hlth.
FOUNDATION

Techquity for Health Coalition

in partnership with: **Ipsos**

TECHQUITY IN 2023

We asked healthcare leaders how they are integrating health equity into the design and deployment of health technologies. Here's what they told us.

March 27, 2023

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ABOUT THE TECHQUITY FOR HEALTH COALITION

In 2021, the HLTH Foundation- a 501(c)3 non-profit organization that promotes equity, inclusion, and opportunity in healthcare, strategically partnered with Ipsos- a global market research and advisory firm, to explore the concept of techquity. Together, the teams conducted exploratory industry and patient-focused research for the purpose of bringing attention to the relationship between health equity and health technology and identifying opportunities for the industry to collaborate on addressing techquity gaps -which resulted in an introductory "Path to Techquity'' report and patient ethnography video (published March 2022). The research partnership expanded in 2022 with growing interest and support from key industry advisors, and by early 2023, the 'Techquity for Health' Coalition was formed with a mission to assimilate health equity considerations into healthcare technology innovation and data practices across the industry (*See Exhibit 1*)*. As of March 2023, the Coalition Advisory Committee includes representatives from 18 additional organizations across the industry (not including HLTH Foundation or Ipsos), and will continue to grow its membership in order to build for broad and diverse representation. The following report includes Advisory Coalition member input, and all comments have been included with permission.

Exhibit 1: Techquity for Health Coalition Members (as of March 3, 2023)

Aletha Maybank, American Medical Association (AMA)	Amy Green, Hopelab
Rowland Illing, Amazon Web Services (AWS)	Burgess Harrison, National Minority Health Association
Andrea Werner, Bellin Health & Gundersen Health System	Lisa Esch, NTT DATA Services
Lorren Pettit, CHIME	Maya Said, Outcomes4Me
Tanisha Hill, Digital Health for Equitable Health Alliance (DHEH)	Carlos Nunez, ResMed
Grace Cordovano, Enlightening Results, LLC	Ricky Choi, Stanford University Medicine Children's Health
Jaime Dictenberg, EmpiRx Health	Theresa Demeter, Tegria
John Cordier, Epistemix	Raj Gorla, UST
Pooja Mittal, Health Net	Will Flanagan, VSP Global Innovation Center
Kyu Rhee, Senior Advisor, HLTH Foundation	
Janna Guinen & Alison Drone, HLTH Foundation (convening organization)	
Alexis Anderson & Alex Spencer, Ipsos Healthcare (strategic partner)	

*Note: Coalition members organized alphabetically by organization name

The Techquity for Health Coalition firmly believes that as healthcare marches towards full digitization, integrating health equity considerations into technology design and data practices - or techquity - is increasingly important to help reduce outcome disparities and systemic inequities. Furthermore, without a concerted effort to develop standards for techquity, existing disparities are likely to get worse with the continued adoption of technology in healthcare. Techquity is also essential to diversifying innovation, developing a representative workforce and equitable employment policies, which in turn will result in a healthcare system that works better for everyone. We envision a future in which all people have access to and simple use of digital health tools for the betterment of their health, as well as confidence that these tools are designed with their needs in mind.

"Although Techquity is enabled by technology, it is a profoundly human process. Patients must experience care delivered through systems that take into account their particular needs. There must be a diversity of inputs when defining the needs of care systems, the technology chosen, and how care is delivered. AWS is privileged to provide tools and programs providers, payors and our partners can use to accelerate the mission of health equity for all."

Rowland Illing, DM, MRCS, FRCR
Director & Chief Medical Officer | Amazon Web Services

RESEARCH PURPOSE & REPORT NOTES

Purpose of this research

A great deal of expertise exists around addressing health outcomes disparities and inequities and practicing diversity, equity and inclusion (DE&I) within teams and organizations. Additionally, there is even an increasing knowledge base on the importance of equitable technology design; but the industry has yet to work toward consensus on standards, metrics and best practices for techquity. Therefore, the first action of the Coalition was to launch a broad industry survey of techquity in healthcare, aimed at understanding the current state of techquity (see Appendix for more information on participants). This report highlights some of the most essential findings from the inaugural benchmarking initiative, and is not intended to be exhaustive. Additional insights may be published throughout 2023 to further dig into detailed findings.

> *"Techquity engages us in thinking and acting in a way where no person is left behind…..leveraging the collective knowledge, diverse perspectives and experiences of the Techquity for Health Coalition will help us go further, faster to level the playing field and optimize technology for the people we serve."*
>
> **Andrea Werner, MSW**
> Chief Population Health Officer | *Bellin Health and Gundersen Health System*

Techquity is a complex topic, and therefore not everything can be covered in this report. Rather, the intention of this report is to utilize insights from our recent techquity survey in order to promote awareness, dialogue and action toward techquity on the part of industry stakeholders.

Survey Respondents

Our recent survey had 212 respondents, who were affiliated with 200 distinct organizations from across the US healthcare industry (12 respondents worked at the same organization, however represented different departments/functions). In order to participate, respondents were required to be at the Manager level or above, and have some degree of decision-making authority or oversight in regards to equity-based initiatives (see Appendix for more information on survey logistics & respondent details).

Respondents were identified primarily via the HLTH and CHIME email distribution networks, which have promoted techquity via emails and in website content related to the 2022 and 2023 VIVE conferences; therefore, it is important to note that these respondents might have higher levels of awareness and activation with regard to techquity compared to the broader industry. Also, while organizations of all

sizes were eligible to participate in the survey, approximately 44% of respondents currently are affiliated with smaller organizations (<100 employees). Additionally, given that there aren't many standardized and externally verifiable metrics to measure progress re: techquity, a number of questions in this survey probed on individuals' perceptions, levels of confidence, and/or their personal reaction to statements. While variability was anticipated, it is worth noting that individual respondents' perceptions may not reflect all activities being achieved by an organization.

Lastly, it is important to note respondent demographic and background information. Approximately 63% of respondents in this survey identified as White (non-Hispanic/Latino), 12% of respondents identified as Asian, 8% identified as White (Hispanic/ Latino), 7% identified as Black or African American, 7% preferred not to say, and 6% identified with multiple races/ethnicities. In terms of gender, 51% of respondents identified as male, 42% as female, 5% preferred not to say, and 2% identified as transgender or non-binary.

By comparison to industry, a study published in the JAMA Network showed that in 2019, Black, Hispanic and Native American people were significantly underrepresented in both the workforce and educational pipeline across ten key healthcare occupations, including advanced practice registered nurses, dentists, occupational therapists, pharmacists, physical therapists, physician assistants, physicians, registered nurses, respiratory therapists, and speech-language pathologists (Salsberg, E. 2021). And, as of 2021, women accounted for 60% of healthcare workers at manager level, while women of color held 18% of those roles; and at the C-suite level, white women account for 24% and women of color held only 5% of these positions, per research by McKinsey & Company and LeanIn.org (Berlin, G. 2022). Overrepresentation of both white and male respondents to the survey may have implications for respondents' perceptions concerning the extent of techquity initiatives as well as their employers' commitment to techquity. Underrepresentation of people of color and women in healthcare underscores the need for techquity initiatives that target workforce diversity, equity, and inclusion in healthcare.

> *"Often in healthcare, we [as an industry] run to technology to solve problems…and we can sometimes look at things with a very narrow focus, forgetting about the bigger ecosystem that healthcare happens in. Techquity needs to be top of mind so we can ensure that healthtech functions in the way we intend it to."*
>
> **Lisa Esch**
> Senior Vice President | Chief of Strategy, Innovation, and Industry Solutions | *NTT DATA Services*

Executive summary

- Techquity can be defined as the intentional design and deployment of technology both to advance health equity, and to avoid deepening existing systemic inequities and health disparities; it includes technology as well as data practices.
- While not new, the concept is essential for industry to address - particularly as it progresses towards digitalization, or else it risks further entrenching inequities and health disparities and exacerbating disenfranchisement and mistrust among underserved, and marginalized populations.
- In 2023, the Techquity for Health Coalition launched a benchmarking survey, which aimed to understand current levels of awareness around equity/health equity/techquity, explore how (& to what extent) organizations are integrating techquity considerations into their strategies, leadership, processes, and overall approach to designing and deploying technology and data solutions. As of March 2023, the survey had 212 respondents from 200 organizations from across industry.

Highlights from the survey

- Once introduced, techquity is easy to understand as a concept; and most people agree on a personal and organizational level that it is an important topic for industry to address.
- About two-thirds of respondents are doing something *today* to try to address equity, health equity, and/or techquity; the remainder say that a lack of knowledge, commitment, or resources stands in the way.
- Efforts to increase the user-friendliness of healthtech, developing community-based partnerships, and efforts to provide awareness and educational materials are popular tactics- as are initiatives that support Medicare/Medicaid, rural, and BIPOC communities.
- The industry isn't sure whether or not its techquity efforts are successful, and recognizes that current industry measurements/metrics are only somewhat effective. There is also widespread belief that an economic recession is likely to have a significant impact on techquity investments.
- The industry needs more champions for equity/techquity embedded at leadership levels- and more importantly, leaders equipped with adequate decision-making authority to effect change- for example through the development of incentive mechanisms to promote techquity, establish better patient-industry feedback mechanisms, and establish 'SMART' goals. While equity is *sometimes* considered in the current design and deployment of technology, the industry isn't confident in its ability to leverage data and technology tools to generate an understanding of underserved patients' needs, nor its ability to use that information to address health disparities.

"The healthcare industry is now leveraging technology, data, analytics, and AI in almost all its outreach to customers, partners, and colleagues. And, at the same time, we live in a health system where we know that health inequities and disparities have existed for many decades, but also have worsened during (& since) the COVID-19 global pandemic. This report and its findings help show that techquity must be a business imperative now; we must all embrace and assure that technology is intentionally used to reduce and eliminate health inequities and achieve health equity for all."

