Healthcare Information Technology – Global Trends, Common Challenges

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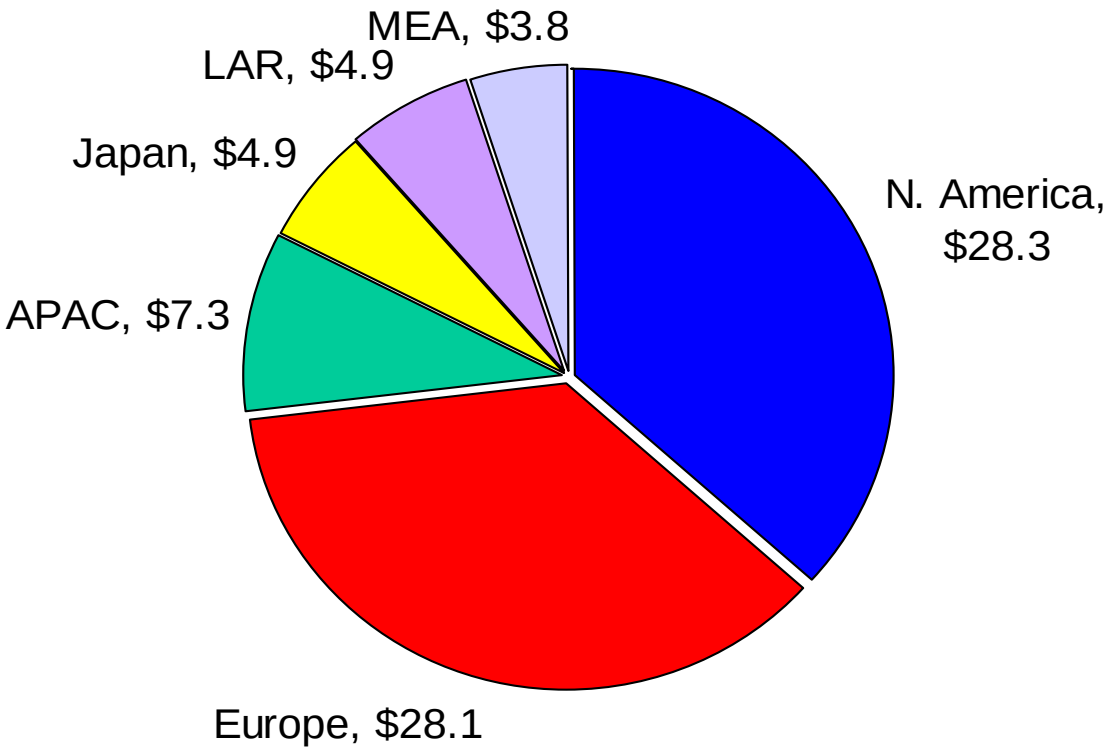
President & CEO

Global Health Policy Issues

- There are differences (public health infrastructure, disease) often defined by national economic development
- Among GCC, EU, North America, others we share issues:
  - Costs: going up too fast
  - Quality: less than what we expect
  - Access: for whom and when

