What's Hot in Health IT

Smart VAR Healthcare Summit
August, 21, 2014
Chicago, IL

HIMSS
transforming health through IT

@JohnHDaniels

Agenda

- Who or what is HIMSS
- EMR Market Adoption Trends
- Notable EMR Adoption Correlations
- Final thoughts

Who or what is HIMSS

HIMSS Vision

- Better health through information technology.

HIMSS Analytics Mission

- Provide the highest quality data and analytical expertise to support improved decision-making for healthcare providers, healthcare IT companies and consulting firms.

US EMR Adoption Model℠

Stage	Cumulative Capabilities
Stage 7	Complete EMR, CCD transactions to share data; Data warehousing; Data continuity with ED, ambulatory, OP
Stage 6	Physician documentation (structured templates), full CDSS (variance & compliance), full R-PACS
Stage 5	Closed loop medication administration
Stage 4	CPOE, Clinical Decision Support (clinical protocols)
Stage 3	Nursing/clinical documentation (flow sheets), CDSS (error checking), PACS available outside Radiology
Stage 2	CDR, Controlled Medical Vocabulary, CDS, may have Document Imaging; HIE capable
Stage 1	Ancillaries - Lab, Rad, Pharmacy - All Installed
Stage 0	All Three Ancillaries Not Installed

Why We Do What We Do

- **Thought leadership**
  - Quality, Safety, Efficiency improvements
- **To reflect the market**
  - Where is the market heading
- **To inform government policy**
  - Contributor to architecture of Meaningful Use program
  - Used around the world to gather data for policy formulation
- **To "drive the market"**
  - A useful roadmap for CIOs, governance boards, public policy

Market Trends

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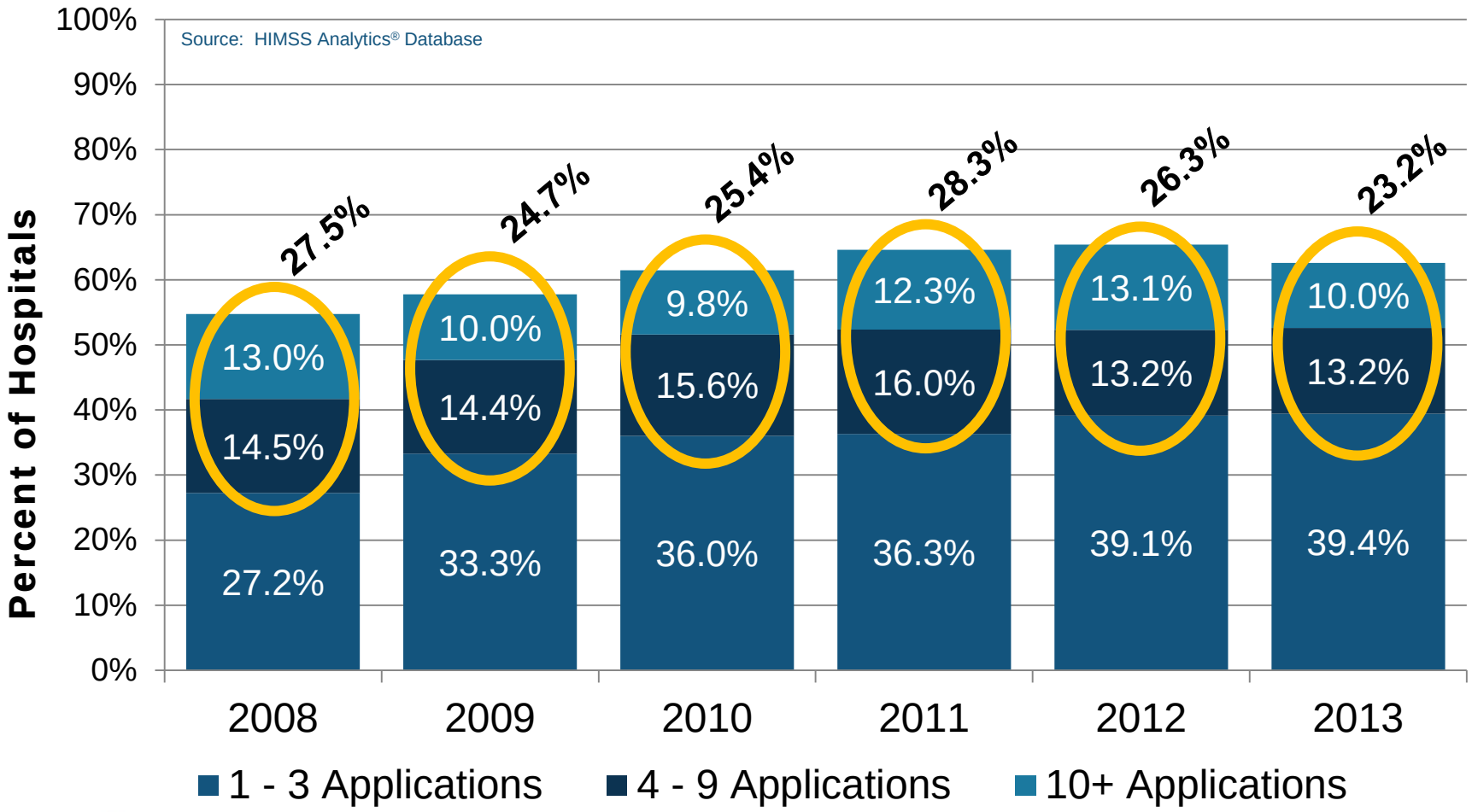
The HIT buying patterns of U.S. hospitals have been relatively "predictable" over the past few years.

Roughly one-quarter of hospitals change four or more HIT applications a year…



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… with clinical applications dominating the most frequently acquired / installed applications …

Application	2008	2009	2010	2011	2012	2013	AVG RANK
Computerized Practitioner Order Entry (CPOE)	2	1	1	1	1	2	**1.2**
Physician Documentation	3	3	2	2	2	1	**2.0**
Electronic Medication Administration Record (EMAR)	1	2	3	3	3	3	**2.8**
Nursing Documentation	4	4	4	4	4	5	**4.2**
Order Entry (Includes Order Communications)	6	6	5	5	5	7	**5.6**

Source: HIMSS Analytics® Database

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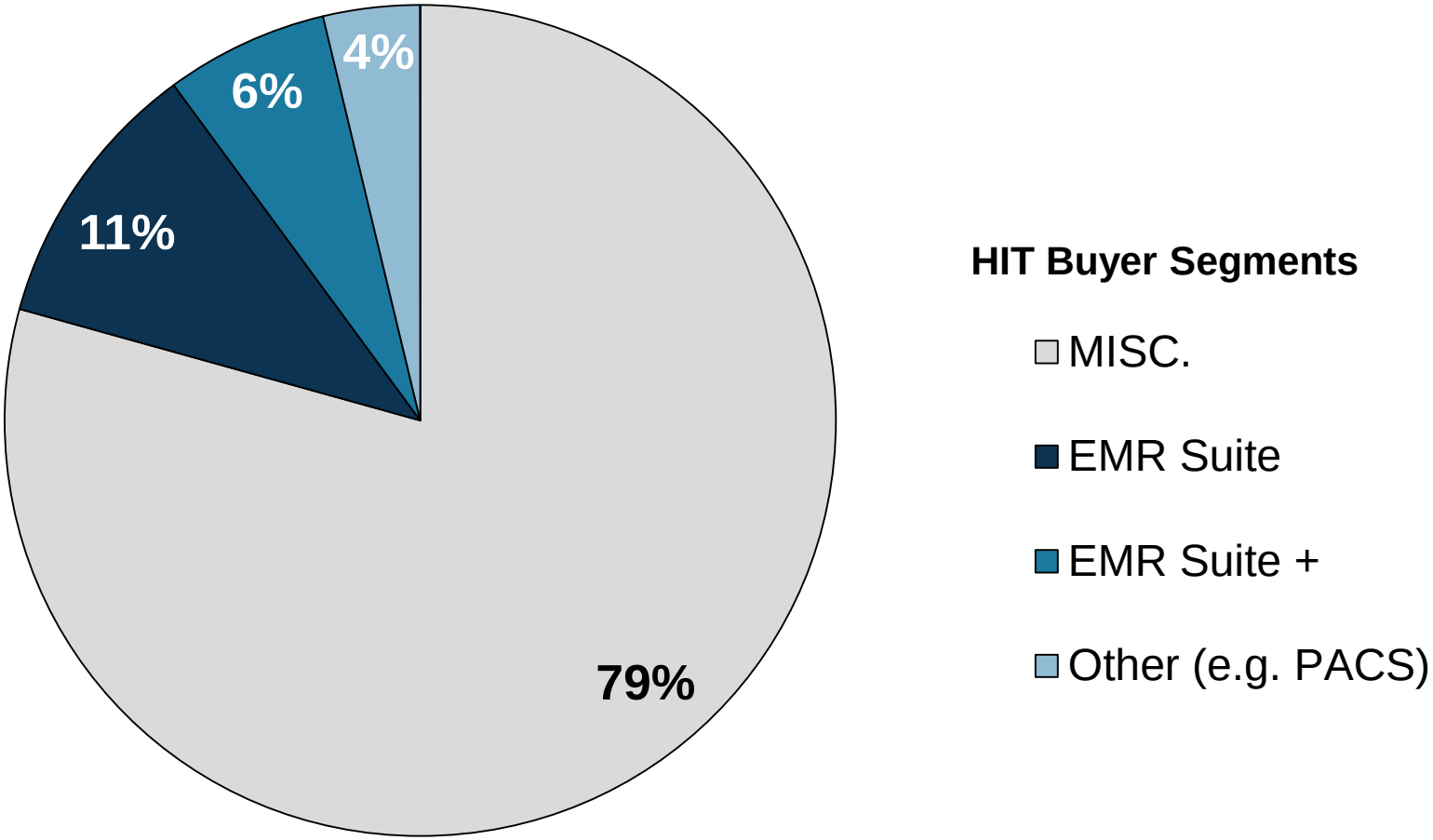
...resulting in distinct HIT buyer segments over the past five years.



