



All Systems Go – Or Are They

A Focus on ...
Clinical Automation & New
Product Delivery



2005 Annual Meeting, September 2004

htma florida chapter

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Introduction



Bob Blades

30+ years
VP/CIO
Consultant
Vendor VP



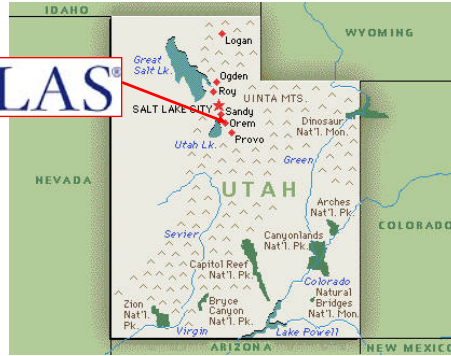
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So You Feel Comfortable with the Data



- Founded in 1996
- Market Research & Intelligence Firm
- Monitor & Report the Performance of HIT Vendors
- Conduct 1,000+ Interviews/month
- 7 Years Research Data
 - 4,500+ Hospitals
 - 1,000+ Clinics
 - 300+ Vendors
 - 500+ products
- All Provider "contributors" Receive Free Access to KLAS Summary Data



www.healthcomputing.com

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Information contained herein comes primarily from provider interviews conducted by KLAS and includes strong opinions reflecting the emotion of exceptional success and, at times failure. It does not represent KLAS' opinion.

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...includes strong opinions reflecting the emotion of exceptional success and, at times failure. It does not represent KLAS' opinion."

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Market Trends

What's Working, What's Not

New Product Delivery

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Medication Admin Check (Sept/2004)

- Extreme level of attention
- Every key vendor has live sites
- KLAS has "83" sites reported, and confirmed "69" (excluding Meditech):
 - Baxter 3
 - Bridge Medical 30
 - Care Fusion 1
 - Cerner 1
 - McKesson 17
 - Siemens 17
- Post study Meditech reported 80



- Emerging market, 14 vendors cannot grade
- Definite mix of enterprise & best of breed
- Interfacing/integration the challenge
- 6-9 month install process

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Is it time to go "Wireless"?

(September 2004)



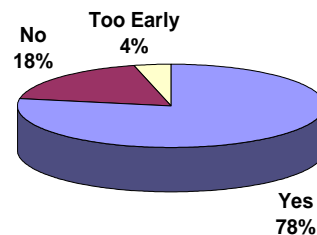
- **COWs are widely accepted (Computers on Wheels)**
- **Tablets (worked for Moses but not for hospitals, yet)**
- **Handhelds are a big win for MercuryMD and Patient Keeper**
- **Cerner, Epic, McKesson, Siemens, etc. have solutions**

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New CIS Installs- Were Benefits Achieved?

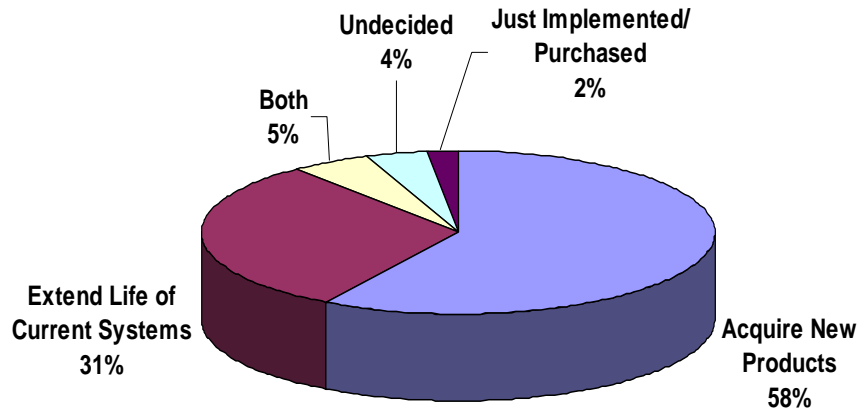
Cerner, Eclipsys, Epic, IDX, McKesson,
Meditech & Siemens users indicated:

- 78% achieved benefits
- 4% too early to tell
- 18% no



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Regarding core clinical IT systems, would you describe your organization as wanting more (1) to extend the life of your current systems (next 3-5 years) or (2) to acquire new (next generation) products?