Kyu Rhee, MD, MPP
Senior Advisor | HLTH Foundation

DEFINING TECHQUITY & ITS BUILDING BLOCKS
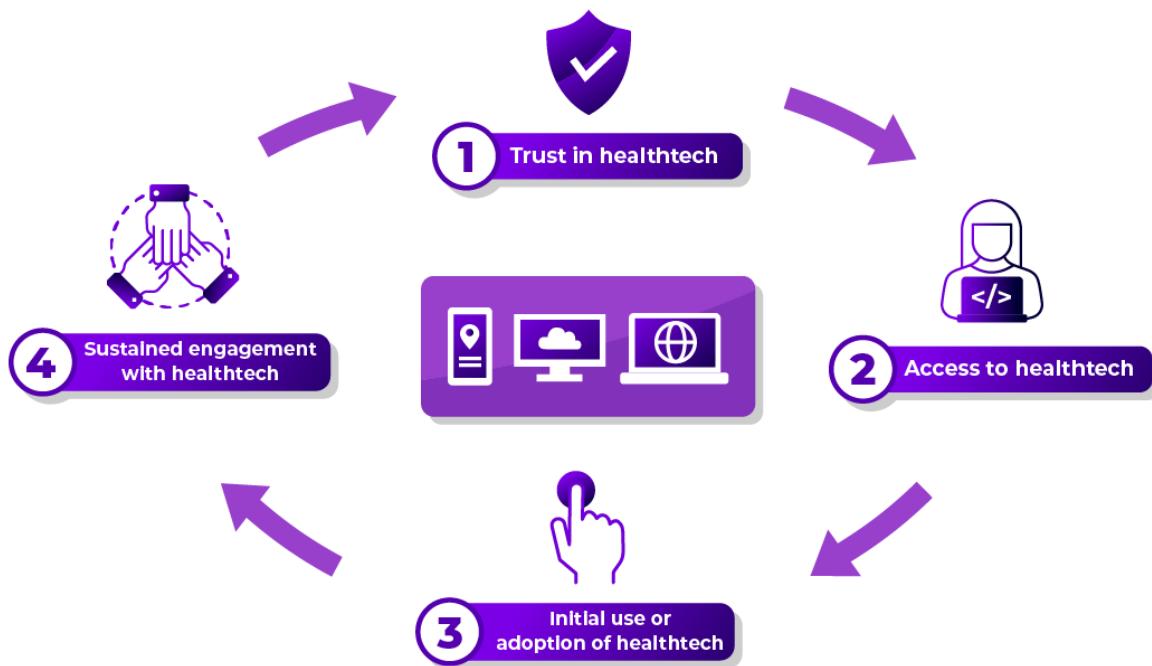
The US healthcare industry has seen a rapid increase in its adoption and use of technology over the last decade (Landi, H. 2021). While new technologies and data tools represent an immense opportunity to transform healthcare through greater efficiency, scale, and expanded access points, it's important to acknowledge that when technologies are not designed and implemented with health equity in mind, they also have the potential to inhibit prospects for optimal health, most especially across underserved, and marginalized communities. Herein lies the focus for techquity, which can be **defined as the intentional design and deployment of technology both to advance health equity, and to avoid deepening existing systemic inequities and health disparities; it includes technology as well as data practices**.

"ResMed is reimagining the patient experience to help patients live better, breathe better, and sleep better. In a rapidly evolving healthcare environment, we have remained unwavering in our commitment to elevating the focus on health equity as a pathway to accelerate impact in critical areas like access, affordability, and quality.   As a leader in digital health today, we have been at the forefront of determining how health and technology intersect to transform quality of care and outcomes. I, and my leadership team, hold ourselves accountable to build that more equitable future for the people and communities we serve. The Techquity initiative will be a critical component of our ability to realize that future and I am excited for ResMed to be a founding member of the program."

Carlos Nunez, MD
Chief Medical Officer | ResMed

The Coalition has defined 4 pillars fundamental to addressing techquity (see Exhibit 2)[1]:

Exhibit 2: 4 key pillars or building blocks of techquity

1. Building **overall trust in the healthcare system**- which means establishing strong partnerships with communities as well as underserved, and marginalized groups, and working to eliminate factors like stigma and bias in tech design and data practices, for example through representation in the design process
2. Increasing **access** to digital tools and technologies- which can be impacted by issues of affordability, among others
3. Supporting **initial use or uptake** of healthtech- for example through intentional design and integration of features which enhance user friendliness (for example, offering language options other than English, or accessibility features for people with disabilities)
4. Enhancing **sustained or long-term engagement** of healthtech- which can be impacted by factors like user centric design (i.e., consideration of patients' goals and lifestyles), and levels of health literacy or digital literacy

Lastly, as the introductory report noted, it is important to acknowledge that the term techquity is not new, nor is the idea of inequities and their connection to poorer outcomes. However, this topic has become more urgent than ever: As the healthcare system increasingly turns to technology as a solution, it is important to acknowledge that healthtech can only solve for the specific requests that are input by humans in its design, and is therefore subject to human error and possible amplification of systemic

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[1] *Note: For additional information please see our introductory report, 'The Path to Techquity' from March 2022.*

inequities and biases. Furthermore, lacking a defined practice of techquity in healthcare, the industry risks entrenching inequities and health disparities and exacerbating disenfranchisement and mistrust among those already at greatest risk of outcomes disparities.

"We know that some communities in the US are at disproportionate and greater risk for illness and shorter life expectancy than others, due to a variety of factors like social determinants of health or structural inequalities. We also know, at baseline, that the cost, availability and quality of the healthcare system is not equitable across populations. Today technology is part of our lives in a way it never was before, and offers a tremendous opportunity. If guided the right way, technology can help us close these recalcitrant health equity gaps. However, if we don't do it right, it will greatly exacerbate inequities that already exist. We have a joint responsibility to try to think about how we do this in a thoughtful way."

Ricky Choi, MD, MPH
Clinical Assistant Professor | Stanford Medicine Children's Health

BENCHMARKING INSIGHTS

Introduction to the survey

In early 2023, the Techquity for Health Coalition established a first-of-its-kind, industry-wide benchmarking initiative, driven by the idea that to advance health equity, all healthcare stakeholders need to define but also to embed a techquity practice from within - much like the way safety and quality are now built into many facets of healthcare. The survey also originated from the idea that health equity is not something that can be addressed externally; rather, it needs to be fully embedded within an organization in order to be actualized. Therefore, the Coalition concluded that it would be important to explore the ways in which healthcare organizations are approaching equity internally, in terms of its people and processes (for example, in leadership & organizational culture- among other factors) as well as how equity was being considered in its processes for designing and deploying healthtech and in its approaches to collecting, storing and analyzing data. Guided by the motto of "if we can't measure it, we can't move forward", the Techquity for Health benchmark survey had 4 main objectives:

1 Understand the **current level of awareness of techquity**, and **perceived importance and urgency** around the topics of equity, health equity, and techquity

2 Explore **how (and to what extent)** healthcare organizations are currently integrating techquity into their **strategies** & the **time frame** in which they are focused

3 Identify **what steps** healthcare organizations are taking to advance techquity now (internally and externally), and understand **how success is being measured**

4 Gauge current levels of **confidence** in organizations' abilities to move forward

"The concept of techquity is still new to many. This survey helped drive much needed awareness and important discussion, and the results will help the coalition understand how healthcare organizations are approaching and prioritizing techquity. This information will serve as the foundation to develop guidelines and metrics to help techquity become the norm."
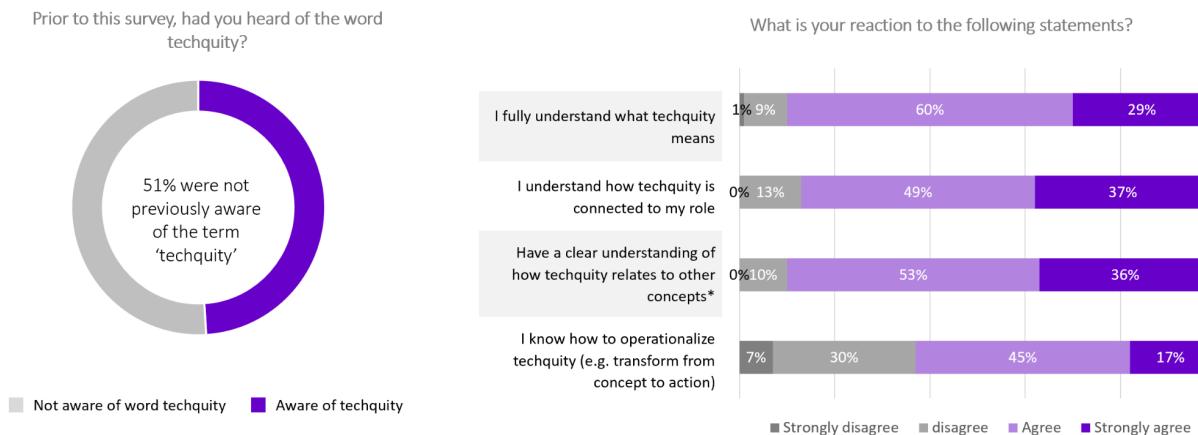
Theresa Demeter, MHA
Managing Director | Tegria

Research findings

As of March 2023, 212 leaders from across the industry participated in the techquity benchmarking initiative, with 45% of respondents working at a technology organization, 41% working at a clinical care organization, and the remaining 13% working within connector (e.g. nonprofit, academic) and/or patient advocacy or community-based organization (*please see Appendix for more information on respondents and industry segments*). Here's what they told us…..

