

MidSouth eHealth Alliance (MSeHA):

Experiences from the Front Lines

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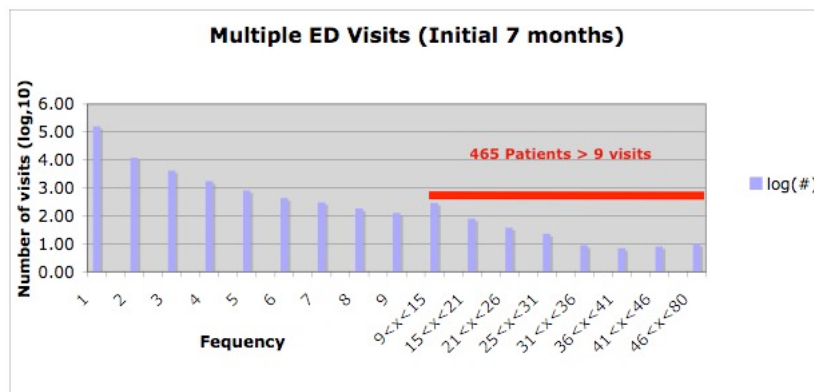
Health information exchange
doesn't help people....

Health information exchange use
and a transformed health system
combine to help people.

Executive Summary

- MSeHA has allowed a unique look at challenges in the regional delivery of quality care
- MSeHA has consistently good and increasing usage
- MSeHA qualitative feedback suggests value added in
 - Duplicate testing
 - Medical history (especially with communication barriers or chronic illness)
- MSeHA is impacting other clinical systems

Multiple Visits Over 7 months (2006)



Consequences of Multiple Visits

StarPanel Lite V1.3.9

Encounter | Claims | Demographics | Print Summary

View All | Chem | Blood Gas | Hemo | Micro | Other Labs | Cardiac | Rad | Disch. Summ. | Other Notes | Claims | Misc.

The "x" next to a Radiast report title indicates a revised version. | Ctrl-Click to select more than one category

Date	Encounter Type	Diagnosis / Procedure
10/18/06	Radiology	•Xr Abd Compl W/Flat/Erect [BMHCC-Coll]
10/16/06	Radiology	•Xr Abdomen 2 Views [SFH]
09/20/06	Radiology	•Ct Abd+pelv W/Con O# [BMHCC-Coll]
09/09/06	Radiology	•Ct Abd+pelv W/Con O# [BMHCC-Coll]
09/06/06	Radiology	•Ct Pelvis With Contrast [SFH] •Ct Abdomen With W/O Contrast [SFH] •Xr Abdomen 2 Views [SFH]
09/04/06	Radiology	•Xr Abdomen 2 Views [BAR]
09/03/06	Radiology	•Abdomen Acute Series [BMHCC-Mem]
08/21/06	Radiology	•Ct Pelvis With Contrast [BAR] •Ct Abdomen With W/O Contrast [BAR]
08/17/06	Radiology	•Nn Gastric Emptying Study [SFH]
08/16/06	Radiology	•Ct Abdomen With W/O Contrast [SFH]
08/15/06	Radiology	•Xr Chest 1 View [SFH]
08/12/06	Radiology	•Xr Abdomen 2 Views [SFH] •Talk Report [MED]
08/05/06	Radiology	•Abdomen Flat And Upright [BMHCC-Mem] •Chest Pa/Lat [BMHCC-Mem]
07/25/06	Radiology	•Ct Abd+pelv W/Con O# [BMHCC-Coll]
07/09/06	Radiology	•Ct Abd+Pelvis W/O Contrast [BMHCC-Mem]
07/02/06	Radiology	•Xr Abdomen 2 Views [SFH]
07/01/06	Radiology	•Xr Abdomen 2 Views [SFH]