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CPOE Controversy

Leapfrog Group executive director Suzanne Delbanco, Ph.D. admits she is discouraged by the sluggish pace of hospitals' adoption of CPOE, despite the group's call for action.







"We called it a 'leap' for a reason," she says. The Leapfrog Group started focusing on CPOE several years ago because of the technology's documented success in reducing prescribing errors. But implementations among hospitals have risen only from about 2 percent then to about 6 percent now.

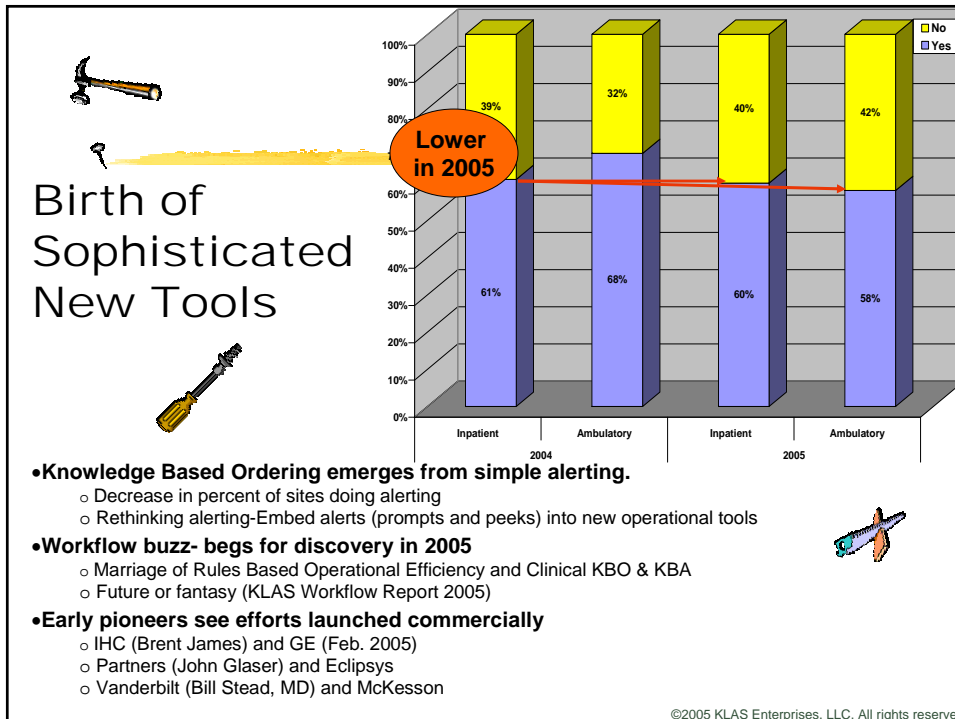
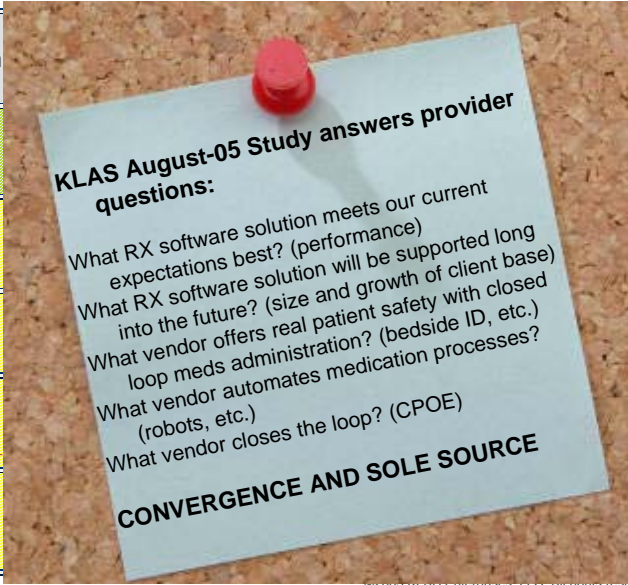
"We also hear from another 16 to 17 percent that they're planning to do it in the next year, though we keep hearing that year after year. Soon we'll have one in four hospitals having implemented it, which is certainly much better than when we started."

