



**Minutes**  
**Health Information Technology Standards Advisory Committee**  
**(HITSAC)**

**Thursday, September 17, 2009**

Virginia Information Technologies Agency (VITA)  
Commonwealth Enterprise Solutions Center  
Multipurpose Room  
11751 Meadowville Lane, Chester, VA 23836

**Attendance**

**Members present:**

Dr. Marshall Ruffin, Chair  
Geoff Brown  
John Quinn

**Members absent:**

Daniel Barchi  
Dr. Alistair Erskine

**Others present:**

Kim Barnes, Coordinator, Commonwealth of Virginia Office of Health IT

**Call To Order**

Chairman Ruffin called the meeting to order at approximately 10:10 a.m. in the Multipurpose Room at the Commonwealth Enterprise Solutions Center (CESC) in Chester.

Chairman Ruffin welcomed Ms. Kim Barnes, the new Coordinator of the Commonwealth's Office of Health IT representing Secretary of Health and Human Resources Marilyn Tavenner.

Mr. Brown made a motion to approve the August 20, 2009, meeting minutes that was seconded by Mr. Quinn and approved by the Committee by voice vote.

## Chair's Report

Chairman Ruffin requested Kim Barnes and Michael Mathews, Chair of the Commonwealth's Health Information Exchange (HIE) Grant Workgroup, to provide a synopsis of the work to apply for federal grant stimulus funds pertaining to state HIEs.

Ms. Barnes advised the Committee that an Executive Order will be issued by Governor Kaine next Monday, Sept. 21, that will pertain to three matters. It will establish the Health Information Technology Advisory Commission (HITAC) as a committed group of stakeholders to assist in the submission package for stimulus funds for HIE; it will create the Office of Health IT in the Virginia Department of Health (VDH) headed by Ms. Barnes; and it will assign additional responsibilities to both of these groups concerning the HIE funding request.

In response to Chairman Ruffin's question about the protection of the continuity of the work done by the Office of Health IT, Ms. Barnes advised the position is not an at-will employee subject to political appointments. Therefore, a full-time permanent position will continue regardless of the political climate.

Ms. Barnes, in response to Chairman Ruffin's question, advised the Office of Health IT will work with the Virginia Information Technologies Agency (VITA) staff on health IT initiatives.

Mr. Mathews provided a status of the Commonwealth's HIE grant application to the federal government. In summary, Mr. Mathews advised the Commonwealth is moving fast to respond to the federal government's request for grant applications issued a few weeks ago. The Commonwealth's letter of intent was submitted by Ms. Barnes prior to the Sept. 11, 2009, deadline. The grant application is due Oct. 16; the award announcement will be Dec. 15; and the anticipated project start date is Jan. 15, 2010.

The main goal of the federal grant program is to further the adoption of electronic exchange of clinical health information and data. The work done for the National Health Information Network (NHIN) will form a basis for the state Health Information Exchange (HIE). There are several avenues for states to participate, including the planning phase or development of operational and strategic plans, an expedited planning process if an operational and strategic plan is in draft, and an implementation phase if a plan exists and is approved by the Office of the National Coordinator (ONC). Virginia will request funds to develop a full operational and strategic plan. The amount of the award nationally will be \$564 million. The floor is \$4 million with a ceiling of \$44 million per state. Ms. Barnes added that the funding is not a competitive process; the federal government will employ an algorithm to each state to determine the appropriate level of funding. The state will know two weeks prior to the grant application due date of its funding level.

The operational and strategic plan covers the following five domains: governance, finance, technical infrastructure, business and technical operations, and legal policy.

Chairman Ruffin welcomed the Office of Health IT's comments and questions on HITSAC's ability to address not only standards, but also architecture and governance structures to further the goal of a statewide HIE.

## HIE Architectures

Mr. Quinn provided a presentation covering HIE architectures that may be located here: [http://www.vita.virginia.gov/uploadedFiles/ITIB/Meetings/2009/Sept\\_17\\_2009/HITSAC\\_HIE\\_Technology\\_Topics.pdf](http://www.vita.virginia.gov/uploadedFiles/ITIB/Meetings/2009/Sept_17_2009/HITSAC_HIE_Technology_Topics.pdf). Mr. Quinn started his presentation on slide 34.

