Written Statement of Richard Gibson MD PhD
President, Oregon Health Network
Portland, Oregon

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Hearing on
Standards for Health IT: Meaningful Use and Beyond
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Chairman Wu and Members of the Subcommittee, good morning and thank you for the opportunity to discuss health information technology standards, current status and future needs. My name is Richard Gibson. I am President of Oregon Health Network. I am a practicing, board-certified family physician, and a former board-certified emergency physician. I have nearly 20 years' experience in health information technology, including working with several major hospital systems and Oregon health information exchange planning efforts.

SUMMARY OF RECOMMENDATIONS

During my testimony I will offer my opinion on the current status of recent standards, discuss challenges to EHR adoption, and make the case for the following new national standards:

- A standard for transmitting provider text notes.
- A standard for exporting and importing patient information directly between EHRs and directly provider-to-provider.
- A standard directory for Health Internet Addresses.
- A standard for document transfer that can accommodate providers on paper records.
- A standard EHR functionality requirement for quality measure reporting.
- A national model for privacy and patient consent, access control, and availability of the entire health record.

STATUS OF CURRENT STANDARDS

Meaningful Use Final Rules Are Well Received

The delivery of the Final Rule on the CMS EHR incentive program has been well received by the provider community. As far as Stage 1 of the Meaningful Use objectives and measures, the uncertainty is now over. This is been enormously helpful to providers. We applaud the consideration that the Office of the National Coordinator and CMS have shown to the many comments received over the past six months. This office has been extraordinarily responsive in making rules as straightforward and pragmatic as possible while still moving the country forward to electronic health records that actually improve the quality and consistency of healthcare. We very much appreciate the obvious collaboration between the Office of the National Coordinator and the Centers for Medicare and Medicaid Services and would encourage continued coordination among all federal agencies working in health information technology to achieve the needed improvement goals in public health, mental health, and long term care through health information exchange.

In particular, the use of Core Requirements and Menu Set Requirements for Meaningful Use, in place of the "all or nothing" approach was very helpful in giving providers and EHR vendors some flexibility in meeting Stage 1 Meaningful Use criteria. It is also very helpful to providers and vendors to set the expectation that Stage 1 Menu Set Requirements will become Core Requirements in Stage 2. Vendors and providers now know what to plan for over the next several years. The Meaningful Use Final Rules have provided structure and organization in electronic health records, previously characterized by a disorganized marketplace where individual products could not communicate effectively with each other.

The HITECH Act Has Ushered Great Progress

EHR vendors now have a clear roadmap for the next two years of what will be required of their software as a minimum for clinician adoption. They know what workflows need to addressed by the EHR. The vendors know the capabilities required of their EHR software in order for it to be certified. Some current EHR products may not be able to achieve certification. Clinicians now know that financial support is available if they use certified EHRs and demonstrate their meaningful use. Clinicians understand how their use of EHR will be measured. The HITECH Act has done as much as it can to remove uncertainty in clinicians' minds about whether or not to pursue an EHR. Enough of the EHR incentive variables are now known for providers, hospitals, and health systems to make reasoned choices about when and how they will acquire an EHR. The HITECH Act has brought focus and consistency to EHR adoption. It is now clear what needs to be done, even if it is not quite as clear how long it will take.

CONCERNS ABOUT ADOPTION OF ELECTRONIC HEALTH RECORDS

Adoption of EHRs is a Prerequisite for Interoperability

We have an enormous effort still ahead of us. Before going on to the specific standards that are the topic of today's hearing, we need to acknowledge that the standards have relatively little application unless individual healthcare providers have electronic health records in the first place. Most of the more than 400,000 Eligible Professionals still need to acquire an electronic health record, and most of that effort will be in small physician offices. CMS has estimated the five-year cost of acquiring an electronic health record for an eligible professional to be $94,000. EHR incentive plans through Medicare and Medicaid will cover 47 to 67% of that estimated cost. As a general rule, EHRs still do not allow providers to see more patients in a day, spend more quality time with their patients, or guarantee better or more consistent health outcomes for their patients. In short, even with the generous EHR incentive program, there still may not be a sufficient financial rationale for individual providers or small practices to invest in electronic health records.