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US EMR Adoption Model℠

Stage	Cumulative Capabilities	2009 Q2 ARRA	2014 Q2
Stage 7	Complete EMR, CCD transactions to share data; Data warehousing; Data continuity with ED, ambulatory, OP	0.3%	3.2%
Stage 6	Physician documentation (structured templates), full CDSS (variance & compliance), full R-PACS	1.0%	15.0%
Stage 5	Closed loop medication administration	4.5%	27.5%
Stage 4	CPOE, Clinical Decision Support (clinical protocols)	3.6%	15.3%
Stage 3	Nursing/clinical documentation (flow sheets), CDSS (error checking), PACS available outside Radiology	38.4%	25.4%
Stage 2	CDR, Controlled Medical Vocabulary, CDS, may have Document Imaging; HIE capable	31.6%	5.9%
Stage 1	Ancillaries - Lab, Rad, Pharmacy - All Installed	7.2%	2.8%
Stage 0	All Three Ancillaries Not Installed	13.4%	4.9%
		N = 5,167	N = 5,447

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US EMR Adoption Model℠

Stage	Cumulative Capabilities	2011 Q2 MU Payments	2014 Q2	
Stage 7	Complete EMR, CCD transactions to share data; Data warehousing; Data continuity with ED, ambulatory, OP	1.1%	3.2%	+291%
Stage 6	Physician documentation (structured templates), full CDSS (variance & compliance), full R-PACS	4.0%	15.0%	+375%
Stage 5	Closed loop medication administration	6.1%	27.5%	+451%
Stage 4	CPOE, Clinical Decision Support (clinical protocols)	12.3%	15.3%	
Stage 3	Nursing/clinical documentation (flow sheets), CDSS (error checking), PACS available outside Radiology	46.3%	25.4%	
Stage 2	CDR, Controlled Medical Vocabulary, CDS, may have Document Imaging; HIE capable	13.7%	5.9%	-57%
Stage 1	Ancillaries - Lab, Rad, Pharmacy - All Installed	6.6%	2.8%	-55%
Stage 0	All Three Ancillaries Not Installed	10.0%	4.9%	-51%
		N = 5,167	N = 5,447	

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US EMR Adoption Model℠

Stage	Cumulative Capabilities	2011 Q2 MU Payments	2014 Q2
Stage 7	Complete EMR, CCD transactions to share data; Data warehousing; Data continuity with ED, ambulatory, OP	1.1%	3.2%
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Stage 0	All Three Ancillaries Not Installed	10.0%	4.9%
		N = 5,441	N = 5,447

MU Stage 3*

MU Stage 2

MU Stage 1

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*Anticipates MU Stage 3 Emphasis on Information Exchange

EMR Adoption in the U.S. Market Trended 2006 – 2013

	2006	2007	2008	2009	2010	2011	2012	2013
Stage 7	0.0%	0.0%	0.3%	0.7%	1.0%	1.2%	1.8%	**2.9%**
Stage 6	0.1%	0.8%	0.5%	1.6%	3.2%	5.2%	7.3%	**12.5%**
Stage 5	0.5%	1.4%	2.5%	3.8%	4.5%	8.4%	11.5%	**22.0%**
Stage 4	3.1%	2.2%	2.5%	7.4%	10.5%	13.2%	14.0%	**15.5%**
Stage 3	18.7%	25.1%	35.7%	50.9%	49.0%	44.9%	41.7%	**30.3%**
Stage 2	40.0%	37.2%	31.4%	16.9%	14.6%	12.4%	11.4%	**7.6%**
Stage 1	17.4%	14.0%	11.5%	7.2%	7.1%	5.7%	4.8%	**3.3%**
Stage 0	20.4%	19.3%	15.6%	11.5%	10.1%	9.0%	7.5%	**5.8%**
# of Hospitals	n = 4,237	n = 5,073	n = 5,166	n = 5,235	n = 5,281	n = 5,337	n = 5,310	n = 5,458

Source: HIMSS Analytics® Database

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

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Average IT Operating Expenses as a Percent of Total Annual Operating Expense

Source: HIMSS Analytics® Database

Numbers in white represent the average annual operating expense.

Numbers in gray represent one standard deviation from the calculated mean average.

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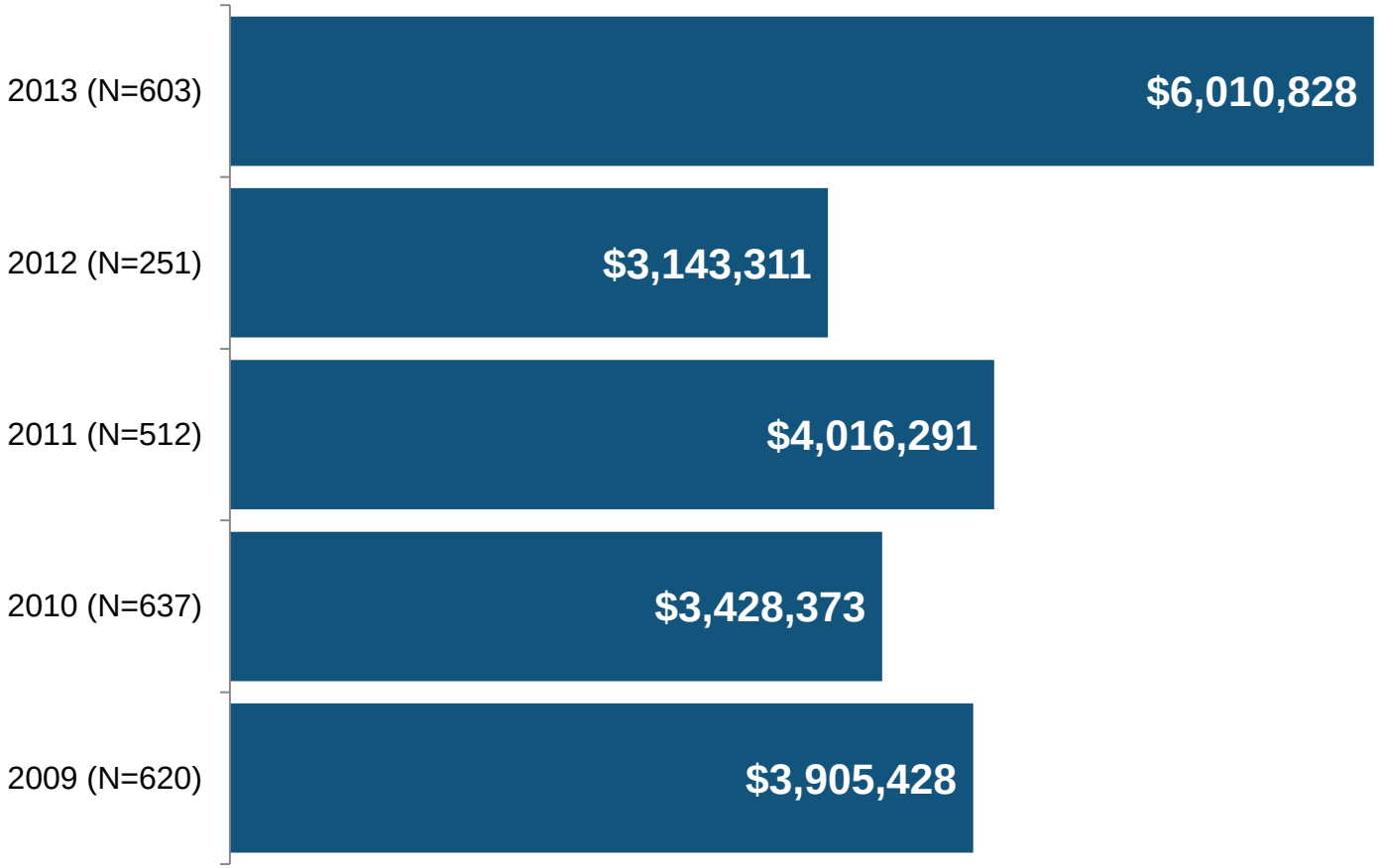
Average IT Capital Expense



