

Management Services Organizations

A Vision of State Designated Organizations for
Physician Practices

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Abstract

Effective use of health information technology (health IT) can help improve health care quality, prevent medical errors, and reduce costs by delivering essential information at the point of care. Successful health IT requires two crucial components – widespread use of electronic health records (EHRs) and the ability to exchange health information privately and securely. While both are challenging projects conceptually, technologically, and economically, the implementation of EHRs pose special challenges. These challenges mostly relate to the cost of the software and maintaining systems that support the application. The integration of EHRs into a physician practice takes time and is influenced by technology constraints, costs, and different perceptions and expectations. Management services organizations (MSOs) have emerged as a way to address these challenges.

MSOs are considered a viable alternative to the traditional EHR client-server model where the technology is maintained at the provider site. These organizations are capable of supporting multiple EHR products at reduced costs through economies of scale and bulk purchasing. Technical support usually extends beyond the standard business hours and in some instances is available on a 24/7 basis. Data is safeguarded through a network operating center (NOC) that, by design, ensures high quality and uninterrupted service. MSOs enable physicians to access a patient's record wherever access to the Internet exists. EHRs maintained outside of the physician practice enables physicians to focus on practicing medicine rather than dedicating staff to support the application. On May 19, 2009, Governor Martin O'Malley signed House Bill 706, *Electronic Health Records – Regulation and Reimbursement*, into law. This law requires the Maryland Health Care Commission (MHCC) to designate one or more MSOs to offer EHRs throughout the state by October 2012.

Over the next year, MHCC plans to identify the critical infrastructure requirements for MSOs that seek a state designation. At a minimum, designated MSOs will need to comply with the requirements of the *Health Insurance Portability and Accountability Act of 1996*, (HIPAA), *Administrative Simplification*¹ provisions and conform to the meaningful use requirements in the *American Recovery and Reinvestment Act of 2009* (ARRA).² The HIPAA requirements establish the framework that MSOs will need to build upon to obtain a state designation. The ARRA establishes a framework for maximizing the use of EHRs in order to receive incentive payments under the Act. To qualify for a state designation, MSOs should offer more than one EHR solution and demonstrate the existence of robust policies for access, authorization, authentication, and audit. MSOs will likely need to undergo an independent assessment to validate privacy and security policies and technical performance. The MHCC designation will be valid for a three year period. MHCC plans to work with stakeholders and existing accrediting entities to develop criteria for a state MSO designation.

¹ Department of Health and Human Services, Office for Civil Rights, HIPAA Administrative Simplification. <<http://www.hhs.gov/ocr/privacy/hipaa/administrative/privacyrule/adminsimpleregtext.pdf>>

² H.R. 1, 111th Cong., *American Reinvestment and Recovery Act of 2009*, (enacted), Division A, Title XIII. <http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=111_cong_bills&docid=f:h1enr.pdf>

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Management Services Organizations

Management services organizations (MSOs) use an application service provider (ASP) to host one or more electronic health record (EHR)³ systems through the Internet. MSOs are well positioned to leverage buying power and manage the technical aspect of EHRs, which frequently makes this approach favorable among physician practices in their evaluation of EHR systems.⁴ This is in contrast to the client-server or standalone model that requires physician practices to individually negotiate pricing and maintain the technology required to support the software. The client-server model in some locations remains the only option for practices that decide to implement an EHR system. Broadband is required to access an MSO and is not universally available to physician practices in remote areas. Some places in Western Maryland, on the Eastern Shore, and in Southern Maryland have limited access to broadband and at the present time could not participate with an MSO.

MSOs can be established by multi-stakeholder groups, hospitals, or physician practices⁵ that form together to offer EHR solutions. Oftentimes, these solutions are in conjunction with other products and administrative services, most notably practice management systems. The most popular approach to EHR adoption remains the client-server model, where the software and hardware reside locally at the physician practice. MSOs offer many advantages over the traditional model and the monthly subscription fees to an MSO is usually less than a client-server model with less upfront costs. Connecting to a health information exchange (HIE)⁶ presents less challenges for physician practices in an MSO model as the MSO can more readily establish and maintain a connection to the exchange. Connecting EHRs to an HIE is a critical step in maximizing the benefits of electronic health information.^{7,8} One of the requirements for incentive funding for physicians under the *American Recovery and Reinvestment Act of 2009* (ARRA) is being able to demonstrate that their EHR system is connected to an HIE.⁹

MSOs provide an alternative for EHR adoption and use network operating centers (NOCs) to host the technology. Outsourcing essential administrative and clinical record keeping functions to an MSO has the potential to reduce a physician practice's overhead. MSOs provide a consistent way of managing privacy and security and ensuring the existence of robust physical and technical safeguards of electronic data.^{10,11} MSOs are capable of supporting EHR products with different levels of

³ An EHR is a computerized, longitudinal record of health information that includes clinical decision support and electronic prescribing.

