



HIMSS ANALYTICS

VA HIMSS ADVOCACY DAY RICHMOND

January 31, 2012



ABOUT HIMSS

- A cause-based, not-for-profit organization exclusively focused on providing global leadership for the optimal use of information technology (IT) and management systems for the betterment of healthcare
 - » HIMSS Vision:
 - Advancing the best use of information and management systems for the betterment of health care
 - » HIMSS Mission:
 - To lead healthcare transformation through the effective use of health information technology

ABOUT HIMSS ANALYTICS

- Wholly-owned, not-for-profit subsidiary of the Healthcare Information and Management Systems Society (HIMSS)
- Collects and analyzes healthcare information related to IT adoption and environments, IS department composition and costs, healthcare trends and purchase-related decisions past and near term future.
- Delivers thought leadership, services, and analytical expertise to the Healthcare IT Community
 - » Consultants
 - » Providers
 - » Vendors

The HIMSS Analytics EMR Adoption Model Explained

WHAT IS ITS VALUE?

WHAT IS AN EMR ADOPTION MODEL ?

- A Capability Maturity Model (SM)
 - » The term "maturity" relates to the degree of formality and optimization of processes, from *ad hoc* practices, to formally defined steps, to managed result metrics, to active optimization of the outcomes¹
- HIMSS Analytics developed a EMR Adoption Model (EMRAM) to reflect how hospitals progress towards a paperless electronic medical record environment
- Each level of maturity is a score derived from a comprehensive survey of the hospital's IT environment

EMR ADOPTION MODEL EXPLAINED

- Progressively sophisticated steps tracking the storage and accessibility of information within an EMR.
 - » Ensures critical clinical information and CDSS guidance are available to the clinician at the point of care
- All technologies in a stage must be accomplished before the hospital can move up a level in the model

WHY DOES HIMSS ANALYTICS COLLECT IT ADOPTION DATA?

- Thought Leadership
 - » Research on maturity vs. quality and efficiency
 - » We can predict where the market is going
 - » Inform government policy decisions
- Participating Hospitals receive:
 - » Their EMR Adoption Model Score
 - Powerful benchmarking that provides a roadmap
 - » Access to the HIMSS Analytics Benchmarking tool consisting of over 40 peer comparison reports assists in:
 - IS strategy development
 - Identifying opportunity for efficiencies
 - Improving competitiveness

WHY DOES HIMSS ANALYTICS COLLECT IT ADOPTION DATA?

- Stage 6 hospitals are validated through a telephone interview
- Stage 7 hospitals are validated through an on-site visit

EMR Adoption ModelSM

Stage	Cumulative Capabilities	2006 Final	2011 Q3
Stage 7	Complete EMR; CCD transactions to share data; Data warehousing; Data continuity with ED, ambulatory, OP	0.0%	1.2%
Stage 6	Physician documentation (structured templates), full CDSS (variance & compliance), full R-PACS	0.1%	5.2%
Stage 5	Closed loop medication administration	0.5%	8.4%
Stage 4	CPOE, Clinical Decision Support (clinical protocols)	3.1%	13.2%
Stage 3	Nursing/clinical documentation (flow sheets), CDSS (error checking), PACS available outside Radiology	18.7%	44.9%
Stage 2	CDR, Controlled Medical Vocabulary, CDS, may have Document Imaging; HIE capable	40.0%	12.4%
Stage 1	Ancillaries - Lab, Rad, Pharmacy - All Installed	17.4%	5.7%
Stage 0	All Three Ancillaries Not Installed	20.4%	9.0%

N=4237

N=5,337

EMR Adoption in the U.S. Market Trended 2006 – 2011

Stage	2006	2007	2008	2009	2010	2011
Stage 7	0.0%	0.0%	0.3%	0.7%	1.0%	1.2%
Stage 6	0.1%	0.8%	0.5%	1.6%	3.2%	5.2%
Stage 5	0.5%	1.4%	2.5%	3.8%	4.5%	8.4%
Stage 4	3.1%	2.2%	2.5%	7.4%	10.5%	13.2%
Stage 3	18.7%	25.1%	35.7%	50.9%	49.0%	44.9%
Stage 2	40.0%	37.2%	31.4%	16.9%	14.6%	12.4%
Stage 1	17.4%	14.0%	11.5%	7.2%	7.1%	5.7%
Stage 0	20.4%	19.3%	15.6%	11.5%	10.1%	9.0%
Number of Hospitals	n = 4,237	n = 5,073	n = 5,166	n = 5,235	n = 5,281	N=5,337