Source: HIMSS Analytics® Database

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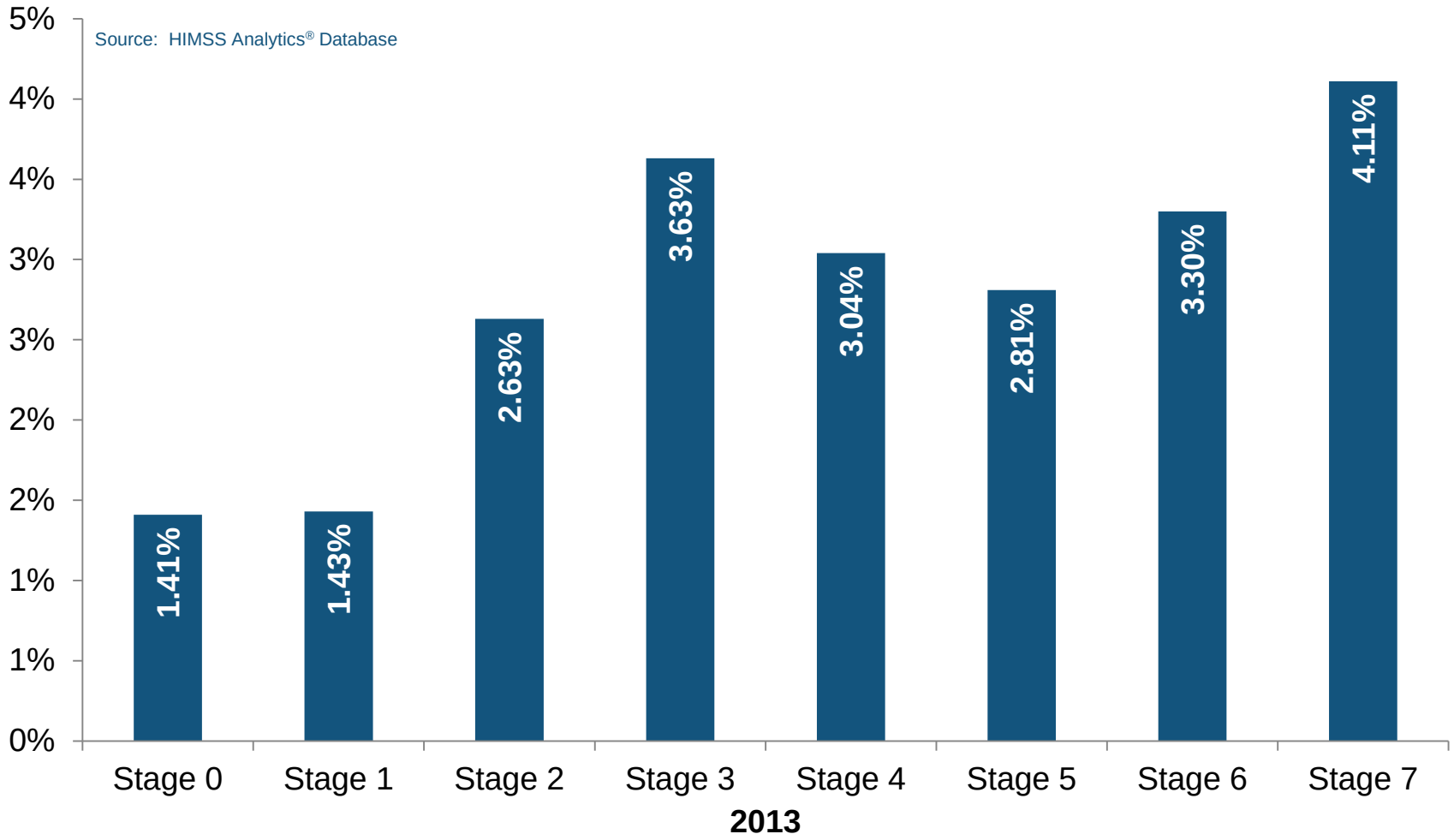
Average IS Operating Expenses*



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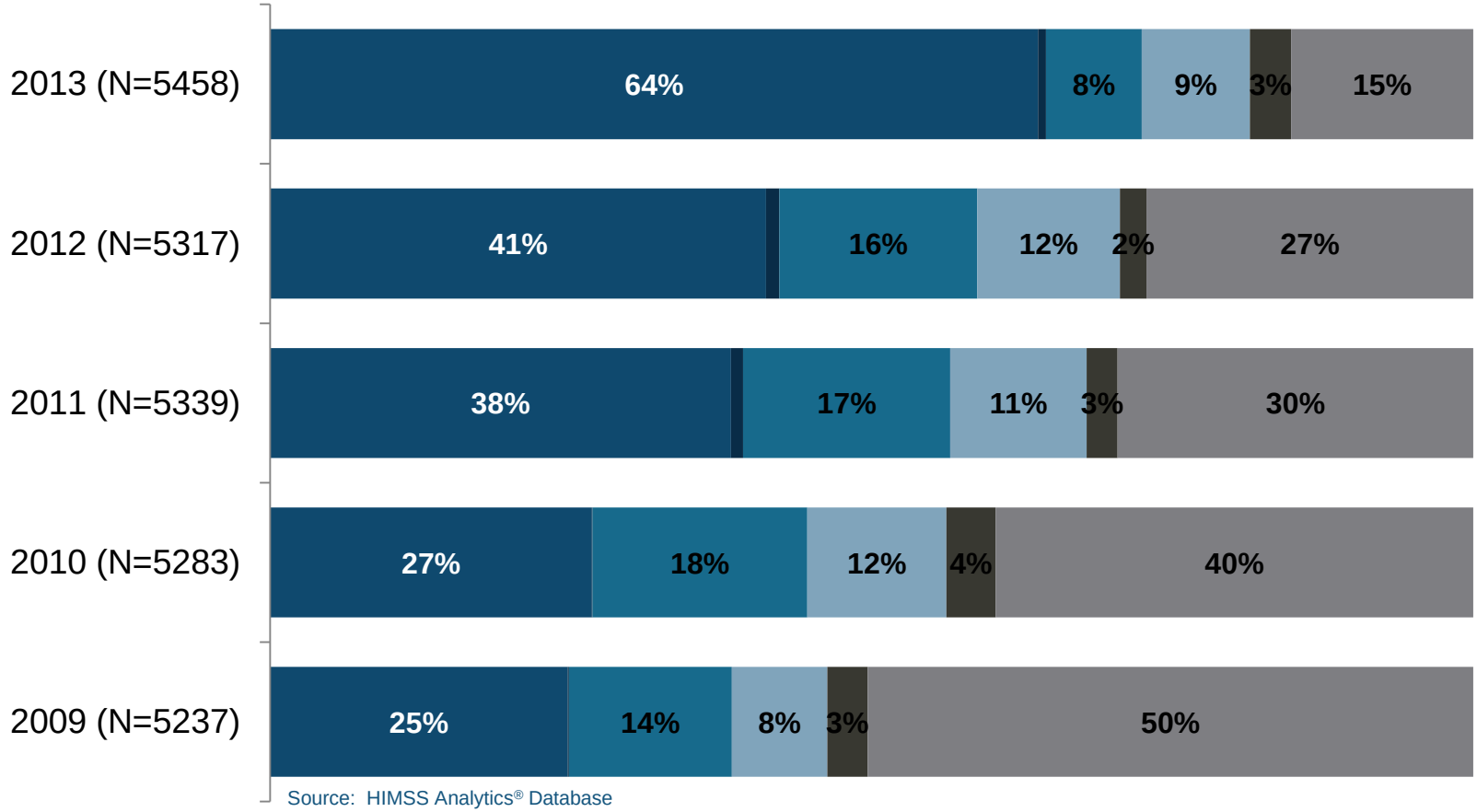
*IS Operating Expense as a percent of Total Annual Operating Expense.

