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“Health Equity by Design”

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Introduction

My name is Dr. Robert Murry and I am the Chief Medical Officer for NextGen Healthcare. I am also a practicing family physician, caring for patients in both my own practice and as part of an Integrated Delivery Network affiliated with a community hospital in suburban/rural New Jersey. I am board certified in both family medicine and clinical informatics as well as a Fellow of the American Academy of Family Physicians. I have years of experience implementing and optimizing Health IT in healthcare organizations across the country.

Thank you for the opportunity to provide testimony on the critically important topic of health equity. I represent NextGen Healthcare, a Health IT company currently focused on the U.S.-only ambulatory healthcare sector. More than 100,000 providers use our Electronic Health Record (EHR), Practice Management System, Health Information Exchange (HIE) and/or accompanying solutions, including interoperability, population health, patient engagement and mobile technology. We power the clinical and financial operations of hundreds of federally qualified health centers (FQHCs), community health centers (CHCs), behavioral health clinics and thousands of independent practices and healthcare organizations both small and large. Achieving equitable healthcare access and outcomes is a top priority for our company. In fact, our corporate vision is “Better healthcare outcomes for all.”

The U.S. Center for Disease Control and Prevention (CDC) defines health equity as when every person has the opportunity to attain his or her full health potential, and no one is disadvantaged from achieving this potential because of social position or other socially determined circumstances. Health inequity in the U.S. has many causes and facets, only some of which involve technology (or healthcare, for that matter). Wherever there are differences in income, education or opportunity, in availability of healthy food, water and activities, or in access to healthcare---especially preventive and pre-natal care---there are likely to be disparities in disease burden, treatment and mortality. Compounded by cultural attitudes and biases towards medicine, healthcare, and lifestyles likely to promote health or disease, the fact that disparities exist should not surprise us. The question is what can be done about it.

Concentrating on the Health IT aspects of the challenge from the perspective of ONC’s Health IT Advisory Committee, five areas of success and opportunity come to mind: **health equity data**



collection, actionable analysis of the data, interoperability of data to promote cooperation and integration of healthcare and social service providers, the special role that HIEs can play this area, and improving overall access to healthcare and technology.

Health equity data collection

Under the maxim that “you can’t manage what you can’t measure,” reducing health inequity begins with the standardized collection of health equity data, defined as race, ethnicity, preferred language, sexual orientation and gender identity (SOGI), disability status, “social determinants of health” (SDOH) and many other data affecting health disparities. The COVID-19 pandemic has brought to light dramatic gaps in even the simplest health equity data collection. For instance, at the first peak of the pandemic only 24 states had reported the race and ethnicity of people who died from COVID-19, and during the first month of vaccine distribution, these data were missing for almost half of the doses delivered even though it was required.¹

NextGen Healthcare’s EHRs and other software products have supported the collection of these data in a standardized fashion for years, and to an increasing degree doing so has become a requirement for ONC EHR certification. We are particularly invested in SDOH data through our collaboration with the National Association of Community Health Centers (NACHC) and their development of the PRAPARE tool for standardized collection of this type of data. PRAPARE stands for “Protocol for Responding to and Assessing Patients Assets, Risk, and Experiences,” and within NextGen Enterprise EHR, PRAPARE data collection options include a screen in the EHR, an online form, and using NextPen plus a paper form---any of these methods imports structured, codified data in the EHR database.

Various mechanisms exist to incent healthcare providers and organizations to collect some of this data, including the Meaningful Use program (now Promoting Interoperability), the Uniform Data Systems (UDS) data collection and reporting by Community Health Centers, reporting for state or locally administered Medicaid (or similar) programs or government-funded grants, etc. However, challenges remain that ONC can help solve:

Recommendation – expand standardized data sets for and the definition of “health equity data.” The NextGen Enterprise EHR supports collection and bidirectional exchange of all SDOH data elements from USCDI v1, v2 and v3. But these standards don’t include many data already known to influence health outcomes: access to clean (e.g. lead-free) water, access to early education, access to a computer or smartphone, access to the internet, etc. We applaud The Gravity Project² and similar efforts, but it will require coordination at the national level to incorporate these novel data standards into future versions of USCDI, EHR certification, et al.

¹ Health Equity and Health Disparities, ebook published by Audacious Inquiry. Accessed at <https://ainq.com/wp-content/uploads/2022/02/Health-Equity-2022.pdf> on March 1, 2022.