⁴ American Academy of Family Physicians, Center for Health Information Technology, *Brief Report of the AAFP's EHR Pilot Project: Key Learnings from Six Small Family Practices*, March 8, 2005.

http://www.centerforhit.org/PreBuilt/chit_pilotresults.pdf

⁵ J.C. Robinson, "Physician Organization in California: Crisis and Opportunity," *Health Affairs*, Project HOPE: 2001.

<http://content.healthaffairs.org/cgi/content/full/20/4/81>

⁶ A statewide HIE is currently under development in Maryland.

⁷ Institute of Medicine, *Key Capabilities of an Electronic Health Record System*, 2003. <http://www.iom.edu/?id=19374>

⁸ Healthcare Financial Management Association, *Overcoming Barriers to Electronic Health Record Adoption*, February 2006.

<http://www.hfma.org/NR/rdonlyres/480C921F-8D33-48E8-A33F-1512A40F2CC8/0/ehr.pdf>

⁹ H.R. 1, 111th Cong., *American Reinvestment and Recovery Act of 2009*, (enacted), Division A, Title XIII.

http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=111_cong_bills&docid=f:h1enr.pdf

¹⁰ S. Mason, *ASPs are Worth a Second Look*, Behavior Health Management, November/December 2003. EBSCOhost database.

¹¹ California HealthCare Foundation, *Creating EHR Networks in the Safety Net*, March 2008.

<http://www.chcf.org/documents/chronicdisease/CreatingEHRNetworksInTheSafetyNetIB.pdf>

sophistication that serve physician practices of various sizes and specialties. In general, MSOs allow for more advanced reporting, which may be used to help physician practices become more efficient and cost effective. Physician practices participating with an MSO have continuous access to data and typically receive support beyond core business hours. MSOs are unique in the level of support services they provide as compared to the client-server environment where physician practices are often left to resolve problems on their own.¹² MSOs use NOCs to host software and manage the physical security of the information and the protections related to authorization, authentication, and access. NOCs perform detailed analysis of system safeguards and are capable of providing comprehensive audit logs.

In 2004, the American Academy of Family Physicians' Center for Health Information Technology conducted an EHR Pilot Project that was supported by the Centers for Medicare and Medicaid Services. Results of the study demonstrated that EHRs hosted by an MSO provide measurable efficiencies through the centralization of data storage and maintenance.¹³ MSOs are becoming increasingly popular around the nation; California and Florida are examples of two states that use MSOs to drive the adoption of EHRs.¹⁴ MSOs in these two states have managed to build confidence from physician practices in using the Internet as a secure and reliable approach for EHR adoption. MSOs function as a Business Associate under the *Health Insurance Portability and Accountability Act of 1996* (HIPAA) and are required to meet industry defined performance criteria for privacy and security.

Existing law requires the MHCC to designate one or more MSOs to offer services throughout the state by October 1, 2012. Expanding the options for EHR adoption is expected to help spur growth statewide and enable more physicians to take advantage of the EHR adoption incentives under the ARRA.¹⁵ The rate of EHR adoption in Maryland is consistent with national activity, which is reported at roughly 17 to 27 percent.^{16,17} MSOs provide a viable solution to the adoption of EHRs and offer a private and secure alternative to the traditional client-server EHR system maintained at the provider site. MHCC in consultation with select stakeholders intends to develop criteria for state designation.

¹² E. Mendoza, "Security Considerations When Choosing An EMR System: Electronic Medical Record Systems Offer Many Benefits That Can Improve Physician/Patient Interaction and Relationships. In Addition To Saving Time and Eliminating Paper Charts, EMR Systems Provide Numerous Security Capabilities – EMR – EMR Security," *Health Management Technology*, October 2003. <http://findarticles.com/p/articles/mi_m0DUD/is_10_24/ai_109025623/>

¹³ Ibid.