Computerized Practitioner Order Entry (CPOE)



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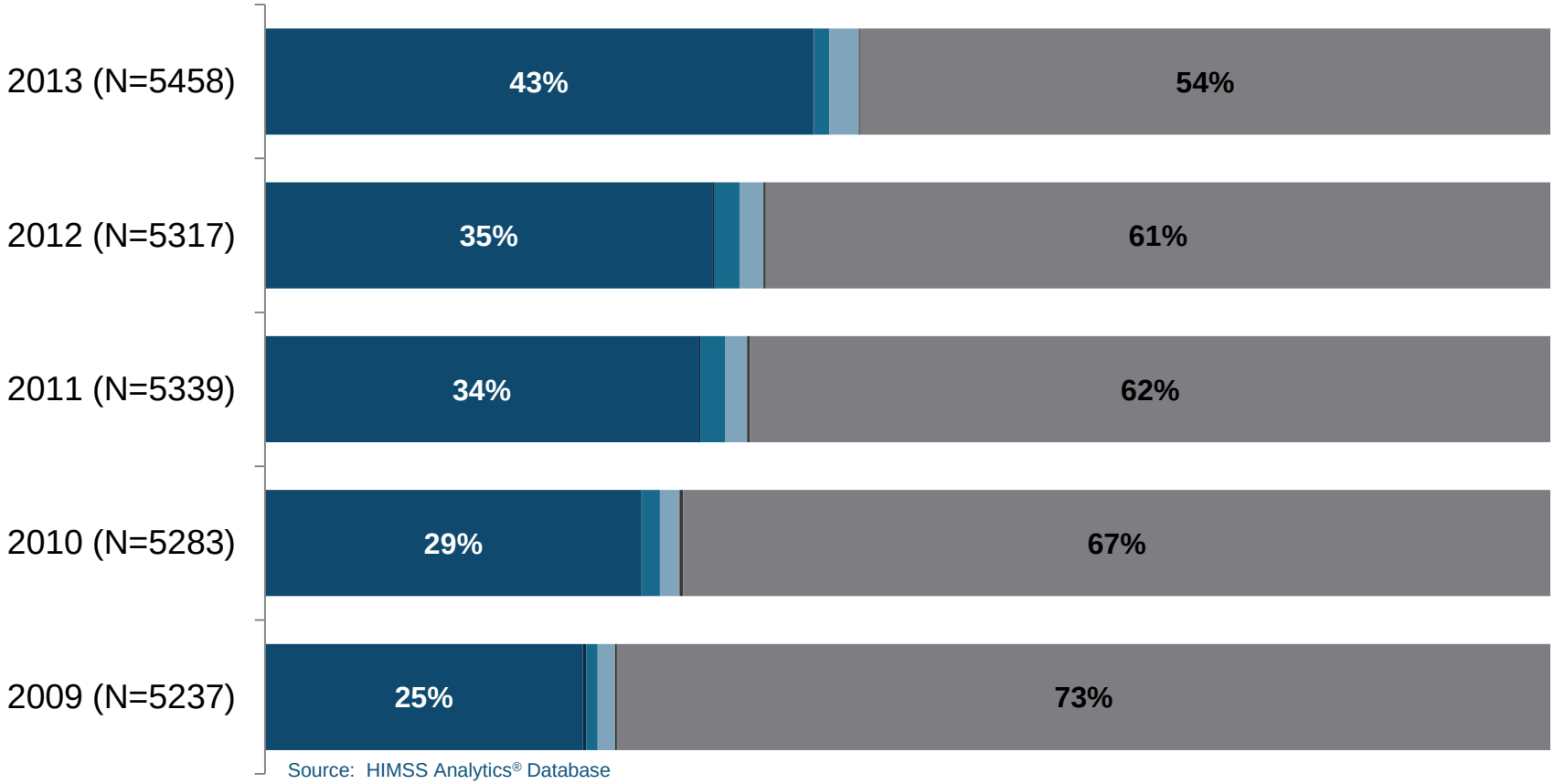
Data Warehousing / Mining – Clinical



Source: HIMSS Analytics® Database

- Automated
- Replacement Purchases
- Contracted - Not Yet Installed
- Contracted - Installation In Process
- First Time Purchase
- Not Automated, No Plans to Purchase

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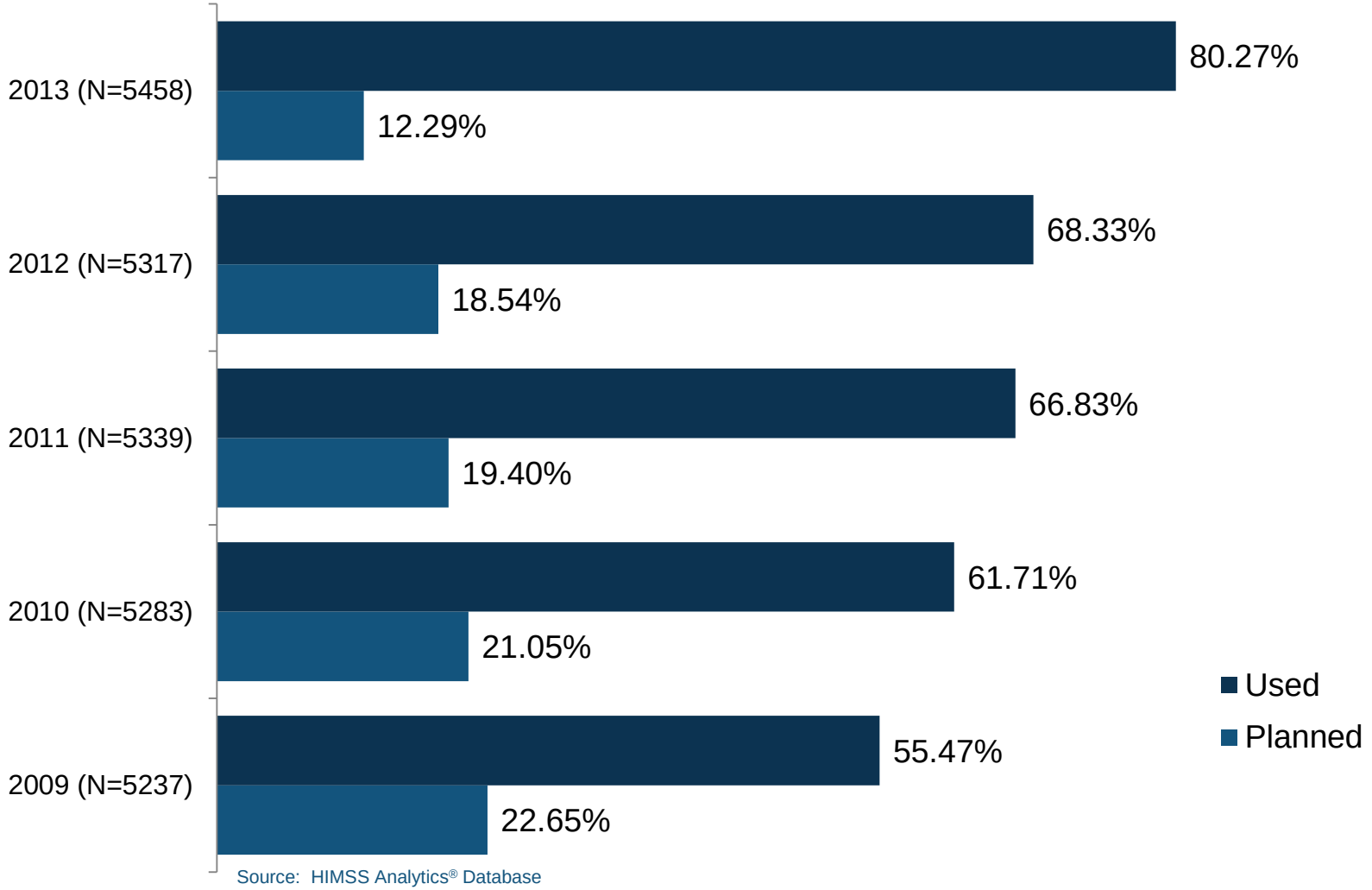
Bar Coding in the Pharmacy



Source: HIMSS Analytics® Database

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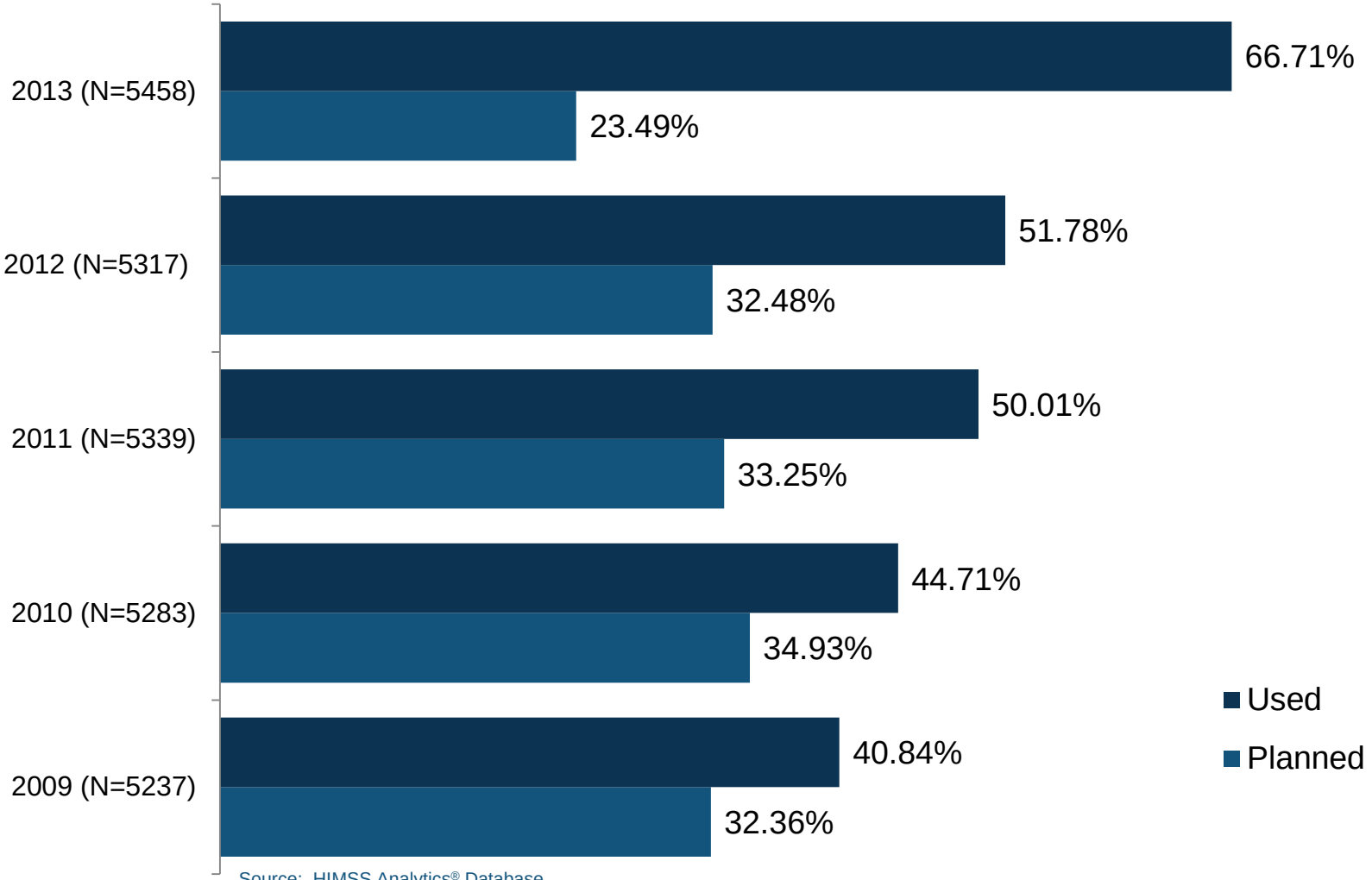
Bar Coding for Medication Administration