1. **Once introduced, techquity is easy to understand as a concept; however, there are some difficulties when it comes to knowing how to translate it into action**

Approximately half of respondents were unaware of the term 'techquity' prior to taking the survey (51%). However, after the definition and context for the term was shared, most (~87%) of participants said they understood the concept, how it connects to their role, and how it relates to other concepts. However, a little over one third (37%) of respondents said they weren't sure how to ***operationalize*** techquity or how to turn it into action.

Prior to this survey, had you heard of the word techquity?

51% were not previously aware of the term 'techquity'

■ Not aware of word techquity   ■ Aware of techquity

What is your reaction to the following statements?

Statement	Strongly disagree	disagree	Agree	Strongly agree
I fully understand what techquity means	1%	9%	60%	29%
I understand how techquity is connected to my role	0%	13%	49%	37%
Have a clear understanding of how techquity relates to other concepts*	0%	10%	53%	36%
I know how to operationalize techquity (e.g. transform from concept to action)	7%	30%	45%	17%

■ Strongly disagree   ■ disagree   ■ Agree   ■ Strongly agree

> *"In order to truly adopt techquity in healthcare, we must evolve from understanding into action. The industry needs to align on measurable and achievable steps that will bridge the gap between knowledge and implementation. Within organizations, a top-down approach is essential for ensuring techquity becomes ingrained in our corporate policies and practices. Just as DE&I efforts are becoming part of our universal language and behavior, techquity must also be integrated in our very DNA. Only then can we create a truly equitable technological landscape in healthcare and beyond."*

Jaime Dictenberg
Chief Marketing & Experience Officer | EmpiRx Health

2. About half of the industry thinks that techquity is 'extremely' important; however, when compared to other industry challenges, it's seen as less urgent
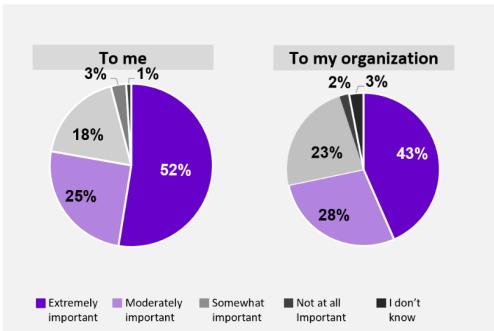
Techquity seems to be a personally compelling topic, with 52% of individuals saying it is 'extremely' important to them, and an additional 25% saying it is 'moderately' important. However, when asked about relative importance from the perspective of their *organization*, responses were noticeably lower (43% and 28% saying it's 'extremely' or 'moderately' important, respectively). Interestingly, when asked to react to a few industry challenges and share how *urgent* they were to address (with the opportunity to mark all topics as 'extremely urgent'), techquity was perceived as being less urgent than other topics, being ranked 4 out of 5 and falling behind the high cost of healthcare, the slow adoption of information technology, and cybersecurity threats in terms of urgency (in their personal opinion).

This finding potentially highlights the need to address zero-sum thinking when it comes to health equity, which is the idea that attention and urgency towards one topic necessitates a subsequent loss in importance of urgency in another, also known as the 'fixed pie' fallacy (Pilditch,2019). It is also important to note that this thinking can be erroneous when it comes to health equity/techquity, due to several reasons, not limited to, but including the fact that:
- In healthcare (& for any stakeholder operating in the healthcare space), we all have a basic commitment to equity and protecting the health of all. Therefore, as part of a society that is intended to value and protect everyone, we have an obligation to prioritize the correction of systems that harm people.
- Also, we all have a joint imperative to invest in equity, otherwise we risk being further entrenched in a vicious cycle of mistrust and low adherence or engagement among those who are currently marginalized by the healthcare system
- There is also significant business opportunity associated with equitable design, since solutions will be more effective and more user-friendly for more people than they are currently (for example, for those with mobility challenges, which currently impact many people congenitally, temporarily, due to accidents, or as the result of aging).
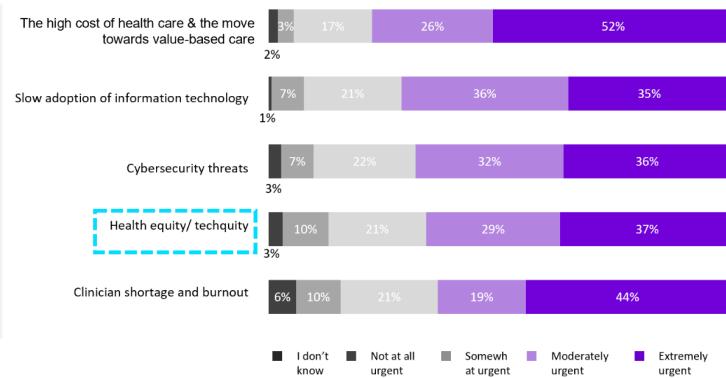
As the healthcare industry moves forwards, we must ensure that equity does not fall behind or become deprioritized; rather, equity needs to be at the forefront when we think about addressing all industry challenges.

To me
3% | 1%
18%
25%
52%

To my organization
2% | 3%
23%
28%
43%

Extremely important | Moderately important | Somewhat important | Not at all Important | I don't know

The high cost of health care & the move towards value-based care: 3% | 17% | 26% | 52% — 2%

Slow adoption of information technology: 7% | 21% | 36% | 35% — 1%

Cybersecurity threats: 7% | 22% | 32% | 36% — 3%

Health equity/ techquity: 10% | 21% | 29% | 37% — 3%

Clinician shortage and burnout: 6% | 10% | 21% | 19% | 44%

I don't know | Not at all urgent | Somewhat urgent | Moderately urgent | Extremely urgent
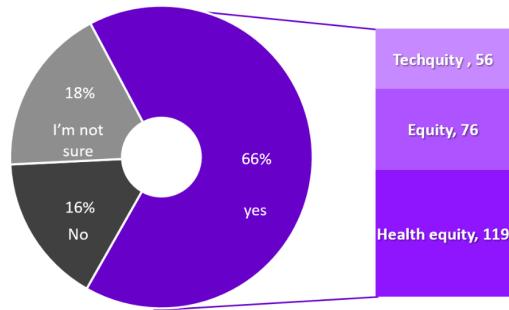
3. **About two-thirds of respondents are doing something <u>today </u>to try to address equity, health equity, and/or techquity; the remainder say that a lack of knowledge, commitment, or resources stands in the way**

Approximately 66% of all respondents in the survey said their organization had **at least one initiative in place** to address equity, health equity, and/or techquity. Among those initiatives, efforts to address **health equity** seemed to be most common (n=119), followed by more broadly focused **equity** initiatives (n=76) and lastly, **techquity** initiatives (n=56) (*Note: see the Appendix for additional information on the nuances between equity, health equity, and techquity*).

Within each segment of industry (e.g. clinical & care, tech & data solutions, and patient, community, & advisor organizations), **clinical & care industry** leaders surveyed seemed to be among the most active, with a higher proportion of leaders in that group being aware of at least 1 initiative (n=69 out of n=87), followed by **patient and community-based organization** leaders (n= 19 out of n=30), and lastly, **tech and data solutions** leaders (n=52 out of n=95 had an initiative in place).

It is important to note that approximately 34% of industry respondents either **did not** have an initiative in place or **weren't sure** if they had something in place. When asked what was *preventing* action, these respondents cited a number of things - for example, having to manage multiple competing priorities, feeling there wasn't commitment for techquity [within their organization], a lack of knowledge or resources, or a lack of senior leadership support - just to name a few.
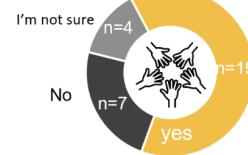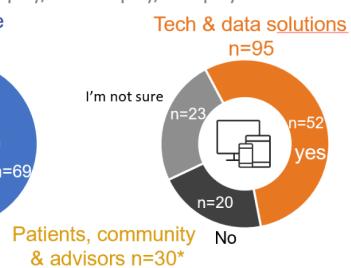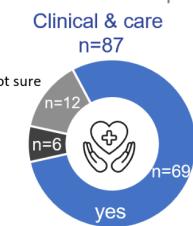
Does your organization have any programs or initiatives in place today to address equity/health equity/techquity?

18% I'm not sure

16% No

66% yes

What is the primary focus?
(select all that apply)

Techquity , 56

Equity, 76

Health equity, 119

Does your organization have any programs or initiatives in place today to address equity/health equity/techquity?

Clinical & care
n=87

I'm not sure
n=12

No
n=6

n=69 yes

Tech & data solutions
n=95

I'm not sure
n=23

n=52 yes

n=20 No

Patients, community & advisors n=30*

I'm not sure
n=4

No
n=7

n=19 yes

Open ended responses to the question, "If no initiatives are in place, what is preventing action in your opinion?" *(Open-ended; non-exhaustive)*

No framework   No commitment
Not enough knowledge   Not considered
Competing priorities   Not enough resources
Lack of priority or urgency
Win-win economics   No clear path
Lack of senior leadership   Clear definition
All-inclusive approach for better outcomes

> *"While there are many reasons and excuses for inaction as it relates to health equity, I believe we can defer to the legendary tennis player Arthur Ashe for inspiration to move forward…..'Start where you are. Use what you have. Do what you can.'"*
>
> **Burgess Harrison, MBA**
> Executive Director | National Minority Health Association
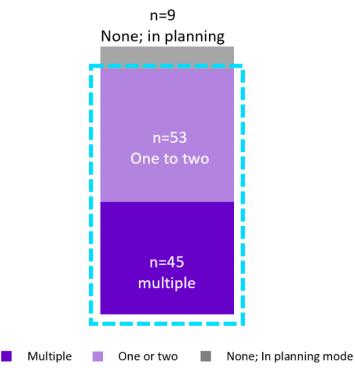
4. Many organizations are deploying more than one initiative; in particular, supporting Medicare/Medicaid, rural, and BIPOC communities are key areas of focus when it comes to techquity
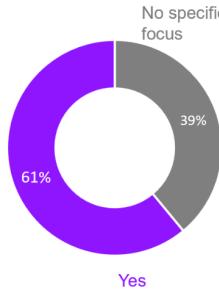
In terms of scale of initiatives- among the organizations with a techquity initiative in place, approximately half (n=53) only had about one or two programs in place, while the other half (n=45) had multiple (3 or more) initiatives in place.

