**BCG** BOSTON CONSULTING GROUP

**March 12, 2020**

Department of Health and Human Services
Office of the National Coordinator for Health Information Technology
ATTN: 2020-2025 Federal Health IT Strategic Plan
Submitted to: **https://www.healthit.gov/topic/2020-2025-federal-health-it-strategic-plan**

**Re: 2020-2025 Federal Health IT Strategic Plan, Public Comment**

Boston Consulting Group (BCG) appreciates the opportunity to offer our perspective on the Department of Health and Human Services' and the Office of the National Coordinator for Health Information Technology's (ONC), draft 2020-2025 Federal Health IT Strategic Plan.

BCG is the leading management consulting firm in health care strategy and digital innovation. Over our 50-year history, we have supported hundreds of health care providers, payers, medical device manufacturers, pharmaceutical companies, and other innovators in developing digital and data solutions that have improved the quality of care and the efficiency of the health care sector. We are acutely aware of the challenges inherent in the current health care IT and technology landscape and how these challenges serve as barriers to further improvements in care efficiency, patient experience, and innovation. They are one reason that in 2012, BCG together with Professor Michael Porter of Harvard Business School and Professor Martin Ingvar of the Karolinska Institute co-founded a global institute for supporting value-based care and development of global standards for measurement of outcomes that matter to patients, ICHOM (International Consortium for Health Outcomes Measurement). In 2018, the World Economic Forum identified the lack of global standards for health informatics as a major barrier to global transformation to value-based health care, and have recommended national policies and legislation as a means to catalyze development of common standards for healthcare data interoperability.

**A First Step Toward a Truly Interoperable Health Care Data System**
We support the recently proposed ONC rules, which in our judgment represent a significant step towards creating truly interoperable heath care data systems. We are delighted to see ONC make such a strong push in this direction.

Despite various efforts, digital innovation has not yet transformed patient experience. Standardization can accelerate the rate of change and unlock multiple benefits for patients, providers, payers, and healthcare IT organizations. For example, technological standardization has gained traction in the financial services industry, leading to numerous benefits for consumers and financial institutions including better data sharing, improved fraud and risk reduction, and more options for payment access. (See "API Standardization – Shaping the Financial Services Industry" by NACHA, The Electronic Payments Association's API Standardization Industry Group (ASIG)).

In our view, the proposed changes have benefits for multiple stakeholders.

**Benefits to the US Population.** The biggest benefits—for all parties—are the potential for improved care and reduced costs. Building on recent analysis published by Humana and the University of

Pittsburgh in JAMA that identified between $191 billion and $282 billion in addressable waste in healthcare, BCG has identified opportunities to save more than $100 billion globally with more effective digital health solutions, including addressing health care needs sooner (and avoiding delayed treatment), directing patients to the appropriate site of care, reducing medication errors and adverse events, avoiding unnecessary duplication of services, and supporting better management of chronic disease, among other measures.[1]

The second biggest benefit has long been an elusive goal:  the ability for a patient (or others with permission) to view all of his/her clinical data in one place. This can lead to improved outcomes through increased patient engagement and easier coordination of care across providers (there is no burdensome record transfer).  Comprehensive patient care records, maintained through consolidated data access, can be used for secondary analytics and advanced AI-type functions.

Long term, the ONC strategy will make data access cheaper, easier, and more consistent, and could also make it cheaper and easier for patients to find the best quality care.

**Benefits to Providers.** Providers will benefit from greater ease in obtaining records of patients from other systems in a standard format, ideally with ability to consolidate and quickly update EHRs, which will streamline provider workflows and improve patient safety. Eliminating the need to review printed paper charts or manually retype data into EHRs will reduce cumbersome documentation burden on physicians.  Providers will be able to provide more safe and efficient care through access to consolidated lists of medications and allergies from different EHRs and providers as well as easier access to data from tests performed at other systems.

Access to broader records will streamline research and quality improvement efforts. Health systems, foundations, and research organizations will get access to needed data to support better diagnostics and population segmentation, improvement in care protocols and longitudinal retrospective studies. This improved ease of research will also benefit pharmaceutical and medtech players.

**Benefits to Payers.** These start with lower costs from waste, e.g., the reduction in duplication of lab work and imaging studies and improvements in underlying care quality brought about by better care coordination.[2]

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[1] Based on BCG's quantitative analysis of digital waste savings performed by BCG using identified categories from the study published by Humana and University of Pittsburg in JAMA; see WH Shrank, TL Rogstad, and N Parekh, "Waste in the US  Health Care System: Estimated Costs and Potential for Savings," *JAMA*, October 2019.

[2] See ED Breckenridge, B Kite, R Wells, and TM Sunbury, "Effect of Patient Care Coordination on Hospital Encounters and Related Costs," *Popular Health Management*, October 2019.

