

July 31, 2017

Department of Health and Human Services
Office of the National Coordinator for Health Information Technology
330 C Street SW
Room 7025A
Washington, DC 20201

Submitted Electronically

Regarding ONC Proposed Interoperability Measurement Framework

Evolent Health was founded in 2011 through a joint venture between The Advisory Board Company and the University of Pittsburgh Medical Center (UPMC) Health Plan with a simple but bold mission: “To change the health of the nation by changing the way that health care is delivered”. Evolent partners with leading health systems and physician organizations nationwide to bring to market value-based care delivery and proprietary technology solutions that enable population health initiatives and innovative risk-sharing models that are well-positioned in the era of accountable care.

In just over five years, our technology platform and care management programs have touched more than 2 million American lives, and we have advised provider organizations on population health and value-based health care in more than 25 markets. We have deployed predictive models and chronic care management programs that have proven successful in lowering total cost of care, readmissions, and avoidable admissions while maintaining or improving the quality of care.

At the heart of Evolent’s population health management model is the Identifi Platform, a value-based population health information technology platform rooted in the latest clinical evidence and care team-specific needs. Identifi provides a near real-time view of individual patients and populations, seamlessly integrating clinical and financial data from inside and outside the health system or provider practice with patient-generated and other data sources, delivering actionable insight, comprehensive workflow, and critical oversight for all aspects of a value business. Identifi enables administrators, care teams, and physicians to operate in a connected fashion, working from a single view of the patient and in a workflow aligned specifically to their needs.

Our work and the success of our health care provider partners is dependent on interoperability between health IT systems and the processes enabled by them. We know that innovation in

health care IT and advances in information sharing will significantly transform how health care is delivered in our country. At the same time, we experience daily the reality that the payment and policy landscape—both public and private—are still not optimized to fully leverage technological advancements for value-based care; in fact, in many ways, payment and policy continue to actively prevent health systems from making the wholesale financial, clinical, and operational changes necessary to support a value-based business.

The clinicians, executives, analysts, operators and associates of Evolent Health support an industry framework for measuring interoperability that is useful and meaningful to both the technology purchasers and the users - front-line clinicians and recipients of their care. This framework should also not be unnecessarily burdensome to the developers, implementers, and practitioners that work in this space. Evolent Health looks forward to contributing to the design, testing, and deployment of the interoperability measurement framework that will be another key step toward achieving the Triple Aim. Fully realized, significant advances in interoperability will have a material effect on the lives of millions of Americans and enable us to have a material effect on both the aggregate cost of healthcare in America. Taken together, we believe our response to the RFI questions will help advance your thinking on how to measure interoperability.

If you have any questions, or would like to follow-up on any part of this RFI response, please contact me at jjames@evolenthealth.com.

Sincerely,

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Number	Item	Draft Response
1	<p>Is a voluntary, industry-based measure reporting system the best means to implement this framework?</p> <p>What barriers might exist to a voluntary, industry-based measure reporting system, and what mechanisms or approaches could be considered to maximize this system’s value to stakeholders?</p>	<p>Industry-based reporting would provide insight into the implementation of standards in support of intended functions. Health care stakeholders on both sides of information exchange – i.e., sending and receiving - need valid, reliable, and usable results from interoperability measurement to select, finance, implement, and evaluate interoperability-dependent processes. Interoperability measurement must be feasible, systematic, transparent, unbiased, and sufficient to differentiate successful from unsuccessful support of interoperability-dependent health care-related tasks or processes. Health IT system developers have varying degrees of incentive or interest in submitting interoperability measure results to a voluntary reporting system, as well as investing in the technical and human capabilities necessary to participate in reporting. The burden and benefit of this activity would fall on the health IT development side (e.g., EMR vendors and non-EMR system developers) and the implementation/use side (e.g., providers of clinical and other health services, health delivery systems, public health organizations, regulators, and payers). Financing, competing development priorities, agreement to standard measurement methods, and protection of intellectual property are some barriers to the success of a voluntary, industry-based measure reporting system. Health IT system developers and implementers have varying degrees of incentive, interest, and capacity in participating in a voluntary reporting program. To reduce this and other sources of measurement bias, each barrier to participation would need to be addressed. An impartial, objective third-party without financial interests in the success or failure of any health IT system or product would be able to balance the risk of bias in participation of quality of measure results due to conflicts of interest. This organization would need to be informed by and operate independent of the different stakeholder groups affected by interoperability.</p>
2	<p>What other alternative mechanisms to reporting on the measurement framework should be considered (for example, ONC partnering with industry on an annual survey)?</p>	<p>ONC partnering with the health IT industry on an annual survey is certainly an option. However, let’s not step backwards but move forwards. We should establish a roadmap or timeline for systems to accept, process, and transmit data for specific use cases that we can objectively test. Responses to surveys would likely not be based on quantifiable characteristics of the health IT systems exchanging or using exchanged information. Thus, there may be inherent threats to the validity of the information gleaned via surveys. Survey methods are best suited to capture information about specific, non-technical factors that affect use of standards (e.g., rationale used in making</p>