² <https://www.hl7.org/gravity/>



Recommendation – balance requirements to collect and report health equity data with the added burden on physicians and healthcare organizations. With physician and healthcare provider burnout being recognized as an unintended consequence of the incentivized adoption of EHRs and Health IT, it is imperative that ONC balance the good that can come with better data against the harm and inefficiency that results from requiring its collection and reporting. As other organizations have suggested, we ask ONC to help coordinate across HHS the initiatives involving Health IT, in particular seeking alignment between ONC and CMS initiatives for EHR and Health IT use and for quality measure data collection and reporting. Particularly as a practicing physician, I ask ONC to consider consolidating or removing existing measures or reporting/usage requirements whenever implementing new ones, and for ONC to support initiatives to create tools and measures which derive their data from existing common documentation and clinical practice patterns rather than requiring extra steps or “clicks”.

Recommendation – accelerate efforts to develop and implement a privacy framework for health equity data. Many factors that affect health outcomes are personal and private to many people: sexual orientation, income, history of violence, literacy level, and so on. It is well known that many patients are not forthcoming with these details even to trusted healthcare providers, much less the many others who may be asking for them. But the health IT industry has not agreed on standards to allow patients to control who has access to this data, how that consent and privacy control should travel with the data, and how these affect the availability of data for queries from external entities. If a privacy backlash against “information sharing” (the opposite of “information blocking”) is to be avoided, there is an urgent need for work on standards and adoption here.

Actionable analysis of health equity data

Once adequate data is available, it must be compared to clinical and health outcomes data to identify disparities. This can be done at the practice, health system, local or regional or national level, and the analyses performed by individual practices, healthcare organizations, public health departments, academic researchers, etc. NextGen Healthcare and other Health IT vendors offer many tools for analyzing demographic and other health equity data alongside health conditions and outcomes. Common analyses include geospatial comparisons (to “map” health disparities in a community), location vs location comparisons and benchmarking, quality improvement project before and after analyses, risk stratification and predictive analytics of health outcomes and healthcare costs, and many more.

Within individual practices, FQHCs/CHCs, healthcare organizations or health systems, there are many “actions” that may be taken based on these analyses, including patient outreach, planning of services to match geographic need, initiation of new quality improvement and variance reduction programs, introduction of alerts and clinical decision support at the point of care, referral to networks of social service providers, medical specialists, care coordination or care management, and so on. NextGen Healthcare products support all of these and more, as does technology and services from other Health IT vendors.



These analyses and response activities are the primary means by which health inequalities are identified and improved. As with the collection of health equity data, opportunities exist for the ONC:

Recommendation – prioritize health equity goals and measures, emphasizing outcomes measures. In coordination with HHS, we ask that ONC prioritize the health equity goals for the country, which will in turn prioritize the industry’s development and implementation of data standards and measures. We are in desperate need of health equity “KPIs” (key performance indicators) so that technology and social services investments can be directed effectively. Even if these KPIs vary by population or region and over time, we need a clear vision of how we will know that health equity is improving. We also ask ONC to emphasize outcomes measures (even patient reported outcomes measures³) as opposed to process measures, and to provide benchmarks not just against national averages but also between historically privileged and underserved groups.

Recommendation – standardize data collection and reporting across states and standardize access to electronic registries at a nationwide level. In our experience and that of our clients, the data collection and reporting requirements for state or locally administered Medicaid (and similar) programs for physical and behavioral health vary significantly. Similarly, there are 54 different immunization registries in our nation of fifty states, each with different connection protocols. This pervasive lack of standardization creates significant barriers to entry for healthcare providers and Health IT vendors and adds cost to the delivery of care, frequently disproportionately so for population groups already known to have disparities of care delivery. It also hinders nationwide data aggregation and academic research. We recommend standardization of this data collection and reporting mechanisms across states.

Recommendation -- develop new tools and predictive algorithms for health equity outcomes and ensure the biases of these and existing tools are studied. It is well known that many risk stratification and healthcare calculators carry a bias and are not accurate across all populations⁴. Machine learning algorithms routinely result in bias analysis embarrassing their creators, and race and other data must frequently be hand removed from data sets before the “learning” takes place. Furthermore, there is no requirement for calculator and algorithm developers and copyright holders to study the bias of the tools they create, despite charging Health IT vendors and providers many thousands of dollars annually for their use. ONC has made some progress in this area by requiring certified EHR technology (CEHRT) to make available the reference and funding sources of embedded clinical decision support, but it could go further to coordinate the study of biases in these tools and dissemination of those biases to the users of CEHRT, especially for tools which demand fees for their use.