-Healthcare Informatics, August 2005

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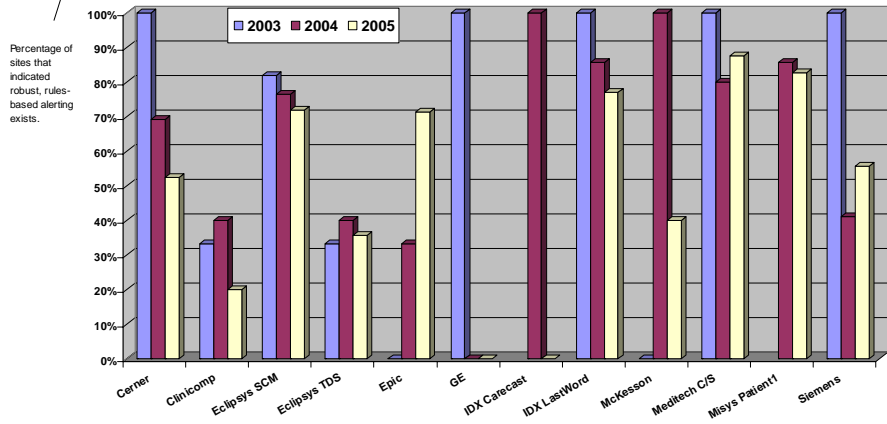
Patient Safety Study

Medication Safety Solution	 McKesson
Prescribing (CPOE)	5 
Transcribing (RX)	 300+
Dispensing (Robots/Cabinets)	 76+
Administering (Bedside ID, EMAR)	 100+
Monitoring (Alerts/CDR)	 100+

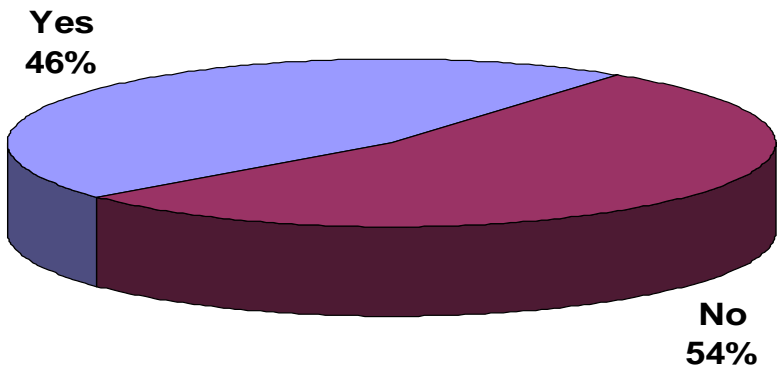


Medical Decision Making Delivers "Mixed" Message

Robust Rules in Use

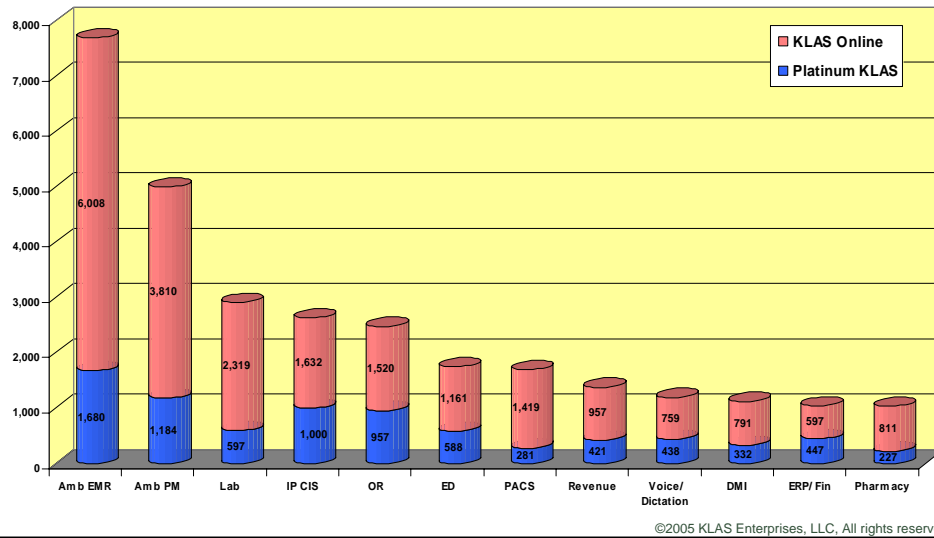


Are online patient self service functions a strategic priority for your organizations?



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Healthcare provider data queries from KLAS database for year 2004



Globalization & Outsourcing

- Will not go away, but rather fine tuned.
- Today, predominately viewed as "quick fix" solutions to high costing labor tasks, turnaround situations, or when a hospital or health plan is in distress.
- Security, privacy and confidentiality concerns are hurdles for health related data.
- Future, need to manage as a strategic investment in order to yield the sought after benefits.