Mr. Quinn informed the committee that the Healthcare Information Technology Standards Panel (HITSP) and the Centers for Medicare and Medicaid Services (CMS) are discussing the adoption of continuity of care documents (CCD) and moving transactions from Health Insurance Portability and Accountability Act (HIPAA) transactions to meaningful use.

Chairman Ruffin remarked that this transaction is enormously important. Mr. Quinn replied that having all health information standards and policies housed in one place would be very beneficial.

Mr. Quinn noted that the barriers around developing successful HIEs have primarily been because of a lack of adoption and buy-in of the system among providers. The concept of a HIE can exist at many different levels including a single provider, a geographic system, a corporate-wide system, and a statewide system based on state boundaries. A statewide system also faces issues as many states' borders have metropolitan areas that encompass more than one state.

The three main architectures are federated, centralized and hybrid systems with variations within each. One of the biggest challenges to implementing HIEs is the level of sophistication of information technology within each provider's system. Common themes in all current projects are a record locator service, a portal and a public health reporting option. These exist at the HIE level and the NHIN level with the goal of implementing only one NHIN as a very thin structure with responsibilities mainly to find the patient and where to ask to find the patient's records. In response to Chairman Ruffin's question about what constitutes a thin HIE, Mr. Quinn responded that this means no data or true records are stored by the NHIN, but its main responsibility is to locate the patient and tell the requestor where the information is stored to retrieve it. In developing HIPAA, the political climate resulted in the federal government making a decision not to implement a patient identifier which created issues for locating a patient. Therefore, a probabilistic matching approach was developed in this country for patient identification.

In a federated model, a master patient index (MPI) can be utilized to locate a patient and a record locator service (RLS) is then used to query the HIE for the location of the records. Further, the source system actually storing the data is primarily responsible for patient privacy protection. Almost all aspects of performance are dependent upon the IT systems at the source where the data is stored. None of the current vendor systems were designed to respond to ad hoc queries. This sharing can happen but will require money and modifications.

In a hybrid model, the MPI and the RLS are used in a similar manner as with the federated model, but the actual data is staged within the HIE infrastructure and/or within the source provider's IT system, but on a dedicated "edge" server. Mr. Quinn reported that only an estimated 30 percent of dedicated providers respond that they use the HIE portal at their provider site. Providers only appear to use the system 30 percent of the time due to suspicions that information provided by the patient is false. Therefore, the use of the system is more of an exception rather than the rule. Patient data privacy is a shared duty between the providers and the HIE.

In a centralized model, all of the data is stored in one centralized location for queries. The system still uses a MPI, but a RLS is not explicitly necessary. At a national level, Britain found that a centralized model did not work. It may work on a state or regional level. Privacy and access become totally the responsibility of the HIE. Ms. Barnes asked about the Epic environment used in Oregon and Washington. Mr. Quinn responded that in the Kaiser environment, which is the same as Epic, every provider is on the same system. Epic copies a record from one geographic area to another and then keeps them synchronized for thirty days. This is easy enough to do within one system but difficult with different systems.

Chairman Ruffin posed a question about the security of the data in a federated model as dependent upon the security within each provider's system. Mr. Quinn responded that the security really depends upon each provider's adherence to a central authority's minimum security requirements.

When discussing the challenges posed by patient identification, in response to Chairman Ruffin's question, Mr. Quinn advised he knew of no studies showing the rate of false positive or false negative matches with patient identification by architecture.

Existing clinical health IT systems (HIT) were not designed to support HIEs and were not designed to meet meaningful use requirements. In response to Chairman Ruffin's statement that many providers will not have HIT systems meeting meaningful use requirements by 2011 or 2012, Mr. Quinn responded he believes that is the case but that some notable organizations may meet the HIT requirement. Further, Mr. Quinn advised there is a discussion of who is taking the responsibility for the definition, publication, and mapping of reference terms for all of the terminologies HIT systems will need to use, specifically for Systemized Nomenclature of Medicine (SNOMED). Chairman Ruffin remarked that he had the mistaken impression the National Library of Medicine (NLM) would be serving this function. Mr. Quinn advised that simply has not happened, possibly due to NLM's being a part of the National Institutes of Health (NIH), which focuses on research rather than on operations.

