What product inclusion means for digital health

To understand product inclusion as it applies to healthcare, we must first step back and look at the bigger picture of where we are, where we're headed, and how far we *haven't* come.

onduo by **verily**

The state of health equity in America

In 2002, the National Academy of Medicine, formerly called the Institute of Medicine, released Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care, a landmark publication about the widespread disparities in the US healthcare system. "Despite steady improvement in the overall health of the US population, racial and ethnic minorities, with few exceptions, experience higher rates of morbidity and mortality than non-minorities," the report found, calling the worse medical outcomes "unacceptable."[1]

The sad truth: In 20 years, we haven't made much progress. Disparities in outcomes by race, ethnicity, and income remain persistent, despite our increasing awareness about the enormous cost for the American economy: an estimated $300 billion per year.[2] As just one example, type 2 diabetes and its complications—an area of focus for our company, Onduo by Verily—continue to disproportionately affect minority and low-income populations.[3]

In addition, a compounding problem is the lack of diversity in both clinical trials and care delivery. A 2021 study that looked at 230 clinical trials for vaccines conducted between 2011 and 2020 found that white participants were overrepresented (77.9 % of the time), whereas Black participants were represented only 10.6 % of the time and Hispanic participants were represented just 11.6 % of the time.[5]

As for care delivery, Black, Hispanic, and Native American physicians remain significantly underrepresented.[6] In fact, a 2021 UCLA study found that the proportion of Black male physicians in the US hasn't changed since 1940, whereas the proportion of Black female physicians increased by only 2.7%.[7] As of 2018, when 12.8% of the total US population was Black, only 5.4% of US physicians were Black—2.6% Black men and 2.8% Black women.[8]

Tackling these inequities requires innovators to move forward with an intentional examination of the structural systems that have historically excluded minority voices in the development of products and services. To achieve infrastructure change, we must analyze our current design, development, and implementation of digital health services, within the context of our past. We must bring awareness of the experiences of those who have lived in communities that have been neglected or disinvested, or faced stolen opportunities to build wealth—in addition to segregated and inequitable healthcare systems and chronic over-policing and police brutality. This is the story of unnecessary harms—emotional, mental, and physical pain—across many generations.

Key findings from the 2022 National Diabetes Statistics Report:[4]

- More than 130 million adults are living with diabetes or prediabetes in the US

- The percentage of adults with diagnosed diabetes in 2018-2019 was highest among:
    - American Indian and Alaska Native people (14.5%)
    - Non-Hispanic Black people (12.1%)
    - People of Hispanic origin (11.8%)
    - Non-Hispanic Asian people (9.5%)
    - Non-Hispanic White people (7.4%)

- Adults with a family income below the federal poverty level had the highest prevalence for both men (13.7%) and women (14.4%).

Where things are headed:
The business case for inclusion

The US is rapidly becoming a more racially and ethnically pluralistic society, which only underscores the need to address these stark, and too often deadly, disparities. For example, if clinical trials continue to lack representation from diverse patient populations, the robustness and generalizability of the research findings to those populations may be limited.

In addition, healthcare organizations would be remiss to overlook the implications in terms of economic influence. Minority consumers in the US—including Hispanic, Black, Asian American, and Native American buyers—wield $4.9 trillion in combined buying power.[10] Creating products and services within a framework of product inclusion makes business sense, as does designing solutions that consider the 56.7 million Americans with a disability.[11]

Did you know...