Implementing an EHR is Stressful for the Provider

Implementing electronic health records in small physician offices is not like purchasing a copy machine or a fax machine. In addition to the great capital expense, the EHR is markedly disruptive to both the clinical and administrative functions of the office. Every provider, medical assistant, receptionist, and billing staff member needs to change the way they do their work. Even with excellent training, it usually takes 2-12 months before providers are fully comfortable on their new tools. On a new EHR, each office visit takes longer - this means increased waiting times for patients or a fewer number of patients per day for the provider. It is not uncommon for providers on a new EHR, after a full 8-10 hour day of seeing patients, to finish their charts on the computer at home for three or four hours in the evening. Even those providers who believe in the patient care benefits of an EHR are exhausted by the process in the first year.

EHRs Viewed Unfavorably by Many Providers Because of Administrative Documentation

Many providers who do not yet have EHRs in their office have commented to me how much they dislike the output received from many other physician office EHRs or from hospital EHRs. They specifically complain about how many pages these EHR reports require and how difficult it is to find the small bit of useful clinical information within. Upon investigation, most of this low-value verbosity comes from physicians documenting specific history and physical exam findings required to support their billing. Also, as medicolegal requirements ratchet up, clinicians feel a need to document with a date-time stamp every single finding and every single item of data that they have reviewed. The existing cumbersome EHR reports impair the clinical process and can put the patient at risk by making important information obscure. Clinicians criticize the EHR for this clumsy reading even though the cause lies with our current payment and administrative systems, and not the EHR itself, which is otherwise widely agreed to be highly legible. Most clinicians would prefer to go back to simpler charting that more closely reflects their thought process. These EHR changes will need to await payment reform.

IT Professionals with Multiple Skills Needed for EHR Implementation

Another challenge in implementing electronic health records in small provider offices is the lack of technical expertise and support for the office. The providers are busy with a full schedule seeing patients. Medical assistants are putting patients in rooms or they are continuously on the phone with patients. Front office staff members are trying to make appointments and handle incoming calls. The billing staff is overwhelmed with insurance paperwork. Most providers and staff, especially those in small practices, don't have time to become fluent in the use of the new system, much less become expert in training others to use the system. Typical small physician implementations start two to three months before the expected launch date of the software. All current paper-based workflows need to be examined and re-designed for the new software. This requires analysts who are not only familiar with software but familiar with the healthcare office process. Bringing the majority of the 400,000 Eligible Professionals up to speed on an EHR in the next several years will be challenged by a lack of IT implementation professionals.

EHR Technical Requirements Can Be Challenging for Smaller Practices

Small physician practices are already spending 40-60% of their net revenue on overhead. Space in small physician offices is at a premium and providing a physically locked computer space within the physician office is difficult. Physician offices do not typically have the technical expertise to manage the computers in the clinical areas as well as the office computer network and the larger computers that act as servers and tape backup for the EHR software. Hosting provider EHRs on centralized servers supporting multiple practices may address this concern, but many of the currently used office EHRs are not yet ready for this step-up in technology. Many small towns do not have local computer hardware professionals to support physician offices. The Regional Extension Centers (RECs) exist to assist physicians in this context but even with generous funding, the RECs will be challenged to meet the enormous demand in the next several years.

