw how frustrating it could be for them [patients in the safety net] to not have the same access or have obstacles in gaining the access that was relatively common or easier for other people . . . I have this previous experience from working one-on-one with peers in my Spanish-speaking community, of having this patience to walk the other person through the steps necessary to feel empowered and to help them gain the confidence in their own skills. And so, I had that experience and I saw this as a role combining the things I love the most— my community and this guidance and this mentorship"

—LAC DHS Health Technology Navigator

Digital health has the potential to improve health services and outcomes, and it has long been championed as a means toward expanding access to care for patients served by safety net health systems—"systems which organize and deliver a significant level of healthcare and other needed services to uninsured, Medicaid, and other vulnerable patients."[1] Safety nets are also majority-comprised of racial and ethnic minority, low-income, Limited English Proficient (LEP), and other vulnerable groups at risk for disparities; groups that are more likely to be affected by access barriers related to the time, effort, and cost of in-person care.[2]

However, safety net patients face multilevel digital barriers that have mitigated these potential benefits. LEP and racial and ethnic minority populations, who are at baseline risk for worse health outcomes, face barriers to use of existing digital health tools (e.g. patient portals, phone health applications, remote patient monitoring devices)

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due to a "digital divide,"[3–7] characterized by health and electronic literacy, limited broadband and data plans, and lack of access to Internet-connected personal devices. Technology-specific challenges, including usability and English-only language of digital tool platforms, along with health system factors (e.g. lack of patient-centered engagement), also contribute to these digital disparities. As such, vulnerable patients, like many of those cared for within the safety net, have been less likely to access digital tools that improve health care. This all became crystal clear in the early days of the Affordable Care Act in the United States when electronic health records (EHRs) became a reality, and, patient portals, an expectation of patient care. In the Los Angeles County Department of Health Services (LAC DHS), the second largest safety net health system in the United States, it was no surprise to still see large lines of patients waiting to print their medical records and/or refill medications, despite the exciting integration of digital health (patient portals) in our system. Many of those in operations and research leadership at LAC DHS knew that there had to be a better way to equip patients with all the possible health services accessible to them—and that it was a matter of health equity to be able to do it.

This led to digital health research at LAC DHS to better understand perceptions of the portal (and digital health in general) to develop patient-centered recommendations for implementation. Such work revealed the need for dedicated patient guidance and navigation on digital health.[8–10] For example, we realized that front-line staff needed to pitch the importance of the technology and how digital tools would improve the quality of life for patients' family and home network. We also recognized the need for safety nets to build patients' digital literacy and confidence to use the technology—it was not enough to equip patients with Internet-connected devices. This echoes one recent study among patients with low health literacy which showed that even though patients had access to digital devices and used the Internet previously (as we have observed with our own safety net patients), they were unable to perform web-based health tasks without assistance.[11]

But how could we boost digital literacy within our system? In early LAC DHS initiatives to increase patient portal awareness and registration, we observed that our under-resourced staff did not have the time to focus on patient-centered digital health engagement. We had spent significant funds to implement more user-friendly and bilingual telehealth software, increase access to free smartphones, develop marketing campaigns, videos, posters . . . but what we needed was a stable resource for helping patients get comfortable and confident to meaningfully use health technology. Over the last 3 years, LAC DHS responded with a Health Portal Adoption Champions initiative. While champions encouraged staff to enroll patients into the portal in this time, staff continually noted resource constraints and overwhelming requests for

assistance from patients and front-line providers. Although we were doing a good job of talking about patient portals through culturally tailored marketing and such promotion campaigns, very few patients went on to enroll (or use the portal after enrolling) even worse among LAC DHS Spanish-speaking patients.[12]

When the coronavirus-19 disease (COVID-19) pandemic reduced access to in-person care, this ongoing (but albeit too slow) discussion around improving connection to telehealth in the safety net transformed into an urgent one. The abrupt transition from in-person visits to telehealth left our safety net system, and many others, ill-prepared to support telehealth adoption among patients, especially those who would be most negatively impacted by inequitable implementation: patients with chronic conditions and LEP individuals.[13,14] COVID-19 and the reckoning with social injustice also opened a deep and raw conversation about the importance of equity in all spaces—particularly in the safety net. In the realm of digital health, we saw how the digital divide produced vast inequalities during the pandemic: ability to register for and access COVID-19 vaccines, online access to registration for social services, and access to quality education. And even before the pandemic, digital health had been associated with many patient benefits: awareness of personal health information, engagement and activation around chronic disease, higher quality of care services, improved medication compliance, expanding the locus of primary care, and among many others.[15–17]

The pandemic provided the insight that digital health was a social determinant of health, and we knew that our safety net health system needed to come up with new and innovative ways to "meet our patients where they were."[18,19] The pandemic pressed on, and our system grappled with staff shortages and increased work burdens. Our prior research had already pointed to the need for high-touch digital health interventions among safety net patients (as had other published work).[2,3] We needed to provide new support rather than add on additional responsibilities to current staff—a new workforce to help us address these digital needs. Formative research within our system identified health educators as the ideal role to deliver coaching to improving telehealth uptake, following self-efficacy models used in our LAC DHS Spanish and English chronic disease education classes.[20]

However, limited resources at the time did not allow us to pilot an intervention through LAC DHS health educators and this compelled us to think strategically. In the summer of 2021, we recruited three pre-health college students who needed clinical volunteer opportunities during the pandemic. These students were trained by clinical leadership on patient portal enrollment and use. Using the engagement toolkits that had been developed for staff (and based off our pilot research), these students set up in clinic waiting rooms with an iPad and other educational materials, to work with

patients on portal enrollment and use while patients waited for their providers . Our students were able to double patient portal enrollments (n = 168) from baseline (n = 95) over the course of their 2-month pilot engagement in the clinics observed. The student prototype was pivotal as a precursor model, and this empowered leadership to approve a health technology navigator pilot project.

