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National Coordinator for Health Information Technology  
Department of Health and Human Services  
200 Independence Avenue, SW  
Washington, DC 20201

Attention: Request for Information Regarding Assessing  
Interoperability for MACRA

Submitted electronically to: <http://www.regulations.gov>

Dear Dr. DeSalvo:

The College of Healthcare Information Management Executives (CHIME) appreciates the opportunity to submit comments regarding the Request for Information, "Request for Information Regarding Assessing Interoperability for MACRA," published April 8, 2016 by the Office of the National Coordinator (ONC).

CHIME is an executive organization serving nearly 1,900 CIOs and other senior health information technology leaders at hospitals and clinics across the nation. CHIME members are responsible for the selection and implementation of clinical and business technology systems that are facilitating healthcare transformation. CHIME is a professional association representing more than 1,900 chief information officers (CIOs) and other top information technology executives at hospitals and clinics across the nation. CHIME members have frontline experience in implementing the kinds of clinical and business IT systems needed to realize healthcare transformation.

**I. Background**

The Medicare Access and CHIP Reauthorization Act of 2015 (MACRA) calls for achieving widespread exchange of health information through interoperable certified electronic health records (CEHRTs) nationwide by December 31, 2018. The law also requires that by July 1, 2016, the Department of Health

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and Human Services (HHS) create metrics to determine whether this goal has been met. If interoperability has not been achieved by December 31, 2018, then the secretary must submit a report to Congress by December 31, 2019, identifying barriers to this objective and recommending actions that the federal government can take to achieve it.

ONC issued this request for information (RFI) to solicit input on the following topics: 1) Measurement population and key components of interoperability that should be measured; 2) Current data sources and potential metrics that address section 106(b)(1) of the MACRA; and 3) Other data sources and metrics ONC should consider with respect to section 106(b)(1) of the MACRA or interoperability measurement more broadly. **Our recommendations around how ONC should measure interoperability are summarized below:**

1. **Accurate patient identification is crucial to interoperability.** We will not achieve the desired state of interoperability without a way to accurately identify and match patients to their records, securely and protective of patient's privacy.
2. **Measuring interoperability must go beyond "meaningful users."** Limiting measurement of interoperability only to providers that have attested to meaningful use and their exchange partners will not create an accurate picture of information exchange across the entire care continuum.
3. **Measuring transactions is insufficient.** We also believe it is insufficient to simply measure transactions. Healthcare is still in the relatively early stages of shifting to value-based payment and care models. While we know that data exchange will be a critical role in this transformation, we still face some significant barriers. We recognize the statutory timeline under which ONC is operating, but believe that the agency should pursue a measurement scheme that will evolve as the industry progresses.
4. **Data exchange must be useful to clinicians.** Clinicians must be offered the information they deem relevant and it must be presented in a contextually sensitive manner such that it will drive better clinical decision-making. Further, when it is available clinicians must be encouraged to use it in a secure and appropriate manner.
5. **More information is needed to understand how clinicians use exchanged data.** Improvements to patient care should be the primary measure of interoperability.
6. **Existing measurement information should be used to compliment any ONC measurement efforts.** There are HIT measurement efforts that explore end-user experience with information exchange. These efforts should be utilized to avoid duplication and to encourage market-driven transparency and solutions related to interoperability, security and privacy.

## **II. Responses to ONC's Questions Posed in the RFI**

### ***A. Scope of Measurement: Defining Interoperability and Population***

MACRA describes key components of interoperability that should be measured and the affected populations. The law defines interoperability as the ability of two or more health information systems or components to: 1) Exchange clinical and other information; and 2) Use the information that has been exchanged using common standards to provide access to longitudinal information for healthcare providers in order to facilitate coordinated care and improve patient outcomes.