In response to Chairman Ruffin's question about the amount of federal grant money used to develop the only current functioning statewide HIE in Indiana, the Indiana Health Information Exchange (IHIE), Mr. Quinn advised he believed it to be in the range of \$20 to \$30 million, and it was developed over the course of twenty years.

When looking at other HIEs that are operating, but not to scale, across the country, these HIEs are looking at the federal funds as an opportunity to expand their operations. Many existing HIEs such as the New England Healthcare EDI Network (NEHEN) were designed primarily to transmit billing and claim information and not clinical data.

Mr. Quinn advised the development of the Medicaid Information Technology Architecture (MITA) is also in need of determining how they are going to transmit clinical information and adhere to the federal health architecture (FHA). MITA's goals have some of the same common themes as HIEs for meaningful use.

Other countries are also experimenting and moving forward with HIE projects facing their own issues. As in the United States, adoption of use by providers is the only meaningful measure of success. Further, every country has a different set of terminologies. SNOMED and Logical Observation Identifiers Names and Codes (LOINC) appear to be the most common threads but have different variations on these terms as well. In response to Dr. Ruffin's question about the adoption of use by providers in other countries, Mr. Quinn

responded that other countries have come to agree that adoption is the only real measure of success. The British have solved what could be the United States biggest problem of lack of computer adoption of clinical use by primary care physicians.

While HITSP does work to develop implementation specifications, they are not a standards development body. Instead, there are several standards bodies, such as X12 for administrative data as it relates to payment, the National Council for Prescription Drug Programs (NCPDP) for administrative data as it relates to payment for pharmaceuticals as well as electronic prescribing, and HL7 for most of the rest of clinical data except for imaging. Further, there are some 60 organizations developing terminology standards. HITSP writes implementation specifications from recognized standards. Federal projects must use HITSP recognized standards.

The ONC, heading the HITSP effort, has changed course from a use case focus to an approach based on meaningful use and interoperability specifications. HITSP's Interoperability Specification (IS) 107 is the implementation specification of everything that HITSP has accomplished since the passage of the American Recovery and Reinvestment Act (ARRA).

Mr. Quinn, in response to Chairman Ruffin's inquiry, advised that the HIT Policy Committee and the HIT Standards Committee both report recommendations to the ONC. The HIT Policy Committee has undertaken tasks such as defining meaningful use. Mr. Quinn interprets ARRA as requiring certification for a provider's IT system that supports meaningful use requirements. Most provider organizations have a lot of systems that contribute to effecting meaningful use. The question has arisen if all of those systems must be certified. Meaningful use is not just about the system, however, but also about how it is implemented to assure meaningful use is met. This has posed a major issue.

In moving toward HIEs, a provider must only meet interoperability specification requirements once the data is transferred to the HIE, but a provider does not necessarily need to adhere to all the standards when transmitting data within their own IT system. As long as the provider can map this information to HIE specifications and transmit the data to the HIE, the specifications should be met. Currently, the HITSP messaging standards include the following: Health Level 7 (HL7) V2 and V3, NCPDP, Institute of Electrical and Electronics Engineers (IEEE) 1073, and Digital Imaging and Communications in Medicine (DICOM).

SNOMED, as the largest set of terminologies, should be considered as a tree rather than a list of terms. There are subsets of terminologies grouped by practice area and other things, such as LOINC, can then be grafted onto this area.

Chairman Ruffin recessed the meeting at approximately 12:30 p.m. for lunch.

Chairman Ruffin reconvened the meeting at approximately 1:20 p.m.

## **Roundtable Discussion on COV-HIE Technical Infrastructure**

Chairman Ruffin, along with Barbara Baldwin, CIO of the University of Virginia Health System, and Cindy Perry, Enterprise Architect for the University of Virginia Health System, led a roundtable discussion on the technical infrastructure recommendations for the Commonwealth of Virginia (COV) HIE.

