MIDSOUTH eHEALTH ALLIANCE

Newsletter

MSeHA Surpasses 3 Years of Data Sharing and Interoperability

The MidSouth eHealth Alliance (MSeHA) recently celebrated its third year as a Regional Health Information Organization (RHIO) in the Memphis, TN area. The Alliance was initiated with the support of grants from the Agency for Healthcare Research and Quality (AHRQ) and the State of Tennessee.

The AHRQ grant focused on data sharing, interoperability and documentation of the lesson learned during the first three years. The last two years of the grant aims to discover the impact of the MSeHA on patient care and treatment. The State of Tennessee grant focused on TennCare reform, the implementation of informatics, improved patient care and cost reductions for providers of patient care.

Through a strategic partnership with the Vanderbilt Center for Better Health, the MSeHA concentrated on developing data sharing between Emergency Departments (ED's) within the Memphis region. The Alliance continues to focus on five key areas: 1) Improving patient care 2) Decreasing ED utilization 3) Reducing hospital stays 4) Cost containment and 5) Reduction in overlapping tests.

The system has been successful in sharing patient data across emergency departments and has now expanded into the ambulatory care setting with the recent additions of Christ Community Clinics and the UT Medical Group. As the Alliance continues to rollout to the remaining hospitals ED's in Shelby and the surrounding counties, the data becomes more value to all users as a method to better treat patients and provide an avenue to guide them to a medical home.

The participating hospitals of the MSeHA now includes: The Regional Medical Center (The MED), Baptist Memorial Healthcare, Methodist Healthcare, Saint Francis Hospital, Le Bonheur Children's Hospital, Christ Community Clinics, the University of Tennessee Medical Group (UTMG) and Memphis Managed Care/TLC (AmeriGroup).

MSeHA Presents at Arkansas eHealth Meeting

The Arkansas Foundation for Medical Care (AFMC) recently held their eHealth Arkansas meeting on October 24 in Little Rock to continue their quest to establish a statewide eHealth information exchange. The MSeHA was asked to present their success to the AFMC and to their statewide officials. This meeting provided a platform for the MSeHA to share their experience and expertise in eHealth information exchange. The conference was attended by nearly 175 representatives from government, hospitals, payors, and physicians and other state RHIOs.

The conference was attended by Arkansas Governor Mike Beebe and Roy Jeffus, Director of the Arkansas Department of Human Services. The Governor spoke with the Tom Duarte, MSeHA Executive Director, regarding the success of the RHIO and his appreciation for providing assistance with the AFMC and their efforts. The MSeHA informed Governor Beebe that we would like to get both he and Governor Bredesen to visit the RHIO in the near future.

The response to the presentation was very positive and the audience was impressed with the amount and quality of the data that was being captured. A variety of groups met with Monroe Wesley (Vanderbilt Center for Better Health) and Tom Duarte (MSeHA), such as Shared Health, Regenstrief and others, to discuss in more detail issues such as governance, security, technological concerns and cooperation between hospitals and clinics. The meeting clearly demonstrated the strong position the MSeHA occupies in the eHealth arena.

Interview with Kevin Johnson, MD, Vanderbilt University

Kevin B. Johnson, MD, MS is an Associate Professor and Vice Chair in the Department of Biomedical Informatics and Associate Professor of Pediatrics at Vanderbilt University Medical Center. He is also leading the Evaluation Team for the MSeHA.

MSeHA: The MidSouth eHealth Alliance began in 2004 as a grant from the State of Tennessee and the Agency for Healthcare Research and Quality. The first 3 years focused on data sharing, interoperability and documenting what was learned. Years 4 and 5 will evaluate the impact of the MSeHA on patient care and treatment. What has been your strategy to discovery the impact of the Alliance on the patient population in Memphis?

KJ: We were given a set of objectives that needed to be assessed as a part of our contract with AHRQ. Those outcomes included financial outcomes such as decreasing duplicate radiology and lab tests, but also administrative outcomes such as the length of ED stay, impact on in-patient admissions, out-patient readmissions, early discharges from the hospital and personnel (nurse/physician) satisfaction. In addition, we felt that it was important to listen to the ED staff in all of the sites to determine other specific outcomes that would be of interest to those groups. Our strategy has been to incorporate hypotheses of many of the clinical leadership from the sites that are currently active. To sustain the Alliance we have paid attention to the financial and clinical working groups in the Memphis area who have helped us to identify metrics that they think will be important for demonstrating value and ensuring sustainability.

MSeHA: Choosing what and how to evaluate the program is a difficult task. How did you narrow the focus to demonstrate the impact and potential value of the Alliance?