The RFI notes that metrics should address both the exchange and use of healthcare data. ONC plans to assess interoperability by limiting it to "meaningful EHR users," though it also notes that exchange partners do not need to necessarily be meaningful EHR users themselves. ONC plans to measure interoperability by assessing the extent



to which “meaningful EHR users” are electronically sending, receiving, finding, and integrating information that has been received within an EHR, and subsequently using information they receive electronically from outside sources. It also plans to measure interoperability by identifying measures that relate to both exchange of health information and information that has been exchanged using common standards. In looking at data that has been exchanged, ONC plans on examining data that was sent, received, requested / queried, and integrated into a patient’s medical record. CHIME’s responses to ONC’s questions are detailed below.

**Q. Should the focus of measurement be limited to “meaningful EHR users,” as defined in this section (e.g., eligible professionals, eligible hospitals, and CAHs that attest to meaningful use of certified EHR technology under CMS’ Medicare and Medicaid EHR Incentive Programs), and their exchange partners?**

A. Limiting measurement to meaningful use providers and their exchange partners leaves out a significant segment of the marketplace. For instance, this approach excludes post-acute care settings, long-term care, and behavioral health, to name a few. If we only rely on data from meaningful users and their exchange partners, we are getting an incomplete picture. However, CHIME recognizes that ONC’s statutory deadline for establishing interoperability metrics is extremely short. Given this limitation, we recognize that there is little else ONC is capable of accomplishing other than validating what measures are already established and underway.

CHIME would like to stress, however, that a more appropriate course of action for measuring interoperability would take into account data exchange that occurs both between / among EHRs and with systems that are not EHRs. For instance, this could encompass labs or other entities exchanging data with one another. We also recognize that obtaining data to measure these exchanges could be difficult. We seek clarification from ONC as to whether it plans on considering an evolving set of metrics as the state of interoperability changes, as more requirements are placed on providers to use certified EHRs as a condition of reimbursement under Medicare, and as more reimbursement is tied to outcomes.

**Q. ONC seeks to measure various aspects of interoperability (electronically sending, receiving, finding and integrating data from outside sources, and subsequent use of information electronically received from outside sources). Do these aspects of interoperability adequately address both the exchange and use components of section 106(b)(1) of the MACRA?**

A. It appears that ONC is attempting to measure interoperability by way of counting what is being exchanged (i.e. Direct messages or queries). There are current measurement efforts in place in the market that represent some of the data desired. Use of existing data should be considered and used where meaningful and appropriate to encourage market-driven transparency and solutions related to interoperability, security and privacy. Duplicating effort and/or competing with options already in the market should be avoided. We understand the time constraints ONC is under, nonetheless, but offer detailed recommendations below.

#### Inadequate Data Sources

CHIME does not believe there are adequate vehicles in place today to accurately depict how much data is being collected and how it is being used. We urge ONC to consider its proposal a starting point; more information will be



needed in order to meet the spirit of the law over the long term. The work ONC undertook as part of its Venesco study, "[Measuring Nationwide Progress: Interoperability and Exchange of Health Information](#)," (Contract # 14-233-SOL-00533) noted this issue. The study found that "there is an important distinction between sharing data for the sake of sharing vs. actually being able to use the information to improve care. Developers and others are beginning to measure what providers do with inbound data that either conflicts with chart data or is new."

#### Counting Transactions Offers Incomplete Picture at Best

We do not believe that counting what has been exchanged or queried will adequately capture the level of exchange underway or will result in more coordinated care or improved patient outcomes. For instance, having access to lab data is integral to a patient's care, but we do not believe that just counting the number of labs is necessarily going to accomplish this objective. Our members report that lab data needs to be better incorporated into the EHR. While some are getting better at this, there are still challenges. Also, under Meaningful Use clinicians are required to send transitions of care (ToC). It is our experience that most physicians will say that these are not important to their clinical decision-making. As one member stated, counting ToC is akin to, "counting the pieces of gravel on a driveway; it doesn't make your driveway better or worse."

To date, the Centers for Medicare and Medicaid Services (CMS) has had providers focus on data that is sent by the provider, not the data that has been received. Stage 3 and MACRA are moving to requiring clinicians to account for not only what they sent, but also what was received. Questions still remain around how this data is integrated and the utility clinicians find in the data as it has been presented. We are concerned that this misses a big piece of the value proposition of data exchange. We urge ONC to keep in mind the bigger picture of improved patient care. Also, we note that work is underway at KLAS to both examine the issue of received information, as well as, identify what information clinicians find useful in informing their treatment decisions. We urge ONC to work with KLAS to better understand how information received by a clinician is perceived and how it helps inform the clinical decision-making process, as well as, any barriers.