STANDARDS-RELATED PRIORITIES FOR THE FUTURE

A Standard for Transmitting Provider Text Notes

When providers care for patients as a team, they expect to be able to review the patient's relevant laboratory results, diagnostic imaging reports, diagnostic images, and text reports that have been produced by other providers. Historically these text reports were produced by transcribing notes that physicians dictated for an office visit, a consultation note, a surgical procedure, and the like. These text reports are crucial for the coordination and transfer of care among providers. One of the Meaningful Use Core Requirements for Eligible Professionals calls for the capability to exchange "Key Clinical Information" among providers and gives examples of such data. The Requirement leaves the interpretation of "key clinical information" up to the provider. The HITECH Act specifies that the content standard for a patient summary will be the Continuity of Care Document (CCD) or Continuity of Care Record (CCR). These two documents have 17 sections containing mostly lists but there is no standard CCD or CCR for the specific text documents most useful for patient care. Physician office EHRs and hospital EHRs need to be able to export and import CCDs or CCRs specifically created for these crucial physician-authored reports.

A Standard for Exporting and Importing of Patient Information Directly Between EHRs and Directly Provider-to-Provider

As noted above, health information exchange is predicated upon providers having electronic health records. Oregon is currently developing a statewide plan for the operation of local, regional, or statewide health information exchanges. There is discussion as to what health information should be exchanged and how that exchange should be managed, for example, directly from provider to provider or from provider to central information exchange to another provider. There are pros and cons of these two ends of the spectrum. Three points need to be made here. First, even if one has a centralized health information exchange (HIE) the EHR still needs to export and import the common patient information such as laboratory reports, diagnostic imaging reports, diagnostic images, and provider text reports from the HIE. The HITECH Act already specifies the content standard for most of these data types but Meaningful Use Stage 1 does not require EHRs to use this function. Second, HIEs are not yet well established. Complex centralized patient data repositories serving as HIEs are likely to be expensive to build and maintain and it may take a number of years before most providers have access to an affordable HIE of this nature. Third, central clinical data repositories may not be as trusted by patients as direct exchange of information from one provider known by the patient to another provider known by the patient. EHRs that can directly export and import data are required even if HIEs are present, and such EHRs have the added benefit that they can be used among providers when an HIE is not available. The next round of regulations needs to require that EHRs can export and import these data types directly to and from other EHRs without requiring a central health information exchange.

It should be noted that importing clinical data from an outside EHR into one's own EHR will be very challenging technically and culturally. Typical use of a CCD or CCR has them displaying the outside information in the equivalent of a "Correspondence" section of the electronic record. This is certainly better than having no information at all, but if we wish physicians to order less duplicate testing, we will need to devise technical standards where the results of an outside diagnostic test appear in the EHR results table very close to the internally-obtained test results.

Most ambulatory care in this country is delivered by providers in the patient's local area. Providers in each specialty are likely to know their colleagues in the other specialties from whom they receive and to whom they send consultation requests. Much of the time these consultation requests are arranged by the provider or by one of his/her staff members. In a paper world this is conveniently handled by a phone call and/or faxing of the clinical documents. The Receiving Physician is very appreciative of having organized patient information from the Sending Physician ahead of the patient arriving in the Receiving Physician's office. As clinicians move to electronic health records, we need to enable our EHRs with the ability to transfer patient information as easily as fax machines accomplish that transfer now. The Sending Physician knows what data need to go ahead of the patient. All EHR vendors need to provide this export/import function at the point of care for use by office staff. This concept and the next two have been promulgated by Wes Rishel at Gartner and have led to the NHIN Direct Project.

A Standard Directory for Health Internet Addresses

If providers are going to electronically export patient information for immediate use by another provider, they will need to have a system of Health Internet Addresses and provider directories. A Certificate Authority will need to be established that can guarantee the authenticity of a provider's Health Internet Address. After a provider decides to refer the patient to another physician, whether next-door or in another state, the provider or his/her staff member could go onto the Internet and search for the provider's authenticated Health Internet Address. This could be entered into the provider's EHR, which would send an encrypted packet of provider text reports (for example, Office Visit Notes), recent laboratory results, diagnostic imaging reports, and diagnostic images to the Receiving Physician's EHR, which would similarly import the patient information. Both provider offices would be assured of immediate transmittal and receipt and the authenticity of the providers' identities. A state, regional, or national body could provide a similar function by building a Master Provider Index. For the basic function of a provider pushing patient information to another provider, there is not a need for a centralized clinical data repository. In the longer run, we need a method where an emergency department, for example, could pull patient data from other providers and hospitals when the patient or family member is unable to say where he or she has been cared for previously. This would require the more complex function of a Record Locator Service, which would keep track of the disparate electronic sources of a patient's clinical data. A state or regional organization could furnish a Record Locator Service.