Ms. Perry began by presenting a technical infrastructure document developed that is located here:

[http://www.vita.virginia.gov/uploadedFiles/ITIB/Meetings/2009/Sept\\_17,\\_2009/COV\\_HIE\\_Architecture\\_Standards.pdf](http://www.vita.virginia.gov/uploadedFiles/ITIB/Meetings/2009/Sept_17,_2009/COV_HIE_Architecture_Standards.pdf).

Ms. Perry provided one example of a HITSP defined capability for interoperability under ARRA for Capability 119. The example highlights the numerous interoperability specifications, transactions and transaction packages, components, and coded health care vocabularies that make up Capability 119. Mr. Quinn clarified that a continuity of care document (CCD) is like a whole bucket of medical records information while each specific capability may not need all of the information contained in the CCD.

Ms. Baldwin advised they attempted to take a transaction and drill down to the specifications a programmer would need to comply with one of the capabilities, and then match that with what is expected with the HIE proposal required by the state. The draft recommendations include the following: (1) adopt the federal HITSP standards; (2) all new health related procurements should follow these standards; (3) all legacy systems should plan to conform within a specified timeframe to the HITSP standards; and (4) potentially evaluate the Availity system, currently in use, for its application as an MPI or RLS, or if it could be used for more than one capability.

Mr. Quinn advised Availity has a requirement to accept HIPAA information but not to use it internally. Further, it does not meet the business need of real time benefit verification but is a batch transaction. The Council for Affordable Quality Healthcare Committee on Operating Rules for Information Exchange (CORE) CAQH is used for real time verification of benefits, claims, and eligibility. The state also may not have a current contractual ability to use Availity for these other purposes. Ms. Barnes further clarified the Commonwealth has no actual partnership with Availity, but she believes it is only with the Healthcare Association.

Chairman Ruffin summarized the discussion as recommending the following: (1) follow the architecture of the NHIN; (2) adopt the HITSP interoperability specifications; (3) use an MPI using probabilistic matching; and (4) not to refer to a specific vendor in seeking an MPI but refer to the specific capability.

In seeking out an MPI option, the Commonwealth could either first seek out current options being used that could be adopted to serve the MPI function or define the best MPI option and then seek out a vendor that can meet the capabilities. The Committee's inclination is to fully develop its requirements and not mention any specific vendors.

For funding, the Commonwealth must identify the capability for electronic eligibility and claims transactions. An MPI is implicit within the seven identified requirements for the grant application but not explicit in any of them. An MPI will be needed regardless of which architecture is chosen.

Privacy and Security standards will require adherence to the HIPAA standards. Ms. Perry advised there is not a good roadmap to determine how to pull all of the pieces together to determine exactly what the Commonwealth will need. Ms. Barnes added the VITA standards may be stricter, and the Committee agreed they would supersede specific federal standards that were less stringent. Therefore, Dr. Ruffin advised the COV-HIE requirements would say that the Commonwealth would require the Virginia Security Standards for state agencies with any gaps filled by HIPAA requirements.

For person identification, Ms. Perry advised the Commonwealth would need to delve into the HITSP specifications to determine exactly what is needed. Mr. Quinn further advised the exact specifications do appear to be somewhat fuzzy at this time. In response to Chairman Ruffin's question, Mr. Quinn advised the HITSP specifications are sufficient to guide the Commonwealth in acquiring an MPI but in actually deciding how to code values, for example, the Commonwealth may have to study more documentation, such as HL7 underlying documentation. Ms. Perry also said there does not appear to be a clear roadmap from the HITSP defined capabilities to the pieces needed to conduct the transactions. Mr. Quinn responded that there may be more information available from HITSP, but the HITSP process also is still fluid at this time.

In response to Chairman Ruffin's inquiry, Ms. Baldwin responded that defining the COV-HIE at the HITSP Capability level is akin to defining the parent requirements. Therefore, the transactions underneath may have changed by the time of programming, but the capability will remain a requirement.

Mr. Quinn advised there could also be dozens of HIEs within the state that could then be communicating with the NHIN. There does not appear to be a mandate that only one HIE will communicate to the NHIN for each state. Therefore, there is a question of the scope of defining the HIE for the Commonwealth. Chairman Ruffin remarked that the specific charge is to define standards for an HIE and gaining the grant funding for the Commonwealth.