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General Market Trends

- PA - revenue cycle, uncharted renewed interest
- General Financials - expensive poor ROI, low interest
- CDR, CPOE - extreme growth
- PACS - continued growth
- Bedside Meds Mgt - serious interest
- OR Management - strong interest, solid growth

- ED - solid growth
- LIS - replacement market
- RIS - growth tied to PACS
- Rx - critical to CPOE (leader TBD)
- ICU/CCU - heightened interest
- Cardiology - leverage investment, integration (very high interest)
- Ambulatory - lots of excitement

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What's Working



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Emergency Department (Dec 2004)

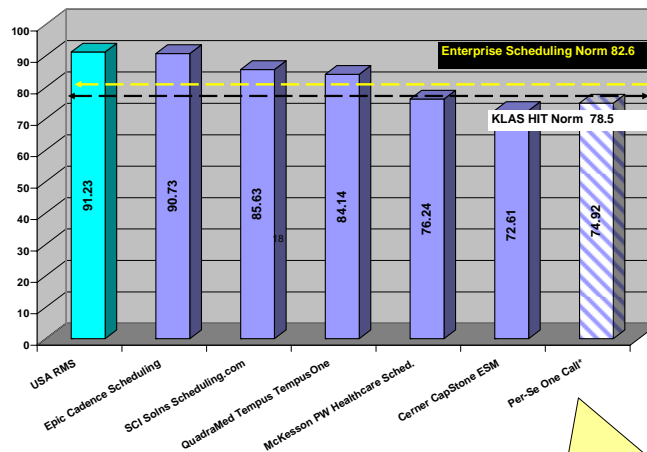
Overall Vendor Rankings Based upon 40 Performance Indicators		
Ranking	Vendor/Product	Total Score (Out of 100)
1	MedHost EDMS	87.4
2	Ibex PulseCheck	87.0
3	Wellsoft ICMS	86.3
4	LOGICARE OnTrack	85.1
5	A4 HealthMatics ED	83.8
6	VitalWorks ED	82.8
7	Cerner Millennium FirstNet	77.5

MedHost, and Wellsoft constantly trading places in top 2 rankings

Keys to Success:

- *Interfacing to key ancillaries is one of the toughest challenges*
- *Choice needs to integrate w/future CPR goals*
- *Meet population needs w/discharge instructions in both content and language*
- *Which vendor can provide all modules?*