A Standard for Document Transfer That Can Accommodate Providers on Paper Records

It will be years before all providers have electronic health records. For the next few years, providers will need to be confident that they can manage patient information to support patient care whether the Sending Physician or the Receiving Physician, or both, or neither, is on an EHR. Imagine the Sending Physician has an EHR that produces a concise, thorough patient information document. The Sending Physician looks up the Receiving Physician's Health Internet Address and sends the document directly from her EHR like an attachment to an e-mail. The Receiving Physician, unbeknownst to the Sending Physician, does not have an EHR. No problem - he receives the document as an attachment to a secure e-mail, prints it out, reviews it, and includes it in his paper charts. Once he acquires a certified EHR, he will be able to import the document easily without resorting to printing. We need a transfer standard that is human readable and that is flexible in terms of the technology required on the receiving end.

A Standard EHR Functionality Requirement for Quality Measure Reporting

The Standards and Certification Criteria Final Rule is clear about what quality measures Eligible Professionals will submit as part of the Core Requirements. I appreciate the ONC making these measures consistent with the Physician Quality Reporting Initiative. Although the data elements for figuring the numerators, denominators, and exclusions of each measure are clear, many EHRs will have difficulty in getting their EHR software to produce these numbers automatically. Business intelligence tools built into most EHRs are currently immature. Smaller practices would likely need to seek the help of consultants in order to produce an acceptable report from their EHR. The necessary clinical data should be present in a certified EHR but smaller EHR vendors will be challenged to include adequately sophisticated report writing tools in their products that can be used directly by clinicians. Quality measure reporting needs to be a core EHR function specified by a consistent nationwide requirement, so that providers in any practice can press a button to produce submission-ready reports on a given measure.

A National Model for Privacy and Patient Consent

Currently Oregon is trying to establish health information exchange privacy and patient consent standards for use within the state. I applaud these efforts but think that EHR adoption would be much enhanced by having consistency in privacy and patient consent across all 50 states. In Portland we often see patients from Southwest Washington. In the course of a busy office day, clinicians need access to previous records. Having significantly different privacy laws in Washington versus Oregon would lead to uncertainty, missed information, and unnecessary duplication of diagnostic testing. Currently, providers may exchange health records for purposes of payment, treatment, and operations without explicit patient consent. If it is decided that a patient needs to specifically consent to have their provider send or retrieve their health information, then we need a standard so that any vendor's EHR can effectively communicate the obtained patient consent with any other vendor's EHR in any other state. We need a federal effort to convene, sponsor, and mandate development of model rules and laws that each state could take through its own legislative process. A "Uniform Privacy Code," as it were, like the Uniform Building Code, would provide interstate consistency and give EHR vendors confidence that their software would perform consistently wherever it is used.

Setting Appropriate Expectations on Provider Access Control to Patient Information

About six years ago at Providence Health and Services in Oregon, we looked at the access to the electronic chart for a typical four-day hospital stay. More than 65 different people had appropriate access to the patient's chart during and after their hospital stay. Depending on their role, some staff members had access to only a part of the patient's information. It is unpredictable which provider will need immediate access to a patient's chart at any given time. On a hospital floor, a physician might ask a colleague to take a look at her patient. The Receiving Physician walks right over to the computer and begins to examine the patient's information. Nurses frequently are called from one unit to another according to the ebb and flow of patient census and they need immediate access to the records of that unit's patients. The nature of fee-for-service healthcare makes it difficult to predict who will be taking care of the patient next. As an emergency physician, I would see people on Saturday night and refer them to the orthopedist to be seen first thing Monday morning. When they show up at the orthopedist's office, that doctor or her partner needs immediate access to the full electronic health record even though they have never seen the patient before. Our model needs to set the expectation in the patient's mind that it is not possible to predict exactly who will need access to their record in the course of their care. To balance these relatively open provider access controls, I do believe we have an opportunity to involve the patient in reviewing the log of who looked at their records. Most confidentiality breaches in electronic health records are associated with people who have approved access to a given electronic health record system but use their access inappropriately in looking up information of a friend or colleague for whom they are not caring.

