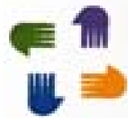


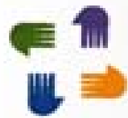
Electronic Health Record Experience in Hennepin County

NACo IT Summit

Kansas City (Jackson County) Missouri
July 11, 2008

Commissioner Randy Johnson

randy.johnson@co.hennepin.mn.us



Hennepin County
Medical Center

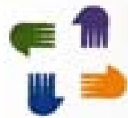
DISCLAIMER

(Most slides stolen from HCMC CIO and all editing errors are Randy's responsibility)

“Getting Your Board On Board”
Electronic Health Record

Minnesota e-Health Summit 2008

Joanne Sunquist
CIO



Hennepin County Medical Center

Presentation Objectives

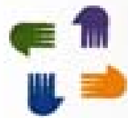
- Provide overview of HCMC
- Review Board process
- Discuss EHR project goals and ROI analysis
- Describe ongoing engagement initiatives
- Outline HCMC status to date
- Answer questions

Hennepin County
Medical Center

HCMC Overview

Hennepin County Medical Center is

- Minnesota’s premier Level 1 Trauma Center
- The third largest hospital in Minnesota, based on operating revenue
- An essential teaching hospital for doctors who go on to practice through the state
- A safety net hospital providing care for low-income, the uninsured and vulnerable populations, and
- A major employer (3000+ employees) and economic engine in downtown Minneapolis



Hennepin County Medical Center

2007 HCMC facts

Staffed Beds	475
Adult & Pediatric Discharges.	21,191
Births	2,892
Clinic Visits	313,465
Emergency Visits	106,179
Ambulance Runs	56,670
Incoming Helicopter Transports	393
Surgeries	9,147
Acute Psychiatric Services Visits	10,910

Hennepin County
Medical Center

Our Mission

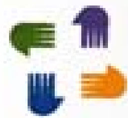
We are committed:

- to provide the best possible care to every patient we serve today;
- to search for new ways to improve the care we will provide tomorrow;
- to educate health care providers for the future; and
- to ensure access to high quality health care for all in our community

Hennepin County Medical Center

Board Review and Communication Process

- Initial EHR project was reviewed in 2004 by the Hennepin County Board, consisting of elected officials
- Board approved the $110M multiyear project and offered capital support of $30M
- Ongoing updates of project status were provided to the Hennepin County Board on a quarterly basis
- In January of 2007, a new governance structure was put into place. HCMC became a semi-independent subsidiary of Hennepin County and no longer a department of the County. At the same time a new Hennepin Healthcare System (HHS) Board was chosen
- The new HHS Board has been monitoring EHR project status since that time



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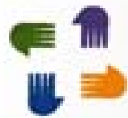
Goals — Why is HCMC doing this?

- Improve patient safety (e.g. limiting adverse drug events)
  - Automate care standards
  - Leapfrog Group requirement for CPOE
- Match the standard of care in this community
  - All major community providers in Twin Cities are investing in EHRs
  - Epic is the most frequently selected system—potential for "community record"
- Meet legislative and regulatory requirements
  - CMS & JCAHO



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Goals, continued

- Improve patient satisfaction
  - Easier and faster access to care
  - Improved coordination of care between areas and providers
- Improve provider satisfaction
  - Universal chart access
  - Collaborative charting
- Improve the financial state of HCMC
  - Match documentation to diagnosis and billing
  - Staffing efficiencies associated with electronic record
- Enhance the education and research environment
  - Trainees seek out programs with automation

Hennepin County
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Project Scope

Hennepin County
Medical Center

History

2003

- System Selection Process Began
- Original Scope was to Replace Homegrown Clinical System

2004

- Scope Expanded to Include Revenue Cycle and Other Clinicals
- System (Epic) Selected and Contract Negotiated
- Cost/Benefit Completed
- County Board Approval (Nov 04)

2005

- Team Compiled and Trained
- Consultants (Deloitte) Selected
- Began Design and Build
- Finalized Contract with HFA

2006

- May 2 Go-Live---CDR, HIM and Document Imaging
- June 1 Go-Live---HFA Clinics Revenue Cycle
- Preparing for November Go-Live (EpicCare Pilot Clinic)

Hennepin County Medical Center

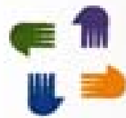
History

2007

- “Big Bang” Go--Live in Feb 07 (ADT, Hospital Billing, Scheduling and Registration, Professional Billing, Radiology, CPOE, Pharmacy, and ED)
- Rollout of EHR in all HCMC and HFA Clinics
- Rollout of Provider/Clinician Documentation
- OR System Go-Live

2008

- First Affiliate Clinic Implementation (NorthPoint), with other Affiliates scheduled for 08
- Oncology (Beacon). STORK (OB) and Nurse Triage
- “Optimization” and ongoing training activities
- Major system software and hardware upgrades