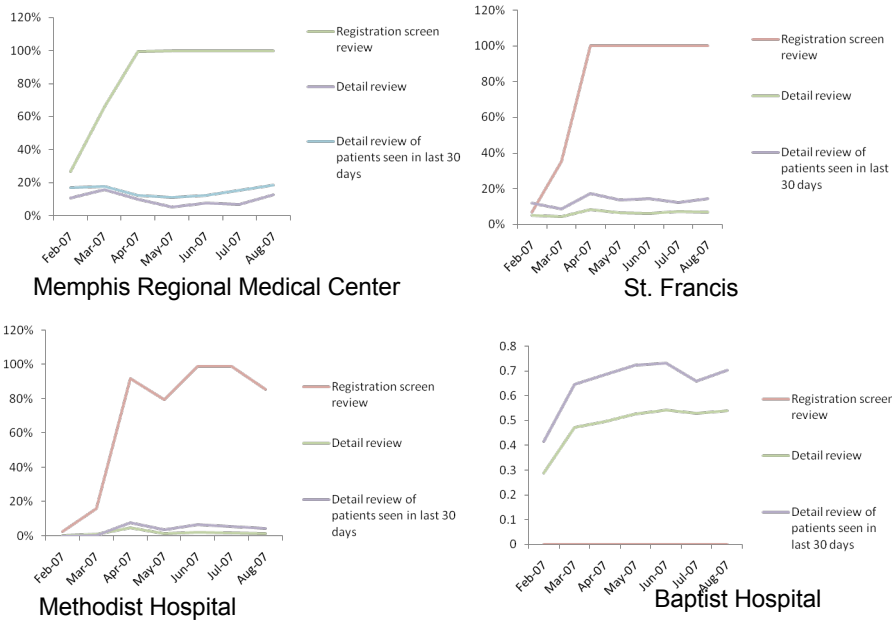
Hover here to display the encounter type interpretation

This individual had over 40 ED visits to multiple emergency departments within a 7-month periods.

Options:

- more effective treatment in ED
- more effective care outside of ED

System Usage Across Sites



Qualitative Feedback

What Song are YOU Singing about Data Exchange?



I'm singing the blues

I'm rockin' an' rollin'!

Tell us why:

Your name: _____
 Phone number: _____
 (Your comments will not be shared with anyone here)

Anecdote	Category
I had a patient come in tonight who had just been seen at Methodist but did not get narcotics there. Wanted lortab, I did not have to repeat labs-very helpful	Duplicate testing
I was able to see that a "frequent flyer"/ drug seeker was seen and and xrays	
Checked ehealth to review/verify xray results done @Methodist to verify that the Xray were performed and were normal, I didn't have to repeat (the eval took place 2 days before visit here)	
I love this system	
Patient told one CT report but his visit did not show up.	
It has been helpful, but needs improvement	
Patient presented with cough, just seen at Methodist and had negative xray	
Very user unfriendly to use	
Patient forgot to tell us they had TB	Surveillance
Pt with chronic pain came in today saying he needed pain shot, couldn't wait to see PCP tomorrow for regular appointment. Pt. Denied having been anywhere else for treatment since seeing his PCP 3 wks ago and eHealth allowed me to see that the patient had indeed recently sought care at 3 other hospitals in the area.	Med history
When it works, it's good, but lately...it is not working	Usage
I was able to review MRI and xray report on a patient done elsewhere, eliminating the need for me to do any diagnostic testing here today. Saved \$, patient time, and ER time.	Duplicate testing
Need to know the PCP	Enhancements
System able to let us know if first doses of meds have been given elsewhere	Treatment history
D/C summaries useful for medication reconciliation	Med history
Patient had a negative CT 5 days ago, eHealth provided additional history, avoided hospitalization	Med history
Additional history, decreased testing, prevented a prescribing error	Med history
Decreased testing	Duplicate testing

Total

Category	Count
Duplicate testing	12
Med history	7
Usage	3
Enhancements	5
Surveillance	1
Treatment history	1
Usability	1
Med history	1
Missing information	1
downtime	1

From: Donna Abney <AbneyD@methodisthealth.org>
Donna Abney
Executive Vice President
Methodist Le Bonheur Healthcare
>>> Meg McGill 9/6/2007 2:54:27 PM >>>

Dr. Sands used his access to the RHIO for the first time last night and was thrilled with the results. He accessed a discharge summary from the Med for his pt that was just admitted to him. He had been told he was terminal and came to Dr Sands for a 2nd opinion. Dr Sands was able to review what had been done and review the test results and as a result was able to directly admit him to Hospice. He stated that all the tests for a work-up he would have ordered had been done at the Med so he saved many, many thousands of \$\$ so he was truly in awe and loved the access and the ease of use! MM

----- End of Forwarded Message

Other Potential Areas of Impact

- ❗ Impact on social work referrals
- ❗ Impact on case management
- ❗ Impact on narcotic prescription rate
- ❗ Impact on patients affected by HIV (CD4 and admission rate)
- ❗ Impact on referrals to primary source of care for impending deliveries
- ❗ Rate of patients who “left without being seen”

