Bobby Jindal
GOVERNOR

Alan Levine
SECRETARY

State of Louisiana

Department of Health and Hospitals

Office of the Secretary

October 1, 2009

The Honorable Willie Mount, Chair
Senate Health and Welfare Committee
State Capital
P.O. Box 94183
Baton Rouge, LA 70804

Dear Senator Mount:

In response to House Concurrent Resolution No. 107 (HCR 107) of the 2009 Regular Session, the Louisiana Department of Health and Hospitals (DHH) submits the enclosed report. The resolution requests that DHH, consulting with the Louisiana Healthcare Quality Forum, study whether Louisiana's public and private health care providers should be mandated to adopt the VistA electronic medical record system.

DHH is available to discuss the enclosed report and recommendations with you and the members of the Senate Health and Welfare Committee. Please contact John Ragsdale, DHH chief information officer, at (225) 342-5643 with any questions or comments that you may have.

Sincerely,

Alan Levine
Secretary

Enclosures

Bobby Jindal
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The Honorable Kay Katz, Chair
House Health and Welfare Committee
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P.O. Box 44486
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Enclosures

DEPARTMENT OF HEALTH AND HOSPITALS

SUITABILITY OF VISTA FOR LOUISIANA'S PUBLIC AND PRIVATE HEALTH CARE PROVIDERS

REPORT PREPARED IN RESPONSE TO HCR 107 OF THE 2009 REGULAR SESSION

SEPTEMBER 2009

Contact:
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EXECUTIVE SUMMARY

This suitability evaluation of the Veterans Health Information System & Technology Architecture (VistA) has been prepared for the purpose of understanding whether the VistA software application should be mandated for use by the Louisiana public and private healthcare providers.

VistA has been successfully transported and implemented in a number of non-VHA healthcare organizations across the U.S. VistA has many strong clinical components and generally is found to have less expensive one-time costs, but VistA is also a very complex system that carries a high total cost of ownership (TCO). And as it has come to be marketed, without continued development, VistA becomes just another vendor-supported product.

Requiring that public and private healthcare providers of Louisiana use VistA as their Electronic Health Record (EHR) system would negatively impact all of those that have spent resources over the years in Health Information Technology (HIT). The existing HIT within Louisiana should be leveraged and not wasted by requiring that all health care providers use VistA. The exchange of information across disparate health care systems and the access to ARRA funding will be governed by standards that will be selected by the Certification Commission for Healthcare Information Technology (CCHIT).

The decision of what EHR system to select must be based on industry best practices, where the first step is to establish a set of clear goals and objectives for the EHR. The selection of the technology is usually the last step in the process. VistA should not be selected by those that have a significant investment in sound EHR technologies, or by those that have needs and requirements that are not easily met by VistA. Ultimately, the decision of what EHR system best meets the requirements of a health care provider can only be made on a case by case basis.

It is the recommendation of the Department of Health and Hospitals (DHH) and the Louisiana Health Care Quality Forum (LHCQF) that provider adoption of the VistA EMR system should not be mandated.

INTRODUCTION

BACKGROUND

The success story of the Veterans Health Administration (VHA) within the U.S. Department of Veterans Affairs has been well documented[1] and in large part is attributed to VHA's clinical information system known as the Veterans Health Information Systems and Technology Architecture (VistA[2]). VistA has been successfully transported and implemented in a number of non-VHA healthcare organizations across the U.S. including health care facilities in Louisiana[3], Arizona[4], Hawaii, West Virginia[5], Texas[6], Oklahoma[7], Florida[8], New York[9], and California. VistA has also been deployed in various U.S. federal healthcare agencies including the Indian Health Service, Department of Health & Human Services (HHS), Department of Defense (DoD), NASA, not to mention State Veterans Homes and other healthcare organizations in many states across the U.S.[10]

The Health Information Technology (HIT) for Economic and Clinical Health Act (HITECH) as a component of the vast federal stimulus legislation known as the American Recovery and Reinvestment Act (ARRA), authorized roughly $36 billion in outlays over six years for health information technology—an unprecedented investment in the nation's health information infrastructure. Division B, Title IV, of ARRA defines the Medicare incentives for eligible professionals[11] and hospitals that demonstrate "meaningful use of the technology"[12]. The payments are $44,000[13] to professionals and $2 million for hospitals[14] with a total federal allocation estimated at $17.2 billion.