We also caution that the level of effort to incorporate data that has been received (regardless of method) can be staggering. We worry that the effort involved to determine how information is used will be daunting and very labor intensive. Measuring interoperability needs to be accomplished in a manner that will not contribute additional, undue burden to providers and the system at large.

#### Clinician Workflow Must Be Considered

One member reported that the hospitals in their region are attempting to examine how often clinicians review data in their HIE anytime there is a patient match. Meaning, when the local hospitals share information on the exchange, how often are the clinicians taking the time to review what was shared? Our members also continue to report that they face push back from clinicians when data is not seamlessly integrated into the EHR. They are sensitive to any mandates that involve requiring a physician to take additional action if there is no additional value. There is a sentiment that even if the data is available, just forcing a physician to review it can be an issue, particularly for sub-specialists. An example of this is a pediatric orthopedic surgeon who does not necessarily need access to a child's immunization data in order to treat a broken wrist. We have members who also report that this issue is not limited to specialists; primary care physicians are also impacted. Their clinicians are experiencing "data overload" even when the data is integrated into their EHR.



CHIME believes that without a more granular and uniformly adopted set of standards, the ability to take in patient data and present it in a manner that is deemed useable and reliable by clinicians, will continue to present a barrier to interoperability. Take CCDs for instance. ToC documents are sent (and received) in a CCD format, which are typically in PDF form. While these are considered “human readable,” they are still hard to digest and clinicians have to scroll through numerous pages to locate the information they need for patient care. So, while Meaningful Use requires providers to send ToC, most clinicians will tell you this is not important to their decision-making. Also, many EHRs can only incorporate the PAMI (Problems, Allergies, Medications, Immunizations) section of the CCD XLM file. Without all of the data needed, this renders an incomplete picture for the clinician. Another issue is lab values. While much of medical decision-making is predicated on test results, seamless lab data exchange continues to present significant challenges to CIOs and their clinicians. One member reported that it took nine months to normalize lab data. CHIME is working on examining how best to tackle the myriad complexities surrounding more discrete standards to foster a more interoperable data exchange environment.

Many of the physicians in our members’ organizations believe that added data is extra “noise” and they cannot always trust it. The general feedback our members get from the clinicians with whom they work, is they: do not have time to sort through data, hunting and pecking for what they need; the information must be presented in a contextualized and secure manner and it must be integrated into workflow; the data must be deemed relevant to their management of the patient and measuring transactions without taking into account clinical workflow will defeat the intended purpose.

Even if some of these standards issues are resolved, CHIME members firmly believe that we will not achieve effective and efficient information exchange without developing a method for accurately and securely identifying patients and matching them to their medical records.

#### Data Blocking

An additional concern we have is associated with “data blocking.” As ONC and CMS prepare for closer scrutiny of this issue, we worry that low levels of transactions could be perceived as data blocking when there could be other factors to consider. Measuring transactions could have the unintended consequence of dictating workflow. If clinicians face scrutiny over how much data was moved, this could have the unintended consequence of dictating workflow. They may begin to feel compelled to share data for the purposes of demonstrating they are not data blockers or to meet a metric when this may in reality bear little to no impact on a patient’s outcome.

**CHIME thus urges caution around relying exclusively on metrics that measures transactions. Ultimately, the goal is not just about moving the information or providing access to information, it’s about how that what information is being presented and ultimately whether it is perceived as being useful to the clinician. Simply measuring transactions will not translate to better outcomes. Measurement already in the market could be used to augment ONC-generated metrics to provide a more comprehensive picture.**

#### ***B. ONC’s Available Data Sources and Potential Measures***

ONC is considering using national survey data from key stakeholder organizations and federal entities and CMS’s Medicare and Medicaid EHR Incentive Programs data for the purposes of measuring the proportion of “meaningful EHR users” exchanging information with other clinicians and health care providers and using the information that has been exchanged. Specifically, the agency proposes to use a survey it conducts in conjunction with the





American Hospital Association (AHA) and the National Electronic Health Record Survey of office-based physicians conducted by the Center for Health Statistics (NCHS).