Original Budget Approved in 2004

	2005	2006	2007	2008	2009	2010	2011	Totals
One-Time Project Costs								
Epic Not To Exceed (NTE)	$ (7,237)	$ (5,676)	$ (2,596)	$ (1,238)	$ (717)	$ (408)	$ (176)	$ (18,048)
Other Project Capital Costs	$ (13,159)	$ (13,114)	$ (5,523)	$ (229)	$ -	$ -	$ -	$ (32,025)
Incremental Operating Costs	$ (5,423)	$ (4,926)	$ (1,648)	$ (10)	$ -	$ -	$ -	$ (12,007)
Contingency	$ (2,768)	$ (2,688)	$ (1,068)	$ (36)	$ -	$ -	$ -	$ (6,560)
Total Project Costs	$ (28,587)	$ (26,404)	$ (10,835)	$ (1,513)	$ (717)	$ (408)	$ (176)	$ (68,640)
Ongoing Operating Costs								
Hardware/Software Maint	$ (548)	$ (3,038)	$ (3,467)	$ (3,316)	$ (4,034)	$ (4,563)	$ (5,041)	$ (24,008)
Support Personnel	$ -	$ (593)	$ (2,140)	$ (3,148)	$ (3,243)	$ (3,340)	$ (3,440)	$ (15,904)
Total Operating Costs	$ (548)	$ (3,631)	$ (5,607)	$ (6,464)	$ (7,277)	$ (7,903)	$ (8,481)	$ (39,912)
Total Annual Costs	$ (29,135)	$ (30,035)	$ (16,443)	$ (7,977)	$ (7,994)	$ (8,311)	$ (8,657)	$ (108,552)
Total Cumulative Costs	$ (29,135)	$ (59,170)	$ (75,613)	$ (83,589)	$ (91,584)	$ (99,895)	$ (108,552)	$ (108,552)
Annual Revenue/Savings								
Benefits	$ 465	$ 1,792	$ 8,083	$ 11,154	$ 14,972	$ 16,242	$ 16,878	$ 69,588
Cost Avoidance (existing IT costs)	$ 950	$ 1,576	$ 5,727	$ 8,351	$ 8,997	$ 8,317	$ 8,473	$ 42,391
Subtotal Revenue/Savings	$ 1,415	$ 3,368	$ 13,810	$ 19,505	$ 23,969	$ 24,559	$ 25,351	$ 111,979
Interest Income	$ -	$ 84	$ 231	$ 297	$ 307	$ 315	$ 325	$ 1,559
Total Annual Revenue/Savings	$ 1,415	$ 3,452	$ 14,041	$ 19,802	$ 24,276	$ 24,874	$ 25,676	$ 113,538
Cumulative Revenue/Savings	$ 1,415	$ 4,868	$ 18,909	$ 38,711	$ 62,987	$ 87,861	$ 113,538	$ 113,538
Annual Net Cashflow	$ (27,720)	$ (26,582)	$ (2,401)	$ 11,825	$ 16,282	$ 16,562	$ 17,019	$ 4,986
Cumulative Net	$ (27,720)	$ (54,302)	$ (56,704)	$ (44,878)	$ (28,596)	$ (12,034)	$ 4,986	$ 4,986

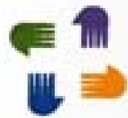
Financial Statistics		
Payback	6.9	years
IRR over 7 years	2.1%	
NPV over 7 years	($5,645)	

Notes: All $ in ,000
Does not reflect any potential interest on debt

Hennepin County
Medical Center

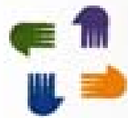
How are Benefits Achieved?

- Cost Avoidance and Revenue Savings
  - Cost of maintenance on current systems being replaced
  - Cost of paying the County for use of the mainframe
  - Cost of staff doing work that will be going away (ie charge and order entry, moving paper charts,document imaging)
  - Costs of services no longer needed (i.e. off site record storage, transcription, AR reduction services)
  - Costs/loss of revenue on duplicate tests, redundant prescriptions
  - Reduced adverse drug events (ADEs)
- New Revenues
  - Improved productivity of physicians in clinics
  - Fewer denials from payers
  - Interest income from improved AR and DNFB (Discharged Not Final Billed)



Major Risks

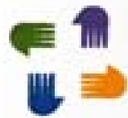
- Staff turnover and/or an inability to fill open positions
- Overcoming resistance to change among providers and employees
  - Resistance to implementation of standardized leading processes
  - Managing unrealistic customer expectations
  - Dealing with competing priorities in the organization
  - Basically trying to change the “culture” of HCMC
- Achievement of expected benefits and cost avoidance
- Design decisions reversed after go live resulting in rework
- Ability to assure ongoing system performance
- Ability to assure data integrity of electronic system
- Reliance on consultants and vendor
- Potential for significant productivity loss with go-lives
- Potential for increase in AR days and other negative revenue cycle impact with go-lives…affecting cash flow even more



Hennepin County Medical Center

Current Status

- Project has been on schedule and on budget
- Overall clinician acceptance exceeded expectations
- Revenue cycle golive was challenging—has taken a year to settle down
- Benefit realization
  - HIM ahead of schedule (transcription, staffing reductions)
  - Cost avoidance of legacy systems on track
  - Tracking of denial benefits has been challenging
  - Duplicate test scores/other departmental savings are difficult to monitor
- Receiving Epic “good install” and “good maintenance discounts
- Ongoing need for additional support resources



Hennepin County
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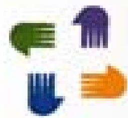
Board Success Factors

- Create a compelling platform
- If possible, define and deliver on an ROI
- Minnesota state mandate for EHR by 2015
- Ongoing status reporting and updating
- Show “success stories”



Hennepin County
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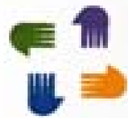
More Future Challenges

- Privacy and security of sensitive personal health information, especially relating to mental health and to medications
- Use of “anonymous” information to improve public health data and improve quality of care – Mayo’s “Intelligent EHR” to implement evidence base approaches for physicians.
- “Minimally invasive infomatics”



The End

Questions and Comments?