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[1] Perlin JB et al. Transformation of the US Veterans Health Administration. Health Economics, Policy and Law 2006, Oliver Adam. The Veterans Health Administration: An American Success Story? The Milbank Quarterly. Vol. 85 Issue 1. January 2007, Edmondson AC, Golden BR, Young GJ. Turnaround at the Veterans Health Administration. Harvard Business School Case Study # 9-608-061. Harvard School Publishing. January 17, 2008.

[2] In the context of this document VistA® is assumed to include its clinical user interface, the Computerized Patient Record System (CPRS).

[3] Health IT News, Louisiana hospital goes for meaningful use via open source IT, August 21, 2009, visited September 28, 2009, http://www.healthcareitnews.com/news/louisiana-hospital-goes-meaningful-use-open-source-it

[4] "Statement of Matthew King, M.D., Chief Medical Officer, Clinica Adelante, Inc, Surprise, Arizona". US Congress House Committee on Ways and Means (July 2008).

[5] "VA's health record system cited as model for a national network". Nextgov (Mar 2009), (visited August 19, 2009, http://www.nextgov.com/nextgov/ng_20090327_6548.php)

[6] "Old code proves key to modern IT at Midland Memorial Hospital". Computerworld (Nov 2008).

[7] "VistA has been implemented in a variety of locations worldwide". VistA Software Alliance

[8] "VistA has been implemented in a variety of locations worldwide". VistA Software Alliance

[9] "Brooklyn's Lutheran Medical Center Selects Medsphere OpenVistA for Electronic Health Record Deployment." BNET, (Jan 2007).

[10] Published in Electronic Healthcare Quarterly, Vol. 7, 2008, (visited August 19, 2009, http://www.longwoods.com/product.php?productid=20077&cat=560)

[11] Eligible professionals are physicians, dentists, certified nurse-midwives, nurse practitioners and PAs (practicing in RHC or FQHCs) who also are: not hospital-based with at least 30% Medicaid patient volume, or practicing predominantly in a FQHC or RHC and have at least 30% patient volume attributable to needy individuals , or pediatricians, who are not hospital-based, and who have at least 20% Medicaid patient volume

[12] Medicare incentives for eligible professionals. ARRA provides payments to non-hospital based professionals that: demonstrating "meaningful" use of certified EHR technology, demonstrates connectivity to improve coordinated care, and reports information on clinical quality and other measures

[13] Payments up $44,000 over 5 years for eligible professionals, no incentive payment if first adopting after 2014, increase of 10% for provider predominately furnishing services in HPSA. Professional not adopting by 2015 will lose 1% a year in overall Medicare reimbursements up to a maximum of 5%.

[14] Medicare incentives for hospitals payments are based on the product of the following factors: Base of $2 million,

(footnote continued)

PURPOSE OF THE STUDY

The intent of ARRA is to improve health care quality, reduce medical errors, reduce health disparities and advance the delivery of patient-centered medical care, reduce health care costs resulting from inefficiency, medical errors, inappropriate care, duplicative care and incomplete information, improve the coordination of care and information among hospitals, laboratories, physician offices, and others. Currently the VHA continues to use VistA to actively manage quality and value through performance measurement, timely data feedback, and information systems that increasingly support clinicians, managers, and patients; therefore, achieving the benefits of evidence-based practice has improved the outcomes in each value domain[15].

The Legislature of Louisiana recognizes the unprecedented opportunity ARRA offers to Louisiana and also recognizes the transformation the VHA has accomplished with their electronic health information system. As part of their due diligence process, the Legislature urged and requested the Department of Health and Hospitals (DHH), consulting with the Louisiana Health Care Quality Forum, to study whether Louisiana's public and private health care providers should be mandated to adopt the VistA electronic medical record system and to report its findings to the House and Senate committees on health and welfare no later than October 1, 2009[16].

