



## **Testimony**

*Submitted on behalf of the University of Pittsburgh Medical Center*

*Before the*

Senate Communications and Technology Committee

*Presented by*

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**TESTIMONY OF GEORGE DANIEL MARTICH, M.D.  
SENATE COMMUNICATIONS & TECHNOLOGY COMMITTEE**

Good morning, my name is Dan Martich and I am Chief Medical Information Officer at UPMC. I appreciate the opportunity to testify before the Pennsylvania State Senate Communications & Technology Committee to provide insight regarding what is keeping us from moving forward with Health Information Exchanges (HIE).

**Who is UPMC?**

UPMC is an \$8 billion global health enterprise with almost 50,000 employees headquartered in Pittsburgh, Pa. UPMC is transforming health care by integrating 20 hospitals, 400 doctors' offices and outpatient sites, a health insurance services division, and international and commercial services.

UPMC is redefining health care by using innovative science, technology, research and medicine to invent new models of accountable, cost-efficient, and patient-centered care. UPMC is taking medicine from where it is to where it needs to be.

For many years, UPMC has been a leader in applying information technology to improve health care, and has received such recent information technology related awards as:

- **HIMSS Analytics Advanced Use of Electronic Medical Records:** Eight UPMC facilities—Children's Hospital of Pittsburgh of UPMC, Magee-Womens Hospital of UPMC, UPMC Mercy, UPMC McKeesport, UPMC Presbyterian, UPMC Shadyside, UPMC St. Margaret, and ISMETT (transplant hospital located in Palermo, Italy)—have been recognized for their advanced use of a comprehensive electronic medical record (EMR) to enhance patient safety.
- **Hospitals & Health Networks (H&HN) 100 Most Wired Hospitals and Health Systems:** For the 12th consecutive year in 2010, UPMC was named one of the 100 Most Wired health systems in the United States by H&HN, the journal of the American Hospital Association.
- **2009 Association of Medical Directors of Information Systems (AMDIS) Award:** By providing comprehensive and seamless EMR from 30+ clinical systems to 20,000+ caregivers, UPMC's interoperability team was 1 of 8 AMDIS award recipients in 2009 for successfully applying information systems to improve patient care and efficiency.
- **KLAS Top Children's Hospitals in the Use of Electronic Health Records:** Children's Hospital of Pittsburgh of UPMC was recognized in 2009 by KLAS, an independent health care research organization, as the leader in the use of health care information technology among pediatric hospitals in the United States.

UPMC has deployed a suite of state of the art clinical applications that we call the UPMC eRecord throughout most of UPMC's facilities. It is our hope to complete deployment to



our remaining facilities, with the exception of the newly affiliated Hamot Medical Center, by May 1<sup>st</sup> of this year.

As a result, UPMC is able to deliver comprehensive full-fidelity electronic medical information to its physicians and clinicians whenever and wherever it is needed. Coupled with advanced clinical decision support and work-flow tools, UPMC is able provide the information necessary to ensure that our patients receive the best care possible.

### **Removing Barriers confronting the Establishment of HIEs**

With respect to the establishment of health information exchanges, I believe that there are seven barriers that need to be removed. While a number of these barriers may simply retard HIE formation, others have proven to prevent HIE formation or sustainability:

1. **Aligning Cost with Value.** Many HIEs struggle with the cost associated with not only starting up the HIE, but also how to fund ongoing operations. There appear to be three basic methods for HIE funding: (i) funding by the participants of the HIE (such as transaction based fee or some type of pro-rata contribution by the participants), (ii) a “tax” levied on payers on a claims basis, and (iii) governmental or 3<sup>rd</sup> party subsidies.

With respect to funding by participants, while larger providers and insurers may be willing and able to contribute to the startup and ongoing operation of an HIE, smaller and rural providers often do not have the money to participate. Unfortunately, the value of the HIE diminishes dramatically as the number of participants decreases. Further, the entities that benefit the most from the HIE are often different from the entities that bear the cost.

