DEPARTMENT OF VETERANS AFFAIRS

Electronic Health Information Exchange Between VHA System and Private Providers

Keith J. Mueller, PhD, Michelle Lampman, MA

Introduction

The Veterans Health Administration (VHA) is increasingly recognizing that comprehensive and coordinated care for the veterans it serves requires coordination between VHA providers and private sector providers, particularly for rural veterans. Modern techniques of disease management and coordinated care for persons with multiple chronic conditions, both of which are critical to an aging veteran population, require that the primary provider of care to each patient has access to all relevant information.

The purpose of this project is to characterize and better understand the nature of health information exchange (HIE) involving providers within and outside of the VHA system who are caring for common patients. We are particularly interested in innovative methods and processes to improve the flow and use of information among providers. This project is a first effort to develop a "lessons learned" resource. Given the paucity of cases, the final product of this project is not yet a catalogue of practices, but a report of two cases.

Methods

We originally set out to learn from the experiences of seven projects supported by the VA Office of

Key Findings

- Routine and frequent communication between VHA and private sector professionals facilitates success of eHIE efforts.
- Specifically, success is enhanced when:
  - Regular meetings are held involving key players (IT, Lab, health care administration)
  - Meetings involve troubleshooting and brainstorming issues related to IT, security, and overcoming obstacles.
  - Expectations of all those involved are clearly defined and communicated.
  - Clinic site managers are designated to help facilitated contracting and coordinating eHIE activities.

This work was funded by the Veterans Administration Office of Rural Health (ORH).

For more information about this study contact Keith Mueller at (319) 384-5120 or keith-mueller@uiowa.edu.

Rural Health (ORH). These seven projects were selected after a review of their project narratives indicated the use of innovative methods of improving communications across practitioners treating rural veterans. However, after preliminary discussions with the project leaders of these seven projects we determined that five of these projects did not meet the study criteria either because their project objectives had been delayed or had not yet materialized or because their focus was not on dual use and/or communication between the VHA and private systems. Two projects were selected because of their involvement in innovative practices in electronic HIE between the VHA system and private providers. In order to broaden our knowledge base as much as possible, an additional interview was conducted with an expert in the field who had additional relevant experiences. The following is a brief description of the cases selected for this study:

"Partnering with Primary Care Providers" (FY09RFP-V20-D): *This study takes place in VISN 20 and is led by Charles Marsden. The purpose of this project is to increase access to VHA services for rural veterans. This project involves contracting with select private providers in rural areas to provide primary care services to local veterans on a capitated payment system. Rural private providers who are selected to participate in this project receive VHA credentials and access their veteran patient's VHA medical records through T1 lines connecting the rural providers to the VAMC in Spokane, WA.*

"Health Information Exchange in Rural Southeast Utah in Support of Better Access to Statewide Information" (FY09RGP-CHIO-A): *This study takes place in VISN 19 and is led by Tim Cromwell. The purpose of this project is to improve the quality of health care for rural veterans through the sharing of medical*

Figure 1. Semi-Structured Interview Guide

1. What motivated the decision to embark on this project? Were there specific requests from clinicians for improvement in communications between private practice physicians and VA physicians?
2. Were there antecedents to the design of the project, such as breakdowns in communication, increases in the volume of communication between providers that seemed to warrant electronic communication, or discussions about how to manage patient care more effectively?
3. Have you experienced or observed hindrances or helps in improving the mechanics of communication? If yes, please describe them and how you have or will address the hindrances or capitalize on the helps?
4. Have you experienced or observed hindrances or helps in improving the ease of communication, including formatting and content? If yes, please describe them and how you have or will address the difficulties or capitalized on the helps?
5. How are you assessing the outcomes of the system you are developing?
6. Please elaborate on circumstances surrounding several key examples of how communications are improving or not, with your evaluation of the driving or restraining forces contributing to the situation.

Information between VHA providers and non-VHA providers, more specifically, to establish eHIE between the VAMC in Salt Lake City, UT and a non -VHA facility in Moab, UT. This eHIE connection uses and electronic medical record (EMR) system that is capable of exchanging summaries of veteran's health information through the Utah Health Information Network (UHIN) via a bridge to the Nationwide Health Information Network (NHIN).

Expert Opinion: *This individual is both a VA clinician and an owner of a small private practice. He is a former Director of Primary Care at the Pittsburg VAMC. He has chaired the field advisory committee for primary care for VA for the last 3 years and was involved in writing the VHA Dual Care National Policy. He also has served as a consultant to various groups within the VA who are working to address the issues surrounding dual care.*

We used a case study design to learn from the experiences of projects funded by the VHA Office of Rural Health and other experts in this field. Telephone interviews were conducted with individuals most knowledgeable about the identified projects and/or subject area using a semi-structured interview guide (See Figure 1). Detailed summaries for each interview were developed and used to identify common themes across interviews and to compare and contrast the experiences related to each of the projects studied. Project narratives were reviewed and used to triangulate the interview findings.

Results

Development of Project Expectations

Both projects were developed to improve access to, and quality of, primary care services for veterans in rural areas. Rural sites were included in which there were not VA providers offering services, and from which travel to a site offering VA services could be a barrier to primary care. Both projects began with the supposition that care provided by local private sector physicians would be improved through sharing the electronic medical record (EMR) generated by the VA system.