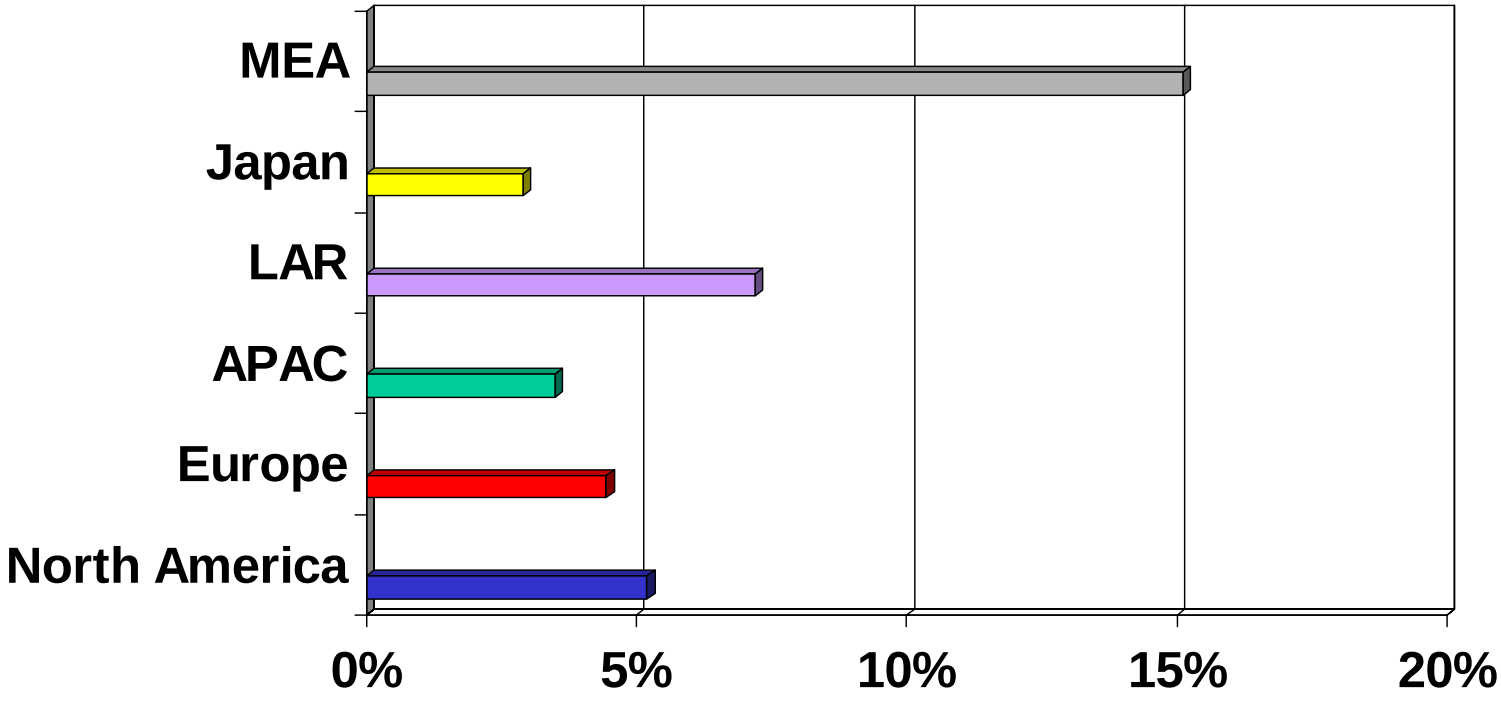
Global Trends in IT Spending: 2007

* In Millions of Dollars



Source: 2007 Gartner Inc and Affiliates

Compound Annual Growth Rate Through 2006-2011



The Value of IT in Healthcare

- Information Technology- Enabled Diabetes Management (ITDM) can save hundreds of lives and electronic registries can save up to $14.5 billion
- Healthcare Information Exchange and Interoperability (HIEI), the electronic flow of information among healthcare organizations, can achieve net savings of about 5% of total US healthcare expenditures annually
- Ambulatory Computerized Provider Order Entry can avoid more than 2 million adverse drug events annually and achieve US cost savings of $44 billion if implemented nationally by avoiding nearly 1.3 million outpatient visits and 190,000 hospital admissions