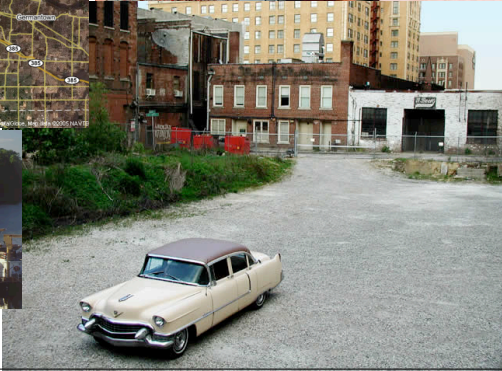
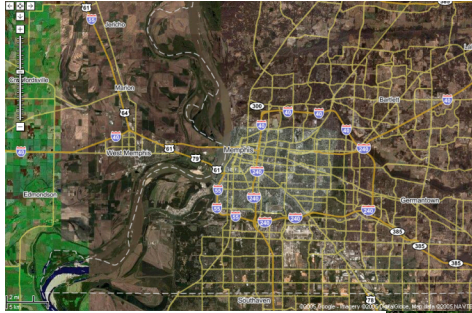
Provider Perspectives



Value and Sustainability: Areas of Investigation

- Inpatient hospitalization
- Inpatient length of stay
- ED LOS
- Testing rates (especially images)
- Un-reimbursed care

Questions?



Testing Rates

Low Stability Tests	High Stability Tests (HST)	HST Duplication Interval
CBC	HbA1c	12 weeks
CMP	TSH	6 weeks
UDS	Hepatitis serologies	4 weeks
Chest X-ray	HIV	2 weeks
	Echocardiogram	4 weeks
	MRI Head	2 weeks
	CT Head	2 weeks
	CT Abdomen	2 weeks
	Ankle X-ray	2 weeks

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Clinical Hypotheses—HIE:

- Will improve the efficiency of care as manifest by
 - Lower rates of testing
 - Lower rates of admission*
 - Shorter time per encounter in the ED*
- Will change the case mix of the ED as demonstrated by:
 - Decreased repeat ED visits over 30 days**
 - Decreased chronic pain patients**
- Will alter the workflow of the environments in which it used, by:
 - changing time spent seeking information
 - changing time spent using computer technology during patient care
 - changing who is responsible for information seeking
- Will not adversely impact “bounce backs” (repeat visits within 24 hours of discharge)*

* = collected by EDs
 ** = collected through HIE system.

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Value and Sustainability - Assumptions

- Value is a function of costs saved by HIE, costs avoided through the use of HIE, and costs incurred because of HIE
- Costs saved are a function of workflow change, practice pattern change, and improved safety



*"Mr. Herman, you made me laugh and you made me cry,
but you didn't make me money."*

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Workflow change

- Activity-based costing
 - Model construction at Vanderbilt
 - Model validation in Memphis
 - Use model to construct activity matrices in EDs under study
 - Assess how activity matrices change pre and 1 year post implementation

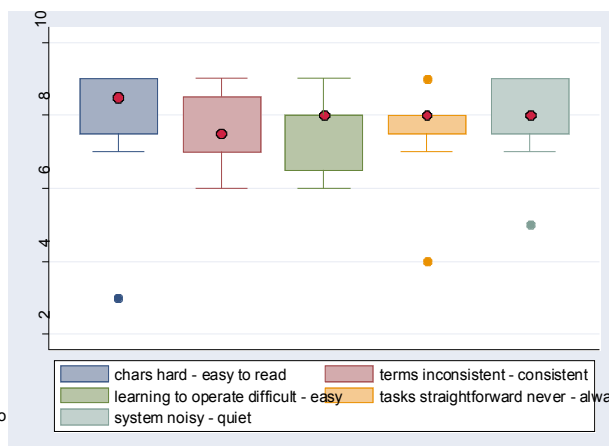
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Usability Successes



Answers provided on 1-9 scale, anchored by, in first answer, "hard to read" = 1 – "easy to read" = 9

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Our Evaluation Team

Leader	Role
Kevin Johnson	Usage and usability
Renee Stiles	Activity-based costing
Cynthia Gadd	ROI analysis, qualitative measures
Scott Russell	Disease-specific outcomes
Dominik Aronsky	Administrative outcomes
Thomas Salas	ROI analysis, financial metrics
Paul Cornell	Advice, data collection