Source: HIMSS Analytics® Database

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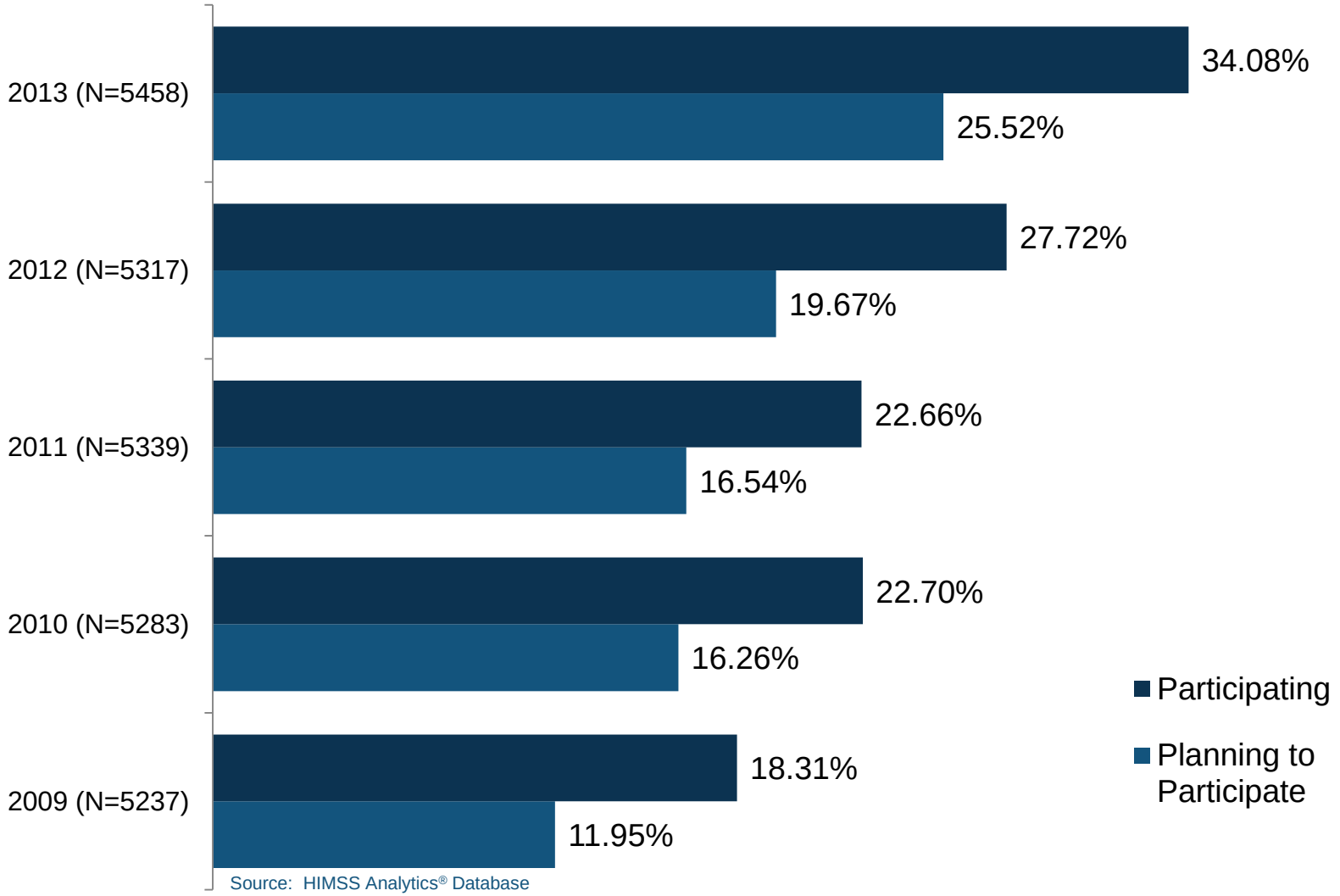
HIE Adoption (noun)



Source: HIMSS Analytics® Database

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Top 10 Applications Planned For Purchase

2009

Application	Number of Hospitals	% of 5237 Total Hospitals
CPOE	182	3.48%
eMAR	179	3.42%
RPACS	132	2.52%
Physician Documentation	123	2.35%
Nursing Documentation	120	2.29%
Document Management	80	1.53%
CDSS	75	1.43%
Order Entry	72	1.37%
Clinical Data Repository	70	1.34%
EDIS	69	1.32%
CPACS	69	1.32%

2013

Application	Number of Hospitals	% of 5458 Total Hospitals
CPOE	222	4.07%
Patient Portal	186	3.41%
Physician Documentation	183	3.35%
Physician Portal	160	2.93%
Physician Assessment Software Tool	127	2.33%
HIE	94	1.72%
Radiology Information System	85	1.56%
Materials Management	83	1.52%
Laboratory Information System	82	1.50%
CDSS	77	1.41%
Nursing Documentation	77	1.41%

Source: HIMSS Analytics® Database

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Ambulatory EMR Adoption Model℠

Stage	Cumulative Capabilities	2012 Q2	2014 Q2
Stage 7	HIE capable, sharing of data between the EMR and community based EHR, business and clinical intelligence	0.00%	4.3%
Stage 6	Advanced clinical decision support, proactive care management, structured messaging	1.20%	5.83%
Stage 5	Personal health record, online tethered patient portal	0.04%	5.56%
Stage 4	CPOE, Use of structured data for accessibility in EMR and internal and external sharing of data	0.41%	1.23%
Stage 3	Electronic messaging, computers have replaced the paper chart, clinical documentation and clinical decision support	10.92%	11.42%
Stage 2	Beginning of a CDR with orders and results, computers may be at point-of-care, access to results from outside facilities	34.1%	30.74%
Stage 1	Desktop access to clinical information, unstructured data, multiple data sources, intra-office/informal messaging	5.29%	34.29%
Stage 0	Paper chart based	48.04%	6.63%
		N = 9,247	N = 26,008

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Summary Profile of a Stage 6 and 7 Organization

- **Use data to drive improved outcomes related to:**
  - Process, Financial, Clinical, Quality & Safety
- **Are paperless, or near paperless** (create no paper)
  - All clinically relevant data is in the EMR
- **Are fully committed to continuous process improvement through collaboration**
  - Strong IT leadership and executive champions
  - Clinician/end-user champions
- **Have embraced their technology supplier as a partner**