		<p>decisions, provider preferences, cost, competing priorities, etc.). Ideally, information obtained via surveys would be a supplement to (rather than substitute for) quantified, data based information. To the extent possible, the responses to items in the survey should be a) data based rather than subjective, b) based on relevant impressions made regarding the interoperability use case (e.g., satisfaction), and c) come from specific types of respondents familiar with health IT data standards, clinical/health informatics, and other aspects of interoperability. Stakeholders on both the sending side and the receiving side should be surveyed. This would be to facilitate the conversation with the health IT system(s) designed to support these use cases, rather than a mechanism through which to submit support issues or complaints. We must also ensure that surveys are designed to yield results that are scientifically sound, use terms that are recognizable to the respondents (e.g., non-technical clinical end-users), and meaningful in terms of the value to the people who would benefit from them. One example of a topic that is ideal for survey is gauging the willingness of health IT developers, implementers, or purchasers to invest in deeper interoperability when it is available, such as replacing lower tech offerings like fax and pdf with structured documents. Another example topic is the relative importance that each stakeholder would place on different use cases that depend on successful interoperability.</p>
3	<p>Does the proposed measurement framework include the correct set of objectives, goals, and measurement areas to inform progress on whether the technical requirements are in place to support interoperability?</p>	<p>The proposed interoperability measurement framework includes necessary components yet may not be sufficient to inform decisions for all stakeholder groups. The framework should either contain or signal the use of domains of interoperability, to communicate priority areas, and highlight opportunity for future measure development. Health IT developers and other industry stakeholders benefit from self-assessments. When performed well and meaningfully, they facilitate conversations with customers/recipients of their exchanged data. Health IT developers may vary in their willingness to provide information regarding “Standard on development plan”. To some extent, the information on planned standards in the vendor product/offering roadmap is proprietary to the health IT vendor. This is highly volatile and subject to change based on internal prioritizations and needs from existing customers. Hence collecting this metric may not be accurate and will be prone to both ambiguity due to being outdated. The interoperability measurement framework must highlight the need to consistently describe the nature and degree of customization and transformation required to make data useful. The need for successful interoperability is not unique to clinical data exchange. The Electronic Data Interchange (EDI) standards for billing</p>