¹⁴ K. Terry, "Can an MSO Help You?" *Medical Economics*, November 3, 2006.

<<https://www.med3000.com/cms/program/adminlinks/docs/Can%20an%20MSO%20help%20you.pdf>>

¹⁵ H.R. 1, 111th Cong., *American Reinvestment and Recovery Act of 2009*, (enacted), Division B, Title IV.

<http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=111_cong_bills&docid=f:h1enr.pdf>

¹⁶ M. Goldstein, *Physician Adoption of HIT: AHRQ 2007 Annual Meeting*, The George Washington University Medical Center: Washington, DC. <<http://www.ahrq.gov/about/annualmtg07/0926slides/goldstein/Goldstein.ppt>>.

¹⁷ D. Gans, J. Kralewski, T. Hammons, and B. Dowd, "Medical Groups' adoption of electronic health records and information systems," *Health Affairs*, September/October, 2005. <<http://content.healthaffairs.org/cgi/reprint/24/5/1323>>

MHCC Designation: A Conceptual Framework

MSOs offer a cost effective alternative to physician practices that seek to implement EHRs. The average cost of a client-server EHR system is around \$53,000 per physician over three years¹⁸ as compared to the ASP model where the three year average is around \$28,800 per physician, or \$800 per physician per month.^{19,20} An important distinction between the two models is that MSOs use critical mass to manage costs and implement technology; whereas standalone EHRs require the physician practice to implement the necessary software and maintain the hardware. MSOs are a viable alternative to the standalone EHR model and have enormous potential to spur adoption. The legislature tasked the MHCC with developing requirements for MSOs interested in obtaining a state designation. The criteria for a state designation will focus largely on privacy and security, compliance with the ARRA for incentive funding, safeguarding the NOC, and the development of user participation agreements that address how electronic data is accessed, stored, and maintained. To be considered for a state designation, MSOs will need to offer more than one nationally certified EHR solution that meets the meaningful use definition and has a NOC that conforms to industry defined technical performance standards.

Ideally, MSOs will compete for market share based on their EHR solutions, and other administrative and practice support services.^{21,22} Broad functionality of an EHR is critically important and MSOs seeking a state designation will need to select technology solutions that include at a minimum clinical decision support, e-prescribing, computerized physician order entry, and diagnostic results viewing. State designated MSOs will need to integrate hosted EHRs with the statewide HIE as specific functionality of the exchange becomes available. MSOs designated by the state will deploy a NOC with a technical infrastructure that complies with HIPAA's administrative, physical, and technical safeguards.²³ Stringent policies pertaining to access, authentication, and authorization are also required. Established reporting measures related to provider satisfaction and assessing MSO performance is a critical component of state designation. Gathering physician feedback on EHR solutions and satisfaction levels with end user support is required on an annual basis. State designated MSOs will need to report select aggregate performance information to the MHCC.

The relationship between MSOs and the physician practice is conceptually a simple one. Agreements should be mutually beneficial and flexible to allow for changes in physician practice and in the marketplace. State designated MSOs need to allow physician practices to enter into an arrangement that includes a without-cause termination feature that enables them to terminate the arrangement without a reason after an appropriate amount of time. Consistent with the new HIPAA requirements, the relationship between physician practices and a state designated MSO must include

¹⁸ R. Lowes, *How Much Do EHRs Cost? The Latest Data*, February 8, 2008.

<<http://www.modernmedicine.com/modernmedicine/article/articleDetail.jsp?ts=1235141049717&id=488973>>

¹⁹ Future Healthcare, *Is the Application Service Provider Model the Answer to Physician EHR Adoption?*

<<http://www.futurehealthcareus.com/?mc=application-service-ehr&page=ehr-viewresearch>>

²⁰ Costs do not take into account training and the impact of clinical workflow restructuring.

²¹ Ibid.

²² IPRO, *What Is the Difference Between An ASP and Locally Hosted Models of EHR?*

<<http://www.norc.org/6275/Module5/Difference%20between%20ASP%20and%20Locally%20hosted%20Models%20of%20EHR.pdf>>

²³ Extreme Networks, *Data Center Network Overview*, 2009.