A Model for the Complete Health Record Being Available to the Provider

Access to the entire health record is important for providers taking care of patients. It is crucial that providers see the entire medication list, the entire allergy list, the entire problem list, pertinent laboratory results, and diagnostic imaging studies. Although the provider can infer some of the patient's diagnoses from the medication and allergy lists, it is crucial that providers see all the medications and allergies when they prescribe. Without this guarantee, the patient could be hurt when a physician prescribes a medication that interacts with one that they are already taking or to which they have developed an allergy in the past. Most physicians would be very uncomfortable practicing in an environment where some information about the patient in front of them may have been redacted. Similarly, providers need access to the complete laboratory reports and diagnostic imaging results when they're trying to make a diagnosis. Hiding these data because they imply a certain "restricted" diagnosis is unsafe and could ultimately result in physical harm to the patient. I acknowledge that most providers do not need to see the office visit notes from sensitive psychotherapy sessions and these parts of the records should be restricted to the mental health therapists only. Everyone else needs to see the full health record.

CONCLUSION

In summary, The HITECH Act and the Meaningful Use regulations have dramatically accelerated interest in electronic health records. The proposed standards have assured clinicians and EHR vendors of a level playing field where EHRs will ultimately be able to communicate with each other. The regulations appropriately require evidence not just of EHR implementation, but of improved intermediate healthcare outcomes. I respectfully request that the next round of standards builds on the progress of the current standards. Let national standards enable our small physician offices to communicate directly with each other using tools that can be mastered by the provider or office staff. We need a specific transfer standard for the most crucial provider-authored text notes. National regulations must require that EHRs can directly send and receive patient information initiated by the office staff at the point of care using the equivalent of e-mail attachments and Health Internet Addresses while we wait for more complex exchange methods to be developed. These tools can be used by physician offices still on paper records as they prepare to move to an EHR. Finally, we need a national privacy and patient consent model for states to use creating their own legislation so that patients and providers can be confident that clinicians always have all the information in front of them that they need to provide consistently superior care.

Chairman Wu and Members of the Subcommittee, thank you for the opportunity to testify on these important issues. I would be happy to answer any questions you may have.

Richard Gibson MD PhD - Biography

Richard Gibson is President of Oregon Health Network, a nonprofit using Federal Communications Commission funds to extend a medical-grade, high-bandwidth network to all Oregon hospitals, community colleges, and clinics for the underserved. He is a practicing family physician and former board-certified emergency physician. Previously he was Senior Vice President and Chief Information Officer for Legacy Health, an integrated delivery network in Portland, Oregon. Before that he was Chief Medical Information Officer for Providence Health and Services, Oregon Region, also an integrated delivery network in Portland, Oregon.

Dr. Gibson practiced family medicine in Forks, Washington, a logging town of 3,000, four hours west of Seattle. He was an emergency physician in Port Angeles, Washington, a community of 20,000 three hours west of Seattle. He received a BS in Biology from Stanford University and an MD from Case Western Reserve University in Cleveland. He holds a PhD in Medical Informatics from the University of Utah and an MBA from The Wharton School.

Outside of practicing medicine, Dr. Gibson has spent his information technology career helping physicians, health systems, and independent software vendors acquire, develop, and implement electronic health records for use in physician office and hospital settings. He has advised the State of Oregon in electronic health records, health record privacy and security, health information exchange, and telemedicine.