KJ: Clinicians have told us that the primary way the system has impacted them is by changing the trajectory of the care they deliver in the settings where the system is used. Specifically, that has meant avoiding duplicate tests, which is one of the original outcomes of interest and facilitating some of the Memphis initiatives that are ongoing, including right care, right place. We have continually narrowed our focus based on the fact that these emerging interests are unlikely to have a significant level of penetration in the Memphis region until probably after the initial project.

MSeHA: What have other RHIOs chosen to evaluate their impact on patient care and treatment?

KJ: From the published literature there are very few outcomes other than the ones that were initially noted by AHRQ and those included primarily financial metrics, such as decreasing duplicate tests and improving the access to information from disparate sources at the point-of-care. In fact, these are the general measures that other RHIO's have chosen to evaluate as well. Other RHIO's may collect different data than we have, such as medication data (Regenstrief) and would have more information on adverse drug events or outcomes related to medication delivery.

MSeHA: There are a number of stakeholders that will be keenly interested in the evaluation, such as AHRQ, State of TN, participating hospitals and clinics. What are some of the key points that each entity may be looking for in the evaluation process?

KJ: Different stakeholders are going to be interested in different aspects of the evaluation and some stakeholders may not yet fully recognize what they will find of value. Clearly clinicians are interested in outcomes related to the use of the system to improve patient care through testing, readmission or access to information before they have to make decisions, such as from discharge summaries. The State of Tennessee is primarily interested, at this point, in outcomes related to sustainability primarily because of their desire to improve the care of TennCare patients who utilize fragmented delivery systems. Therefore, they are going to be uniquely interested, and perhaps especially interested, In addition, data that addresses the potential dollars that may be saved per patient, the ability to merge records in one setting and the impact that may have on patient care, but also on the rate of hospital admissions and whether we can decrease that, and the return of patients to their medical home, in other words, the decrease rate of ED visits per patient.

MSeHA: Would you describe the impact that the MSeHA has had on the Emergency Department physicians?

KJ: It appears that one of the major things we notice in the qualitative feedback we have received from ED physicians, is that the impact is primarily through helping to bring together data for patients that either have language barriers and are unable to tell people about the data, or patients who for one reason or another are not as willing or able to disclose the data. The MSeHA tools have allowed the clinicians to understand that patient's medical history better than it's ever been able to be understood before.

Interview continued . . .

MSeHA: Has the system impacted work flow and treatment decision within the ED?

KJ: One of the outcomes of interest is going to be both workflow change and treatment decision in a more timely fashion. We believe that there are going to be work flow changes primarily based on the roles that clerks have played in emergency departments. From the standpoint of understanding the impact on treatment decisions, we will get that primarily through survey, but we certainly have heard anecdotes about hospitals and ED physicians who have normally delayed treatment decisions but are now able to more appropriately make a decision either to treat or not to treat based on the availability of data from other institutions.

MSeHA: Do you expect the same kind of impact when the system is rolled out to the ambulatory setting?

KJ: My suspicion is that the areas of impact will likely be related to tying together loose ends that arise in a fragmented care delivery system. Therefore, it would not surprise me at all if primary care settings noted some shock about the degree to which care is fragmented for patients that they have seen and, therefore, an improvement in the care they deliver during a primary care visit. Similarly, it is our belief that emergency departments who are able to better identify the medical home of the patient, will be more empowered in referring patients back to their medical home and potentially in delaying some therapy pending an evaluation by a provider who is more familiar with the patient.

MSeHA: The current focus is on improving patient care and treatment and evaluating the impact of the system. How do you begin to look at and measure patient satisfaction?

KJ: Patient satisfaction has been measured through a variety of tools already available in the literature. The key aspect of patient satisfaction will have to start by informing patients about the system and having them provide us with some open-ended, qualitative data describing what they have noticed with the system being present. The most appropriate model may be to capture a cohort of patients who have had their record accessed by the MSeHA to determine if they notice a difference in the way care is delivered compared to a second cohort who did not have their record accessed using the exchange rather than using a random population of patients.

MSeHA: Moving patients through the ED faster without loss of quality care is important in the workflow process

for the hospital. Can you explain some of the benefits?