BRIEF HISTORY OF VistA

VistA evolved from the Decentralized Hospital Computer Program (DHCP), the VHA's first electronic information system, adopted in the 1980s. DHCP is still the core of the health information system in individual medical centers. To acknowledge the increasing technological complexity of the VHA medical centers' information systems, the name VistA was introduced in 1996. In 1997, the Computerized Patient Record System (CPRS) graphic interface was introduced. For clinicians, CPRS dramatically improves the ease of recording clinical details and provides easy access to patient charts.[17]

$200 for each base-year admit from 1,150 up to 23,000 admits, Medicare patient-day mix as calculated by formula, Transition Factor which decrease .25 each year from 1.0. Adoption must begin by 2015 to be eligible. For example, a hospital with 5,000 admissions and 30% Medicare patient-day mix in the second year of payment would receive:
$2,000,000 + ($200 x 5000) x 0.35 x (1.0-0.25) = $787,500. Market basket adjustments to rates decrease if no meaningful adoption by 2015

[15] The Veterans Health Administration: Quality, Value, Accountability, and Information as Transforming Strategies for Patient-Centered Care Jonathan B. Perlin, MD, PhD, MSHA; Robert. M. Kolodner, MD; and Robert H. Roswell, MD, http://www.ajmc.com/issue/managed-care/2004/2004-11-vol10-n11Pt2/Nov04-1955p828-836

[16] Louisiana HCR NO. 107, Regular Session, 2009, House Concurrent Resolution No. 107, by Representatives Tucker, Burford, Doerger, Hill, Hines, Katz, Labruzzo, Nowlin, Pope, and Simon, (visited August 19, 2009, http://www.legis.state.la.us/billdata/streamdocument.asp?did=658845)

[17] "VistA-U.S. Department of Veterans Affairs national-scale HIS" by S.H. Brown, M.J. Lincoln, P.J. Groen, and R.M. Kolodner [Int J Med Inf. 2003 Mar;69(2-3):135-56, PMID 12810119].

VistA has its roots in the late 1970s, at that time, the Office of Data Management and Telecommunications (ODM&T) was tasked with VHA computerization nationally. ODM&T typically implemented large, centralized, batch transaction-based systems. Developing new systems required a lengthy traditional systems development life cycle process of justification, specification, programming, testing, and deployment[18]. Programs to aid medical administration (patient registration, admission/discharge/transfer, and clinic scheduling), mental health, radiology, and dietetics were presented in December 1978.

By 1985, the VistA "full core" of applications (adding clinical lab, inpatient pharmacy, and some radiology functions) was installed at 169 sites nationwide. By 1989, the next eight applications (adding dietetics, fiscal/supply, medical center management, medical records tracking, mental health, nursing, radiology, and surgery) were nationally implemented. Congress required that commercial hospital information systems be installed in the other three VHA medical centers.

VistA functionality has expanded greatly, at the beginning of 2002, VistA included 99 applications. Despite the changes, much of the production code and underlying system tools remain the same. VistA applications are built on a common data dictionary and database, and use the same core building blocks to provide functions such as security, device access, and communications[19].

OPEN SOURCE SOFTWARE

Open Source Software (OSS) is a software program where the source code is available to the general public for use and/or modification from its original design. There are many types of OSS, mainly differing in the licensing terms under which altered copies of the source code may (or must be) redistributed[20]. OSS is experiencing explosive consumer growth, software offerings are growing at an estimated yearly compound rate of about 55%[21] and adoption has grown at even a higher rate[22]. The general attraction to open source is easy to understand, OSS has a low cost of entry, easy access, expansive

[18] Navigating the mandated 17 steps between system specification and deployment alone took at least 3 years, according to T. Munnecke, VA decentralization: scaling problems down, US Med. 18 (7) (1982) 3, 8.