According to the US Census, less than 50% of the US population is projected to be non-Hispanic white by 2044.[9] Clinical trials need to represent diverse patient populations to have generalizable research findings.
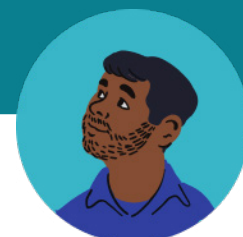
There is also growing evidence that consumers respond to inclusive efforts. A 2019 survey of nearly 3,000 US consumers conducted by Ipsos and our sister company Google found that respondents were more likely to consider a product after seeing an ad that they deemed diverse or inclusive. Overall, 64% said they took action (from research to a purchase) based on inclusive ad campaigns, and the numbers were even higher for Latinx (85%), LGBTQ (85%), Black (79%), and Asian/Pacific Islander (79%) respondents.[13]

Of course, advertising is one of the last steps, and product inclusion—as we'll discuss in the next section—must inform your complete end-to-end process. Critically, such efforts must also be intertwined with Diversity, Equity, and Inclusion (DEI) initiatives to ensure that the teams creating your products and services reflect the diverse populations you're serving—and can approach them with cultural competency. Plus, having champions of inclusion as leaders increases the chances that you're prioritizing inclusion at every important juncture.

Did you know...

Product inclusion is not only good for people—**it's good for business.**[12]
- $1.7 trillion LatinX spending power in the US
- $1.4 trillion Black spending power in the US
- $18 trillion purchasing power of women globally

Source: Selig Center for Economic Growth. Multicultural Economy Report: 2021.

Going beyond the build

As Onduo by Verily is part of the Alphabet family, we are guided by Google's product inclusion philosophies. Central to these tenets is the overarching principle that in order to create diverse and inclusive digital health technologies, we need to co-create with the communities we serve.

To effectively co-create means developing a diverse and inclusive workforce first and foremost, ensuring that the *social determinants of health* (SDoH) are included and measured in our data gathering and analysis, and then contextualizing and applying that data to personalize our app-based virtual care. We offer clinical services to members from a position of cultural humility, and we focus on doing all of this at scale, so that we can be a partner in creating structural change, lifting up communities in need, and leaving no community behind.

We also focus on product inclusion as a holistic goal, versus a narrower focus on inclusive design, which is just one piece of it. What's the difference? Here's a quick primer:

Social Determinants of Health (SDoH)

Defined by the CDC as "the conditions in the environments where people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks."[14]

Product Inclusion	vs.	Inclusive Design
This means inviting in those with diverse perspectives, learning from their lived experiences, and then embedding those learnings at key inflection points in a complete end-to-end process. The goal is to create useful solutions for a more diverse customer base. It's building for everyone—with everyone.		This term encompasses design methodologies used to build products that enable and support people of all backgrounds and abilities. Inclusive design may address: accessibility, age, culture, race, socio-economic situation, education, gender, geographic location, language, and more.

Annie Jean Baptiste: Leading the movement

" In order to truly build for everyone, we need to think about intersectionality. Too often, we think about dimensions of diversity in silos, but humans are multifaceted. For example, I always say 'I'm not Black on Monday, a woman on Tuesday, and left-handed on Wednesday.' All of those things are always within me and affect my interactions with people and products."[15]

—Annie Jean Baptiste, Head of Product Inclusion, Google

"When creating something for someone else, you must always ask, 'who else?' says Annie Jean Baptiste, author of *Building for Everyone* and the Head of Product Inclusion at Google. "We need to move from the positioning of giving historically underrepresented consumers a 'seat at the table' to co-creation and full collaboration. When we do this, the outcomes are better for everyone because a diverse set of perspectives leads to higher innovation and solutions that can touch the lives of more people. Let's build the table together where we all have a voice."

Did you know...

According to Annie Jean Baptiste, author of Building for Everyone, there are 4 key points in the product design process to think about inclusion:

- Ideation
- User experience design (UX)
- User testing
- Marketing phases

Accordingly, at Google, Onduo, and all Alphabet companies, product inclusion doesn't just occur at one point in the process, but at every critical point in the process. Google's approach to end-to-end inclusivity requires three key steps:[17]

Address the user

Race, gender, age, education level, ability, and geographic location are some of the dimensions of diversity that we consider developing a product.

Start with equity

Inclusion shouldn't be an afterthought. We want to make sure that underrepresented voices are being heard throughout the product development process.

Continually test

To ensure our products are inclusive, we are always researching and testing.