Center for Information Technology Leadership, various studies

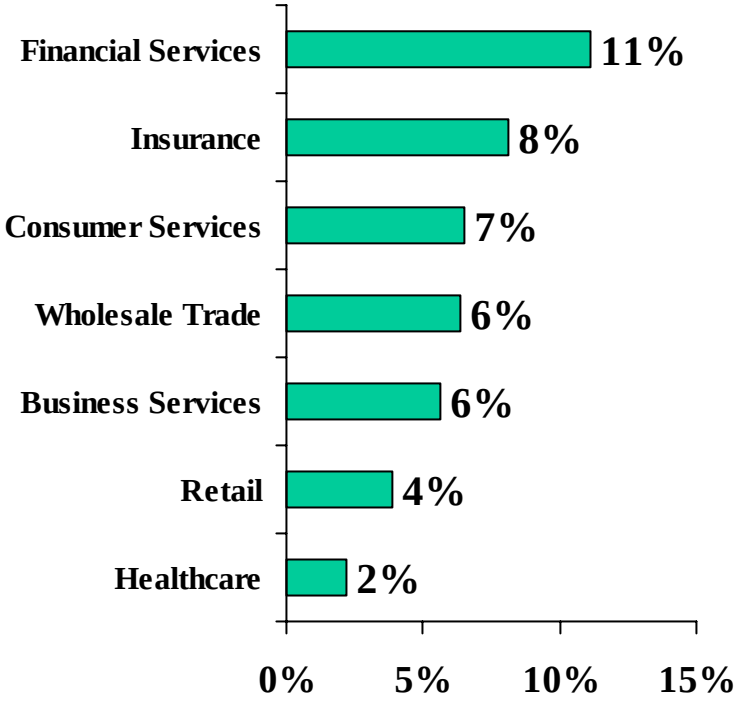
ROI Case Study

Evanston Northwestern Healthcare

- Connected hospital with other locations
  - three hospitals and 50 outpatient clinics and medical offices
  - 6200 system users
- Implemented an EMR with CPOE capability
  - Test results for mammograms take one day, down from up to several weeks
  - Cardiographic reports also take one day, down from as many as 10 days
- Reduced medical errors
  - Number of delays in administering medication down 70%
  - Omitted administration of drugs dropped 20%