Some Notable Correlations With EMRAM

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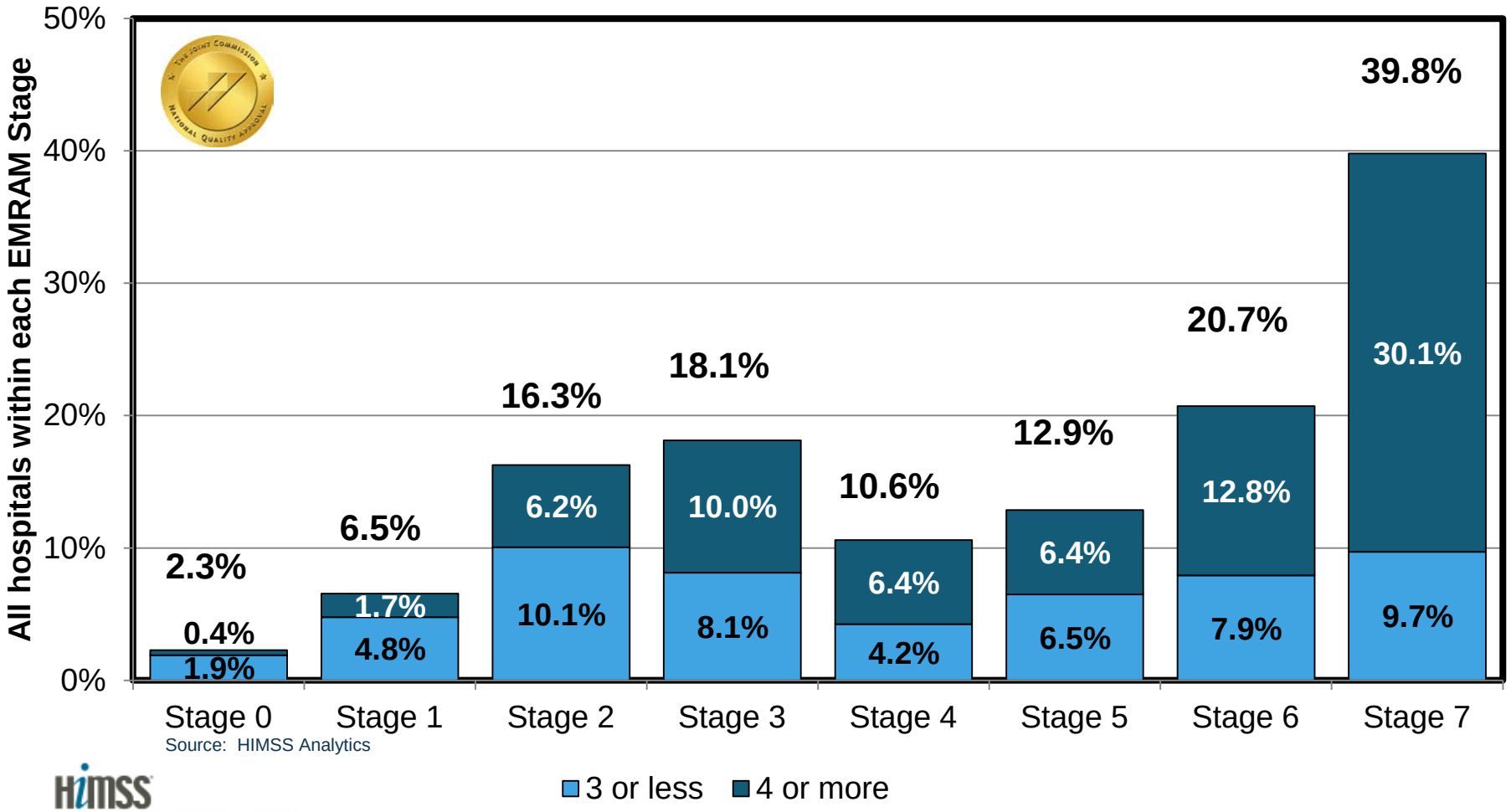
Representation of TJC Top Performing Hospitals BY Number of Quality Metrics Excelling In, within each EMRAM Stage



Source: HIMSS Analytics

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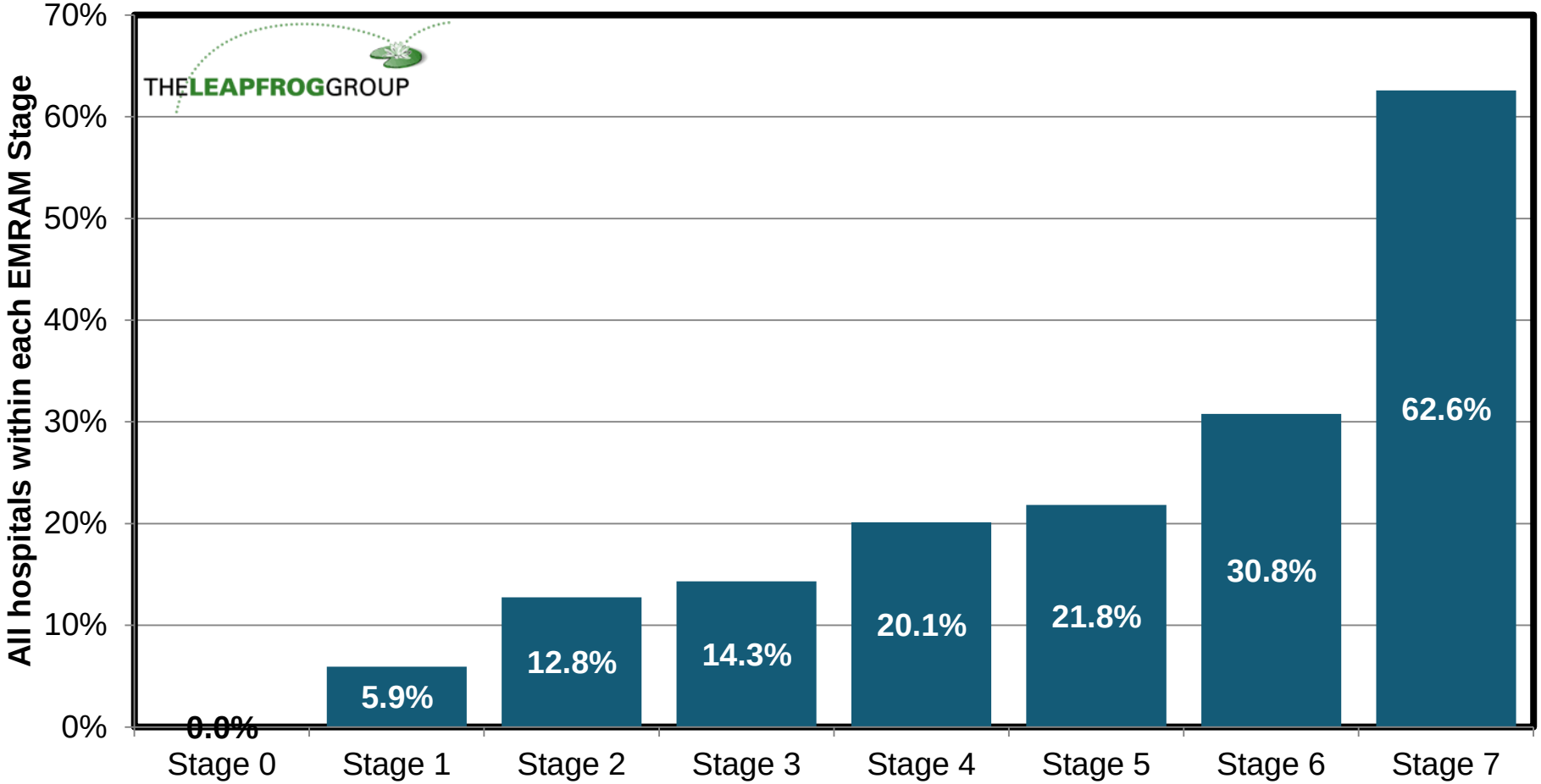
Representation of Hospitals with an "A" Leapfrog Hospital Safety Grade by EMRAM Stage



Source: HIMSS Analytics

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Value-Based Purchasing (VBP) Program*

Clinical Performance Score + **Patient Experience Performance Score** = **Total Performance Score**