		<p>and reimbursement transactions may yield lessons learned, as would the development of inter-bank transfers and inter-device connections via Bluetooth. Quality improvement programs have long used domains to categorize measures and understand the degree to which measures are available. For example, CMS has used the following domains in recent quality improvement and reporting programs: Community/Population Health; Efficiency and Cost Reduction; Person and Caregiver-Centered Experience and Outcomes; Effective Clinical Care; Communication and Care Coordination; and Patient Safety. Together, this set of domains represent the *whole* of quality improvement. In a similar fashion, a set of established interoperability domains would enable developers, researchers, purchasers, and implementers to determine the scope of measures available...and opportunities to fill gaps. We propose to add a measurement area 'Transformations needed to implement/convert to Standards' under the Objective #2 "Understanding the use of standards". This would be a measure of the nature and degree of transformations necessary for attaining the interoperability needed by the receiving system to accomplish a particular task or perform a process. One example would be the need to translate the terminology native to the sending system to a different standard health terminology (e.g., RxNorm). Other transformations may include conversions to preferred units of measure or translating proprietary codes for data element modifiers (e.g., attributes) to those in a standard value set. We also propose to add another measurement area 'Alignment to information submitted to Payers' under the Objective #2 'Understanding the use of standards...'. Every health IT vendor does have to satisfy standards prescribed by Insurance payers for getting paid for provider services.</p>
4	<p>What, if any gaps, exist in the proposed measurement framework?</p>	<p>Reported measures should tell all sides of the interoperability story: adherence vs. non-adherence to standards, barriers to implementing the standards, cost of addressing the gaps, and outcomes (e.g., care coordination and adverse events). Measures should be based on relevant, prioritized outcomes enabled by interoperability (e.g., clinically valuable use cases and adverse events/errors) and should also reflect the relative cost (or effort) in addressing gaps in health IT standards through conformance vs customization. In clinical performance measurement, the volume of a service delivered alone is not very informative. For example, knowing the number of surgical cases performed by a provider or at a health care facility does not yield meaningful information about the quality of care rendered. The "Volume of transactions by standard" would be valuable as a denominator of a measure of interoperability. If transaction volume alone were a metric, it would primarily indicate that the metric is</p>

		<p>technically feasible to calculate. While perhaps outside of the scope of a framework, interoperability measures must use an appropriate “unit of measure” that supports stakeholders’ decision-making. A meaningful person-centric unit of measure of clinical data quality is “person-years”. This person-centric approach measures the distinct number of people who had at least one concept of interest (observation, intervention, event, or episode) per year. Adjusting our counts to person-years helps to preserve the person-centric nature of our clinical and analytic services, while not allowing the raw volume of concepts (or transactions) to inflate our assessment of clinical data quality.</p>
5	<p>Are the appropriate stakeholders identified who can support collection of needed data? If not, who should be added?</p>	<p>The framework should enable all stakeholders in health care to provide their perspectives on and receive information about interoperability capabilities of health information technology: data broker or data aggregator, payers and health risk assessment data collectors, public health organizations, purchasers of health IT systems and integration services, and patients and their family care givers. In the proposed framework for Objective#1 and measurement area #b- ‘Standards implemented in health IT product’, the mention of HIE developers as Data Holders may not be entirely accurate. The HIE developers are mostly involved in being a conduit of sorts to facilitate the data movement and may not be able to provide the information needed for this measure. This information must be sourced from the health IT vendor/developers. We would want to make data from MIPS ACI measures available, so that health systems and public health organizations can report on their experiences with Send a Summary of Care; Request/Accept Summary Care; Health Information Exchange; View, Download, or Transmit (VDT); Immunization Registry Reporting; Syndromic Surveillance Reporting; Electronic Case Reporting; Public Health Registry Reporting; Clinical Data Registry Reporting; and Specialized Registry Reporting. Lastly, include patients and family care givers among the reporters of the outcomes of successful and failed interoperability. Patients and family caregivers are the ultimate beneficiaries and victims of health IT interoperability. Successful data exchange can lead to improved care coordination and more timely, efficient, and informed care. Patients experience failures of interoperability in ways such as delays in care, confusion, redundant outreach/ treatment, and partially informed decisions.</p>
6	<p>Would health IT developers, exchange networks, or other</p>	<p>Interoperability involves a spectrum of standards: transport/messaging, security, terminology, ontology (aka information model), content (e.g., structure of messages and documents),</p>

