Appendix C: Maryland Health Care Commission White Paper

Health Information Technology and Telemedicine

A Complimentary and Synergistic Approach

July 23, 2010

Background

Telemedicine is the use of technology that provides or enables the delivery of medical care remotely.[1] Telemedicine connects patients to primary care and specialty providers via telephone, computer, and/or video and enables the exchange of data between sites of care. The need for telemedicine is driven by several factors, including an aging population with a high incidence of chronic disease and physician shortages. As of 2005, roughly 45 percent of the U.S. population had one or more chronic conditions, and this rate continues to increase, especially for some age cohorts.[2] Telemedicine has proven to be an effective strategy for monitoring and managing some of today's most prevalent chronic conditions, including diabetes[3] and chronic obstructive pulmonary disease (COPD).[4]

The shortage of physicians also contributes to the rise of telemedicine. The shortfall is most prevalent in primary care. It is estimated that almost 60 million people in the U.S., including 37 percent of rural residents, currently do not have access to a primary care physician.[5] On the other end of the spectrum, select specialty providers and intensivists serving critically ill patients are in short supply. The Department of Health and Human Services projects the demand for intensivists will continue to be greater than available supply for the next three decades.[6] By enabling providers to have access to other providers and connecting patients to providers across different regions, telemedicine helps close the provider shortage and geography gaps. The general premise of a telemedicine initiative in Maryland is to enable providers to have access to other providers.

---

[1] UnitedHealth Group's Connected Care. Available at: http://www.connectedcareamerica.com.
[2] Paez, Katherine, et. al. "*Rising Out-of-Pocket Spending for Chronic Conditions: a Ten-Year Trend,*" Health Affairs, January/February 2009, viewed December 2009. Available at: http://content.healthaffairs.org/cgi/content/abstract/28/1/15,.
[3] "*Telemedicine-Based Diabetes Management Program Focusing on Education and Eye Exams Improves Self-Management Capabilities and Outcomes For Low-Income Rural Patients,*" AHRQ Website, updated November 2009. Available at: http://www.innovations.ahrq.gov/content.aspx?id=1767#a3.
[4] "*Telemedicine Increases Compliance, Reduces Costs in Patients With COPD,*" Medscape Today, November 12, 2009. Available at: http://www.medscape.com/viewarticle/712265.
[5] UnitedHealth Group's Connected Care. Available at: http://www.connectedcareamerica.com.
[6] Landro, Laura. "*The Picture of Health,*" Wall Street Journal, October 27, 2009. Available at: http://online.wsj.com/article/SB10001424052970204488304574428960127233136.html,.

The *American Recovery and Reinvestment Act of 2009* allocated significant funding to telemedicine and broadband in recognition of the growing importance of health information technology (health IT). Health IT initiatives currently underway in Maryland are aimed at expanding the adoption of electronic health records and implementing a statewide health information exchange. The value of telemedicine is significantly increased when providers are able to share the electronic health record as part of the patient evaluation process. The exchange of electronic health records requires the existence of a robust private and secure network that supports the exchange of clinical data and enables providers to query information. The Maryland Health Care Commission (MHCC) is the state agency responsible for advancing health IT in Maryland.

Intersecting Opportunities

Health IT can help improve health care quality, prevent medical errors, and reduce health care costs by providing essential information at the time and place of care delivery. [7] Widespread adoption of health IT offers the prospect of transforming the American health care system, where spending on health care currently amounts to approximately 16 percent of Gross Domestic Product, according to the U.S. Department of Health & Human Services' national health expenditure data.[8] For the most part, health IT and telemedicine are interrelated; telemedicine is facilitated by access to an interoperable electronic health record that can allow providers to review and evaluate all of the necessary information about the patient prior to and while the patient receives care.

Some states are moving in the direction of using health information exchanges to serve as the platform for telemedicine. The Louisiana Rural Health Information exchange is one example.[9] It was formed in 2007 by the Rural Hospital Coalition and will eventually link 24 rural hospitals allowing patients to receive specialized care and in many cases continue to be cared for in their own communities. The Louisiana Rural Health Information exchange funds their telemedicine initiative using 2 percent of the consult fees received by hospitals.

Until recently, the market for telemedicine solutions has not been large enough to attract major industrial efforts to consistently agree on a core set of standards.[10] Telemedicine in general has benefited from technical standards developed for interrelated markets. Standards are continuing to emerge; the use of ANSI H.32x standards has facilitated broad videoconferencing interoperability, which is leading to a continued growth in that market and a decrease in the cost of equipment. Standards enable interactions between parties using different solutions. However, interoperability has not yet been achieved industry wide in telemedicine. Beyond technical standards, the telemedicine community needs to further develop unified protocols and guidelines for both clinical and administrative activities related to remote patient care. Efforts to expand telemedicine in the state should be managed synergistically with the existing health IT initiatives.

---

[7] The Markle Foundation has conducted a rigorous and comprehensive net value analysis of health adoption reduction or redeployment, and an environment that allows for performance-based care and incentives.
[8] "*NHE Fact Sheet*" (Centers for Medicare & Medicaid), July 25, 2008. Available at: http://www.cms.hhs.gov/NationalHealthExpendData/25_NHE_Fact_Sheet.asp#TopOfPage.
[9] This information is available at: http://www.larhix.org/Home/tabid/36/Default.aspx.
[10] The American Telemedicine Association, "*Telemedicine, Telehealth, and Health Information Technology*," May 2006.

Taking Advantage of Existing Efforts

The MHCC certifies administrative health networks that exchange transactions with providers and payers. Administrative health networks that seek MHCC certification must demonstrate compliance with more than 110 criteria in the areas of privacy and confidentiality, technical performance, business practices, resources, and security. The MHCC also formally designates management service organizations (MSOs) in the state. MSOs offer an alternative to the traditional client server model for electronic health records through an application service provider. MSOs that seek State Designation are required to demonstrate compliance with roughly 90 criteria in similar categories as the administrative health networks. These programs were developed with the assistance of industry stakeholders and are administered by a federally recognized standards development organization.[11] Allowing the market to develop independent of any restrictions has worked well in the past. Requiring organizations that enter the market to meet industry standards has enabled the state to ensure solutions are of a high quality. A comparable program could be developed for telemedicine to ensure that solutions in Maryland are interoperable and synergistic with existing health IT initiatives. The need for administering the program and in developing user protocols and guidelines would still need to be addressed.

[11] The Electronic Healthcare Network Certification Commission was founded in 1993 and is a 501(c)(6) non-profit accrediting body.