Ms. Barnes responded that two structures are giving guidance in light of the application for funds. First, the statutory mandate for technical advice and standards for HITSAC as well as the executive commission designated by executive order to plan the exact structural model of the HIE. The administration would like a thin government layer. By October, the Commonwealth should come to a decision on whether this will be a state-run HIE or a state-designated organization as the lead.

Mr. Quinn advised HITSAC clearly is defining standards for how any HIE is communicating with another within the Commonwealth. Further, another level is to consider what services for this interconnectivity will be provided at the HIE level, such as whether it purely will be peer to peer and whether the architecture will support the functions. Ms. Perry advised she believes the COV-HIE would need to accommodate all individual providers. Ms. Barnes advised that the ONC's expectation is for a state HIE responsible for establishing the NHIN, so that every state has the capacity to connect to other states. In response to Mr. Quinn's question about a provider directing a request to the state HIE, Ms. Barnes responded that it was her understanding that the state HIE would then be responsible for communication with the NHIN. Mr. Quinn advised it appears the Commonwealth must build a state HIE and then also define what providers are expected to communicate. Ms. Perry advised she has seen that the NHIN is not requiring one point of contact within a state but that they are not contemplating numerous points of contact.

Chairman Ruffin expressed a goal to have another draft of the COV-HIE Technical Infrastructure document reflecting the discussion of the meeting. Further, Chairman Ruffin advised he believed the committee's discussion reflected a desire to have the COV-HIE as the connection to the NHIN for the state.

In response to Chairman Ruffin's inquiry about the implication for a RLS if the COV-HIE does serve as the contact with the NHIN, Mr. Quinn responded that the COV-HIE will need to respond to any inquiry from within the state about the location of a patient record. Further, there is still a question about COV-HIE's function when responding to the NHIN such as will the COV-HIE respond from an upper level or go to a lower level to find a RLS. As a single

point of contact with the NHIN, the COV-HIE will have service level requirements that will be impacted by the decision about the RLS.

Ms. Perry recommended a mixture for the architecture of the COV-HIE. Mr. Quinn advised other states have considered the concept of edge servers as a practical requirement but foresees issues with performance management and availability of the records if local copies are not maintained. Chairman Ruffin proposed that Indiana's HIE would be an example for a current architecture that appeals to the Commonwealth, as it protects privacy and provides standardized access. Mr. Brown agreed with this proposal but also acknowledged political considerations within the state that existing HIEs may be ruled out of such a model. Mr. Quinn responded that an existing HIE may continue to perform as long as it meets the requirements and service levels.

## Other Business

Chairman Ruffin asked that Ms. Baldwin and Ms. Perry work with VITA to update the COV-HIE document based on the meeting's discussion. This document will hopefully be sent to the team drafting the grant application for technical specifications.

Chairman Ruffin advised HITSAC will meet on Tuesday, Sept. 29, 2009. Further, Ms. Hoffman advised HITSAC will hold a regularly scheduled meeting on Thursday, Oct. 22, 2009.

Ms. Hoffman advised the Committee that she and staff are continuing to gather the current health information exchanges and standards used in the Commonwealth. The information is located here:

[http://www.vita.virginia.gov/uploadedFiles/ITIB/Meetings/2009/Sept\\_17,\\_2009/Health\\_Data\\_Exchange\\_Summary.pdf](http://www.vita.virginia.gov/uploadedFiles/ITIB/Meetings/2009/Sept_17,_2009/Health_Data_Exchange_Summary.pdf).

Further, Ms. Hoffman presented a matrix of the data standards and users within the Commonwealth from information that has been presented to HITSAC. This document is located here:

[http://www.vita.virginia.gov/uploadedFiles/ITIB/Meetings/2009/Sept\\_17,\\_2009/Defined\\_Data\\_Standards\\_COV.pdf](http://www.vita.virginia.gov/uploadedFiles/ITIB/Meetings/2009/Sept_17,_2009/Defined_Data_Standards_COV.pdf).

## Public Comment

Chairman Ruffin called for any public comment. There was no comment from the public.

## Adjourn

Chairman Ruffin asked for a motion to adjourn. Ms. Barnes made a motion, seconded by Mr. Brown, to adjourn the meeting at approximately 3 p.m.