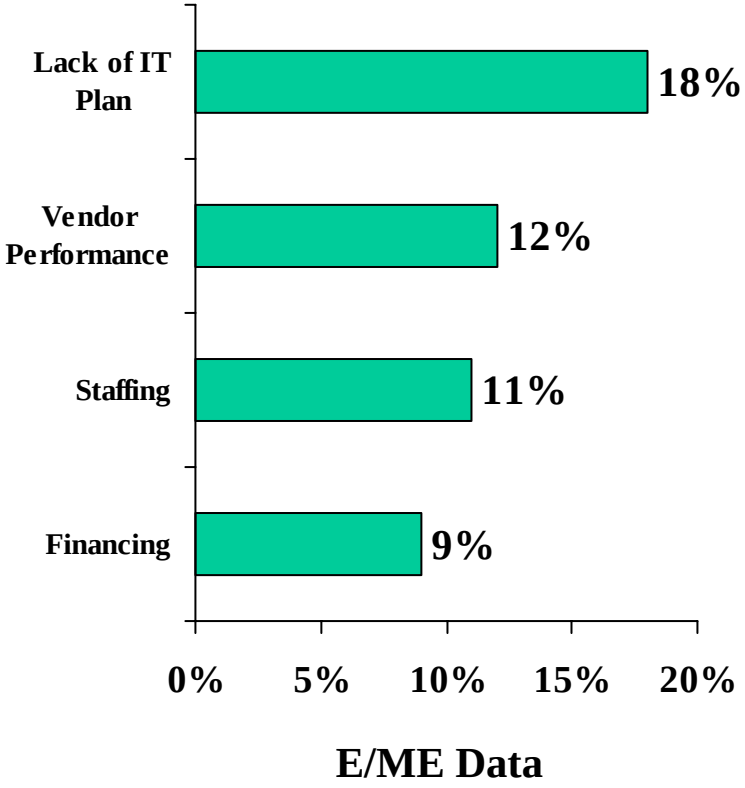
US Healthcare IT: Current Investment

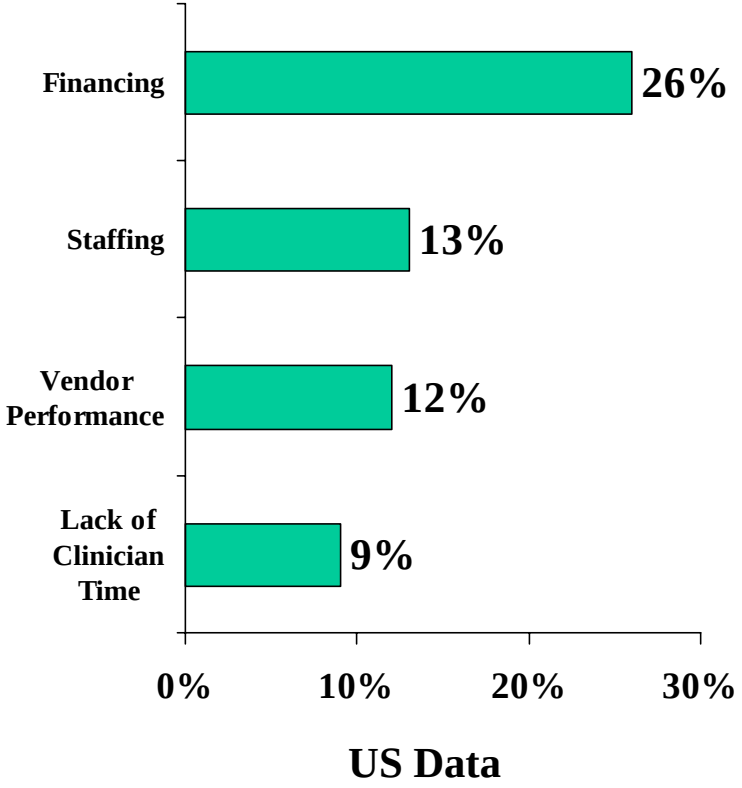
IT Investment as Percentage of Revenue



- One of smallest levels of investment among major industry sectors
- Most transactions are by phone, fax or mail (>90%)
- Key barriers to date:
  - Technical…standards
  - Financial…..reimbursement system
  - Organizational and clinical….leadership

Most Significant Barriers to IT Adoption





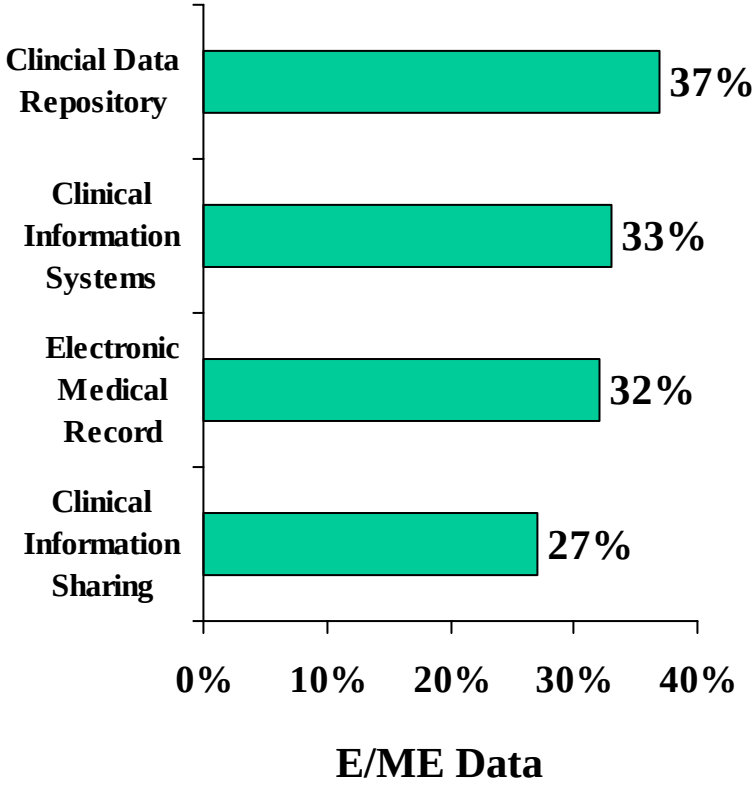
E/ME data: 1st HIMSS EMEA Leadership Survey, 2007; US data: 19th Annual HIMSS Leadership Survey, 2008