This is how long it takes to make “significant” progress

Data from HIMSS Analytics™ Database



Description of Each Stage of the HIMSS Analytics EMR Adoption Model

EXPLANATION AND VALUE

STAGES 0 AND 1

- Stage 0 – Laboratory, Pharmacy, or Radiology are not installed.
 - » The patient record is paper based
 - » There may be some departmental systems, but they are not integrated
 - » **Value:** Departmental process improvement
- Stage 1 – The core ancillary systems are automated – Laboratory, Pharmacy, and Radiology
 - » The patient record is still primarily paper based
 - » Core clinical departmental systems are installed
 - » Data is not yet being stored in a central database
 - » **Value** – Core clinical data related to results and medications are stored electronically

STAGES 2 AND 3

- Stage 2 – A Clinical Data Repository is installed
 - » A central database containing core clinical data from the core ancillary departments; one data base allows rules capability across departmental data
 - » **Value:** Creates the foundation for a patient centric electronic medical record

- Stage 3 – Nursing Documentation, and Electronic Medication Administration Record (EMAR) Installed
 - » Further capture of core clinical data
 - » **Value:** Allows for basic clinical decision support including duplicate order checking, order sequencing

STAGE 4

- Stage 4 – Computerized Practitioner Order Entry
 - » Physicians are entering their own orders supported by CDSS
 - » **Value:** Standardized and improved care delivery supported by CDSS guidance

STAGE 5

- Closed Loop Medication Administration is being practiced
 - » Pharmacy orders verified by a pharmacologist before dispensing
 - » Use of bar coding at the point of care – the patient and medication (unit dose) must be bar coded
 - » “5 Rights” of closed loop medication administration – the right patient, right drug, the right dose, the right route, and the right time
 - » **Value:** Eliminates medication errors, improves patient safety and improves patient and family confidence.

STAGE 6

- Stage 6 – Physician Documentation and complete Radiology PACS
 - » Physician Documentation with underlying CDSS and clinical guidance
 - » All radiology images are available for review in the Electronic Medical Record environment
 - » **Value:** Structured data allows for data sharing, CDSS and sophisticated analytics; full Radiology PACS offers improved diagnostic efficiency and improved service to the medical staff with image availability throughout the network

STAGE 7

- Stage 7 – Complete EMR, Data Warehousing, Business Continuity, and Health Information Exchange, Data & System Governance
 - » No paper charts used for patient care throughout the hospital
 - » 90% of all physician orders entered by physicians in CPOE
 - » 90% of all medications are verified at bedside
 - » Use of clinical data warehouses to analyze outcomes, protocols, and care delivery processes; care improvement to be demonstrated
 - » Disaster recovery and systems governance demonstrated

» **Value:** discrete data supports sharing with all

STAGE 7, CONTINUED

- Stage 7 is validated with a site visit by two CIOs and a CMIO
 - » Team visits to:
 - Medical surgical unit(s)
 - Pharmacy
 - Medical imaging
 - Emergency department
 - ICU
 - HIM

The HIMSS Analytics EMR Adoption Study

SOME INTERESTING STATISTICS

AVERAGE EMRAM SCORE BY HOSPITAL TYPE

Hospital Type Segment	Mean	Number
Academic/Teaching	4.2658	220
NonAcademic	3.1748	5,117
General Medical/Surgical	3.5204	3,189
Others	2.7735	2,148
Rural	2.4560	1,284
Urban	3.4618	4,053
IDS	3.3765	3,347
Independent Hospital	2.9563	1,990
Critical Access	2.4741	1,330