In terms of the scope or focus of these various programs or initiatives, a slight majority (61%) of respondents said their techquity initiatives are currently designed to support a ***specific population or community***, with the top 3 most frequently mentioned being Medicare/Medicaid, rural, and BIPOC communities, followed by women, LGBTQIA+, and ESL populations.[2]
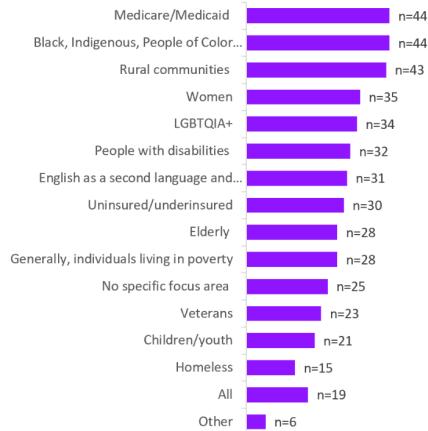
How active is your organization in terms of addressing techquity?

- n=9 None; in planning
- n=53 One to two
- n=45 multiple

Legend: Multiple / One or two / None; In planning mode

Does your organization's strategy focus on supporting a specific group or community?

- No specific focus 39%
- Yes 61%

Does your organization's strategy focus on supporting a specific group or community? *(select all that apply)*

Group	n
Medicare/Medicaid	n=44
Black, Indigenous, People of Color…	n=44
Rural communities	n=43
Women	n=35
LGBTQIA+	n=34
People with disabilities	n=32
English as a second language and…	n=31
Uninsured/underinsured	n=30
Elderly	n=28
Generally, individuals living in poverty	n=28
No specific focus area	n=25
Veterans	n=23
Children/youth	n=21
Homeless	n=15
All	n=19
Other	n=6

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[2] BIPOC= Black, Indigenous & People of Color
LGBTQIA= Lesbian, Gay, Bisexual, Trans, Queer and/or questioning, Intersex, Asexual plus
ESL= English as a Second Language

"The promise of digital health to improve health outcomes and democratize access to evidence-based information and the very best treatments is limitless. Health equity simply cannot exist without equitable access. In our world of oncology care at Outcomes4Me, we know that the pace of innovation is so great it is impossible for the average patient to benefit in real-time--and we worry about the inequity gap continuing to widen--which is why we believe in using AI and ML to bring personalized treatment information to all patients no matter who they are and where they receive their care and why we believe this coalition is doing such important work."

Maya Said, ScD
Founder, President & CEO | Outcomes4Me
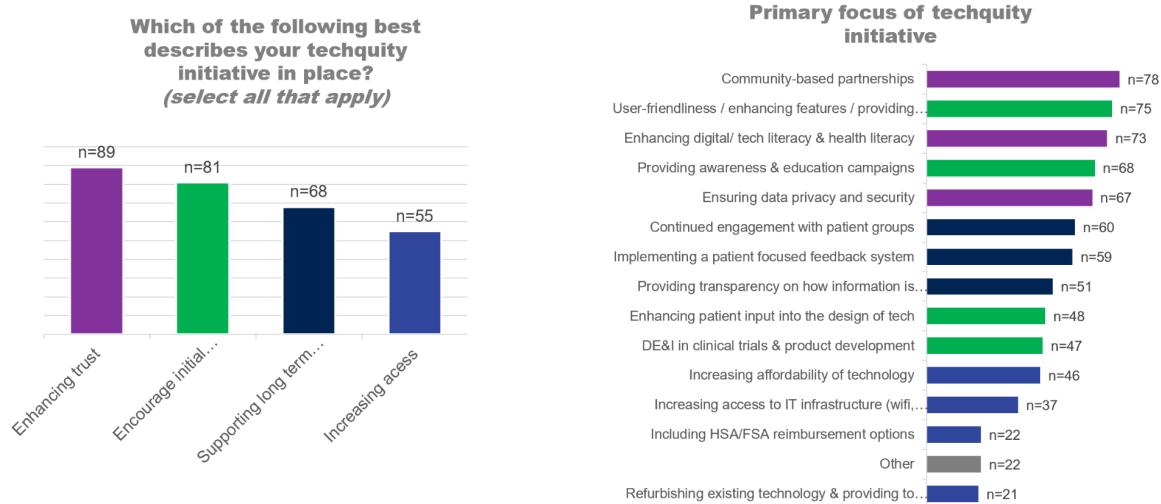
5. **Popular tactics focus on establishing community-based partnerships, increasing the user-friendliness of healthtech, and efforts to enhance digital & health literacy**

    When asked which types of activities respondents were focusing on to address techquity, responses were fairly evenly split across the 4 'building blocks' of techquity, with a slight lead or preference for activities related to **enhancing trust in the healthcare system** (mentioned by 89 respondents) - for example- through the development of community-based partnerships (the most popular tactic overall) and efforts to build digital/ tech literacy or to enhance data privacy/security.

    The second most popular tactics related to efforts to encourage better **initial use or uptake of healthtech** (mentioned by 81 respondents) - for example, through efforts to increase user-friendliness, deployment of educational or awareness campaigns, or through efforts to integrate patient input into the design of healthtech.

    Next up, efforts to support **long-term, more sustained uptake of healthtech** (mentioned by 68 respondents)—for example, through efforts to develop a better understanding of patient needs.

    Least commonly mentioned were efforts to **increase access** (mentioned by 55 respondents) to healthtech, mainly via affordability measures or through efforts to enhance basic IT infrastructure or provide HSA/FSA reimbursement.

Which of the following best describes your techquity initiative in place?
(select all that apply)

- Enhancing trust — n=89
- Encourage initial… — n=81
- Supporting long term… — n=68
- Increasing access — n=55

Primary focus of techquity initiative

Focus	n
Community-based partnerships	n=78
User-friendliness / enhancing features / providing…	n=75
Enhancing digital/ tech literacy & health literacy	n=73
Providing awareness & education campaigns	n=68
Ensuring data privacy and security	n=67
Continued engagement with patient groups	n=60
Implementing a patient focused feedback system	n=59
Providing transparency on how information is…	n=51
Enhancing patient input into the design of tech	n=48
DE&I in clinical trials & product development	n=47
Increasing affordability of technology	n=46
Increasing access to IT infrastructure (wifi,…	n=37
Including HSA/FSA reimbursement options	n=22
Other	n=22
Refurbishing existing technology & providing to…	n=21

"To build trust and transparency, it is critical that patient, carepartner, caregiver, and advocate lived experience and expertise are included throughout the design, development, and deployment of techquity strategies. In order to build user-friendly, scalable, sustainable uptake of healthtech, organizations will need to allocate budgets to support inclusion of diverse patient, carepartner, caregiver, and advocate expertise. Allocated budgets support priorities. Commitment to techquity as a priority will build a sustainable future."

Grace Cordovano, PhD, BCPA
CEO | Enlightening Results

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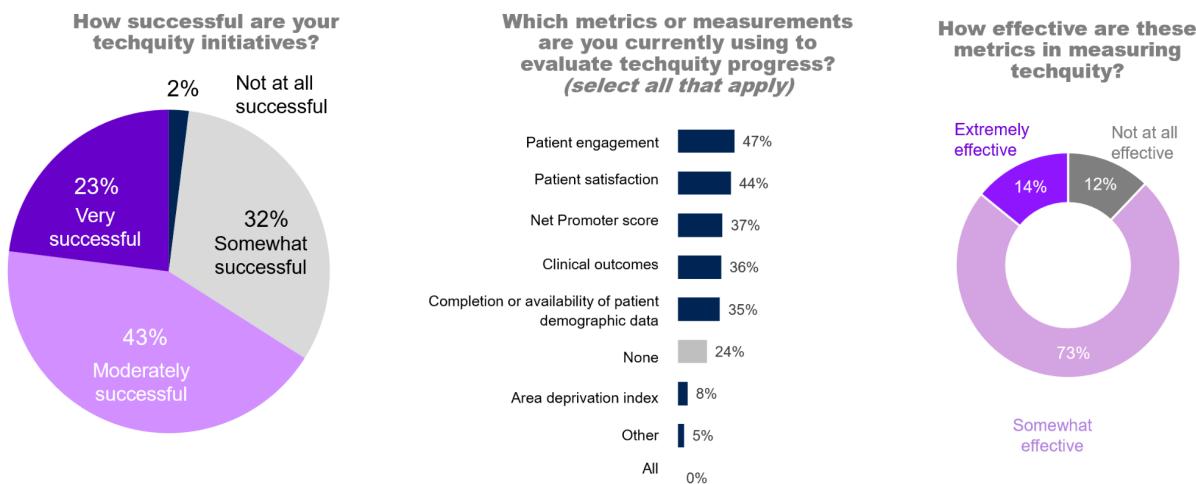
6. **The industry isn't sure whether or not its techquity efforts are successful, and recognizes that current industry measurements/metrics are only somewhat effective**

Approximately half (43%) of respondents said that their techquity initiatives were 'moderately' successful, followed by 32% who responded 'somewhat' successful; conversely, only 23% of respondents said that their initiatives are 'very' successful.

In terms of how industry is measuring success, the most common metrics in place currently are patient engagement, patient satisfaction, and use of net promoter score, followed by some use of clinical outcomes and patient demographic data. Interestingly, 24% of respondents said they did not use any metrics or to evaluate the progress of their techquity initiatives.