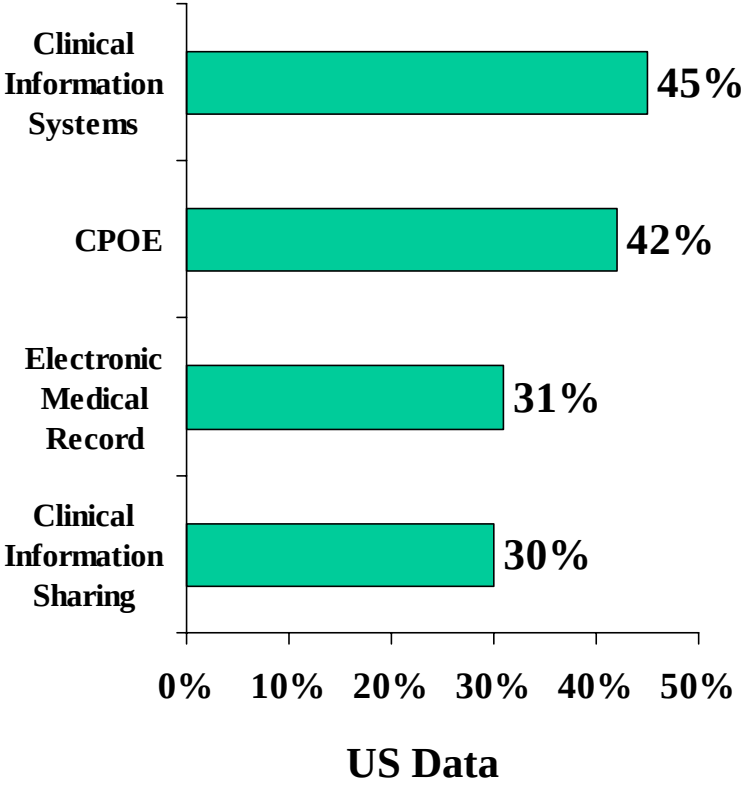
CIO Top IT Issues (2007-2009)

- European/Middle East CIOs
  - Implementing regional/national EHRs (n/a)
  - Connecting hospital with remote environments (4)
  - Integrate systems in multi vendor environment (6)
- National policies driving agenda: data moves with patients
- US CIOs
  - Replacing/Updating clinical information systems (8)
  - Reducing medical errors (5)
  - Implementing EMRs (9)
- Institution specific issues drive agenda: quality issues; time to replace systems; moving toward interoperability

European data: 1st HIMSS EMEA Leadership Survey, 2007; US data: 19th Annual HIMSS Leadership Survey, 2008

Most Important IT Applications (Next Two Years)





E/ME data: 1st HIMSS EMEA Leadership Survey, 2007; US data: 18th Annual HIMSS Leadership Survey, 2007

Stages of IT Adoption

EMR Adoption Model

Stage	Cumulative Capabilities	% of US Hospitals
Stage 7	Medical record fully electronic; CDO able to contribute to EHR as byproduct of EMR	0.0%
Stage 6	Physician documentation (structured templates), full CDSS (variance & compliance), full PACS	0.1%
Stage 5	Closed loop medication administration	0.6%
Stage 4	CPOE, CDSS (clinical protocols)	2.7%
Stage 3	Clinical documentation (flow sheets), CDSS (error checking), PACS available outside Radiology	14.2%
Stage 2	CDR, CMV, CDSS inference engine, may have Document Imaging	42.9%
Stage 1	Ancillaries – Lab, Rad, Pharmacy	21.8%
Stage 0	All Three Ancillaries Not Installed	17.9%

Source: HIMSS Analytics Databases (derived from the Dorenfest IHDS+ Database™)