At the time of project inception, neither site had established eHIE connections. In one case the content of information to be exchanged was being determined, with an expectation of completion during calendar year 2011. The other site was developing contracts for use by the VA and private providers as an early step toward developing information exchange.

Despite the early stage of development of each project, which led to our decision not to conduct a site visit, most of the questions outlined in Figure 1 were answered by project staff and the external expert.

Motivations for Innovative Communication

These projects were undertaken with the intention of improving primary care services for rural veterans by linking information systems. Project representatives noted an interest in the possibility of 1) increasing access to primary health care services for rural veterans; 2) reducing drive time for rural veterans to the nearest VHA facility by allowing them to receive care locally; and 3) improving health care quality for rural veterans through the sharing of medical information between providers.

Our interviews also suggested that unsatisfactory experiences reported by VHA and non-VHA providers provided a catalyst for pursuing these projects. Specifically, both VHA and non-VHA clinicians expressed frustration over being unable to access necessary medical information when treating their patients. Additionally, providers noted that changes in the structure and presentation of medical information are necessary as the way medical information is traditionally organized no longer fits with how clinicians practice and think about patients.

Impediments to Project Objectives

The projects we surveyed were able to report on

early experiences including difficulties in achieving project objectives. Project representatives identified the following challenges, attributed to operations within the VHA:

- The processes involved in contracting, credentialing, and establishing connections within the VHA are time consuming and fragmented.

- The rules regarding patient privacy/ confidentiality have become overly protective to the point that efforts to share patient medical information between systems have been paralyzed.

- The VHA culture is that of a closed system which is unwilling to be open and take risks associated with information sharing.

The responsibility of co-management/provider-provider communication/information exchange has not been assigned to any specific staff position within the VHA. (Sites that *have* had success in sharing information between systems and in co-management of dual-user patients have designated personnel to manage these tasks).

Other difficulties were attributed to the nature of implemented new complex systems or the challenge of establishing new working relationships:

- Planning and development involved in eHIE require decisions to be made about format, content, and parameters of information to be exchanged.

- The use of different EMR software by the various providers results in the inability for systems to crosstalk and transfer information effectively.

- There is confusion between VHA and non-VHA providers about what medical information require patient signature in order to be shared.

Factors Facilitating Success

We found that some of the elements contributing to the success of project objectives were tied to the interaction of VHA and private sector professionals, and between both sets of providers and the patients.

Specifically, both patients and providers agreed there is a need for medical information sharing between systems in order to effectively co-manage care. Efforts are more likely to be successful when the opinions of those in the community (i.e., patients and local providers) are incorporated into the planning and development.

Prerequisites for success include designing processes that promote routine and frequent communications and use of health information through electronic exchange. Success is facilitated by regular communication, particularly through regular meetings involving key players (IT, Lab, health care administration, etc.), when meetings involve troubleshooting/brainstorming issues, and when the expectations of all those involved are clearly defined. Additionally, project representatives noted that success is promoted when clinic site managers are designated to help facilitate contracting and coordinating eHIE activities.

Finally the persistence of project leaders is required. Their activities have to include nurturing relationships that will contribute to the continued development of the new systems. For example, one of the project representatives we interviewed makes regular personal phone calls to state congressmen and senators to keep them on board.

Conclusions

The VHA was one of the first health care systems to operate a paperless system, and the use of eHIE methods is preferred within the VHA. One respondent pointed out that the backbone of the VHA EMR is public software and can be used by others to set up a standardized data exchange. As indicated by the project taking place in Utah, the possibility of utilizing already established state health information exchange networks and further connecting them to the National Health Information Network (NHIN) could be a model successfully replicated in other organizations.

This study highlights the need for further research focused on the design, development, and implementation of eHIE, specifically in rural locations. Best practices in eHIE that have been developed within urban settings should be examined and further adapted to fit rural settings in order to improve coordination of care for rural veterans by enhancing the involvement of local primary care providers in providing continuous, comprehensive services through coordination with VA providers.

However, this study is not without its limitations, most notably the limited experiences of the projects within the time frame of our study. Many of the ORH projects we selected (based on project description and time line of their proposals) had very little experience with eHIE at the time of data collection and, thus, were ineligible for inclusion in this study.

The two projects included in this study were still in the early stages of implementation and therefore had not yet demonstrated overall success of establishing eHIE between VHA and non-VHA systems. The delayed experiences within the projects we studied limited our ability to effectively characterize and understand the nature of HIE involving providers within and outside of the VHA system who are caring for common patients. While we were able to learn about the barriers experienced by these projects in their early months of activity we were less able to understand the bridges to successful communication of health information needed for timely diagnosis and treatment.

Implications

- VHA should commission a similar study once there have been at least three projects with at least one year of experience linking VHA and private sector information systems.
    - Future analyses should include: impact on the local community, such as economic activity resulting from higher retention of services locally.
- VHA should work with primary care physicians to design systems drawing on data which is essential to daily practice and decision making.
- VHA should align information exchange efforts with statewide and national health information networks.
- This analysis highlights the importance of identifying a place or individual within the VHA infrastructure responsible for the technology of information exchange with private physician offices.

ORH
VHA Office of Rural Health