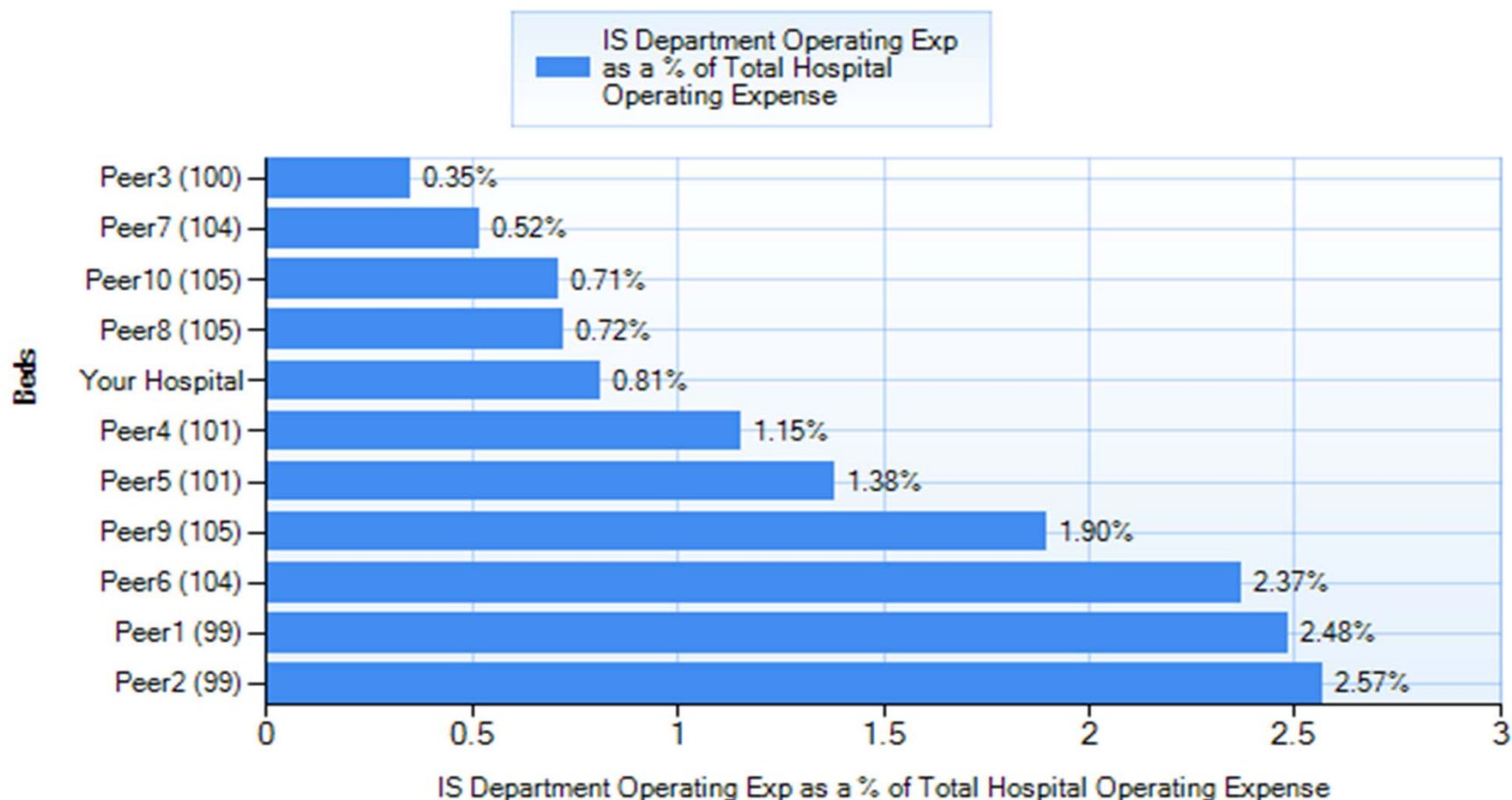
TOP TEN STATES BY AVERAGE EMRAM SCORE

Segment	Mean	Number
Maine	4.4460	37
Rhode Island	4.3700	11
Vermont	4.2833	14
Delaware	4.1662	9
Massachusetts	4.0602	81
Virginia	4.0477	84
Connecticut	3.9186	34
Maryland	3.8349	48
Minnesota	3.6675	136
Illinois	3.6044	200