	<p>organizations who are data holders be able to monitor the implementation and use of measures outlined in the report? If not, what challenges might they face in developing and reporting on these measures?</p>	<p>knowledge representation, and care processes. ONC should ensure that measures are being generated by systems with appropriate and sufficient capabilities related to those measures. Not all systems are designed to evaluate – much less – use information exchanged per any one or set of standards. It is important to ascertain from which types of systems we should expect valid measures of interoperability for clinically recognized and prioritized use cases. To provide accurate and useful information about the content of information exchanged, an organization must integrate (e.g., parse and load structured content) the content of the exchanged information. At that point, the receiving system would be able to assess the degree to which “information and knowledge” were preserved during data exchange. Some organizations such as health information exchange networks (HIEs) may only be able to report on transport and security standards but not all would be able to report on the usefulness of the content of information exchanged. The exchange would receive messages and content coming from all possible versions of the health IT vendor systems, but may not be able to definitively provide details on a whether a specific content standard was implemented, its degree of use within a health IT vendor system, and its usefulness in supporting logic and tasks on the receiving end. However, many HIEs may not be able to provide comprehensive and complete information on either the implementation or the use of content or terminology standards (e.g., how data is represented and organized so that knowledge is preserved).</p>
7	<p>Ideally, the implementation and use of interoperability standards could be reported on an annual basis in order to inform the Interoperability Standards Advisory (ISA), which publishes a reference edition annually. Is reporting on the implementation and/or use of interoperability standards on an annual basis feasible? If not, what potential challenges exist to reporting annually?</p>	<p>Annual reporting is common in clinical performance measurement and recognition of performance against structural standards such as the patient centered medical home. However, good data quality surveillance is an on-going process. Each organization involved in interoperability should aim for automated, systematic, on demand reporting of interoperability process and outcome measures to inform its work. The scope and frequency of interoperability surveillance may be different for each stakeholder group, actor, or reporting organization. A reasonable balance between the friction of measurement and demand for external reporting must be struck. We must identify the barriers to reporting results annually (e.g., low numbers or lack of incentives) and develop ways to address them, whether the reports are survey based or generated directly by health IT systems. We have processes and technology that allow data quality surveillance for different data feeds and the degree to which standards are implemented; thus, reporting on the implementation and use of interoperability standards is technically feasible. However, we do not currently report results of this internal surveillance to external organizations. That would require additional planning, design, and</p>

	<p>What would be a more viable frequency of measurement given these considerations?</p>	<p>development of capabilities. In current external quality reporting programs, the reporting organization must achieve a minimum denominator size to deliver valid, comparable results for its relative level of aggregation. Low numbers and lack of incentives may be additional barriers for an organization to periodically report results. Annual reporting should be feasible since data quality assurance is a periodic effort that should be performed by health IT organizations. The measurement framework should allow flexibility in the frequency of reporting based on consensus-based criteria, such as a minimum number of interoperability-dependent events and size/type of organization involved in health IT-enabled data exchange.</p>
<p>8</p>	<p>Given that it will likely not be possible to apply the measurement framework to all available standards, what processes should be put in place to determine the standards that should be monitored?</p>	<p>The standards selected for monitoring and reporting interoperability between systems should be those necessary for enabling use cases that are meaningful to the principal beneficiaries and actors in each health care stakeholder group. ONC and other federal stakeholders should identify key use cases that require interoperability and define domains of interoperability. The measurement framework should either reflect or reference established interoperability domains (e.g., clinical patient care, population health, public health, etc.), for processes and outcomes that rely on successful exchange and integration of data between health IT systems. These interoperability domains can be used to organize and prioritize the development of survey questions and health IT system generated measure results. Like the approach in the CMS Medicare and Medicaid EHR Incentive Program, ONC and stakeholders should establish a clear relationship between the technical capabilities of health IT systems, relevant interoperability standards, and interoperability-dependent processes/outcomes. At Evolent Health, we assess the level of clinical data quality received via data interfaces according to but not limited to the following use cases: care coordination, care management, risk stratification, public health reporting/surveillance, quality/performance measurement, and collection of patient reported health state and outcome data from health risk assessments and personal devices.</p>
<p>9</p>	<p>How should ONC work with data holders to collaborate on the measures and address such questions as: How will standards be selected for measurement? How will</p>	<p>The development, specification, and selection of measures for interoperability standards should include and support the various perspectives and capabilities of stakeholder groups, while yielding a set of measures for each explicit intent of reporting. We must ask (and answer) the questions: How exactly will each measure result be used? Is the measure as specified appropriate for the intended use? How accurately was the measure calculated? Traditional federal offices and agencies use a well-known and established process and infrastructure</p>