[19] VistA, U.S. Department of Veterans Affairs national-scale HIS, Steven H. Brown [a,b], Michael J. Lincoln [a,c], Peter J. Groen [a], Robert M. Kolodner [a], (a)-Department of Veterans Affairs, (b)-Vanderbilt University, (c)-University of Utah

[20] http://www.opensource.org/

[21] To calculate the 55% the proliferation of projects hosted on SourceForge, the major open source code repository. The number of projects hosted by the site has grown from around 12,500 in 2000 to nearly 200,000 by year-end 2007.

[22] Over the past seven years, download totals have increased over 7,000% and total yearly downloads will certainly reach one billion this year or next (this yearly download total actually understates the total number of project downloads, as Sourceforge is mirrored to a number of other sites and mirror downloads are not included in the numbers cited here).

license terms. It is difficult to estimate the penetration of OSS in the enterprise today since vendor reports are missing and self reporting by enterprises cannot be relied upon[23].

Public Domain software has no copyright restrictions or license at all, so Public Domain software can be repackaged and sold or modified and licensed as proprietary, free or OSS. Public Domain software has no requirements or obligations on sharing or distributing whatsoever. VistA is in the Public Domain under the Freedom of Information Act (FOIA). It has been re-licensed as both proprietary in the case of the vxVistA by the DSS corporation[24], and as OSS versions by different organizations, such as the WorldVistA organization[25].

An effort has been made by the VistA Software Alliance[26] to standardize the structure among the platform derivatives to allow for future interoperability. VistA derivates can be found on the Internet at the following locations:

1. WorldVistA or WorldVistA EHR (company: WorldVistA, http://worldVistA.org)
2. OpenVistA (company: Medsphere, http://medsphere.org)
3. vxVistA (company: DSS, http://www.docstorsys.com)
4. OnDemandCARE (company: Sequence Managers Software, http://sequencemanagers.com/)
5. BlueCliff VistA-EMR (company: Blue Cliff, http://www.bluecliffinc.com/VistAemr/)

[23] Open Source in the Enterprise--An O'Reilly Radar Report: Study reveals how enterprises use open source software to save money, gain control, and innovate, January 24, 2008
[24] http://www.docstorsys.com
[25] WorldVistA EHR (WorldVistA, http://worldVistA.org)
[26] The VistA Software Alliance (VSA) is a non-profit trade association formed for the purpose of promoting the VistA electronic health record system. They are committed to improving healthcare by increasing the quality of care, reducing patient errors, and lowering costs.

FINDINGS OF THE STUDY

LEVERAGING EXISTING TECHNOLOGIES IN THE PURSUIT OF ARRA FUNDING

Many of the larger hospitals and hospital systems[27] across the state of Louisiana have made, and continue to support, a substantial investment in comprehensive EHR systems. The investment made by these larger hospitals and hospital systems over the years goes beyond hardware (e.g., scanners, PCs, tablets, digital diagnostic equipment) and software licenses; it includes the cost of installation, configuration, workforce training, annual maintenance fees, and support fees.

Not only larger hospitals and hospital systems have made substantial technology investments, but also LARHIX a Regional Health Information Organizations (RHIO) has made a large investment in EHR and Telemedicine technologies. LARHIX was formed by the Rural Hospital Coalition through $28.7 million in funding provided, through DHH, in the 2007 and 2008 Legislative Sessions. Another RHIO, the Health Information Network in Pointe Coupee Parish received a $1.5 million grant from the federal Department of Health and Human Services[28]. These investments in RHIOs were used to fund CareFx, Computer Associates, Initiate, and IBM implementations.

Additionally, it is estimated that 17%[29] of the Louisiana hospitals have implemented parts of an EHR system and that these hospitals would want to continue to leverage their investment in the technologies they selected.