As evidenced by the number of failed HIEs to date, creating regional and statewide HIEs will prove challenging as there are still no demonstrable and repeatable business models of HIEs that are self-sustaining. Further, the majority of the HIEs that have survived are “closed systems” that work within a given Integrated Delivery Network.

To facilitate HIE funding and sustainability, the cost that a provider must incur to participate in an HIE must be reasonable. If the cost of participation is too high, many providers will simply choose not to participate. To address this issue, HIEs should be established in a manner that minimizes startup costs and the cost of ongoing operation.

Further, it is imperative that HIE costs be closely tied to value. In order to reduce the cost associated with HIE startup, it is important on which core set of objectives be focused in order to prove the value of the HIE. These objectives should have a clear return on investment or allow providers to meet meaningful use criteria. These objectives should be achieved prior to the HIE pursuing additional objectives that add cost.

2. **Managing Overhead and Governance.** The HIE should be structured with minimal overhead and with a streamlined governance structure. Many HIEs establish a robust



governance and management structure that is far in excess of what is actually required to in order to achieve the HIE's initial objectives. Such governance and management structures add substantial and unnecessary cost to the HIE. A streamlined governance structure will not only reduce cost, but allow the HIE to focus on and more quickly achieve its initial objectives.

Assuming that the HIE meets its initial objectives and proves its value, additional objectives may be considered (which may warrant additional governance and management).

- 3. Understanding Provider Focus.** The adoption of electronic health records (EHRs) within the healthcare industry remains low. This is especially the case within the physician practice environment, where recent studies show EHR adoption rates as low as 15 percent.

Stage 1 "meaningful use" incentives are primarily designed to facilitate the adoption of EHRs. In Stage 1 beginning in 2011, meaningful use objectives in large measure focus on electronically capturing health information in a coded format. Further, the Centers for Medicare and Medicaid Services have concluded that the availability of HIEs at this time was not sufficiently widespread to base a significant number of requirements in Stage 1 on the presence of HIE. Therefore, many of the stage 1 meaningful use objectives are not dependant on the existence of HIE. Where electronic exchange is required in Stage 1, much of the functionality already exists without the need for an HIE (such is the case of electronic claims submissions).

Therefore, since basic EHR adoption (stage 1) is a logical prerequisite to the robust exchange of information via an HIE (stages 2 & 3), most providers will be focused on implementing meaningful use compliant EHRs and not HIE development or participation. To address this barrier, it is important that providers be informed of how HIEs will allow the provider to meet stage 2 and stage 3 objectives.

It is important to note that UPMC has been substantially involved in facilitating the adoption of EHRs by physician practices. Specifically, UPMC is a recipient of a Pennsylvania state REC grant. UPMC is also selling and deploying EHRs to physician practices pursuant to the federal Stark statute EHR safe harbor.

- 4. Ensuring Interoperability.** In order for HIEs to be successful, data must be made available in a manner that facilitates exchange. Initially, most HIEs will seek to exchange a Continuity of Care Document (CCD).

The Continuity of Care Document (CCD) specification is an XML-based markup standard intended to specify the encoding, structure and semantics of a patient summary clinical document for exchange.



The CCD specification is a constraint on the HL7 Clinical Document Architecture (CDA) standard. The CDA specifies that the content of the document consists of a mandatory textual part (which ensures human interpretation of the document contents) and optional structured parts (for software processing). The structured part is based on the HL7 Reference Information Model (RIM) and provides a framework for referring to concepts from coding systems such as from SNOMED and LOINC.

The patient summary contains a core data set of the most relevant administrative, demographic, and clinical information facts about a patient's healthcare, covering one or more healthcare encounters. It provides a means for one healthcare practitioner, system, or setting to aggregate all of the pertinent data about a patient and forward it to another practitioner, system, or setting to support the continuity of care. Its primary use case is to provide a snapshot in time containing the pertinent clinical, demographic, and administrative data for a specific patient.