And along the way, continue to ask: Who else can you include and get feedback from? Baptiste says this may mean identifying underrepresented groups that are not part of your current customer base, conducting focus groups, tapping into online surveys, and working with agencies led by diverse founders who can provide access to underrepresented talent.

Did you know...

Coined by Kimberlé Crenshaw, JD, LLM, in 1989, the term intersectionality is defined by Merriam-Webster dictionary as "the complex, cumulative way in which the effects of multiple forms of discrimination (such as racism, sexism, and classism) combine, overlap, or intersect especially in the experiences of marginalized individuals or groups."[16] We must be cognizant of intersectionality if we are to build equitable solutions.

How digital health is pushing things forward

Digital health companies like Onduo currently have the opportunity to apply data-driven, evidence-based care more equitably by using an inclusive approach when building out products and services. Through the marriage of technologies like machine learning and AI, with human-centered interventions based on empathy-based care models, we can take a holistic approach to care by understanding more about the individual and how we can personalize care to meet their needs. We can come to understand more about each individual's health challenges by including and measuring their SDoH.

> "We know that no more than about 10% of a person's health status is based on the direct care they receive. We have to look beyond the clinical attributes related to this person and factor in things like housing status, local employment rates, food insecurity, or transportation challenges. The collection of SDoH helps us craft solutions that fit the individual and allow us to take a more proactive approach to care."

—Dr. Vindell Washington, CEO of Onduo

We can also learn from our past and work to root out bias. Case in point: AI may suggest an intervention or course of therapy that a human provider might not. But we're also aware that bias can occur algorithmically, so at Onduo we are vigilant about evaluating our data science to ensure inclusivity in the data models we're building and the training we conduct.

The checklist: Google's 10 product inclusion questions to ask yourself

Here's a great checklist for evaluating your organization, creating a plan to build product inclusion into your processes, and winning support from the necessary stakeholders.

- ☐ Has your team been exposed to inclusive design?
- ☐ Have you identified a champion?
- ☐ What's the business challenge you're trying to solve?
- ☐ What is the inclusion challenge you're trying to solve?
- ☐ How do the business and inclusion challenges align? (This will help shape a team's goal statement for product inclusion.)
- ☐ Whom do I need to influence to unlock resources to solve the problem?
- ☐ What's your action plan for a test/pilot?
- ☐ What partners need to be involved?
- ☐ How can you build the resources to continue this work?
- ☐ What is your public commitment to inclusive design?

We're committed to doing this in a deliberate way as we expand our customer base across industries, geographies, and health coverage types, including Medicare and Medicaid.

Digital health is also poised to spark a paradigm shift in chronic disease management. Using an individual's health goals and data as a guiding framework, we can move from a siloed, one-size-fits-all approach to healthcare to one where a person's complete health picture—including their various chronic conditions, cultural barriers and beliefs, and wellness challenges, from the physical to the mental— can be addressed holistically with empathy, cultural competency, and personalized, whole-person care.

At the same time, we can transform the feedback loop via data gathered from apps, sensing devices, care team notes, and engagement preferences. This information allows us to continually optimize our care to provide the right intervention to the right person at the right time. The result? Impactful interventions that lift up communities in need and provide precision care at scale, no matter what zip code someone lives in. And while technology alone is not the answer, leveraging best-in-class, member-centered technology and caring clinicians, when needed, helps us improve individual outcomes at scale—**for everyone.**

Did you know...

Zip code is the single strongest driver of life expectancy, according to the CDC. But through the expansion of digital health, virtual care, and telemedicine, we may be able to mitigate that.

We're excited that product inclusion is a priority for the Onduo leadership team, with commitments from our CEO Dr. Vindell Washington and our Chief Science and Innovation Officer Dr. Erich Huang. We look forward to forging partnerships with organizations who can guide our progress and share in our commitment to end-to-end inclusivity.

Onduo is ready.
Let's talk.

partners@onduo.com

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