#### Data Sources

ONC has requested input on these data sources and feedback on additional national data sources that may be available for this purpose. CHIME recognizes that the data sources available for ONC's use may be limited. We believe that the NCHS and AHA survey data are, nonetheless, insufficient and do not offer either the level of granularity needed, nor do they encompass the entire healthcare provider community. The AHA survey does not elicit the level of measurement needed to render valid conclusions and the NCHS survey focuses on the meaningful use requirements. It also only reviews the data that was sent, not received. There is also a lag for when the NCHS survey data is available.

Another challenge some of our members expressed is responding to surveys. When a CIO receives the AHA survey, for instance, they must canvass all their physicians repeatedly and response rates are often very low. However, we also understand that collecting information, as noted earlier, just through Meaningful Use data, has significant limitations as well.

#### Measures

Although the data sources are imperfect, CHIME members do not want to see any further mandates imposed in the form of new measures. We recognize that it's not easy to measure interoperability. However, more measures are not necessarily going to achieve better patient outcomes, which should be the end goal. Going back to our earlier point, clinicians need to have information that is useful and presented in a contextually sensitive manner. We also note that clinicians are likely to stop using or looking at data in EHRs or a HIE if they don't think it contributes to better patient care. Initially, health information exchange was a one-way feed and clinicians had to go look for patient data. While data exchange continues to grow and more data is being moved through HIEs, as one member noted, "you can only bring to horse to the water so many times when well is dry." Once a clinician has tried looking for information two or three times and cannot locate what they are looking for, they give up and find it easier to order a new image or lab order. CIOs want to ensure that if they are asking clinicians to query patient records that they are going to be presented with the information they deem relevant and actionable as part of the physician's normal workflow.

Our CIOs also report that the clinicians they work with report frustrations with locating patient records and a level of awkwardness that prevents them from using querying features. While a clinician can sometimes get a match depending on the patient matching algorithm, given the lack of a national patient ID solution, this continues to present challenges (as detailed under Section IV below). We would also add that while some of these barriers are related to infrastructure and some to being able to properly and securely identify a patient. **Taking into account these concerns, we believe that the number of matches to a medical record stemming from a query on an HIE can provide an inaccurate depiction of interoperability and we caution ONC on over-relying on this as a barometer of interoperability.**

#### ***C. Measures Based Upon National Survey Data***

In considering national survey data, ONC posed the below question.



**Q. Could office-based physicians serve as adequate proxies for eligible professionals who are “meaningful EHR users” under the Medicare and Medicaid EHR Incentive Programs (e.g. physician assistants practicing in a rural health clinic or federally qualified health center led by the physician assistant)?**

A. CHIME is concerned that physicians may under report the utility of their EHR. Additionally, use of EHRs can vary greatly based on a medical group is organized and by specialty. We recognize that casting a wider net could be helpful, but it could also hinder physicians from being able to implement workflows that best meet their needs. For example, if a patient shows up at the physician’s office and the front desk asks whether they have been seen recently by any other providers, we don’t see any reason why that office shouldn’t be able to automate that process assuming the appropriate authorized staff are performing this function. We don’t want to see a situation where physicians are the only ones querying HIEs / patient records; it is not always a good use of the physician’s time. Also, going back to our earlier comments, we worry that some physicians simply do not find utility in reviewing patients records from other providers (i.e. orthopedic surgeon may find no use for immunization data).

**Q. CMS Medicare and Medicaid EHR Incentive Programs Measures**

CMS notes that Medicare and Medicaid EHR Incentive Program data could potentially be a useful data source as it consists of the population and measures aspects of interoperability as described in MACRA. However, as CMS acknowledges, there are limitations such as the differences in how CMS currently receives performance data from each of the Medicare and Medicaid EHR Incentive Programs. In considering this data sources, they pose the below questions.