**Benefits for Healthcare IT Organizations.** EHR players have the potential to accelerate this shift to interoperable heath care data systems as they control access to the majority of data.[3] While they will bear some upfront cost to produce the new functionality, EHRs will likely benefit in the long run from being able to offer a greater degree of functionality and convenience to their customers stemming from this interoperability.

Interoperability may also open up new revenue channels (such as direct to consumer opportunities) and establish a more robust partner and third-party solution ecosystem. New data and analytics applications will be made possible by being able to pull together data from multiple sources.

### Realizing the Intended Benefits

We suggest several areas of the ONC's strategy that will benefit from greater specificity to clarify future rules and ensure that the intended benefits can be realized.

**Unify and Reconcile Data Standards.** Standardization of key data sets is essential to enable a truly interoperable EHR system. In the absence of regulatory guidance, the multitude of existing initiatives (Argonaut, Trillium, and Commonwealth Alliance, to name a few) will likely lead to multiple competing data sharing standards, which will undermine interoperability.

Consider, for example, the potential for confusion if a patient's sex is not coded consistently as "F/M/O" (vs. 1/2/3 or 0/1/2, or male/female/other vs. including more than three options). Without a standard way to portray this data, reconciliation across systems becomes onerous. Some areas will require extensive data standards to be formed. For example, to construct a medication list, there must be guidance on standard definitions, common identifiers, and data coding, including how to differentiate active vs. past medications, medications administered as an inpatient vs. outpatient, and how to differentiate one-time immunizations vs. maintenance medications. Provision of standards such as these should accompany guidance on sharing medications list data, and must specify how this data should be formatted to allow for reconciliation across EHR medication lists.

Unifying regulations will help standardize data writing across EHRs and other data sets, leading to easier consolidation, partly enabled by having consistent record metadata such as timestamp, source, and globally unique primary key. To accomplish this complex task, we recommend selection or creation of an organization or coalition that would be responsible for unifying and reconciling data standards (or developing standards where they do not exist or are nascent, such as the social determinants of health).

**Specify Where the Data Exchange Occurs.** Clinical data exchange and the consolidation of clinical data (such as reconciling medications and social determinants of health information) can occur at various layers of the health care system, including within EHRs (non-intermediated application layer

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[3] Thomas H Payne, Christian Lovis, Charles Guttenridge, Claudia Pagliari, Shivam Natarajan, Cui Jong, and Lue-Ping-Zhao, "Status of health information exchange: a comparison of six countries," *Journal of Global Heath*, December 2019.

consolidation); within health information exchanges (HIEs) external to EHRs (intermediated data layer consolidation); and within patient portals, such as in an app used by consumers (client layer consolidation).

We believe that clinical data should be consolidated early in the collection process (that is, close to its raw state) and in the most reconciled, and consistent state possible. These criteria dictate that the consolidation process should take place within core systems such as EHRs. These systems should also maintain their data sets in such a way that consolidation and reconciliation of data from multiple systems (such as different providers) can be accomplished quickly and reliably.

The shortcomings of the other layers are two-fold. First, the current HIE model for data exchange (intermediated consolidation) does not lend itself well to providing real-time care records to patients, as these systems are built for analytical uses and not to handle direct patient queries. Similarly, client-layer consolidation requires too much sophisticated processing and logic and cannot easily be built directly into a user application.

**Define Access and Security Standards**. As with any collection and use of individual's personal data for any purpose, delineating access and setting security standards are paramount considerations.

ACCESS. Guidelines that standardize access rights and rules are essential to democratize access for patients to their health data. Patients need to be informed about how their data, or that of their proxies (e.g., children), will be collected and used and how they can opt in or out of both commercial and research applications. This feature may take the form of a national access database that allows consumers to control how and with whom health systems can share data. Users will need an easy, centralized way to access the database and the ability to adjust access rights as needed or desired. Regulations should specify governance of these consumer access points for rights management: who builds them, where they reside, and who is responsible for maintenance.

SECURITY. The primary criticism of many health apps is they are not subjected to the [same security or regulatory scrutiny](#) as EHRs. ONC should specify which security standards need to adhered using commonly accepted frameworks such as NIST, HiTrust, and ISO.

**Conclusion**

As frequent advisors to participants throughout the health care sector, BCG is excited that the proposed ONC strategy represents a significant step forward. The prospect of a "reliable source of truth" for medical records has long eluded patients, providers, and payers. With the help of clear standards for how this data sharing is to be accomplished at a functional and technical level, IT in healthcare can catch up to that of other industries and the sector can improve care and reduce costs for the benefit of all stakeholders.

BCG appreciates your willingness to consider our comments. Please contact me at [kellar.josh@bcg.com](mailto:kellar.josh@bcg.com) with any questions or concerns.

Sincerely,
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