³ <https://www.nextgen.com/blog/measuring-patient-reported-outcomes-measuring-what-matters>

⁴ <https://www.science.org/doi/10.1126/science.aax2342> and <https://www.nextgen.com/blog/racial-biased-unintended-consequences-population-health-algorithms>



Interoperability of health equity data to promote collaboration and integration

Health inequity must be tackled by many different parts of the healthcare and social services systems, making the ability to share data among these entities essential.⁵ ONC's focus on health IT interoperability has certainly increased the industry's capabilities for data exchange, and while challenges remain we feel that an era of innovation which leverages the availability of health data is on the horizon.

NextGen Healthcare prides itself on its interoperability capabilities. I am sure the HITAC is familiar with the 21st Century Cures definition of interoperability, but as a physician, I prefer one from KLAS⁶ from 2016 which is more practical. It frames 4 stages of interoperability: providers and practices (a) can be made aware that data from care delivered elsewhere is available, (b) they can query and obtain that data, ideally in an automated fashion, (c) they can incorporate that data, as structured and codified elements, into the EHR database whenever possible, and (d) the imported external data affects patient care. ***All of these must be possible regardless of whether the external care site is using NextGen EHR or another EHR.*** NextGen Healthcare offer tools and functionality for all these steps, incorporated into existing clinical workflows whenever possible (as opposed to "extra steps"). We support making all EHI (electronic health information), not just USCDIv1, available through multiple means, including FHIR APIs, proprietary APIs, HL7 traditional interfaces and other electronic means; we also support the 360X referral protocol⁷. Providers using NextGen Enterprise EHR and other technologies can thusly create a longitudinal record for each patient, as well as contribute to the creation of such records by other healthcare organizations running other EHRs and Health IT.

We encourage other Health IT companies to adopt this approach to interoperability, focused on vendor-agnostic exchange with a goal of informing clinical and health outcomes, which we believe aligns with the ONC's view. In addition, the ONC could address the following:

Recommendation – expand access to interoperability tools to social service agencies, health departments, and other important health equity stakeholders. Healthcare providers using certified EHR technology are well positioned to take advantage of data exchange, but many other social service providers and other agencies cannot send and receive messages via the Direct protocol, cannot access the nationwide interoperability networks like Carequality and Commonwell, nor can they participate in 360X referrals. This hinders the handoff and care coordination between healthcare providers and these agencies, as well as increasing the data collection burden since they all must collect the same data themselves. While ONC may not have all the authority required to give these agencies access to the

⁵ <https://www.nextgen.com/blog/three-ways-interoperability-improves-healthcare>

⁶ <https://klasresearch.com/report/interoperability-2016-from-a-clinician-view-frustrating-reality-or-hopeful-future/1099>

⁷ <https://oncprojecttracking.healthit.gov/wiki/display/TechLab360X/360X+Home>



interoperability ecosystem it is creating, we ask for it to maximize the ecosystem's benefit by coordinating with those entities that do. In the next section, we argue that HIEs can play a role here too.

Recommendation – nationwide healthcare patient identifier. We would be remiss if we didn't point out that the presence of a nationwide healthcare patient identifier would greatly facilitate the aggregation, interoperability, and reliability of exchanged health data. Not having one adds to our country's healthcare costs with duplicate testing, time wasted coordinating and integrating health records, and medical errors and expensive consequences due to missing previous results and past history. Everything that increases medical costs and contributes to medical error tends to impact historically disadvantaged populations harder than the average.

Recommendation – simplify and gather more clinician input towards an interoperable---but useful---Care Plan. While ONC EHR certification requires CEHRT to produce a Care Plan document,⁸ the document's extremely structured and rigidly-organized format is not a natural fit for many physicians and care providers. This makes the HL7 Care Plan time-consuming to construct, frequently involving extra steps in EHR systems. Rather than forcing every care plan item into a health issue/goal/outcome/intervention structure, we ask ONC to consider development or approval of a freer format for the Care Plan that is still shareable and easily updated by all members of the care team, including the patient. Since much activity mitigating health inequity at the patient level is interdisciplinary and collaborative, a better Care Plan standard would be immensely helpful.

