NATIONAL DIGITAL INCLUSION ALLIANCE
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Re: Comments on Draft 2020-2025 Federal Health IT Strategic Plan

Kudos to ONC for a forward-thinking plan that recognizes the value of patient use of digital health tools and the barriers posed by lack of patient connectivity and skills to adoption of health IT. Concerns that digital medicine will exacerbate health disparities have become so commonplace [1,2] as to have developed their own name: *"intervention-generated inequity."*[3]

Nevertheless, health care and technology are suffused with blind spots around patient digital engagement disparities. For example, at the closing session of the joint 2020 Health Datapalooza/National Health Policy Conference, the plenary speaker, a former FDA Commissioner affiliated with Verily, Google Health, Duke University and Stanford University, stated as fact, to a crowd of several hundred healthcare and technology thought leaders, that *"the digital divide is over because everyone has a smartphone."* The statement went unchallenged by the moderator, a journalist from Politico.

In my experience as Executive Director of the Urban Health Initiative at the Case Western Reserve University School of Medicine,[1] in my consulting practice at Public Health Innovators, LLC., and as Health Subject Matter Expert and Senior Fellow at the National Digital Inclusion Alliance, I still find most thought leaders in technology, health care, government and industry to be incredulous at the digital barriers and disparities because of their own experience bias (being unable to imagine that anyone isn't connected 24/7) and the visible proliferation of cell phones. Common misconceptions engendered by these dynamics include:

- Assumption that all smartphones are capable of running applications needed for telehealth. In fact, low cost and older smartphones lack this capacity.
- Assumption that individuals have their own smartphones. In fact, many households share a single phone or rely on borrowed phones, raising privacy and access issues.
- Assumption that individuals have adequate data plans or home broadband to use wi-fi for telehealth, transmitting data from remote monitors, etc.

The Strategic Plan represents an unparalleled opportunity—and indeed, has an imperative to further to document threats to equitable Health IT adoption and to highlight opportunities to ensure that the

[1] Views expressed are those of the author and do not represent Case Western Reserve University.

benefits of Health IT reach all consumers. I offer a number of comments that pertain to the entire Plan, and then suggestions applicable to specific text, many of which are ways to call out the health disparities perspective.

Overarching Comments:

1. The report should explicitly **adopt a disparities lens**, recognizing that digital disparities exactly mirror health disparities. The Plan should more thoroughly reflect the growing body of evidence that **lack of internet and digital skills are significant barriers to patient use of health IT**[4–10] and that disparities in internet adoption will fuel disparities in HIT use. **Internet access gaps in urban areas** need greater recognition, as do multiple dimensions of the digital divide that affect meaningful use of HIT.

   Recent U.S. Census Data clearly point to continuing gaps in connectivity. As of 2018, 15.6% of US households do not have a smartphone and 14.7% of US households have NO internet connection whatsoever—neither smartphone nor home broadband. For 8.8% of households, a smartphone is the only type of computing device in the household. 24.3% of households do not have a data plan with their smartphone, and 11.6% of households have a cellular data plan as the only internet subscription.[11] Such individuals are also not likely to use expensive cellular data for a video telehealth session.

   Even these figures, however, belie disparities that are magnified for sub-groups. For example, fully 37.3% of all US households with income less than $20,000 have no internet subscription, contrasting with less than 5% of households earning over $75,000.[11] Internet access lags most among individuals with the greatest health needs. For individuals over age 65, 23.3% lack a broadband subscription, as do 29.7% of those without high school education.[12]

   Geographic disparities are also profound. According to The National Digital Inclusion Alliance, only 2.35% of households in the best connected U.S. city with population over 65,000 (The Woodlands, Texas) lack any broadband (mobile or home) versus 47.1% in the least connected city (Brownsville, Texas). In 221 of these US cities, more than 30% of households lack home broadband. In 18 of these communities, more than 30% have no internet access whatsoever—neither home nor mobile broadband.[13]

2. The report should emphasize that digital skill and access disparities can be fixed. Much as health systems are doing for other social needs, they could **screen patients for gaps in digital skills and equipment and refer them to national and local partners to fill these gaps.**

   Compared with the cost of addressing SDOH, the cost of connecting and training someone to use the internet is miniscule, and it pays dividends that are immediately felt. Although ROI data are

limited,[14] there is a growing body of literature documenting effectiveness of interventions to increase adoption of digital tools among underserved populations.[15–17]
Just addressing access alone may help the subset of patients who have adequate skills but no connectivity. In a neighborhood near MetroHealth Hospital in Cleveland, Ohio, a free community wifi was introduced in 2010. Perzynski reported that 10,619 MetroHealth patients in that coverage area were 50% more likely to use portals, 13% more likely to make appointments online and 15% more likely to check their lab results online than were 62,508 residents of the rest of city of Cleveland where free wifi was not available.[18]

The COVID-19 pandemic has made patient digital connectivity with healthcare an urgent priority that can reduce the virus spread and burdens on the healthcare system.