When asked whether these measurements were effective, 85% of respondents said these metrics were only 'somewhat' or even 'not at all' effective. These findings suggest a need for new measurements

which can be used to assess the effectiveness of techquity efforts in healthcare. One promising potential metric that might be considered by the industry is the patient empowerment score, which is gaining in popularity- although, notably, one which could benefit from further research and industry alignment on its definition and calculation (Mora, M. 2020).

How successful are your techquity initiatives?

- 2% Not at all successful
- 32% Somewhat successful
- 43% Moderately successful
- 23% Very successful

Which metrics or measurements are you currently using to evaluate techquity progress? *(select all that apply)*

Metric	%
Patient engagement	47%
Patient satisfaction	44%
Net Promoter score	37%
Clinical outcomes	36%
Completion or availability of patient demographic data	35%
None	24%
Area deprivation index	8%
Other	5%
All	0%

How effective are these metrics in measuring techquity?

- Extremely effective: 14%
- Not at all effective: 12%
- Somewhat effective: 73%

> *"The future of health and equity are going to be defined by data and new data science approaches to give decision makers the ability to forecast how interventions truly impact outcomes. Techquity will advance the ability for Chief Equity Officers to address root causes of systemic challenges."*
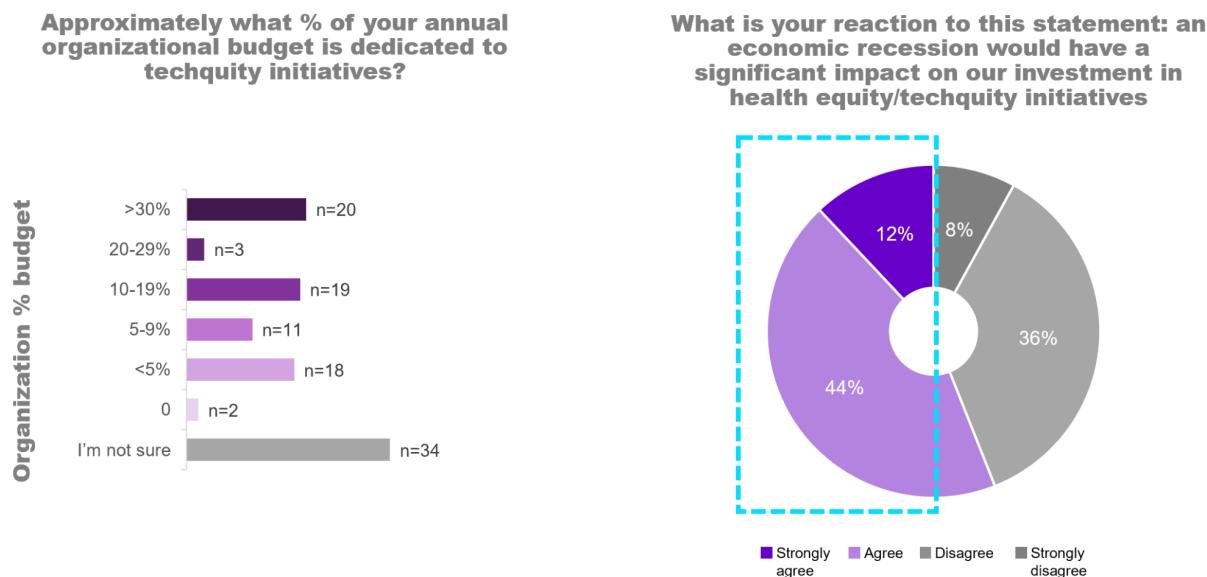
John Cordier, MBA, MHA
CEO | Epistemix

7. An economic recession is likely to have a significantly impact on techquity investments

Among all survey respondents, it is interesting to note that most aren't sure what percentage or portion of their overall organizational budget is allocated to equity/techquity initiatives. Among those who *were* aware of their techquity budget, investment ranged quite a bit, with 20 respondents saying they dedicated 30% of their budget or more to techquity, 19 respondents saying that the 10-19% of the organizational budget was dedicated to techquity, and 18 respondents saying that investment was less than 5%.

When asked whether an economic recession would impact their investment in techquity, it is interesting to note that more than half of those respondents (56%) agreed that an economic recession **would have a significant impact** on their investment in health equity/techquity. This finding is important, as marginalized communities have experienced their wellbeing as a fair-weather investment by industry–a

factor contributing to deep mistrust of the healthcare system. Long-term commitment to techquity investments is essential to success; and cyclic investment points back to zero-sum thinking and may indicate a lack of genuine inclusion of impacted communities in developing sustainable, effective solutions.

Approximately what % of your annual organizational budget is dedicated to techquity initiatives?

Organization % budget

>30%	n=20
20-29%	n=3
10-19%	n=19
5-9%	n=11
<5%	n=18
0	n=2
I'm not sure	n=34

What is your reaction to this statement: an economic recession would have a significant impact on our investment in health equity/techquity initiatives

- 12% — Strongly agree
- 44% — Agree
- 36% — Disagree
- 8% — Strongly disagree

> *"The perceived willingness of organizations to diminish techquity during an economic downturn suggests techquity may generally be considered a "higher personal need" per Maslow's Hierarchy… unless you're the one impacted by the inequity/disparity."*
>
> **Lorren Pettit, MS, MBA**
> Vice President, Digital Health Analytics | CHIME
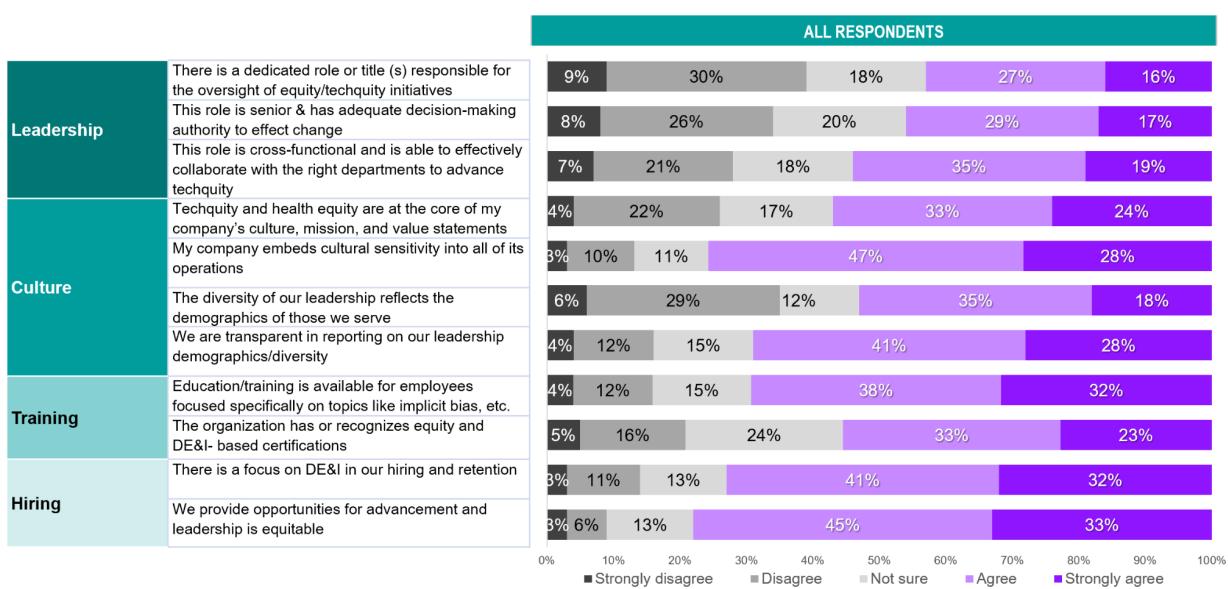
8. **The industry needs more leaders or champions for equity/techquity- and more importantly, leaders equipped with adequate decision-making authority**

When looking at how organizations approach matters of equity internally, the first category was 'People', which explored how matters of equity are currently integrated into leadership, culture, training, and overall hiring practices.

Notably, a little more than half (57%) of respondents weren't sure or didn't think their organization had a **dedicated leader** responsible for the oversight of equity/techquity initiatives. Additionally, 54% of respondents weren't sure that leaders had **adequate decision-making authority** to effect change within

their organization. Only 54% agreed that the role was able to effectively cross collaborate with the right departments to advance techquity.

In terms of **organizational culture**, 75% of respondents agreed that their organization embeds cultural sensitivity in its operations, and 69% agreed that their organization transparently reports on leadership DE&I demographics. However, respondents were fairly split on whether techquity was "core" to their company culture (57% agree), and additionally, whether or not their leadership structure reflected the demographics of the people they serve (53% agree/35% disagree/12% weren't sure). Unexplored aspects of authority for future research include budgetary authority and the relative distribution of budgetary funds to health equity champions and others, such as product development, innovation and population health teams, that develop or assess and purchase technology and data tools across healthcare organizations.

ALL RESPONDENTS

Category	Statement	Strongly disagree	Disagree	Not sure	Agree	Strongly agree
Leadership	There is a dedicated role or title (s) responsible for the oversight of equity/techquity initiatives	9%	30%	18%	27%	16%
	This role is senior & has adequate decision-making authority to effect change	8%	26%	20%	29%	17%
	This role is cross-functional and is able to effectively collaborate with the right departments to advance techquity	7%	21%	18%	35%	19%
Culture	Techquity and health equity are at the core of my company's culture, mission, and value statements	4%	22%	17%	33%	24%
	My company embeds cultural sensitivity into all of its operations	3%	10%	11%	47%	28%
	The diversity of our leadership reflects the demographics of those we serve	6%	29%	12%	35%	18%
	We are transparent in reporting on our leadership demographics/diversity	4%	12%	15%	41%	28%
Training	Education/training is available for employees focused specifically on topics like implicit bias, etc.	4%	12%	15%	38%	32%
	The organization has or recognizes equity and DE&I- based certifications	5%	16%	24%	33%	23%
Hiring	There is a focus on DE&I in our hiring and retention	3%	11%	13%	41%	32%
	We provide opportunities for advancement and leadership is equitable	3%	6%	13%	45%	33%

"Putting the needs of members, patients or clients first is an absolute necessity in order to make sizeable improvements to the processes in which we integrate equity into every aspect of a business. It is not enough to simply provide a service or treatment – it is important to ensure that we understand how different cultural backgrounds, economic statuses, ages, genders and more influence people's health experiences."