The unique role of Health Information Exchanges in Health Equity

We feel that Health Information Exchanges (HIEs) have a critical role to play in the healthcare ecosystem, particularly in the understanding and promotion of health equity. Although many were not originally conceived in this way, they have begun to play an important role connecting healthcare provider organizations with social services providers. In a sense, they have become health data "utilities," like electricity or internet, connecting data collectors with data consumers because they provide the network's "last mile" to the latter⁹. If making everyone's data available and sharable is an important step in addressing health inequity, HIEs are well positioned to do this in many regions. Additionally, like other networks, their value increases with the number of connections, so they have a natural incentive to connect to as many agencies and providers as possible and a disincentive against rent-seeking behavior.

As an example, Healthshare Exchange of Pennsylvania has long partnered with MANNA, a leader in evidence-based nutrition services. MANNA cooks and delivers nutritious, medically appropriate meals and provides nutrition counseling to neighbors who are battling life-threatening illnesses such as cancer,

⁸ Specifically, "Care Plan document template in the HL7® Implementation Guide for CDA® Release 2" as described in <https://www.healthit.gov/test-method/care-plan>

⁹ <https://www.nextgen.com/blog/advisor-podcast-hies>



renal disease, and HIV/AIDS. Using Direct Messaging, HIE participants can refer patients to MANNA's food-delivery service for no cost, reliable healthy meal delivery.

Recommendation – support the development of HIEs and their role in addressing health equity. If the ONC shares our vision of HIEs, we ask that it consider supporting them by providing vision and direction as well as coordinating with HHS and other agencies for funding.

Recommendation – simplify the regulations governing HIEs and information exchange. Many HIEs are subject to both federal and state rules for consent, privacy, etc. Nationwide standards would lower their costs and help them grow within and across state boundaries.

Access to healthcare and technology

Our focus up until this point has been on Health IT, data standards, and interoperability. But in the big picture many health disparities result directly from lack of access---access to healthcare, to resources and services, and to technology and the internet. We feel that in order to make significant gains in health equity, ONC should also support efforts to promote access within other areas of HHS, other federal agencies, and Congress:

- **Support virtual care.** Telemedicine and virtual visits provided access to care for millions of people when physical contact was not possible due to COVID-19 risk. The technology and capacity advanced rapidly in a few months, out of dire need, but that advance was only possible due to payment parity between in-person and virtual care. We strongly feel that this parity should continue indefinitely, to continue to allow access for the many care situations where provider and patient being physically together is difficult. As virtual care evolves, ONC and HHS should be mindful that policies emphasize access to care for the underserved and disadvantaged, rather than convenience of care for the privileged; otherwise, virtual care will worsen health inequity as opposed to improving it. Finally, innovation in the provision of care outside of traditional settings should be sought by ONC and rewarded, and there are numerous promising projects in remote patient monitoring, home-based virtual care, virtual care coordination and collaboration, et al.
- **Support access to technology and the internet.** An obvious fact is that one cannot do virtual care without a device and connectivity, so we support policies to provide broadband connectivity to underserved areas in particular. We have seen our clients with novel situations requiring technology access: Many migrant or undocumented patients are mistrustful of downloading apps out of fear of being reported to immigration services, but are willing to use a device anonymously for virtual visits; many unhoused patients are hesitant to visit a CHC or clinic but are willing to see a provider who comes to them and uses an EHR on her/his smartphone; many patients will honestly answer SDOH questions if presented in private (or at home) on a device when they would not do so if asked in person at the clinic. The availability of connectivity and devices in these examples is critical to access to care and data collection.



- **Support healthcare providers in underserved areas and populations.** While provider payment is outside ONC's purview, the development of simple metrics to measure the degree of health inequity in a given area is not. These can then be used to modify payment formulas to incentivize provider to practice in those areas, as many would if they could remain independent and profitable.

The future and Health Equity by Design

Technology has a key role to play in a future without health disparities. Much as modern software applications automatically track and analyze users' actions, the healthcare system of the future will gather a robust set of health equity data in an unobtrusive fashion and aggregate and report it for analysis while protecting privacy. The data will be used by providers at the point of care in minimally-biased algorithms and clinical decision support tools as well as easily shared amongst providers of care and social services via APIs, point-to-point messages, local and regional HIEs, and nationwide interoperability networks. Creation of longitudinal patient records will be unhindered by patient mismatches or varying transport standards, maximizing efficiency of care delivery and minimizing wasteful duplication. Finally, nationwide broadband and readily available devices for virtual care will remove access barriers and make high-quality care available to all, helping to create a world where everyone can reach his or her full health potential.

Thank you.