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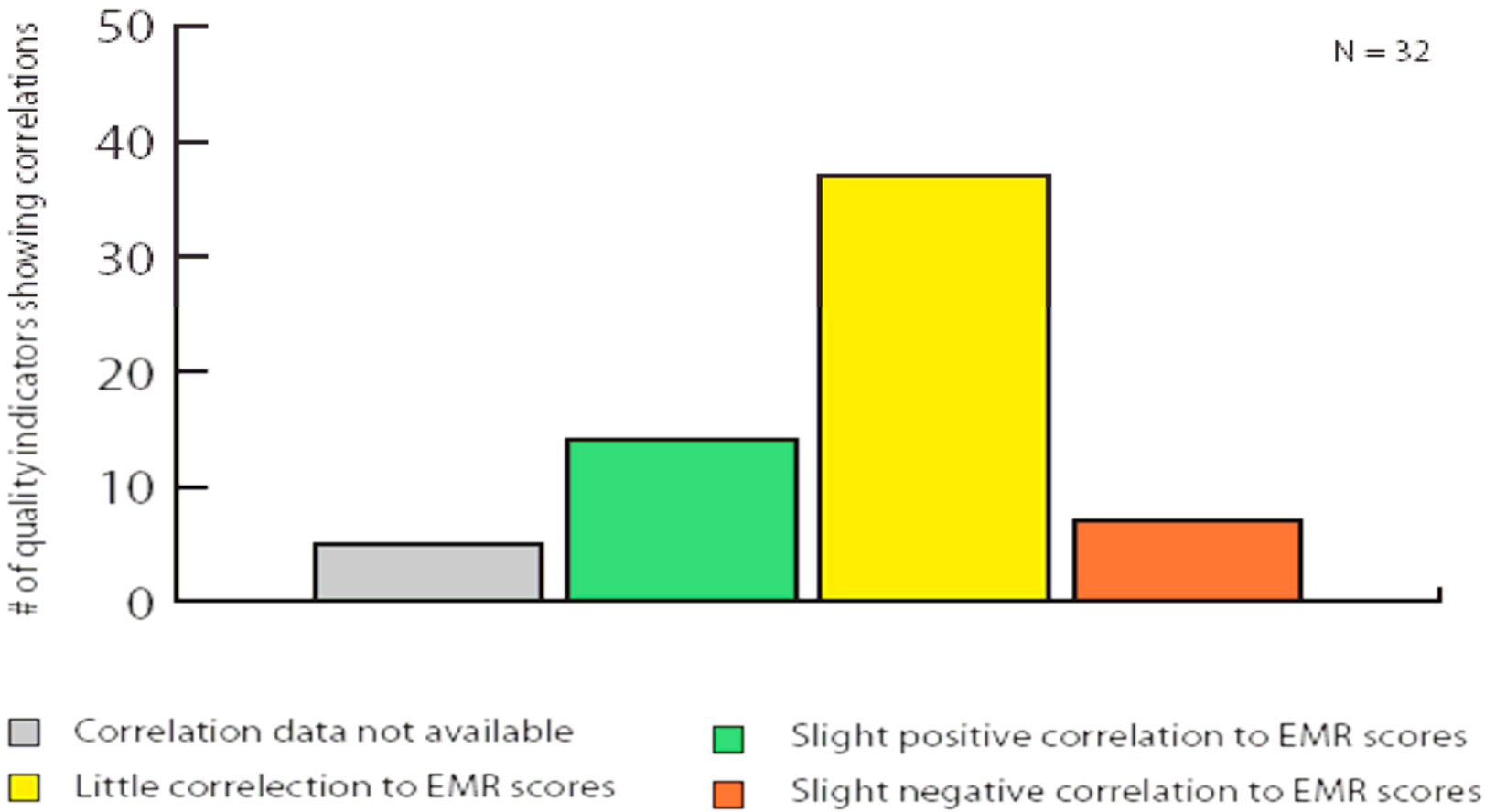
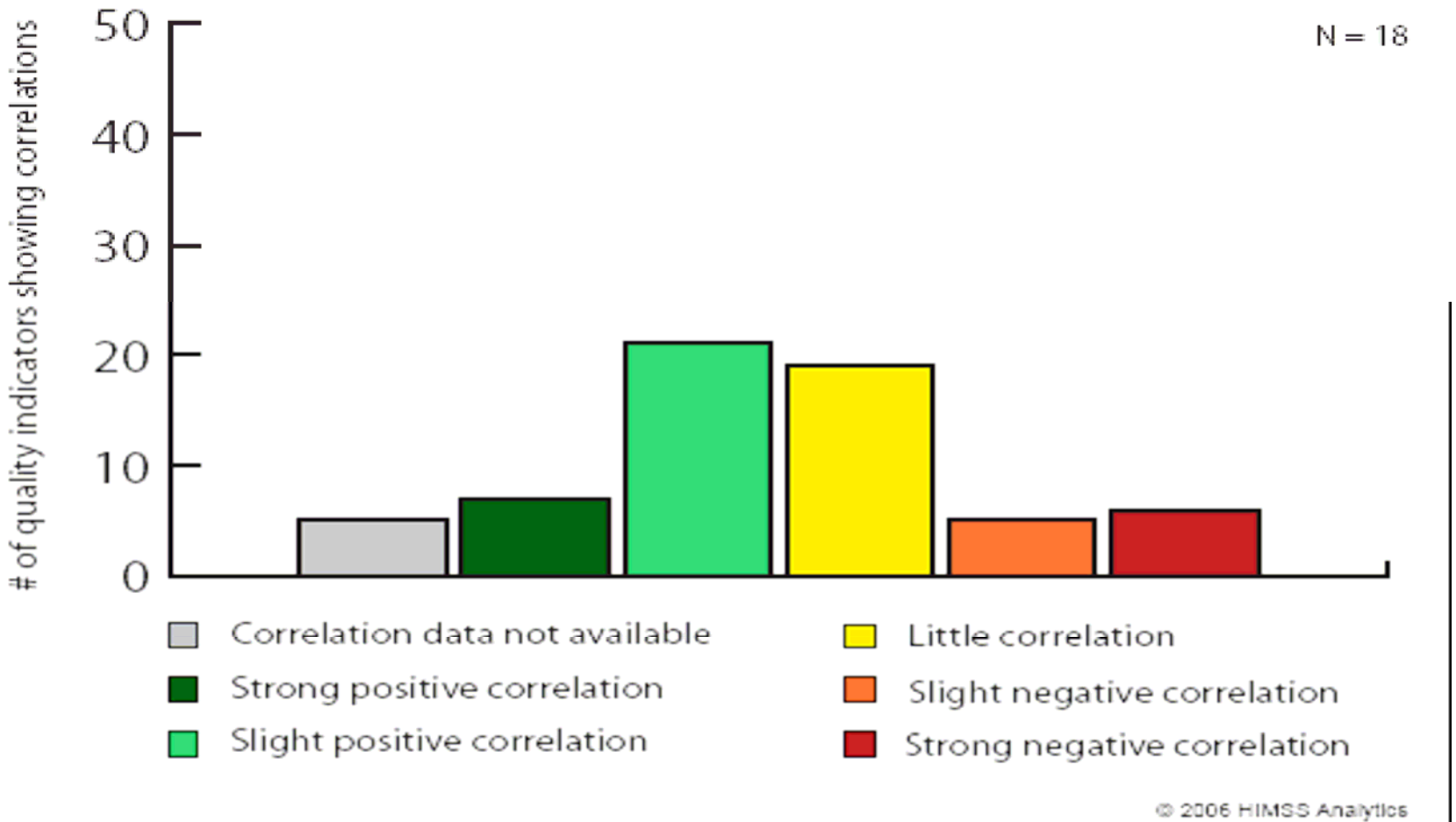
Hospitals With EMR Scores of 3 or More