Specific Comments:

p. 5, Federal Health Principles: Health equity should be an explicit goal.

p. 7, The Federal Government's Role in Health IT: notes regulatory and programmatic activities but neglects to mention a role regarding policies and programs that support patient engagement with health IT and in monitoring and reducing disparities in use.

p. 8, Challenges in Healthcare: "unequal access to and use of technology among certain populations....people without access to smartphones will not experience this benefit."...and "Disparities in health outcomes remain significant, with racial and ethnics minorities..."

The report should acknowledge the **compounding impact of lack of patient digital skills and connectivity on health**. Because digital skills and connectivity are essential for addressing social needs arising for social determinants of health, their absence will compound the impact of poor SDOH on health.

In the figure below, each dot represents the median household income in each census tract of Cuyahoga County, Ohio and the proportion of residents in that census tract with a broadband subscription. The pattern clearly shows that for census tracts with household income <$40,000 per year, the frequency of broadband subscriptions are closely related to income whereas for census tracts with more than $60,000 income per year, the prevalence of broadband is not sensitive to income. In areas where income is between $40,000 and $60,000, there remains some sensitivity to income although not as strongly as for the lower income census tracts.

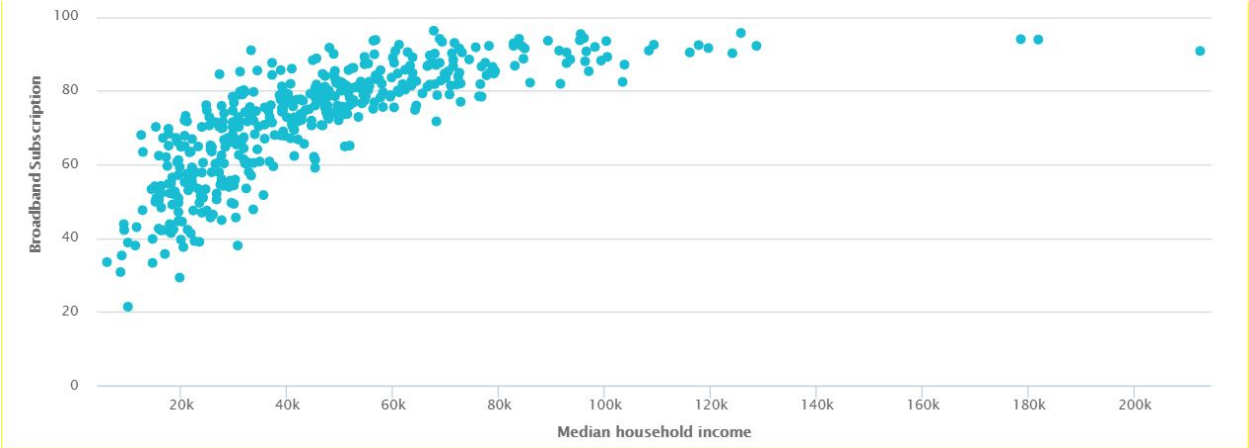

Figure 1: Median Household Income and Broadband Subscriptions, Cuyahoga County, Ohio

Source: American Community Survey 5 Yr data 2013-2017. In, Sheon, 2018.[19]

p. 8 Challenges: "For example, telehealth capabilities could bring new services to rural populations with a shortage of healthcare providers." Could also mention that telehealth offers particular benefits to poor urban residents who may lack transportation and the job flexibility needed to visit health care facilities during the traditional workday. However, broadband access with uncapped data are essential.

p. 9, Access to Technology: These figures significantly overstate internet access. For example, Microsoft reported that 162.8 million Americans do not use high speed broadband.[20] See also other analyses and comments[21,22] and census-tract level ACS data (tables S2801 and S2802).

p. 10: Patient empowerment: Patients with digital health literacy and connectivity can also access high quality health information, connect with other patients for support, and learn about and be able to participate in clinical trials.

P 11: Value based care: This would be a good place to suggest that digital skills and connectivity should be treated as social determinants of health,[23] subject to screening and referral.

New Technologies and Available Data: Analysis of data on patient portal use presents a significant opportunity to understand patient engagement and disparities.