Needless to say, the majority of the above mentioned hospital systems, RHIOs, and a substantial number of the Louisiana hospitals have technology that is compliant with the standards set by the Certification Commission for Healthcare Information Technology (CCHIT), the official technology certification agency in the U.S. The goals established by the CCHIT are to provide better access to data, increased agility to adapt to changes, and to improve health outcomes through the adoption of standards that facilitate the exchange of information. The CCHIT process seeks to build upon the existing infrastructure by

[27] Baton Rouge General, Christus Health System, Franciscan Missionaries of Our Lady Health System, LSU System, Ochsner Health System, Pointe Coupee General Hospital, Willis-Knighton Medical Center, Tulane Medical Center, East Jefferson, West Jefferson, Hospital Corporation of America, Lake Charles Memorial Hospital, Children's Hospital, Willis-Knighton

[28] News Release, Louisiana Department of Health and Hospitals, October 09 2007, http://www.dhh.louisiana.gov/news.asp?Detail=1227

[29] New England Journal of Medicine, Use of Electronic Health Records in U.S. Hospitals, Ashish K. Jha, M.D., M.P.H., Catherine M. DesRoches, Dr.Ph., Eric G. Campbell, Ph.D., Karen Donelan, Sc.D., Sowmya R. Rao, Ph.D., Timothy G. Ferris, M.D., M.P.H., Alexandra Shields, Ph.D., Sara Rosenbaum, J.D., and David Blumenthal, M.D., M.P.P., Volume 360:1628-1638, April 16, 2009, Number 16

leveraging existing technologies to improve health care, thus reducing the total cost of implementation and reducing waste.

Smaller clinics or practices might not have comprehensive EHR systems, but frequently use smaller systems that support their medical billing, patient scheduling and practice management. Many practices have already made significant investments in their existing practice management systems or third party billing services. There are advantages to managing clinical and practice management functions in a single EHR, but there are situations where a simple integration of an EHR may satisfy the requirements of the practice and qualify them to get ARRA funding.

TOTAL COST OF OWNERSHIP

OSS has specific definitions and legally enforceable licenses. "Free" refers to the liberty to use, modify, and or distribute the licensed software, not necessarily the price or value[30]. Proprietary software licenses usually take away these rights, or impose a fee for these rights.

Technology decisions should be based on the Total Cost of Ownership (TCO) and not just on the software price. The TCO includes the software price, any hardware, maintenance, technical support, customization expenses, and training. The OSS price is usually less than a comparable proprietary program[31],[32] and the software license will never expire or demand yearly payments.

OSS typically has lower hardware requirements than proprietary alternatives, but OSS tends to have complicated installation requirements. It is possible that the savings in hardware prices is overshadowed by the recurring technical support cost of installations due to upgrades and patches[33].

Unfortunately it is not clear whether the TCO of open source is lower. Proprietary software companies claim their TCO is lower while open source software companies argue the opposite. One long-term study of Web server deployments found a lower TCO for Linux over Microsoft Windows and Sun Solaris[34]. On

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[30] Free Software Foundation. (2007a). Free software definition. http://www.fsf.org/licensing/essays/freesw.html

[31] Northwest Educational Technology Consortium

[32] Goldstein, D. E. (2007). Medical informatics 2020 : Quality and electronic health records through collaboration, open solutions, and innovation. Sudbury, Mass.: Jones and Bartlett Publishers.

[33] Free and Open Source Software in Healthcare 1.0, American Medical Informatics Association, Open Source Working Group White Paper, November 2008, Prepared by: Ignacio Valdes, MD, MSc

[34] Orzech, D. (2002, October 8). CIN: Linux TCO: Less than half the cost of Windows. St. Paul, MN: Jupitermedia, Linux Today. Retrieved October 8, 2002, from http://linuxtoday.com/it_management/2002100801926NWBZMR

the other hand, Microsoft alleges lower TCO with its "comprehensive, integrated, easy-to-use stack of technologies" and has its own favorable studies[35].

OSS makes organizations responsible, especially if they modified the code to satisfy their particular requirements. OSS may require more skill to deploy and maintain, compared to turnkey proprietary solutions. After a steep initial investment in OSS technology and learning, the long-term costs tend to be lower. The costs for IT consulting to install and configure both hardware and software are highly variable as a function of a given physician practice's current information technology situation and/or levels of IT experience and expertise within their clinical staff.