Hospitals with EMR Scores of 4 or More



Stage Values of the EMR Adoption Model

Stage 7	Paperless environment; discreet data supports data sharing with all stakeholders; market efficiency
Stage 6	Improve diagnostic efficiency; eliminate paper; drive standard treatment protocols
Stage 5	Eliminate medication errors, improve patient safety
Stage 4	Improve care delivery efficiency and reduce medical errors
Stage 3	Standardize care delivery; improve outcomes and quality
Stage 2	Provide access to clinicians for diagnostic results; decrease LOS
Stage 1	Access to diagnostic results; improve dept. operations
Stage 0	Low hospital system value; only departmental value.

Data Overview

- Data on 114 healthcare applications
- Over 700 data elements that includes demographic, hardware, network, security, and application information
- Data related to clinician usage of applications is also captured
- Data on organizational relationships and ownership is collected
- Information on major capital projects for hospital systems is also tracked

Database Participation

- Contact Michelle Glenn for input of demographic data, login access to Database - michelle.glenn@himssanalytics.org
- Login to HIMSS Analytics website to complete survey. (Questions? – e-mail Michelle)
- Once Quality team has reviewed, login to Benchmarking report site will be sent to you
- You'll have access to complete benchmarking report environment free of charge

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- Module 5: **Electronic Record Keeping in Healthcare**

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Future Educational Directions: HIMSS, SAHI, GCC

- Regional educational events
- Customized & localized educational events
- Distance learning
  - HITS
  - e Learning Academy
- Regional GCC-HIMSS advisory board

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