<http://www.extremenetworks.com/libraries/solutions/SODataCenter_1552.pdf>

a Business Associate Agreement. Among other things, data ownership should be specified in the Business Associate Agreement. Physician practices need to retain ownership of the data and the MSO will be required to make the data available electronically or on paper at the request of the physician practice.^{24,25} State designated MSOs will not be permitted to withhold patient data pending any sort of dispute resolution or charge an undue amount for the information.

State designation will require MSOs to undergo an independent review every three years of their privacy and security policies and technical safeguards.²⁶ The complexity of the assessment will depend largely on the size of the MSO and its NOC. MSOs that are state designated must conduct intrusion testing and have a disaster recovery plan that is updated annually. The disaster recovery plan should address policies related to what constitutes a disaster, a physician practice notification process regarding the disaster, and the mechanism for notification. The disaster recovery plan needs to identify critical individuals that can conduct a damage assessment and decide how to mitigate the situation. State designated MSOs will need a defined process for safely storing off-site back-ups and detailed procedures for restoring data from back-ups, as well as the identification of a hot site that can be operational within a matter of hours.

The benefits of an MSO are wide-ranging, in particular, they relieve physicians from the burden of managing information systems required to support EHRs. Implementing EHRs requires a substantial commitment and willingness of a physician practice to make process changes that impact all levels of a physician practice. State designated MSOs will need to provide assistance to physician practices with planning, implementation, and help in identifying new roles and responsibilities for physicians and office staff.²⁷ EHR implementation requires project management, change management with workflow redesign, and end-user training; state designated MSOs are expected to provide physician practices with adequate guidance to ensure successful implementation. The criteria for state designation will be developed using stakeholder input to ensure that MSOs adequately address performance standards related to privacy and security and technical safeguards.

Next Steps

Physician practices often lack the technological infrastructure to support implementing comprehensive EHRs. For the most part, the cost of implementation and the numerous challenges of managing standalone EHRs are viewed by physician practices as a leading deterrent to adoption. A trusted alternative approach is essential in order to help spur EHR adoption; the MSO model provides a suitable alternative. MHCC plans to convene a stakeholder workgroup to develop the evaluation criteria for MSOs that seek a state designation. Engaging stakeholders in establishing performance expectations is critical to defining a robust set of criteria that is necessary to ensure privacy and security and technical performance of MSOs that seek a state designation. MHCC plans to develop the criteria for state designation with the help of stakeholders over the next year.

²⁴ Ibid.

²⁵ Ibid.

²⁶ Hewlett Packard, *Data Center Assessments: The First Steps to Optimization*, February 2009.

http://www.computerworld.com/pdfs/HPTSG_Datacenterassessments_firststep_wp.pdf

²⁷ A. Schreiber, et.al, *The Real Challenge in Implementing EHRs*, HCT Project Volume 3, November 14, 2005.

Appendix A: MSO Evaluation Categories for Consideration

The evaluation criteria for a state designation must consider the organizational structure of the MSO and their approach to implementing key policies. The list below represents leading items for consideration by the stakeholder workgroup.

Organizational

- ◆ Business Associate Agreements
- ◆ Certified EHR Software and Meaningful Use Compliance
- ◆ Data Ownership
- ◆ Operations and Technical Performance
- ◆ Resources
- ◆ Support Service

Policy

- ◆ Access
- ◆ Authentication
- ◆ Authorization
- ◆ Audit
- ◆ Administrative Safeguards
- ◆ Physical Safeguards
- ◆ Technical Safeguards
- ◆ Quality Reporting

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Appendix B: MSO Evaluation Organizations

MSOs seeking MHCC designation will be required to undergo an independent assessment of their privacy and security policies and technical safeguards. MHCC has identified the following three organizations, along with an assessment instrument for consideration in evaluating MSOs that store and maintain data.

Electronic Health Network Accreditation Commission

Background

The Electronic Healthcare Network Accreditation Commission (EHNAC), an independent, 501(c)(6) not-for-profit accrediting agency, grew out of the 1993 Workgroup for Electronic Data Interchange (WEDI). The health care transactions industry felt there was a need for a self-governing body to develop standards for the industry. More than thirty representatives from all facets of the health care transactions industry participated in development of the standards for data transmission, data security, advertising, and resource capability.

