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| Project Title: | Rural Community Partnerships—Electronic Medical Record (EMR) Implementation Project |
| Principal Investigator: | Mullen, R’Nee |
| Organization: | Magic Valley Regional Medical Center |
| Mechanism: | RFA: HS04-011: Transforming Health Care Quality through Information Technology (THQIT) |
| Grant Number: | UC1 HS 015302 |
| Project Period: | 09/04 – 08/08, Including No-Cost Extension |
| AHRQ Funding Amount: | \$924,216 |
| Summary Status as of: | August 2008, Conclusion of Grant |

Strategic Goal: Develop and disseminate health IT evidence and evidence-based tools to improve health care decisionmaking through the use of integrated data and knowledge management.

Business Goal: Implementation and Use

Summary: The completed project’s specific purpose and aim was to implement an ambulatory electronic medical record (AEMR) in multiple, rural primary and specialty care provider settings managed by Magic Health Partners, L.L.C. (MHP) and Magic Valley Regional Medical Center (MVRMC) via Magic Healthcare Partners (MHCP). In addition, critical to the ongoing success, was the College of Southern Idaho (CSI) involvement in integrating AEMR case scenarios into the curricula of the Health Sciences and Human Services Department. This was to ensure that future health care providers would have adequate training and exposure to AEMR technology. Each member committed to use of this technology with the objective of improving overall patient and provider access to high quality care and information. MVRMC provided expertise and leadership for the AEMR implementation; it is the largest, most comprehensive rural hospital in the service area. The preferred system that was implemented to facilitate the AEMR is the Centricity product from GE Medical Systems (GEMS). Preliminary data were gathered during the planning period for the implementation of the AEMR with MHP and MHCP. Observations cited a total of 12,671 charts pulled from practitioners’ archives over the course of a typical 30-day period; this is significant since MHP serves 6,800 to 7,100 unique patients each month. When a chart is checked out to one location, there is potential for it to be unavailable at another point of care. It also represents a significant cost in labor to continually pull and return charts. The potential for information availability related to missing charts was significantly increased by the need to keep charts out of the filing system while updating them with new information. The need for improved verification and access is central to high quality care. The delivery of the right information at the right time at the right place was a key driver for the implementation of the AEMR.

Specific Aims

- Implement AEMR in 18 rural primary and specialist care practices managed by MHP and MHCP via MVRMC to improve medical accuracy, improve patient safety processes, and facilitate non-duplicated tracking and reporting of care services provided to patients located in south central Idaho and northern Nevada. **(Ongoing*)**
- Implement AEMR to facilitate and enhance community wellness via immunizations, screening, and proactive acute chronic condition management within MHP providers via MVRMC. **(Ongoing*)**
- Improve overall business-related outcomes following AEMR implementation by reducing the overall costs of transcription, expenditures on office supplies, costs related to filing expenses, and by the number of lost charges at MHP and MHCP via MVRMC. **(Achieved)**

- Implement and integrate AEMR functionality case scenarios into CSI Health Science curricula to ensure health care provider preparedness for transitioning into workplaces with health care information technology systems. **(Achieved)**

** Several aims of the grant were not completed prior to 8/08, but, as other sources of funding have been secured, these aims are still targeted for completion.*

2008 Activities: Data were collected and analyzed from the live system.

Preliminary Impact and Findings: Initial focus on transcription costs revealed instant cost savings, so continual monitoring was not put in place. A decision not to monitor office supplies and filing expenses was made in order to spend the time focusing on developing a return on investment (ROI) model for the purchase and implementation of the system. Results of doing pre- and post-implementation analysis of medication, allergy, and problem lists being documented completely and accurately indicated a marked improvement in presence and accuracy in the chart in all but two cases. In these cases, there was a decrease seen in documentation completeness and accuracy for the patient problem list. This was due to inadequate codifiable choices for the physician to select from in the AEMR. This was rectified quickly as those physicians identified the missing choices from the selection list of problems. Documentation of patient encounters without chart access and documentation of requests for additional information not found in the patients chart was also analyzed pre- and post-implementation. The lesson learned with Physician Center was to have the scanning solution in place, to conduct retrospective scanning at least 30 days prior to go-live and to make sure there was enough staff to keep up with the retrospective scanning to keep patients entered into the AEMR for their first “electronic” visit at least 72 hours prior to their scheduled appointment. This process was used for two providers and significant improvement in chart completeness was realized. Physician satisfaction surveys were conducted pre- and post-implementation to determine level of satisfaction and discrete improvements in work life. Overall satisfaction with the AEMR system and its impact on their work life was seen. CSI students went through training and evaluation with the AEMR system.

Selected Outputs

Mullen R, Donnelly JT. Keeping it real—building an ROI model for an ambulatory EMR initiative that the physician practices espouse. *Healthc Inf Manag* 2006 Winter;20(1):42-52.

Physician Satisfaction Survey

Patient Satisfaction Survey

Grantee’s Most Recent Self-Reported Quarterly Status: Although implementation took place at fewer sites than originally anticipated, cost effectiveness, and improvements in workflow and quality of care were apparent in post-live data. AEMR curriculum was developed and taught to nursing students at CSI. Some milestones are still ongoing, but stakeholder buy-in suggests that implementation will expand in the future.

Milestones: Grantee did not provide self-assessment during 2008.

Budget: Grantee did not provide self-assessment during 2008.