**Q. Given some of the limitations described above, do these potential measures adequately address the “exchange” component of interoperability required by MACRA?**

A. For the reasons detailed earlier, we believe the answer is no.

**Q. Do the reconciliation-related measures serve as adequate proxies to assess the subsequent use of exchanged information? What alternative, national-level measures (e.g., clinical quality measures) should ONC consider for assessing this specific aspect of interoperability?**

A. We are concerned that if reconciliations are used as a proxy to assess information exchange that it would not be able to tell the story about how a clinician used the information (i.e. a lab, radiology, or cardiology image) to impact medical decision making, as it would be limited to medications. In many clinical settings, physicians are not completing the reconciliation, rather it is another member of the team. The action taken on this type of information only illustrates that the reconciliation process was accomplished, not that it impacted the clinical outcome

**Q. Can state Medicaid agencies share health care provider-level data with CMS similar to how Medicare currently collects and reports on these data in order to report on progress toward widespread health information exchange and use? If not, what are the barriers to doing so? What are some**



#### alternatives?

- A. We are unclear of ONC's goal with this question. If the agency seeks to provide Medicaid data on an information exchange, that could be hard to collect for a variety of reasons, including the challenge of collecting and interpreting data when a patient goes across state lines for care. If ONC intended this question to focus on data that is collected by CMS today for Medicare Meaningful Use, then the same constraints apply which we discussed earlier.
- Q. These proposed measures evaluate interoperability by examining the exchange and subsequent use of that information across encounters or transitions of care rather than across health care providers. Would it also be valuable to develop measures to evaluate progress related to interoperability across health care providers, even if this data source may only available for eligible professionals under the Medicare EHR Incentive Program?**
- A. We believe this could be a good proxy to some degree, however, this is very limited because it is missing wide swaths of data sources (i.e. pharmacy and behavioral health). It is one thing to know when a physician prescribed a patient a medication in the emergency room, but it's another thing to know whether the patient filled it. Further, such providers as home health and long-term care are outside the scope of the Meaningful Use program. As a result, they don't have the same incentives or capabilities to share information. Therefore, interoperability between physicians and hospitals represents just a slice of the pie. HIE's could be helpful in providing this information.

#### **Q. Identifying Other Data Sources to Measure Interoperability**

ONC acknowledges that other data sources might exist that could aid in the measurement of interoperability. CMS cites the Medicare fee-for-service (FFS) claims data and performance data from other programs as examples. ONC is also considering using electronically-generated data from CEHRT or other systems, such as log-audit data, or leveraging surveys of entities that enable exchange to evaluate progress related to widespread electronic information exchange and use. CHIME's responses to the questions posed by ONC are discussed below.

- Q. Should ONC select measures from a single data source for consistency, or should ONC leverage a variety of data sources? If the latter, would a combination of measures from CMS EHR Incentive Programs and national survey data of hospitals and physicians be appropriate?**

CHIME strongly cautions against this approach. We do not believe there is a single source of data that will provide an accurate depiction of the state of interoperability. We are aware of a large EHR vendor who shares with providers how much data is exchanged on their HIEs. One member reflected that because of the type of provider they are that the amount of data that is moving for them appears lower than similar organizations in different areas of the country because they are: a) the only hospital of this type in the region; b) 98 percent of their sub-specialists are on the same EHR as them; and c) 60 percent of primary care specialists are on the same EHR as the hospital and sub-specialists. To add more perspective, while also recognize that using the same vendor to move data can make things easier, it by no means removes all variability. Providers who are in markets where many providers are using the same EHR vendor can still experience variability around patient identification due to different naming conventions. For example, some children's hospitals still have problems sending data because new born babies





don't yet have social security numbers that can be matched against, or, in the case of twins or multiples the ability to make matches becomes even harder – even when using the same vendor system.

**CHIME recommends that whether CMS elects to use a single data source or multiple ones, that it is critical that the data is contextualized.**

**Q. If ONC seeks to limit the number of measures selected, which are the highest priority measures to include?**

As we have noted throughout our letter, we see significant barriers to interoperability without a way to uniquely and securely identify patients and match them to their records. We recommend that ONC work with HIEs to review what percentage of records queried resulted in a successful match to the patient record which is being sought.