Each health care organization has a different environment and requirements, so the only way to determine the VistA TCO is to consider all the variables for each specific organization. VistA might work for small practices if an application service provider (ASP) hosted it and served it over the Internet, but the ASP would probably charge $300 to $400 per doctor per month— about the same as the cost of a commercial counterpart.[36]

REQUIREMENTS AND FUNCTIONALITY NEEDS OF HEALTH CARE PROVIDERS

"Functionality" refers to the range and scope of product in terms of its features/functions and the usability of each. "Core functionalities"[37] are the documented "requirements"[38] or needs of what a particular product or service should be or do. The goal of an implementation is to ensure that all the "requirements" are efficiently met by the "functionality" at the lowest possible TCO.

It must be recognized that functionality relies both on software features/functions and their usability for cost-effective assimilation in the clinical environment; and the latter relies heavily on the clinical workflow, and whether and to what extent it is subject to modification for optimal interaction with the software.

VistA has derived great benefit from the extensive operational history in various clinical environments, during which users and developers working together have drawn from experience to optimize software

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[35] Cooper, C. (2003, January 22). Microsoft shows Linux some respect. San Francisco, CA: ZDNet News. Retrieved January 27, 2003, from http://zdnet.com.com/2100-1104-981552.html

[36] Functionality & Feasibility Evaluation of the Veterans Health Information System & Technology Architecture (VistA) Electronic Health Record System, study conducted by Healthlink, Inc, July 2005

[37] Per Middleton: "Core Functionalities," Value Dimensions," and "Additional Value Areas."

[38] http://en.wikipedia.org/wiki/Requirements

functionality and workflow to meet their specific requirements. Many improvements have been made to VistA over the years to where it has gained the levels of sophistication and elegance that are comparable to other commercial EHR systems[39].

On the flip side, the malleability of the code has created over 130 applications within the VistA platform doing everything from scheduling to managing X-ray images. Each VHA Integrated Service Network (VISN), or even at the hospital for that matter, was allowed to customize their own code to suit their specific needs— with absolutely no source control[40]. This has generated countless derivates of VistA that are negatively impacted by software upgrades, a problem that is less likely to occur in the commercial environment since source control and software engineering practices mitigate these problems.

The LSU System presented the Legislature in 2009 with a study justifying the expenditure for their electronic health record (EHR) system. The VistA system was the least expensive, with a 5-Year cost of approximately $211M. Other Commercial Off-the-Shelf systems were $15M-$40M more expensive over a 5-Year term. While the VistA system was the least expensive, the higher risks associated with the implementation and maintenance and the cost of the additional "functionality" (modules and interfaces) needed to satisfy the LSU System EHR "requirements" dispelled the myth that VistA is "free"[41].

VistA is designed to serve a wide range of medical practices while others are designed for specialties. The narrow focus of a specialty EHR vendor allows them to design their systems around the unique needs of physicians within their target market. This results in a more familiar workflow for the specialist and less customization of the software. There is no "one size fits all" in EHR technology that can satisfy the needs of all different types of clinical operations.

LEGAL CONSIDERATIONS

The enactment of a new state law requiring the universal adoption of the VistA system by Louisiana's health care providers would not appear to violate any provision of federal law or of the federal or state constitution, nor would it necessitate the amendment or repeal of any existing state laws.

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[39] Comments from Internist Peter Basch, medical director for e-health at MedStar Health, a healthcare system in Columbia, MD, expressed in the VistA Electronic Health Record System, Function and Feasibility Evaluation conducted by Healthlink, Inc in July 29, 2005.

[40] Source control is related to the practice of tracking and providing control over changes to source code, configuration files, documentation, and other software development artifacts.