70% **30%**

TPS "100" = **High Value Performance**

TPS "0" = **Low Value Performance**

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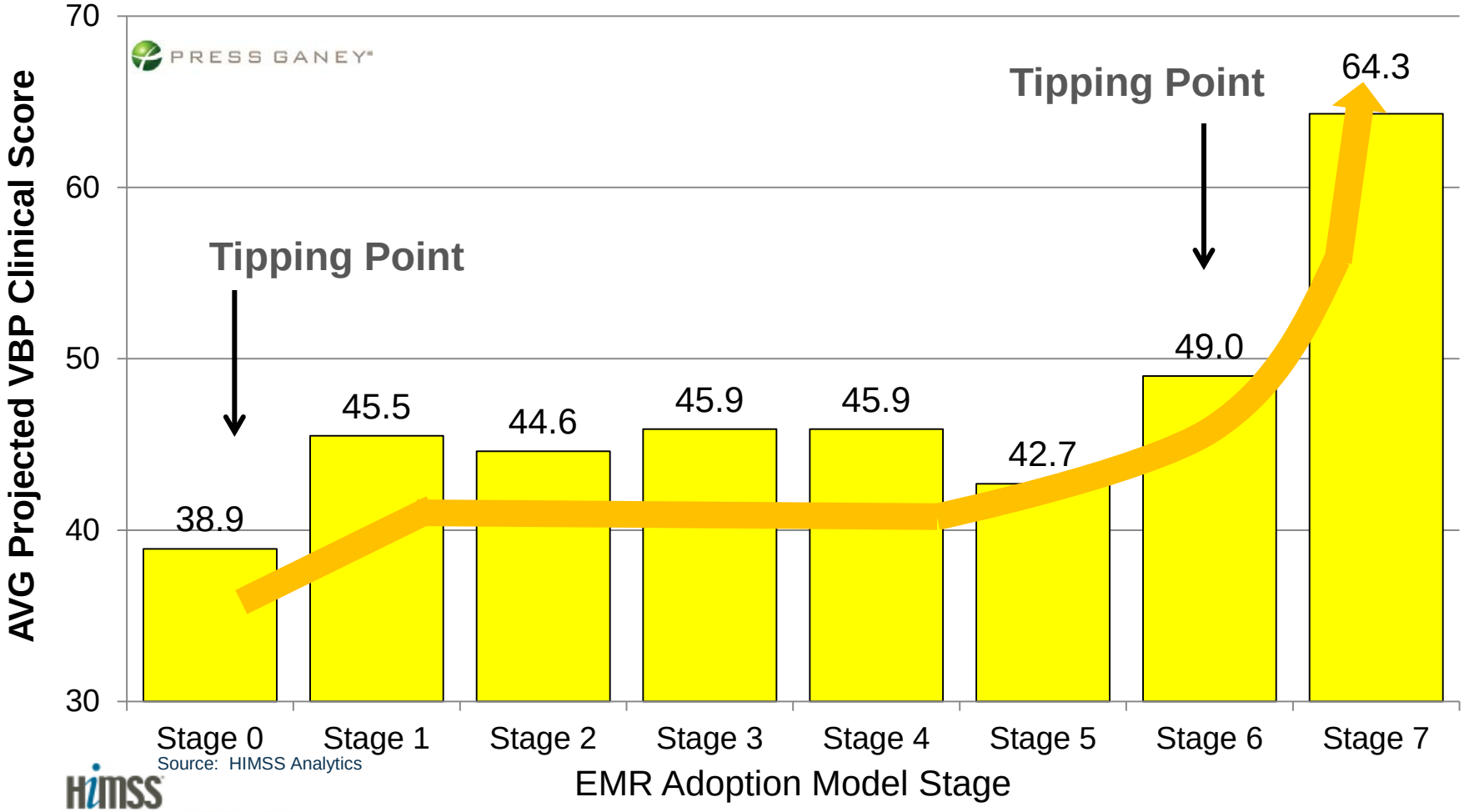
*Program from U.S. Medicare to earn additional reimbursement

Clinical Performance (Value-Based Reimbursement)



Source: HIMSS Analytics

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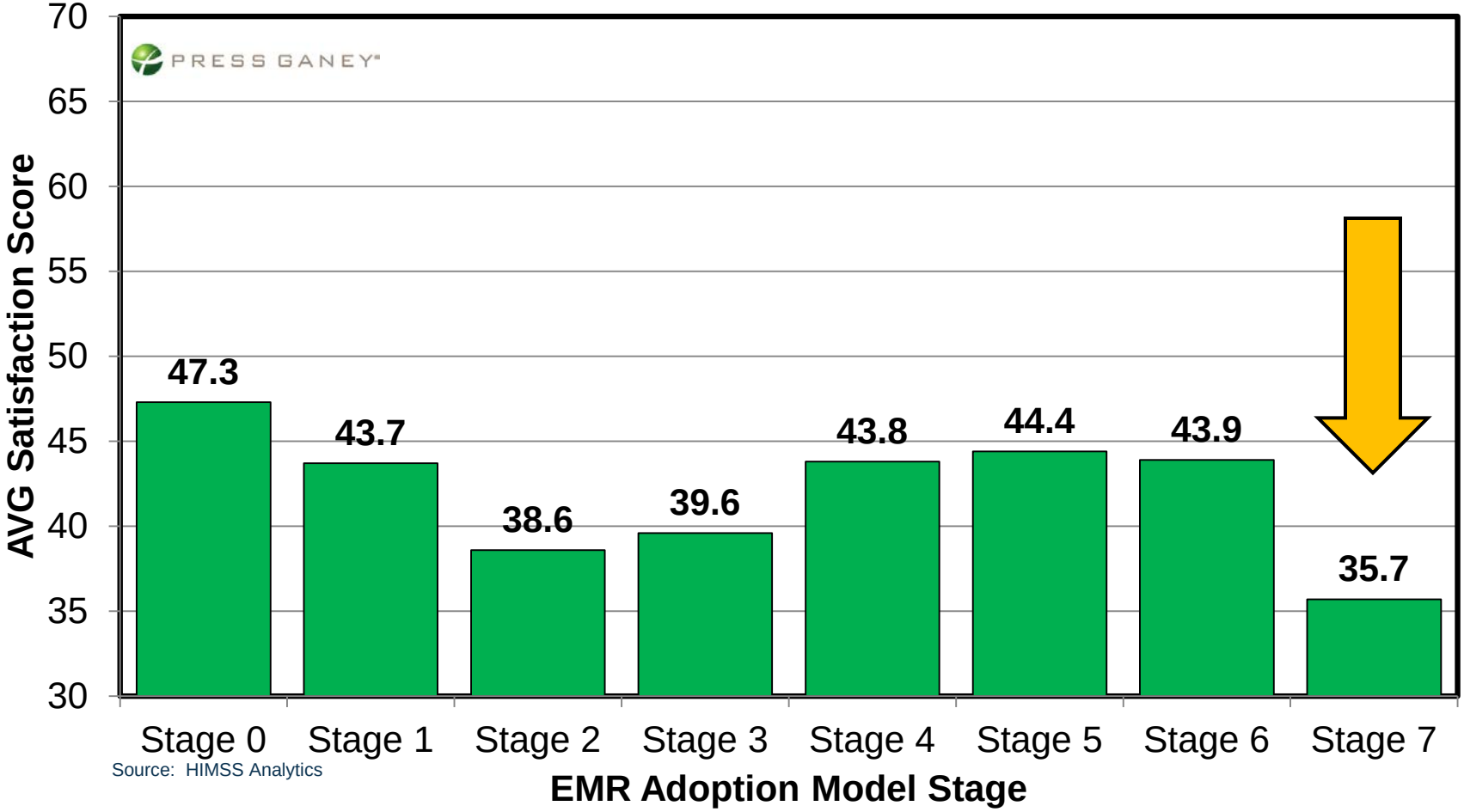
Patient Experience Performance (Value-Based Reimbursement)



Source: HIMSS Analytics

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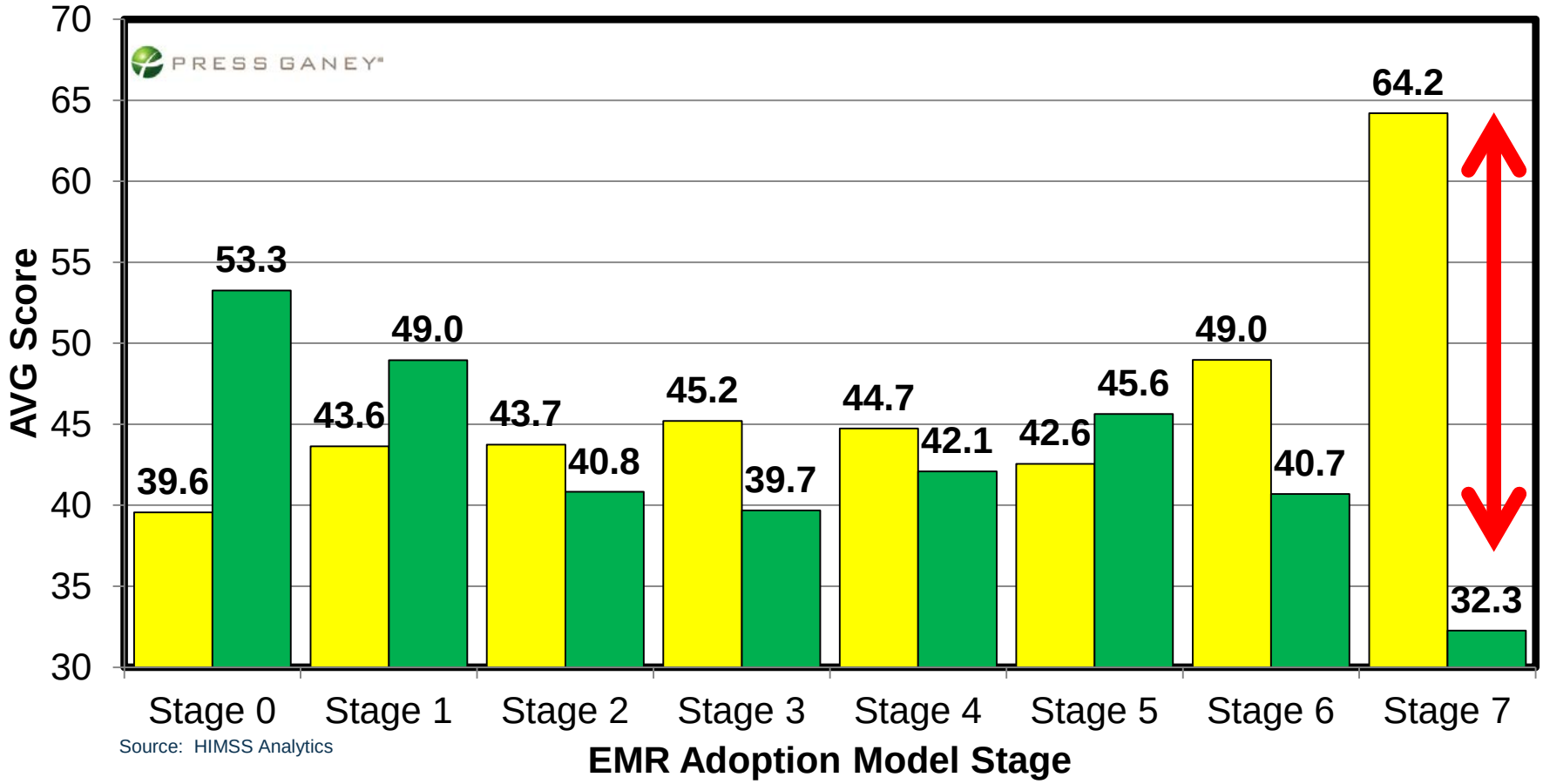
Unintended Consequence (High Tech – Low Touch)