**Q. What, if any, other national-level data sources should ONC consider? Do technology developers, HISPs, HIOs and other entities that enable exchange have suggestions for national-level data sources that can be leveraged to evaluate interoperability for purposes of section 106(b)(1) of the MACRA (keeping in mind the December 31, 2018 deadline) or for interoperability measurement more broadly?**

There are efforts underway in the industry to measure interoperability. We appreciate that ONC is seeking information on other data sources that should be considered outside of those referenced in the RFI. For instance, for the past several years KLAS has been examining interoperability through its surveys and reports. While KLAS may not cover the entire spectrum of issues and provider settings needs to achieve a full picture of interoperability, their efforts, nonetheless we believe, should be considered. We, therefore, urge ONC not to duplicate work that is already underway in the industry and to work collaboratively with KLAS to gain a better understanding of the state of interoperability within the healthcare system. We also recommend ONC work with the HIEs to provide examples of metrics they are using,

**Q. How should ONC define “widespread” in quantifiable terms across these measures? Would this be a simple majority, over 50 percent, or should the threshold be set higher across these measures to be considered “widespread”?**

We do not believe that a simple majority of over 50 percent would provide an accurate predictor of the state of interoperability. We believe there are local factors that need to be taken into consideration. For instance, in some communities there is a high penetration of the use certain EHRs or even specific versions of EHRs such that the flow of data may be occurring more frequently. However, in other areas of the country you could see a wider variety of EHRs in place and more challenges moving data. We believe using such percentages would provide a very arbitrary picture and would not give an accurate depiction of “widespread” exchange of information. Also, as noted before, just because data is moving does not mean that is being used in a manner that informs clinical decision-making.

#### **Patient Identification Solution Key to**

CHIME continues to press strongly for the need for a national patient identification solution. Without the ability to accurately associate a patient with their records, we are crippling our nation's ability to meet our desired goals of an interoperable, high-performing, safer, and outcomes-oriented health care system. Patient identification is the



missing link in the discussions around interoperability. According to ONC's own [study](#), "Patient Identification and Matching Final Report," (Contract HHSP233201300029), 7 out-of-every 100 patient records are mismatched. Worse still, the error rate is typically closer to 10 to 20 percent within a healthcare entity, and it rises to 50 to 60 percent when entities exchange with each other.

We believe that ONC's ability to measure interoperability appropriately will be constrained so long as there is no way to uniquely and securely identify patients across the care continuum. As noted above, the number of matches to query for a patient record on an HIE can be stymied without a way to accurately identify patients. Matches are thus often unreliable due to the matching algorithms in place today and would not be reflective of an accurate interoperability measurement.

CHIME acknowledges the limitations on HHS' ability to pursue a national healthcare identification solution, and has set out to solve to this critical issue. [CHIME's National Patient ID Challenge](#), launched in January 2016, is a \$1 million global competition aimed at incentivizing innovators to accelerate the creation and adoption of a solution for ensuring 100 percent accuracy in identifying patients with their healthcare records in the United States. CHIME expects to award the prize to the winning solution in early 2017.

### III. Conclusion

CHIME recognizes that measuring interoperability is not only mandated by Congress, but that there is value in evaluating the healthcare industry's progress. The challenge is, our level of data exchange, while maturing each year, still remains immature. The ideal scenario we are driving towards would consist of clinicians being offered only the information they deem relevant, presented in a contextually sensitive manner, that it will drive clinical decision-making. As we move to a climate where clinicians and other providers are judged on their ability to improve patient outcomes, measuring interoperability must be done in a manner that does not grow burdens on providers, contextualizes the information provided, and that it ultimately contributes to better patient outcomes.

Sincerely,

A handwritten signature in black ink, appearing to read "Russell F. Branzell".

Russell Branzell, FCHIME, CHCIO  
CEO & President, CHIME

A handwritten signature in black ink, appearing to read "Marc Probst".

Marc Probst, CHCIO  
Chairman, CHIME Board of Trustees & CIO, Intermountain Healthcare