	<p>measures be specified so that there is a common definition used by all data holders for consistent reporting?</p>	<p>for selecting measures for health IT-enabled clinical quality measure reporting, which receives input via various stakeholders and channels. Current methods of selecting measures for federal programs include RFIs, NPRMs, testimony in committees/workgroups convened by ONC, contracts and grants, surveys of each data holder, and calls for measures. Non-traditional measure development and selection is in use by data intermediaries (e.g., QCDRs in specialty societies) that assess interoperability for clear clinical and financial use cases. Measures for other federal programs and related supporting documentation are widely, freely available via the internet. Additional room for development of measures by independent organizations is necessary to foster innovation in measurement of interoperability by non-traditional organizations.</p>
<p>10</p>	<p>What measures should be used to track the level of “conformance” with or customization of standards after implementation in the field?</p>	<p>Interoperability measurement should be a function of the success of the process or outcome that depends on the data exchanged between systems. To look at things from both sides of exchange (e.g., both sending and receiving systems), these measures should complement those that assess conformance with standards built into health IT products on the sending side. Measuring use of standards alone without assessing the success of the use case being supported is necessary yet insufficient for making informed decisions about system development, selection, implementation, or evaluation. Measurement should reflect the nature or type of customization of standards necessary for each use case (e.g., addition of codes to a standard value set, addition of attributes to further clarify a clinical observation, and exchange of clinical decision support output). This can be a measure of agreement or concordance of information between the sending and receiving systems after data has been sent/received/integrated. This should also include a comparison of the degree of “conformance” or “customization” before and after implementation, so that the degree of improvement on the standard can be used by others who wish to consider adopting the same changes. For each context of use, data exchange should preserve data, metadata, and contextual information across systems, so that any person or process on either end will have the same concept in mind or make the same assessment based on the data. Data exchange should not add or remove detail, other than information about the transaction itself (metadata) necessary for administration, info management, or auditing functions. Specific interoperability-dependent use cases include: reconciliation of problem lists, medication lists, allergy lists; calculation of quality measures; submission of quality measure results to reporting programs; populating standard end user displays; transferring health records from one EHR platform to another. Interoperability measures</p>

require units of measure that are relevant to use cases and highlight success vs. failure to support those use cases. Measures in health care are traditionally patient centric or episode centric. Simple transaction volumes are not informative. Interpretation of interoperability measures requires knowledge about factors that affect the degree to which standards are used in the capture/storage/retrieval of data and the design of the interface between systems.

For population health management use cases, data sent in various formats from disparate administrative, clinical, and health-related systems is aggregated and normalized to build a longitudinal, comprehensive profile for each person in our enterprise data warehouse. Our data quality efforts are person-centric and surveillance includes the degree to which data from each data interface supports a core use case in population health management. We list below examples of useful measures that could be calculated for all people in the enterprise data warehouse with at least one encounter in the prior 12 months and compared between the sending and receiving systems. Similar person-centric measures can be developed for procedure history data and patient-reported outcomes.

- Problem List: Average percent by patient of problems that were a) encoded using an ONC-recognized terminology standard, b) had an activity status, and c) had either a start date and/or a stop date.
- Medication List: Average percent by patient of medications that were a) encoded using an ONC-recognized terminology standard, b) had an activity status, and had either a start date and/or a stop date
- Drug Allergy List: Average percent by patient of allergies (or adverse drug reactions) that had a) a causative agent encoded using an ONC-recognized terminology standard, b) a reaction encoded using an ONC-recognized terminology standard, and c) a date of occurrence.
- Laboratory Results or Vital signs: Average percent of patient laboratory results that were a) encoded using an ONC-recognized terminology standard, b) had a collect date, c) had a data type appropriate for the result value (e.g., numeric or encoded value), and d) included the standardized unit of measure from the source system.