Accreditation

EHNAC accreditation provides comprehensive and objective business evaluation; drives the use of best practices by evaluating business performance against measureable industry criteria; facilitates business discipline, organization, and planning through self-assessment; formalizes and improves business processes that are tailored to the specific business environment; improves the quality of products and services; provides training tools for employees; identifies security and business risk exposures and reduces liability; and provides a competitive advantage.

Criteria

EHNAC site evaluators use a rating method to determine overall compliance with EHNAC criteria. The site evaluator assigns a pass or fail rating to each activity in the criteria, based upon an applicant's ability to demonstrate compliance. The accreditation criterion focuses on privacy and confidentiality, technical performance, business practices, resources, and security.²⁸

²⁸ All information obtained from EHNAC's website. <<http://www.ehnac.org/>>

URAC

Background

URAC is an independent organization initially established with a mission to improve the quality and accountability of health care organizations using utilization review (UR) programs. The industry's concerns over the lack of uniform standards for UR services were the key reasons URAC was established. URAC has grown to over 16 accreditation and certification programs and covers a large range of service functions found in various health care settings. The governing Board of Directors is comprised of representatives from all affected constituencies: consumers, providers, employers, regulators, and industry experts.

Accreditation

URAC accredits many types of health care organizations, which depends on the organization's functions. URAC has a number of different accreditation programs, some that review the entire organization, such as the health plan standards, and others that focus on quality within a single functional area in an organization, such as case management or credentialing. Any organization that meets the standards, including hospitals, HMOs, PPOs, TPAs, and provider groups, are eligible to seek accreditation.

Criteria

The standards vary by program and those assessed for privacy and security include: implementation of a privacy compliance plan; maintenance of policies and procedures; requirements for business associates; workforce training; notice of privacy practices; rights of individuals; authorizations; uses and disclosures; complaints; and special requirement for hybrid entities, among other things.²⁹

²⁹ All information obtained from URAC's website. <<http://www.urac.org/>>

Managed Service Provider Alliance

Background

The Managed Service Provider (MSP) Alliance is a professional association and accrediting body for the managed services industry. MSP Alliance was created by service providers almost 10 years ago to meet the needs of the managed services professional as well as the vendor and business consumer. MSP Alliance enforces a strict code of ethics for its members to assure standards for the information technology business consumer. The MSP Alliance is made up of over 8,000 providers world-wide. These providers work together in a vendor-neutral manner to define and promote the managed services industry by educating consumers on the benefits of using managed service providers.

Accreditation

The MSP Alliance is the only professional association, accrediting body, and standards based body strictly dedicated to the managed services industry. The MSP Alliance offers its members extensive educational courses in the Managed Services Institute, world-wide networking with over 9,000 peers, and holds the only vendor agnostic, purely MSP created accreditations and certifications in the managed services industry.

Criteria

The accreditation criteria for MSP Alliance are not publicly available.³⁰

³⁰ All information obtained from MSP Alliance's website. <<http://www.mspalliance.com/>>

Independent Audit – Statement on Auditing Standards: SAS 70 Type II

Background

Statement on Auditing Standards, or SAS 70, is an auditing statement developed by the American Institute of Certified Public Accountants (AICPA). SAS 70 is designed to allow auditors to review the controls established by service organizations. Independent auditors review the control objectives and activities to ensure the controls are valid and enforced. These controls are used to ensure that the organization is in compliance with their established policies and procedures. SAS 70 Type II audits focus on the controls that are in place, as well as how they are executed over a six month period.

Accreditation

A service organization can issue a copy of the SAS 70 Type II audit report to user organizations to verify that the processes and procedures (controls) are adequate for the organization. Ongoing SAS 70 Type II audits ensure the organization is keeping its policies and procedures up to date as technology and business needs change. As these audits are performed by independent auditors, this ensures the service provider is continuing to create and implement proper controls.

Criteria

The criteria provide an overview of guidelines for areas of control. These controls include, and are not limited to, overview of operations; relevant aspects of the control environment, risk assessment, and monitoring; information and communication; control objectives and related controls; user control considerations; control objectives, related controls, and tests of operating effectiveness. Specific controls could include building access/security, datacenter access/security, data storage, customer information security, and change procedures of hardware/software.³¹

³¹ All information obtained from The American Institute of Certified Public Accountants' (AICPA) website. <<https://www.aicpa.org/default.aspx>>



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