[41] Electronic Health Record Strategy
for the LSU System, accessed on August 21, 2009 http://www.lsusystem.edu/systemoffice/healthaffairs/EHR/strategy.cfm

Nevertheless, it is notable that no other state appears to have mandated the adoption of a particular EHR system (including VistA) by all providers. Two states, Minnesota (in 2007) and Massachusetts (in 2008), have enacted laws setting deadlines for the statewide adoption of EHRs, but significantly, those mandates stop short of specifying which system must be used. Instead, they leave providers free to choose any system that is interoperable and compliant with federal standards:

- Minnesota law requires all health care providers to "have in place an interoperable electronic health records system within their hospital system or clinical practice setting" by January 1, 2015. Uniform standards are to be developed "for the interoperable system for sharing and synchronizing patient data across systems", and those standards "must be compatible with federal efforts."[42]
- Massachusetts law directs its department of public health to adopt licensing regulations requiring all hospitals and community health centers to implement: (1) computerized physician order entry systems by October 1, 2012; and (2) interoperable EHR systems by October 1, 2015. The systems must be CCHIT certified. The state's goal is to achieve "full implementation of electronic health records systems and the statewide interoperable electronic health records network by January 1, 2015."[43]

TECHNICAL RISK

VistA is based on MUMPS[44], a programming language designed specifically for healthcare in the 1960's. VistA has many strong clinical components and often has the least expensive one-time costs, but VistA is also a very complex system that carries a high risk price tag. Primarily because it is written in MUMPS, a very old programming language and there is a shortage of skilled software developers and engineers that can support this language.

The complexity of the obsolete technologies used to build VistA further increase the technical risk associated with interoperability with other systems and components at health care facilities. The vendor is

[42] Minnesota Statutes 2007, section 62J.495.
[43] Massachusetts General Laws, Chapter 305 of the Acts of 2008, sections 36, 37, 52.
[44] MUMPS (Massachusetts General Hospital Utility Multi-Programming System), or alternatively M, is a programming language created in the late 1960s, originally for use in the healthcare industry. It was designed for the production of multi-user database-driven applications. It predates C and most other popular languages in current usage, and has very different syntax and terminology.

as important as the product, so quality, service, and continued existence count while selecting an EHR. There are very few vendors that provide implementation and support services, and even fewer that have existed more than 5 years as a corporation[45].

LOUISIANA HEALTH CARE QUALITY FORUM RECOMMENDATIONS

The Quality Forum's HIE/HIT Promotion Workgroup contains public and private stakeholders with expertise in the fields of health information technology and exchange. After review of the findings of the VistA study prepared by DHH the workgroup noted several concerns, a subset of which is listed below. Given the impact of these concerns, the Quality Forum does not recommend a mandate.

Of primary concern is the EMR investment that has been made to date by providers in Louisiana. Many providers in Louisiana have already implemented EMRs other than VistA in their practices. Mandating their implementation of the VistA system would impose unnecessary and costly burdens on their practices.

- Providers are currently striving to maximize their ability to meet the meaningful use criteria and qualify for ARRA incentives beginning in October 2010. Requiring providers with existing EMRs to convert to VistA is equivalent to them going backwards in the process of EMR implementation. For example:
    - Providers who are currently using a 2007 or 2008 CCHIT certified system would be forced to implement a system with less functionality. Specifically, the only CCHIT certified VistA EMR system is WoldVistA EHR VOE. WoldVistA EHR VOE is CCHIT 2006 certified, but has not maintained that certification by 2007 and 2008 standards. Additionally, WorldVista EHR VOE version 1.0 was released in January 2008. No upgraded versions have been released since then, causing concern about the likelihood of future upgrades to meet providers' needs.
    - EMRs are currently in place in many of Louisiana's practices, FQHCs and large health systems. These providers have spent significant resources to transition their offices to the electronic environment. Much of the time and money previously spent by these practices

[45] Electronic Health Record Strategy
for the LSU System, accessed on August 21, 2009 http://www.lsusystem.edu/systemoffice/healthaffairs/EHR/strategy.cfm

would be lost if required to implement VistA. Additionally, the conversion to VistA would require new expenses to be incurred.