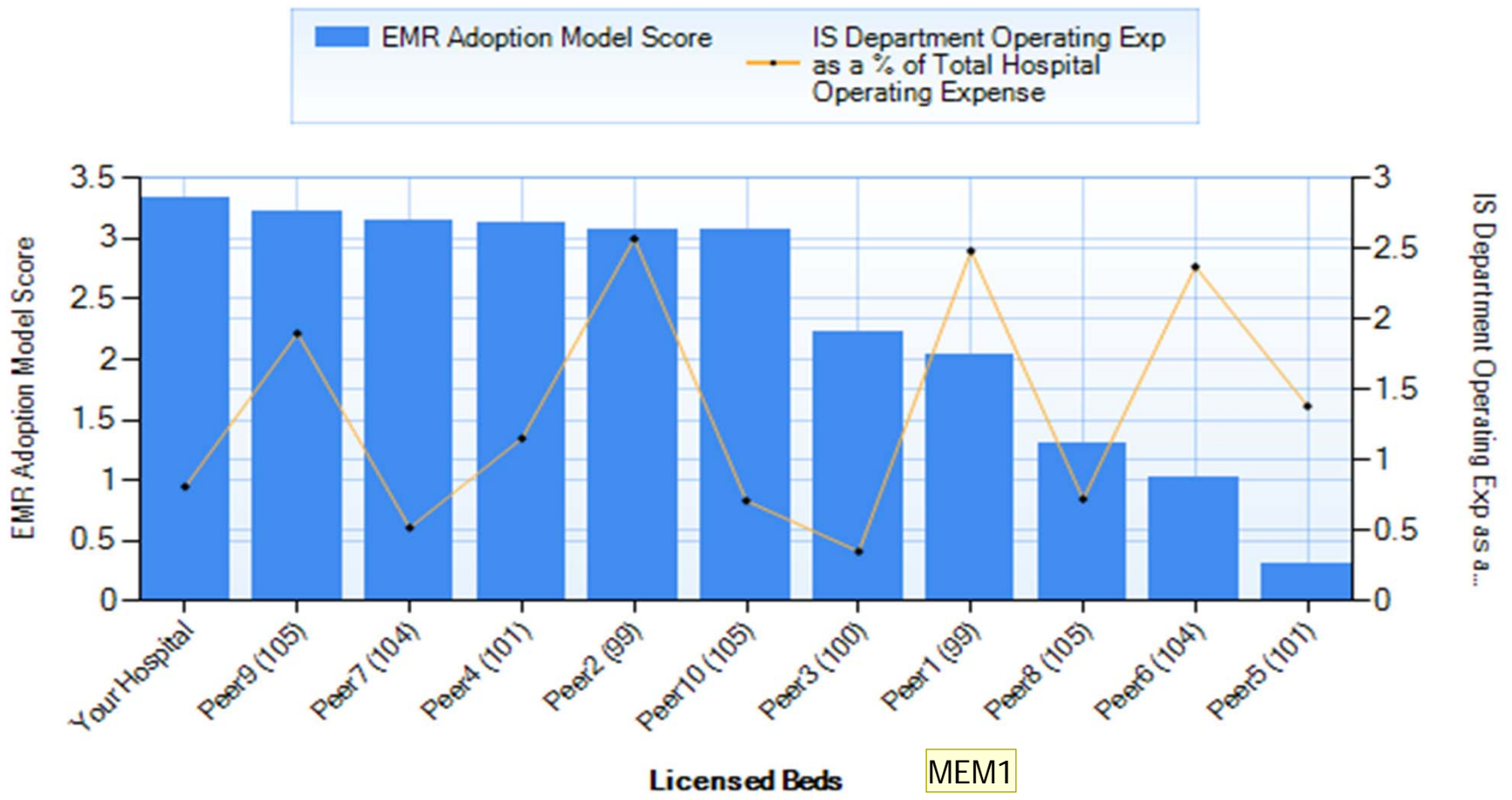
Sample Benchmarking Reports

**PROVIDES GUIDANCE TO I.S.
DEPARTMENT STRATEGY**

IS Department Operating Exp as a % of Total Hospital Operating Expense



EMR Adoption Model Score Compared to IS Dept Op Exp as % of Total Hosp Op Exp