Should also mention the profound and disturbingly consequential implications of algorithmic biases[24,25] that are enabled by access to these reams of data.

p. 12: Privacy of health information: Should mention the unique vulnerabilities of low income populations who are reliant on public wifi and shared devices.

Goal 1, Objective 1a: Improve individual access to health information:

Beyond connectivity, improving access to technology also encompasses the need to train patients to access their health information and to ensure that patient-focused information is tailored to patient health and digital literacy level. [26]

A public health lens points to enormous underexploited potential of patient portals to improve health and reduce disparities. Portals are available to virtually every patient free of charge, they address every health condition imaginable in a specific way and they provide access to high quality health information. They stretch patient resources by offering secure access to caregivers. Portals could even be seen as a gateway to patient use of all digital medicine[27] as they require the digital health skills required for telehealth, remote monitors, etc.

Yet ample data have already pointed to disparities in patient use of portals. [6,8,28–32] A recent review of interventions to increase use of patient portals in vulnerable populations noted, "Given the well-established evidence for disparities in use and the limited research on effective interventions, research should move beyond identifying disparities to systematically addressing them at multiple levels."[3]

In my work at Case Western Reserve University, colleagues and I have identified community health workers as an optimal workforce to conduct digital skill and connectivity screening and referral to ensure that patients have basic digital skills and connectivity, and then to train patients to use digital health tools.[33,34] Others are using patient navigators for digital health tool training.[35,36] Networks of scholars and practitioners active in the National Digital Inclusion Alliance[37–48] and in the Open Door Collective[49] have been developing methods of health portal training that unite adult basic skills training approaches with health literacy and health education. The national strategy should rely on this body of expertise in crafting portal training strategies.

The full capacity of portals is far from realized. Portals could be tailored to address various patient populations such as elderly, non-english speakers, people with low vision and literacy, etc. However, changes are needed for usability. Engagement of diverse patients, especially those with low digital skills and access, in product development has been sorely lacking.[50–52] (Also applies to Objective 4b.)

Objective 1c: Integrate health and human services information
Strategy: Capture and integrate SDOH data into EHRs to assist in the care processes including referrals:

A missed opportunity here is to actually engage the patient in the referral process. If the patient was connected directly (via their own smartphone), the health system could, with patient permission, capture data directly from the patient.

Goal 2: Enhance the Delivery and Experience of Care
Objective 2a: Ensure safe and high-quality care through the use of health IT
Missing strategy: Use data that are collected automatically from every click a patient makes in a portal (or with health applications) to understand patient engagement and engagement disparities.

Objective 2d: Enable efficient management of resources and a workforce confidently using health IT
Strategy: Implement education and training programs to educate and build a strong, cross-functional health IT workforce that can support IT across healthcare settings, especially in rural areas.
Continue to invest in the federal health IT workforce by allocating more resources to train, recruit, and retain workers and to support adequate job opportunities.
Suggestion: Community health workers could be valuable and cost effective contributors here.

Goal 3: Build a Secure, Data-Driven Ecosystem to Accelerate Research and Innovation
Objective 3a: Advance individual- and population-level transfer of health data; and
Objective 3b: Support research and analysis using health IT and data at the individual and population levels
Mention the opportunity to engage patients with low digital skills and access in developing technology to ensure it's appropriate[50,52] and also for patients to be users of the data.

Goal 4: Connect Healthcare and Health Data through an Interoperable Health IT Infrastructure
Objective 4a: Advance the development and use of health IT capabilities
Develop frameworks to assess patient and care team use of new technologies and build an evidence base on the utility and impact of health IT.
Add: Include a focus on equity and disparities in use and in who benefits.

Objective 4c: Enhance technology and communications infrastructure
The U.S. health IT and communications infrastructures are highly variable. While access to smartphones and broadband is increasing overall, gaps remain for some populations and regions. A disparity in health IT access and capabilities separates rural and other typically unserved or underserved areas from areas with substantially greater connectivity and service options.

Mention urban gaps especially, and note that they are not merely a matter of individuals choosing not to purchase broadband but rather reflect policies of digital redlining that violate promises made by telecoms not to discriminate on the basis of race or income.[53–56] A fix requires more than "stakeholders working together." You could highlight digital equity plans developed by some cities and states.[57]

Appendix A: Roadmap:

Consider adding a use for the plan: to organize a focus on health and health IT equity and disparities.

Appendix B:

Mention that federal and private partners must be encouraged to partner with existing community-based digital inclusion organizations to ensure that patient connectivity and skills grow to meet new opportunities.

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Thanks very much for consideration of these comments and again, I commend and appreciate your efforts to recognize and address the digital gaps that are too often assumed not to exist.

Sincerely,
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