As part of the criteria from the Certification Commission for Health Information Technology (CCHIT), all ambulatory and inpatient EHRs should be CCD compatible - which means the participating systems must be able to send and receive clinical documents in CCD format. CCHIT's endorsement of CCD as part of their certification paves the way for better communicating EHRs and HIE. However, the ability to produce or accept a CCD by many EHR is still at an early stage.

To address this barrier, the HIE should make it clearly known to providers that it is a priority to exchange a CCD. The HIE should help facilitate conversations with EHR providers of the importance of supporting the exchange of a CCD.

## **5. Ensuring Patient Matching and Data Quality.**

Since there is no national patient identifier, it is imperative that good processes exist to ensure that patients are accurately matched to their information. Without good processes to ensure that that patient information is accurately matched, either that patient's record as expressed by the HIE will be incomplete (due to not matching information that is associated with the patient) or inaccurate (due to including information from other patients in the patient's record). In both cases, the impact on patient care could be dramatic.

Therefore, it is vital that the HIE develops effective patient matching algorithms, and that appropriate quality control processes are adopted to ensure that any incorrect or incomplete information is identified and corrected.

## **6. Balancing Patient Privacy with Effectiveness.**

Patient privacy must be factored into the fundamental design of any HIE. However, how privacy controls are designed, may have a dramatic impact on the overall utilization and value of the HIE. For example, an HIE may choose a strategy based on "opt-in" (the



patient must affirmatively agree to have his / her information exchanged), “opt-out” (the patient may request that his / her information not be exchanged) or “all-in” (the patient does not have a choice regarding whether his / her information is exchanged).

While “opt-in” provides the greatest level of patient control, it will result in the lowest level of utilization, likely preventing the HIE from being financially sustainable. Further, while many patients in the abstract may desire to have significant control over the exchange of their information; in practice, the overwhelming majority of patients expect that information will be made readily available as necessary for their care and treatment.

In order to balance privacy and participation, an opt-out strategy should be utilized. This strategy, when coupled with a robust patient education program, will maximize patient participation, while allowing patients appropriate choice over the exchange of their information.

- 7. Addressing Concerns Regarding Competition.** Often, clinical data is viewed as a key strategic asset, for example, tying physicians and patients to a hospital. As a result some providers may be hesitant to participate in an HIE.

With ready access to information by a patient’s other providers, some providers may be concerned that the patient will be more likely to seek treatment elsewhere. Further, articles indicate that some providers fear losing their competitive advantage by relinquishing control of “their data.”

Providers may also be concerned that direct competitors or other parties might use data in ways that could harm the provider’s business interests, such as, by using the data for marketing purposes to redirect patients to other providers. Of particular concern was use of data for hospital performance measurement.

In order to address concerns regarding competition, a provider outreach program should be established. The program should clearly inform providers of the HIEs importance, in such areas as the context of meaningful use, improvements in patient care, the ability to reduce costs, etc..

### **Western Pennsylvania HIE Activities**

While some may view UPMC as being a “de facto” HIE, UPMC has long recognized the importance of exchanging health information with other providers in Western Pennsylvania. UPMC is currently exploring the possibility of developing an HIE with other providers in Western Pennsylvania.

UPMC has also invested substantially in dbMotion, an innovative provider of health interoperability solutions for connected healthcare.

The dbMotion solution provides clinicians and applications access to real-time, integrated clinical information. The dbMotion solution overcomes the barriers that exist between the large varieties of clinical systems found within and between healthcare organizations. The



dbMotion solution is based upon a comprehensive platform for interoperability and health information exchange that is able to work with all forms of data architectures.

UPMC has implemented the dbMotion solution to more tightly integrate information systems within UPMC's eRecord environment, as well as to provide the foundation for performing advanced analytics, clinical decision support and population management. The dbMotion solution is ideally suited to seamlessly exchange health information with other providers, and can be easily extended to be the technology platform for an HIE in Western Pennsylvania.

UPMC welcomes the opportunity to assist the state in developing a HIE capacity that is both effective and sustainable.

Respectfully,

George Daniel Martich, MD.