Pooja Mittal, DO
Vice President, Chief Health Equity Officer|Health Net
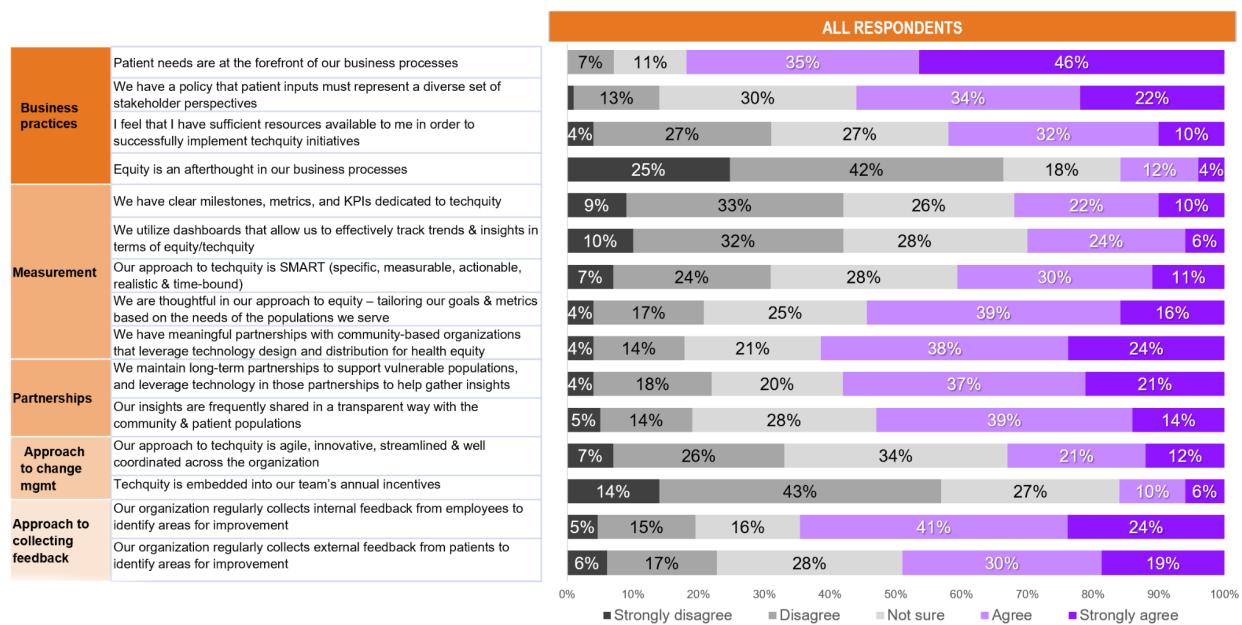
9. Positive intent is present; however, the industry needs new metrics for techquity, better feedback mechanisms to collect patient input, and overall, may benefit from incentivizing efforts towards techquity

The next area of measurement was 'Process', which explored how matters of equity are currently integrated into overall business practices, approaches to measurement, partnerships, change management and collecting feedback.

On a positive note, 67% of respondents disagreed with the statement "equity is an afterthought" and overall, 81% indicated that they prioritized or aimed to put patient needs at the forefront of operations.

On the flip side, there were a few key areas where respondents perceive significant gaps; which notably included:
- whether or not there were **sufficient resources** available to them to implement techquity initiatives (42% agreed, 31% disagreed, 27% weren't sure)
- whether or not there was a policy supporting **diverse patient inputs** (56% agreed, 14% disagreed, 30% weren't sure)
- whether or not **insights were shared back with the community and patient populations** in a transparent way (53% agreed, 19% disagreed, 28% weren't sure)
- whether or not their approach to techquity was **'SMART'** (specific, measurable, actionable, realistic, and time bound) (41% agreed, 31% disagreed, 28% weren't sure)
- the existence of **clear milestones, metrics, and KPIs dedicated to techquity** (32% agreed, 42% disagreed, 26% weren't sure)
- and lastly- whether there were any **internal mechanisms for incentivizing focus or attention to techquity** (16% agreed, 57% disagreed, 27% weren't sure)

ALL RESPONDENTS

Category	Statement	Strongly disagree	Disagree	Not sure	Agree	Strongly agree
Business practices	Patient needs are at the forefront of our business processes	7%	11%		35%	46%
	We have a policy that patient inputs must represent a diverse set of stakeholder perspectives		13%	30%	34%	22%
	I feel that I have sufficient resources available to me in order to successfully implement techquity initiatives	4%	27%	27%	32%	10%
	Equity is an afterthought in our business processes	25%	42%	18%	12%	4%
Measurement	We have clear milestones, metrics, and KPIs dedicated to techquity	9%	33%	26%	22%	10%
	We utilize dashboards that allow us to effectively track trends & insights in terms of equity/techquity	10%	32%	28%	24%	6%
	Our approach to techquity is SMART (specific, measurable, actionable, realistic & time-bound)	7%	24%	28%	30%	11%
	We are thoughtful in our approach to equity – tailoring our goals & metrics based on the needs of the populations we serve	4%	17%	25%	39%	16%
Partnerships	We have meaningful partnerships with community-based organizations that leverage technology design and distribution for health equity	4%	14%	21%	38%	24%
	We maintain long-term partnerships to support vulnerable populations, and leverage technology in those partnerships to help gather insights	4%	18%	20%	37%	21%
	Our insights are frequently shared in a transparent way with the community & patient populations	5%	14%	28%	39%	14%
Approach to change mgmt	Our approach to techquity is agile, innovative, streamlined & well coordinated across the organization	7%	26%	34%	21%	12%
	Techquity is embedded into our team's annual incentives	14%	43%	27%	10%	6%
Approach to collecting feedback	Our organization regularly collects internal feedback from employees to identify areas for improvement	5%	15%	16%	41%	24%
	Our organization regularly collects external feedback from patients to identify areas for improvement	6%	17%	28%	30%	19%

■ Strongly disagree ■ Disagree ■ Not sure ■ Agree ■ Strongly agree

> *"Recognizing the value of digital health technologies in improving healthcare inequities is the first step and these research findings show that leaders in digital health and technology are not only aware of techquity but prioritize equity; the challenge is that gaps still exist that are preventing implementation and complete support of techquity. These results show that more research and more work needs to be done to help techquity reach its full potential".*
>
> **Tanisha Hill, MPH**
> Founder & President | Digital Health for Equitable Health Alliance
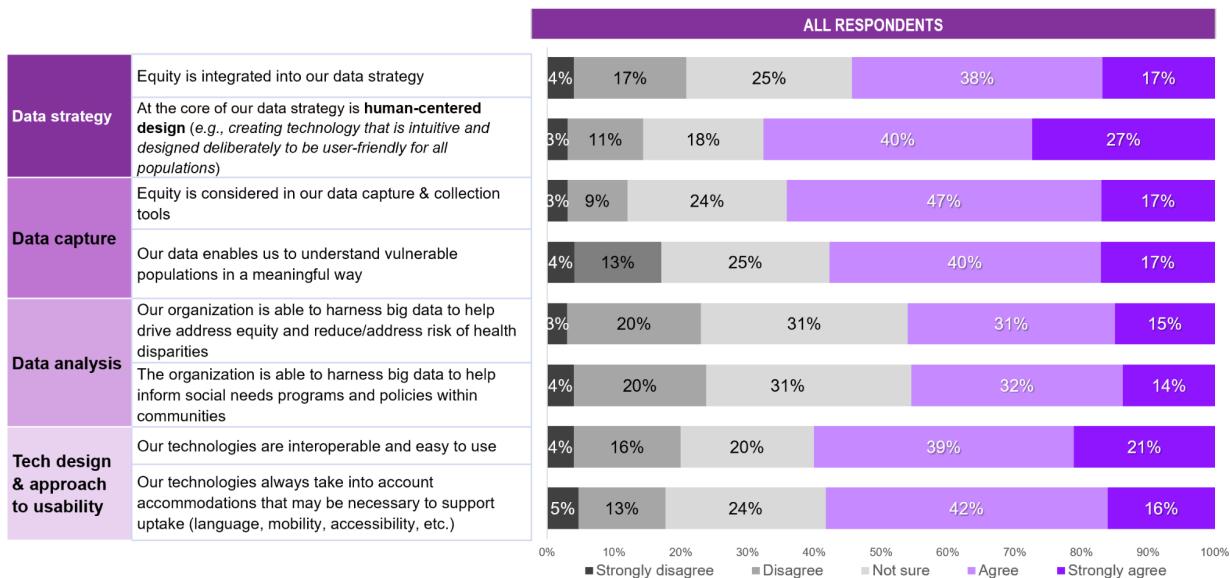
10. **While equity is *sometimes* considered, the industry isn't confident in its ability to leverage data and technology tools to generate an understanding of underserved patients' needs, nor its ability to use that information to address health disparities; lastly- accommodations for language, mobility, and disability is a potential 'low-hanging fruit'**

The final area of measurement was 'Technology', which explored how matters of equity are currently integrated into organizations' data strategies, approach to data capture and analysis, and efforts to enhance tech design and usability.