- If the VistA system is mandated only for providers who do not currently have an EMR, there is a burden and cost for them as well as providers who have already made an EMR investment.
    - VistA does not contain a standard interface for exchanging information. VistA currently only has a Labcorp interface which was customized specifically by Labcorp for VistA. No other interfaces exist and there is no standard HL7 interface. A standard interface, such as HL7, will be necessary for interoperability and exchange with other EMRs.
    - If a standard interface is not built into the VistA system, customized interfaces will be required for all other EMRs in use as well as for the statewide health information exchange being created through ARRA.
    - Customized interfaces will be costly for providers on both ends of the exchange.
    - Without the ability to electronically exchange data providers will not meet the meaningful use criteria and will therefore not be eligible for ARRA incentives.

Considering the lack of current certification, the lack of upgrades and the lack of a standard interface, the overwhelming concern is that mandating provider adoption of VistA will actually make it harder for providers to meet the meaningful use requirements rather than easier.

CONCLUSION

VistA has been successfully transported and implemented in a number of non-VHA healthcare organizations across the U.S. VistA has many strong clinical components and generally is found to have the least expensive one-time costs, but VistA is also a very complex system that carries a high TCO when one considers the maintenance, technical support, customization, and training costs. VistA's infrastructure is built on obsolete technologies that present a high implementation risk.

Requiring that public and private healthcare providers use VistA as their EHR solution would negatively impact all of those that have spent resources over the years in HIT. The existing HIT within Louisiana should be leveraged and not wasted by requiring that all providers use VistA. The exchange of information across disparate health care systems and the access to ARRA funding will be governed by standards that will be selected by CCHIT.

The decision of what EHR system to select must be based on industry best practices , where the first step is to establish a set of clear goals and objectives for the EHR. The selection of the technology is usually the last step in the process. VistA should not be selected by those that have a significant investment in other technologies that are CCHIT compliant, or by those that have needs and requirements that are not easily met by VistA.

Ultimately, the decision of what EHR system best meets the requirements of a health care provider can only be made on a case by case basis.

It is the recommendation of DHH and LHCQF that provider adoption of the VistA EMR system should not be mandated.

BIBLIOGRAPHY

HCR NO. 107 of the 2009 Regular Session.

ENROLLED

Regular Session, 2009

HOUSE CONCURRENT RESOLUTION NO. 107

BY REPRESENTATIVES TUCKER, BURFORD, DOERGE, HILL, HINES, KATZ, LABRUZZO, NOWLIN, POPE, AND SIMON

A CONCURRENT RESOLUTION

To urge and request the secretary of the Department of Health and Hospitals to study whether Louisiana health care providers should be mandated to adopt the VistA electronic medical record system technology utilized by the United States Department of Veterans Affairs.

WHEREAS, the Veterans Health Administration, an agency of the United States Department of Veterans Affairs and hereinafter referred to as the VA, provides care to over four million veterans, employing over one hundred eighty thousand medical personnel and one hundred sixty-three hospitals throughout the United States; and

WHEREAS, the VA utilizes the Veterans Health Information and Technology Architecture (VistA) to manage its electronic medical records; and

WHEREAS, the VistA system allows for the management and retention of both inpatient and clinical electronic medical records throughout the VA in a streamlined and efficient manner; and

WHEREAS, the VistA system has been widely credited with reducing medical mistakes and improving efficiency and safety within VA hospitals and clinics; and

WHEREAS, the VistA system is open-source and low-cost, which has been widely adopted by nongovernmental hospitals and other health care entities; and

WHEREAS, the federal government, in accordance with the American Recovery and Reinvestment Act of 2009, will invest billions toward the adoption of electronic medical records spending millions in Louisiana; and

WHEREAS, adoption of the VistA system by public and private health care providers may be a cost-effective and efficient use of federal tax dollars in Louisiana.

THEREFORE, BE IT RESOLVED that the Legislature of Louisiana does hereby urge and request the Department of Health and Hospitals, consulting with the Louisiana Healthcare Quality Forum, to study whether Louisiana's public and private health care providers should be mandated to adopt the VistA electronic medical record system and to report its findings to the House and Senate committees on health and welfare no later than October 1, 2009.

BE IT FURTHER RESOLVED that a copy of this Resolution be transmitted to the secretary of the Department of Health and Hospitals.

SPEAKER OF THE HOUSE OF REPRESENTATIVES

PRESIDENT OF THE SENATE