The LAC DHS Office of Patient Access and Engagement launched the Health Technology Navigator program in November 2021, the first formal workforce of its kind in a health system. Health Technology Navigators are hired in community health worker roles in LAC DHS and reside in the clinic, where they approach patients in the waiting room, or via provider, nurse, or front desk clerk referrals for portal engagement. Currently, Health Tech Navigators undergo 2 weeks of training: in the first week, they learn how to invite patients and enroll them into a patient portal via phone calls; over the second week, they shadow an experienced Navigator and begin enrolling patients at a shadow site before they start work at their own site. Local clinic supervisors work to incorporate the Navigator into site staff meetings and team huddles. Navigators have portal enrollment goals which they meet as part of their employment. Currently, Navigators each enroll about nine patients per day—in addition to supporting and training other clinic staff to participate in patient portal engagement and utilization workflows. The Navigator program has been a welcome addition to these clinical teams, especially with the aforementioned Portal Adoption Champions magnifying the on-the-ground presence and successes of the Navigators.

Most of our navigators are bilingual, in the 20–30s age range, and comfortable with mobile applications and smartphones. They have a variety of educational backgrounds including a General Educational Development (GED), high school education, and college bachelor's degrees. They have strong communication skills, are comfortable "pitching" technology and approaching patients, and interestingly, many have a background in retail sales. Most come from the local diverse communities that LAC DHS serves. When the Health Tech Navigator program began in November 2021, 20% of active empaneled DHS patients were enrolled in the LA Health Portal. As of September 2023 with 13 Navigators across the second largest municipal US health system, 42% of active empaneled DHS patients are enrolled—a jump we have never observed at LAC DHS since the portal's inception (not even at the beginning of the pandemic). Between November 2021 and June 2023, Navigators documented over 30,000 portal enrollments that could be personally attributed to them. Navigators are also starting to connect patients with smartphone and data service plans that they qualify for under Medicaid. Importantly, we have also observed an increase in staff satisfaction around portal enrollment as evidenced by staff surveys and feedback.

Of course, patient engagement and literacy is just one dimension of the multifaceted approach needed to bridge the digital divide in health. Future solutions will also have to address the large barriers that our navigators have pointed to in their interactions with patients: home broadband access, limited data plans, lack of (or poor quality of) Internet-connected devices, and usability and need for more multilingual digital health platforms. We also realize that not every patient can have a health technology navigator—our system is composed of over 600,000 primary care patients. Program cost per site (12 sites) is approximately $55k per year per navigator, which is similar to other Community Health Worker programs in the Los Angeles region. Future work will have to focus on developing algorithms and screeners to help identify patients who need more engagement and education via this high-touch approach, given the limited resources and cost-constraints in the safety net.

Looking ahead, we are seeking to formalize the curriculum and training of the Health Technology Navigators program so that other health systems may use this model to build a similar workforce. Our navigators are also working to distill their patient engagement approaches into training that can be used by lay LAC DHS volunteers—so that we can make digital health engagement a component of what all county volunteers do. In terms of long-term objectives past the pandemic, LAC DHS is focusing on Navigators helping patients with specific utilizations of the portal like patient-initiated messages, self-scheduling (to increase COVID-19 and influenza vaccination), medication refills, and video visits.

This novel digital health workforce is working to increase health literacy in the Los Angeles Safety net—but we have learned this is also a matter of justice. In the Equity, Diversity, Inclusion and Antiracism community listening sessions for this health system, the LAC DHS patient portal was listed as a top program in our safety net among community members. Community advocates in these sessions highlighted how these Navigators are developing more engaged patients via digital health in a safety net system that serves communities who have been historically disenfranchised. The sessions noted the impact of this producing a more active patient community within these underserved neighborhoods. Our communities' response is a call to action. The Health Technology Navigator Program can be a model for other health systems to follow, especially safety nets, working to make healthcare more accessible for their patients and communities.

Declarations

Ethical approval and consent to participate

Not applicable.

Consent for publication

Not applicable.

Author contributions

Alejandra Casillas: Conceptualization; Data curation; Formal analysis; Funding acquisition; Investigation; Methodology; Project administration; Resources; Software; Supervision; Validation; Visualization; Writing—original draft; Writing—review & editing.

Anshu Abhat: Conceptualization; Data curation; Project administration; Resources; Supervision; Writing—original draft; Writing—review & editing.

Competing interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Availability of data and materials

Not applicable.

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