On a positive note, most respondents agree that human-centered design principles are a core component of their data strategy (67% agreed), and although split, a slight majority of respondents indicated that equity is at least a consideration in their approach to establishing data strategies and data capture, as well as the design of data collection tools.

In terms of gaps, there was notable disagreement on whether the industry is harnessing big data to inform social needs programs or policies and on whether big data was being leveraged to address equity and/or address health disparities (approximately 46% agreed, 23% disagreed, and 31% weren't sure). Additionally, only 57% of respondents believe they are using data to establish a better understanding of marginalized populations in a meaningful way- suggesting an area for improvement.
In terms of low hanging fruit, or something that all organizations can do today to enhance efforts towards techquity, one place to start is by looking at healthtech accommodations for those with language, mobility, and/or accessibility barriers. Currently, only about 58% of respondents thought in their opinion that their organization was taking these factors into account when it came to its approach to technology.

		ALL RESPONDENTS				
Data strategy	Equity is integrated into our data strategy	4%	17%	25%	38%	17%
	At the core of our data strategy is **human-centered design** (*e.g., creating technology that is intuitive and designed deliberately to be user-friendly for all populations*)	3%	11%	18%	40%	27%
Data capture	Equity is considered in our data capture & collection tools	3%	9%	24%	47%	17%
	Our data enables us to understand vulnerable populations in a meaningful way	4%	13%	25%	40%	17%
Data analysis	Our organization is able to harness big data to help drive address equity and reduce/address risk of health disparities	3%	20%	31%	31%	15%
	The organization is able to harness big data to help inform social needs programs and policies within communities	4%	20%	31%	32%	14%
Tech design & approach to usability	Our technologies are interoperable and easy to use	4%	16%	20%	39%	21%
	Our technologies always take into account accommodations that may be necessary to support uptake (language, mobility, accessibility, etc.)	5%	13%	24%	42%	16%

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

■ Strongly disagree   ■ Disagree   ■ Not sure   ■ Agree   ■ Strongly agree

"Techquity has evolved in response to many historical and current streams of work in health equity. By building upon this enabling foundation, our collaborative effort stands to make great contributions. For example, the results gleaned from our initial survey will help accurately target the dissemination and implementation of the Equitable Health Innovation Toolkit developed by the American Medical Association's initiative, In Full Health™. Health equity innovation is a team sport and we are in recruitment mode. Join us!"

Michael Penn, MD, PhD
Director of Health Equity Innovation |American Medical Association (AMA)

CONCLUSION

In line with the hypothesis of our initial (March 2022) report, the benchmark Techquity for Health Industry Survey has demonstrated enormous opportunities for improvement in how healthcare currently understands, prioritizes, addresses, measures and performs with regard to techquity. Our hope is that these high-level findings will serve as a call to action for healthcare leaders to develop consensus guidelines, standards and metrics to frame a new and continually improving practice of techquity as it relates to the integration of health equity considerations into health technology design and distribution as well as conventions for equitable data collection, storage and analysis. Future research by the Techquity for Health Coalition includes conducting a comprehensive review of these benchmark findings and fielding a second, follow-up survey during the 2023-2024 period.

"While there's been an encouraging uptick in activity and investment around technologies and solutions focused specifically on advancing health equity - in fact, ground-breaking advancements in accessibility was one of the standout tech trends at CES 2023 - there's still an urgent need for broader application. Why techquity is so important and timely is that it is, in part, helping to ensure that health equity becomes a default function and not just a feature of next-gen healthcare technologies."

Will Flanagan, MBA
Head of Programs & Partnerships | VSP Global Innovation Center
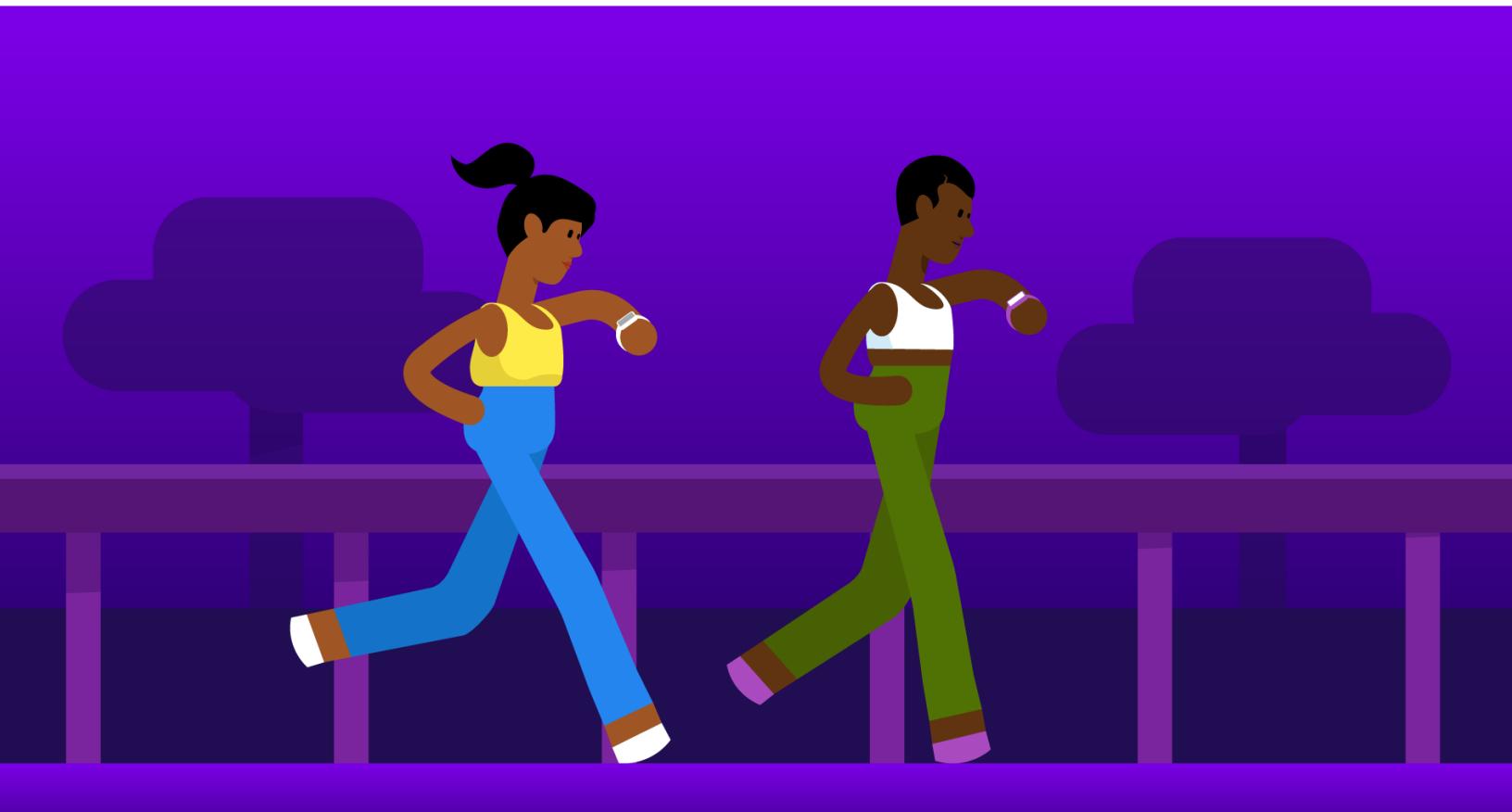
## Get involved in the Techquity for Health Coalition

In addition to additional research activities, the Techquity for Health Coalition's immediate priorities include staffing its Advisory Committee, with a focus on diverse representation; engaging with the industry as a resource for centralizing expertise and best practices information on techquity, as a first step toward developing consensus standards; and continuing to bring attention to techquity as a critical health issue of the digital age.

You can learn more and get involved by emailing info@hlthfoundation.org, and visiting the website: hlthfoundation.org.
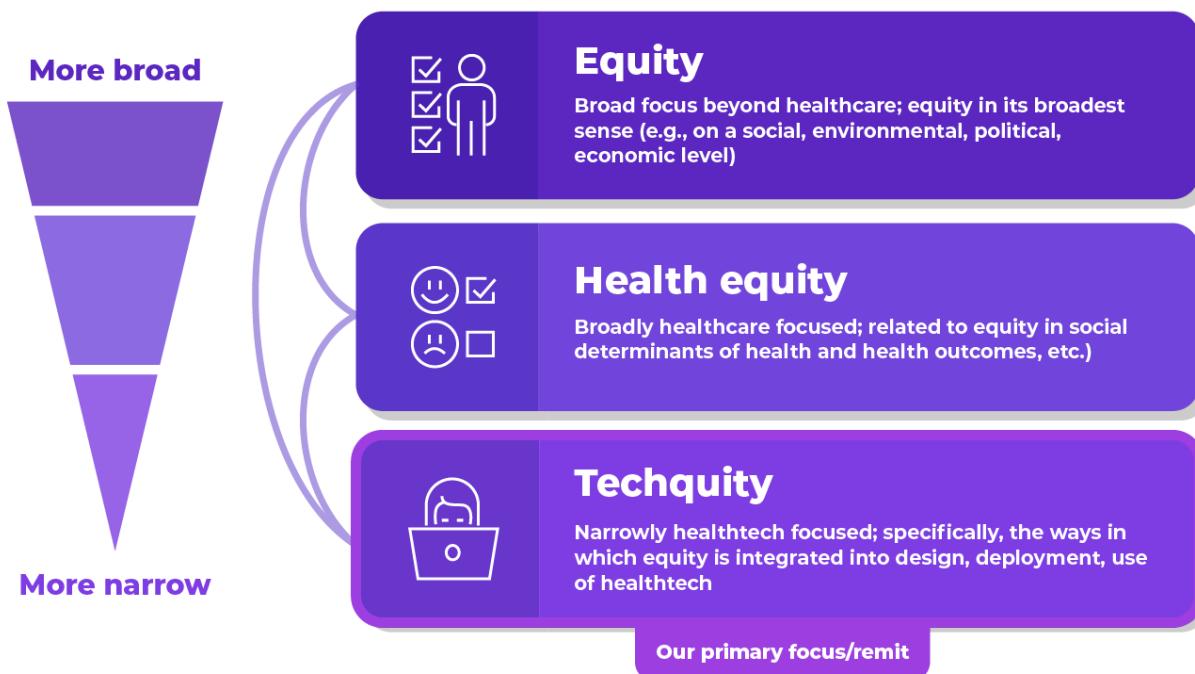
"Each of the four pillars of our techquity model (trust, access, adoption, and sustained engagement) rely on a better understanding of the experiences of patients who interact with the healthcare system so that we can design and build more equitable healthcare technologies. One of the most exciting parts of our coalition is the commitment to highlighting the experiences of a diverse set of patients, including children, youth, and families, who interact with healthcare technologies. Through ethnography videos we are able to uncover key insights that inform our work and will ultimately help the field in reaching our techquity goals."