KJ: There are many benefits to moving patients through the ED faster. A very simple way of thinking about a benefit is the less time spent in the ED, the less time exposed to communicable diseases. Moving patients through the ED faster will likely be associated with patients able to fill prescriptions in a more timely fashion and to provide quality a better of care relative to more rapid access to necessary treatments. There is no health care setting where there aren't significant benefits associated with a more efficient process. However, there are potential deficits too or potential problems with more rapid transfer. For example, if poor decisions are being made and patients are moved through the ED faster this will be manifest presumably by a higher rate of ED visits within 48 hours after a discharge. This is one of the reasons why a key variable we will be measuring will be the ED revisit rate as well as the readmission rate for patients who may be discharged to early from the hospital.

MSeHA: What do you see in the future for the MSeHA?

KJ: Memphis has been an extremely important region for the country in that availability to bring up health information exchange in less than two years really paves the way for lots of other regions to move forward with this technology. I think the future for the MidSouth eHealth Alliance is very bright. Those clinicians who are in the region have told us that they can no longer imagine practicing without a tool like this; therefore, I see that we will need to do everything possible to sustain the system and to demonstrate value in all the areas where it is being implemented.

MSeHA in the News

Publications:
- Frisse, ME and Holmes, RL. Estimated financial savings associated with health information exchange and ambulatory care referral. J. Biomed Inf. 2007; 40: S27-S32.
- One Vision. Methodist Le Bonheur Healthcare, October 2007

Presentations at:
- Arkansas Foundation for Medical Care
- Louisiana HIPAA & EHR Conference
- Inland NW Health Information Technology Symposium (Spokane, WA)
- eHealth Initiative meeting, Washington, DC
- National Governor's Association State Alliance for eHealth meeting (Nashville, TN)
- Agency for Healthcare Research and Quality annual conference, (Bethesda, MD)

Brief Updates

The Technical Advisory Panel recently met at the Vanderbilt Center for Better Health in Nashville to discuss the MSeHA, its accomplishments and recommendations for future expansion and communication to the professional and public arenas. The TAP members included:

- George Hripcsak, Columbia Presbyterian
- Ed Hammond, Duke University
- Betsy Humphreys, National Library of Medicine
- Bill Stead, Vanderbilt University
- Tom Rindfleisch, Stanford University
- Cristie Travis, Memphis Business Coalition
- Antoine Agassi, State of Tennessee

The Evaluation plan was described as being an evolving process but grounded in specific areas. The evolution is due to the expansion of the project beyond the Emergency Departments to hospitalists' and ambulatory clinics. In addition, changes and improvements to the system itself will impact the evaluation process. The Evaluation phase will be affected by many factors such as: outcomes, economics, governance, technology, workflows, etc. An important aspect of the evaluation process will be the development of a business model for sustainability and growth.

The Emergency Departments are evolving and continue to be tasked with providing better patient care. The MSeHA is taking aim at influencing patient care and treatment. Through the exchange of patient data, the system has been able to identify patients that do not need to be in the ED and that should be at a "medical home." One key patient population to target will be the "frequent flyer" or a patient that has excessive and unnecessary visits to the ED, causing a financial and medical strain on the hospital.

Discussions centered on an increase in patient engagement through greater awareness of the benefits of the system and the entitlement of improved patient responsibility. The knowledge of the system may also provide the patient with an understanding of a more appropriate use of the ED.

The ability to connect patients to a medical home has been primarily focused no TennCare patients and uninsured patients in the past. Today, that concept needs to be applied to a wider population group. Clearly, the MSeHA has a greater responsibility to communicate with the patient population and the consumer audience. The TAP members were all in agreement in their message of "It is time for Memphis to be recognized" as a leader in eHealth

MSeHA by the Numbers

The MSeHA has successfully been sharing data between Emergency Departments for nearly two years and continues to add hospitals, ambulatory clinics and medical groups. Regionally, the Alliance amassed a wealth of data from May 2006 through December 2007 including the following:

- Over 2.1 million records
- > 880,000 patient records
- >283,000 procedure codes
- >2.6 million diagnostics codes

On a daily basis, the MSeHA handles:

- >33,000 records
- 3,700 Encounter records
- 1,000 ICD-9 Admission codes
- 12,000 ICD-9 Discharge codes
- 1,800 WBC reports
- 850 Microbiology reports
- 1,200 Chest X-rays
- 80,000 Laboratory values

The Alliance relies on the Vanderbilt Center for Better Health team to provide the informatics expertise to deliver the "real-time" data back to the ED's so that physicians can better treat their patients through the use of comprehensive medical information.

As the Alliance continues to complete the ED rollout in Shelby, Fayette and Tipton counties and moves further into the ambulatory sites, the patient records will continue to grow and provide greater value to the physician users.

Contact Information for the MSeHA

For more information about the MSeHA please visit our website at:
www.midsoutheha.org

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