Source: HIMSS Analytics

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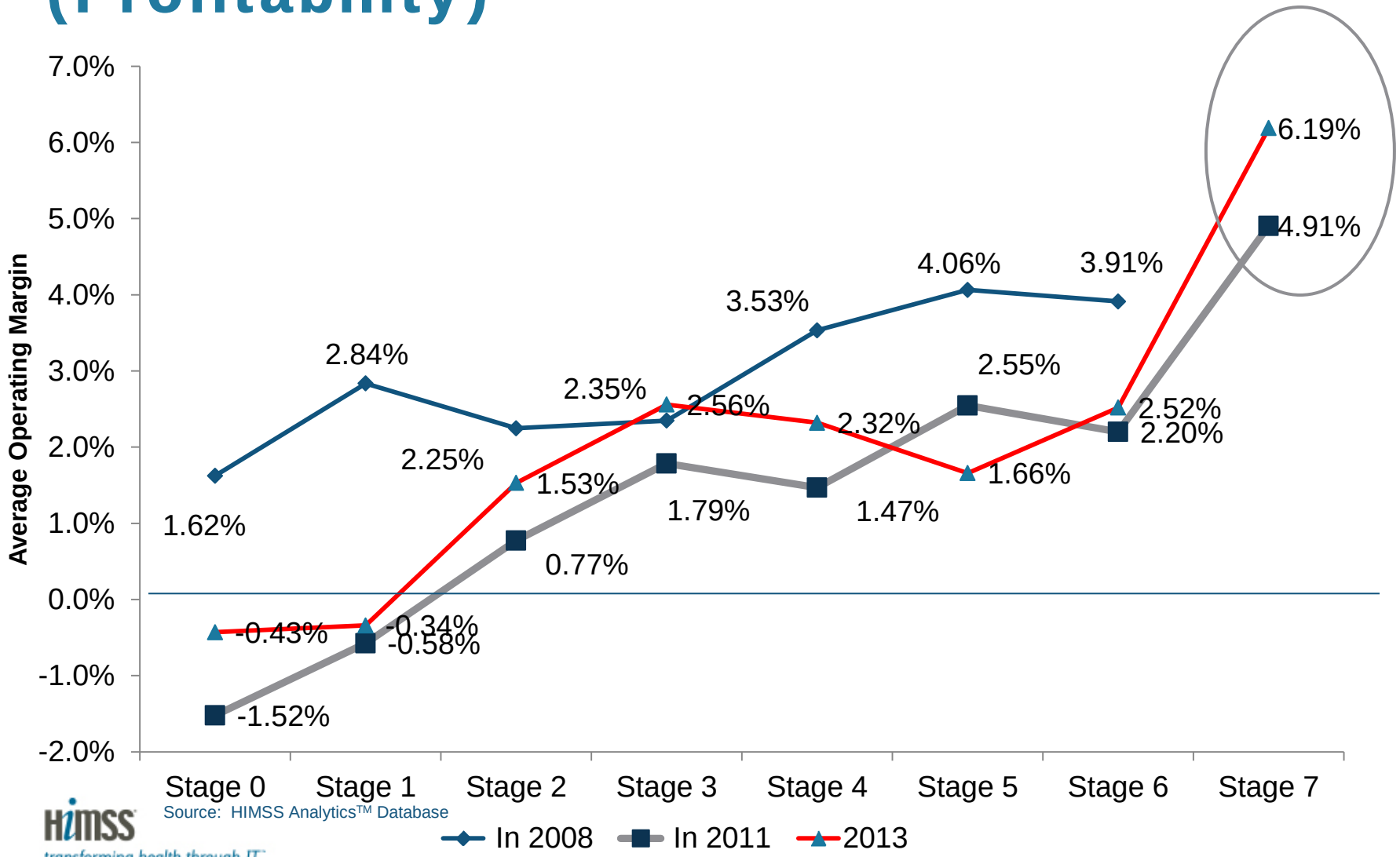
Financial Performance (Profitability)



Source: HIMSS Analytics™ Database

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Bond Ratings

- **Agencies are asking for EMRAM scores during assessments**
- **As a result of the 2009/10 recession:**
  - 1 multi-hospital system's bad debt increased, cash flow decreased
  - All hospitals were validated at EMRAM Stage 6
  - **Bond rating did not change**
- **The EMRAM viewed as a reflection of good vision, execution, and a commitment to excellence**

Final Thoughts

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International

HIMSS Analytics STAGE 7

China, Korea, Germany, Spain

HIMSS Analytics STAGE 6

Belgium, Canada, China, Denmark, France , Germany, India, Italy, Malaysia, Netherlands, Norway, Saudi Arabia, Singapore, Switzerland, Taiwan, UAE

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JAN 1, 2013

Cerner, eClinicalWorks Make the Big Leagues

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Cerner Corp. and eClinicalWorks Inc. have signedmajor contracts with professional sports leagues to support electronic health records systems for the teams. Cerner will provide standard recordkeeping for all 30 teams in the National Basketball Association, which includes reporting features to identify and address medical trends. The EHR platform also includes personal health records software and health care management functions.The National Football League will implement eClinicalWorks' EHR across all teams. The NFL has been relying on paper-based records systems. Details on the multi-million dollar deal were not disclosed.

HIMSS Value STEPS™

	Value Category (STEPS™) and Subtypes	Documented Examples
S	**Satisfaction:** Patient; Provider; Staff; Other	• Improved communication with patients • Improved patient satisfaction score • Improved internal communication
T	**Treatment / Clinical:** Safety; Quality of Care; Efficiency	• Improved patient safety • Reduction in medical errors • Reduced readmissions • Improved scheduling
E	**Electronic information / Data:** Evidence Based Medicine; Data Sharing and Reporting	• Increased use of evidence-based guidelines • Increased population health reporting • Improved quality measures reporting
P	**Prevention and Patient Education:** Prevention; Patient Education	• Improved disease surveillance • Increased immunizations • Longitudinal patient analysis • Improved patient compliance
S	**Savings:** Financial / Business; Efficiency Savings; Operational Savings	• Increased volume • Reduction in days in accounts receivable • Reduced patient wait times

http://www.himss.org/ValueSuite

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HIMSS | Value Suite | STEP

www.himss.org/ResourceLibrary/ValueSuite.aspx#/treatment-clinical/safety/reduction-in-medication-related-errors

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Value STEPS > TREATMENT/CLINICAL > Safety > Reduction in medication related errors...

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S
T TREATMENT/CLINICAL
E
P
S

Quality of Care
Efficiencies
Safety

Improved clinical documentation
Improved use of clinical alerts
Reduction in medical errors
Other safety benefits
Overall improved patient safety
Reduction in medication related errors

Reduce Medical Errors with Bar Coding
Medication Errors Down 53%
Medication Safety up 48%
Cass County Medical Error Reduction
Improved Medication Safety

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Health Care System | California

Children's Medical Center Dallas
Academic Medical Center | Texas

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TOP STORY 10/23/2013

P **Rural Independent Practice Named 2013 Davies Recipient**
White River Family Practice located in White River Junction, Vermont has been named a 2013 Davies recipient by HIMSS

Read More

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HIMSS DIAMOND Corporate Member

810,000	**TOTAL GLOBAL AUDIENCE REACH**
200	**COUNTRIES** *Represented*
64,800	**SENIOR HEALTH IT MANAGEMENT** *CIO, CTO, VP of IT/IS/Network*
218,700	**HEALTH IT MANAGEMENT** *Director and Other IT Management/Professionals*
267,300	**GENERAL AND FINANCIAL MANAGEMENT** *CEO, CFO, COO, President and Other General Admin*
105,300	**CLINICAL MANAGEMENT** *CMO, CNO, Other Clinical Management*
153,900	**OTHER HEALTH INDUSTRY PROFESSIONALS**

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http://www.himss.org/membership/corporate

ACCESS
A WORLD OF HEALTH IT
Innovators, Influence and Opportunity

THANK YOU

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John H. Daniels, CNM, FHIMSS, FACHE, CPHIMS
Vice President
jhdaniels@himss.org

@JohnHDaniels