Amy Green, PhD
Head of Research & Staff | Hopelab

APPENDIX

Relationship between equity, health equity & techquity

More broad

More narrow

Equity
Broad focus beyond healthcare; equity in its broadest sense (e.g., on a social, environmental, political, economic level)

Health equity
Broadly healthcare focused; related to equity in social determinants of health and health outcomes, etc.)

Techquity
Narrowly healthtech focused; specifically, the ways in which equity is integrated into design, deployment, use of healthtech

Our primary focus/remit

About this research

This research was conducted by the Techquity for Health Coalition between January 25, 2023 and March 3, 2023.

Quantitative research methodology

The survey was conducted in English with n=212 respondents. The survey was distributed via HLTH, CHIME Digital Health Analytics Division, and Ipsos Healthcare to their distribution networks and through a press release as well as shared on social media by HLTH and members of the Techquity for Health Advisory Committee. The survey was completed online for a duration of roughly 8-12 minutes.

As an incentive for participating, respondents who provided their email address received a $150 discount code for HLTH 2023 registration, and a copy of the survey report via the email provided in the survey. Additionally, the HLTH Foundation donated $1,000 to RIP Medical Debt in the name of participants, which translated into $100,000 of debt forgiveness for patients earning less than 4x the federal poverty limit and struggling with high medical bills.

Survey distribution & respondent info

For this assessment, the Coalition designed an 'im**PACCT**' framework (standing for **P**atients, **A**dvocacy groups, **C**onnectors, **C**linical care, and **T**ech) to identify stakeholders with a role in techquity, and the modern provision of healthcare today. Notably, this framework focuses on healthcare organizations, meaning those directly involved in the provision of healthcare (like clinical care providers, pharmacy, and pharma, medtech, and biotech orgs), and also technology organizations (for example, those responsible for the development of direct to consumer solutions (DTC), (business-to-business-to-consumer (B2B2C) solutions, as well as business-to-business (B2B) tech and data solutions. Additionally, the framework also includes non-health and non-tech groups, like 'connector' organizations (e.g. advisors, investors, academic orgs, policy makers, and insurers) along with patients and community groups. .
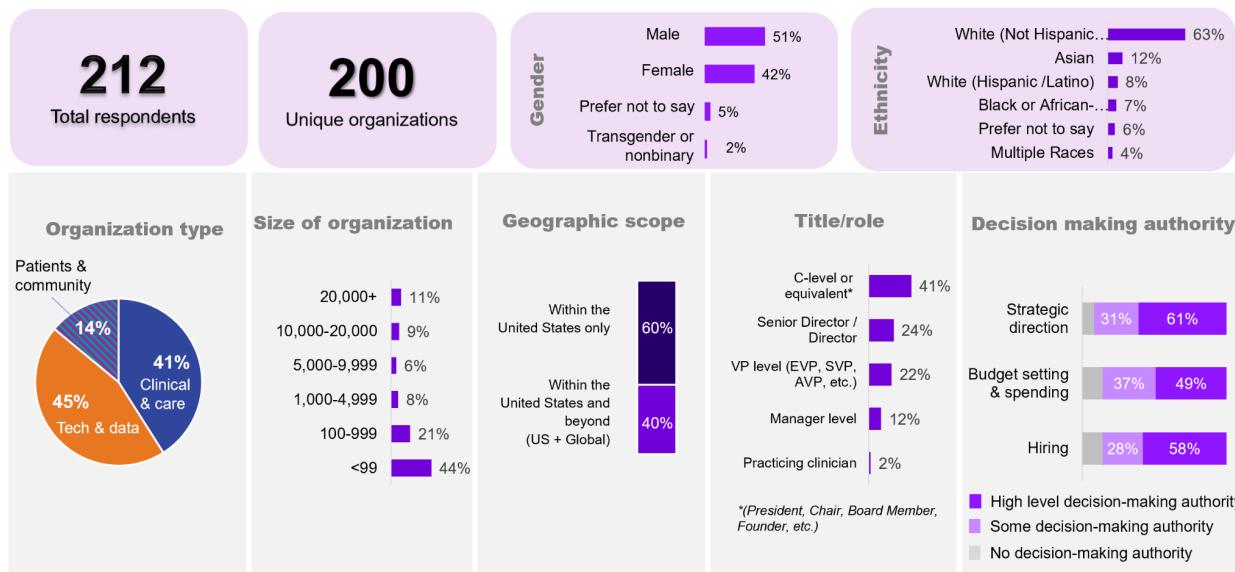
Within each of these key areas, the survey was distributed to leaders (manager and above), and specifically, those with self-reported degree of influence, oversight and/or decision-making authority. While all functions were welcome to participate in the survey, specific emphasis was placed on those roles/functions related to c-suite leadership, operations, strategy, transformation, partnerships, clinical/medical functions, and those responsible for the design of healthcare technologies.*[3]

imPAACT framework for survey distribution & inclusion across industry

	Non-Healthcare/Non-Tech	Tech	Healthcare-focused
Patients & community			
Patients & advocacy orgs	■		
Community based organizations	■		
Connectors			
Advisors	■	■	■
Academic organizations	■	■	■
Investors	■		
Policymakers	■		
Insurers,payers,& purchasers	■		
Clinical & Care			
Product manufacturers (Pharma, Biotech & Med Device)		■	■
Providers (clinical care providers)			■
Pharmacy			■
Tech & Data solutions			
DTC and B2B2C tech & data solution vendors			■
B2B tech & data solutions			■

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[3] *Highlighted area = sphere or operation or area of expertise

Survey respondents & demographic information

212
Total respondents

200
Unique organizations

Gender
- Male — 51%
- Female — 42%
- Prefer not to say — 5%
- Transgender or nonbinary — 2%

Ethnicity
- White (Not Hispanic...) — 63%
- Asian — 12%
- White (Hispanic /Latino) — 8%
- Black or African-... — 7%
- Prefer not to say — 6%
- Multiple Races — 4%

Organization type
- Patients & community — 14%
- Clinical & care — 41%
- Tech & data — 45%

Size of organization
- 20,000+ — 11%
- 10,000-20,000 — 9%
- 5,000-9,999 — 6%
- 1,000-4,999 — 8%
- 100-999 — 21%
- <99 — 44%

Geographic scope
- Within the United States only — 60%
- Within the United States and beyond (US + Global) — 40%

Title/role
- C-level or equivalent* — 41%
- Senior Director / Director — 24%
- VP level (EVP, SVP, AVP, etc.) — 22%
- Manager level — 12%
- Practicing clinician — 2%

(President, Chair, Board Member, Founder, etc.)

Decision making authority

Strategic direction	31%	61%
Budget setting & spending	37%	49%
Hiring	28%	58%

- ■ High level decision-making authority
- ■ Some decision-making authority
- ■ No decision-making authority

About the HLTH Foundation

The HLTH Foundation promotes equity, inclusion and opportunity in healthcare, focusing on patients, healthcare professionals and startup founders. Its activities include operating CSweetener, a mentorship program helping to close the gender leadership gap in healthcare and convening the Techquity for Health Coalition to integrate health equity considerations into health technology innovation. The Foundation also hosts mission-driven content, affinity meetups and campaigns at the annual HLTH and ViVE events through its Impact Programs. The HLTH Foundation is a 501(c)3 non-profit of HLTH, Inc. More information: hlthfoundation.org

About Ipsos Healthcare Advisory

In our world of rapid change, the need for reliable information to make confident decisions has never been greater. At Ipsos we believe our clients need more than a data supplier, they need a partner who can produce accurate and relevant information and turn it into actionable truth. This is why our passionately curious experts not only provide the most precise measurement, but shape it to provide a true understanding of society, markets and people. To do this, we use the best of science, technology and know-how and apply the principles of security, simplicity, speed and substance to everything we do. So that our clients can act faster, smarter and bolder. Ultimately, success comes down to a simple truth: You act better when you are sure. More information: https://www.ipsoshealthadvisory.com/

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Authors

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Alex Spencer is an Associate Consultant at Ipsos Healthcare Advisory. She has a diverse background in healthcare and the medical field including 4 years working in clinical trials. Alex holds a Master's in Public health from Boston University where she focused on health policy & law and a Bachelor's of Arts from Wesleyan University focused on chemistry.

Janna Guinen is the Executive Director of the HLTH Foundation, a 501(c)3 non-profit organization affiliated with HLTH, Inc., which convened the Techquity for Health Coalition. She is dedicated to making healthcare more equitable, empowering patients to advocate for themselves and advancing representative innovation in healthcare.

A word of thanks to our supporters

We are grateful to our supporters, without which this research would not have been possible.