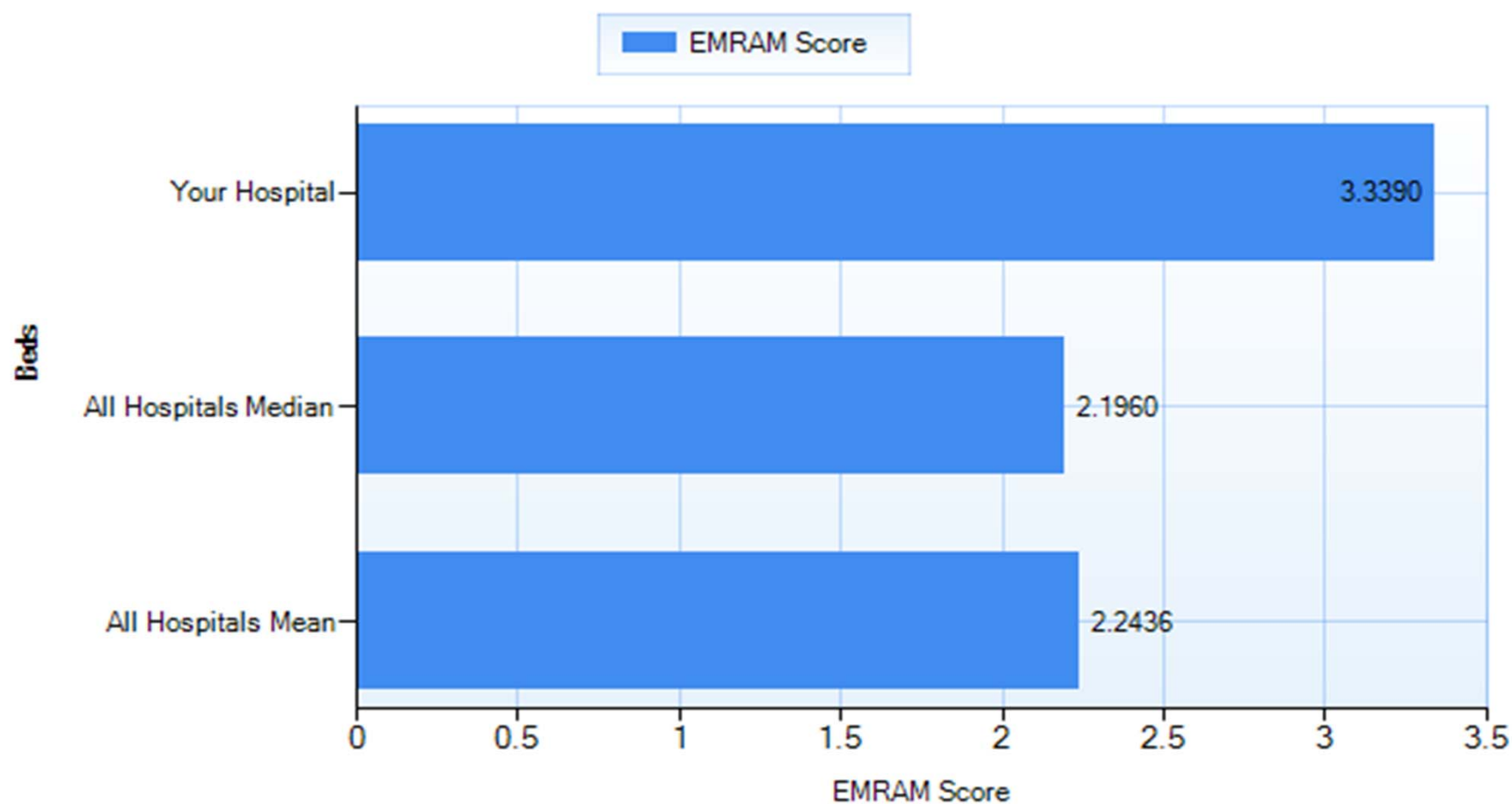
Slide 24

MEM1

Licensed beds does not exist here

Martha Murray, 10/3/2011

EMR Adoption Model Score Compared to all Hospitals in 101 - 200 Bed Size Segment



THANK YOU