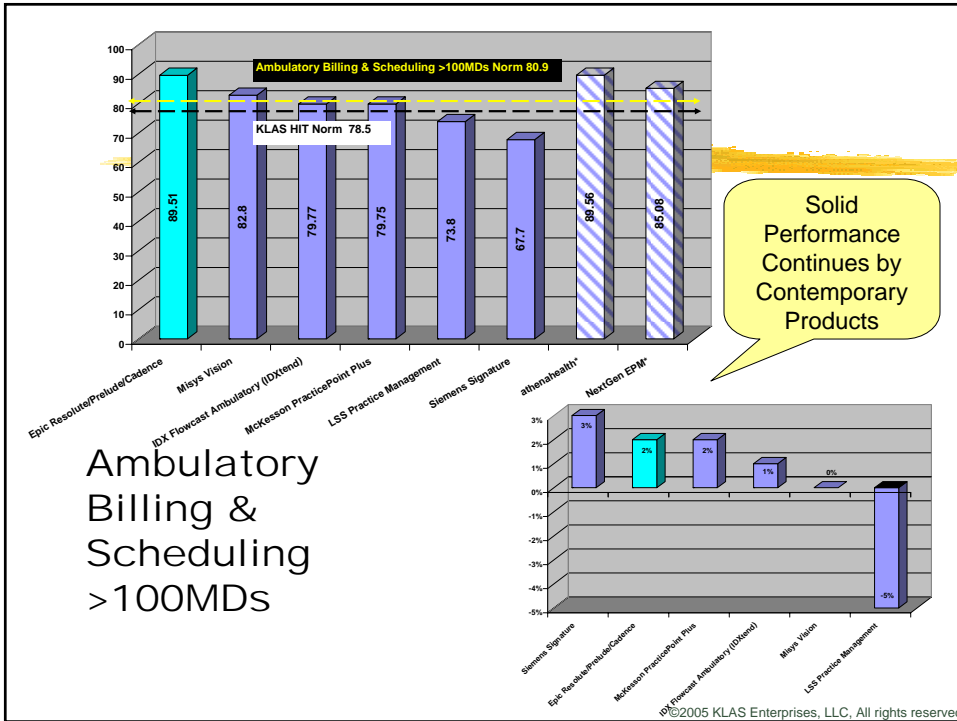
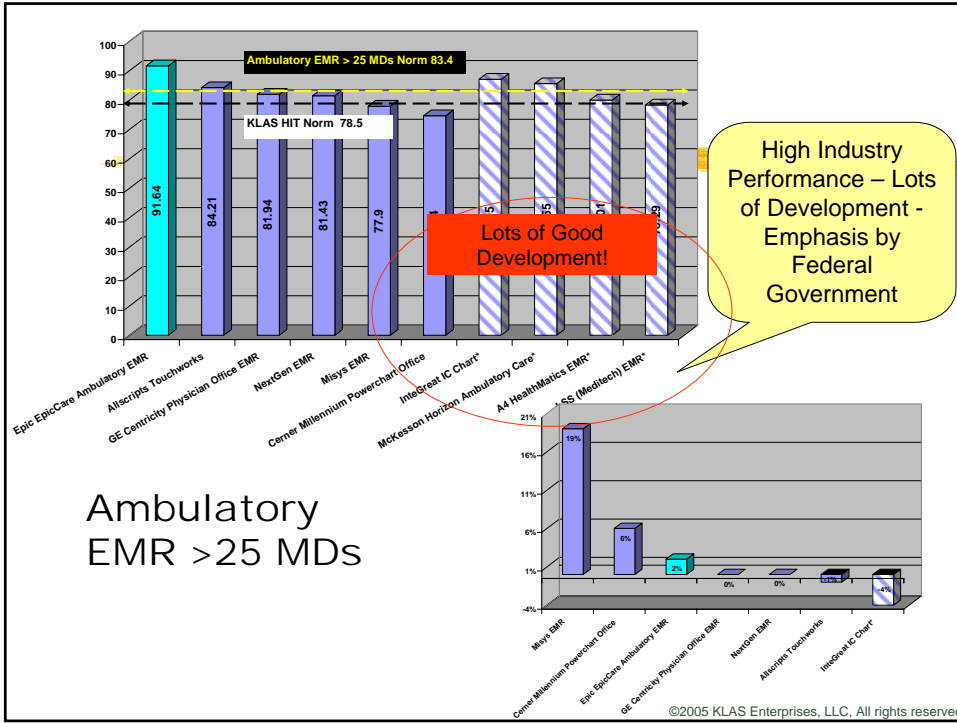
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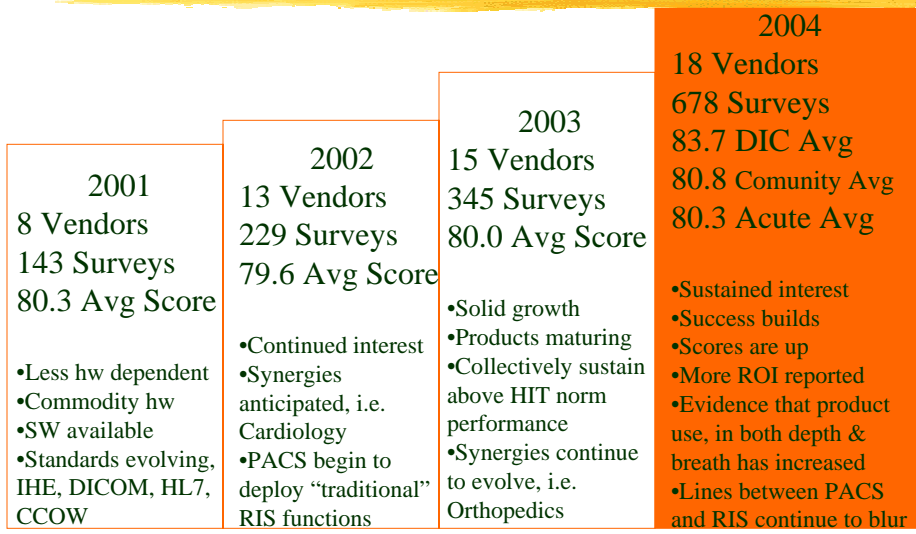
Enterprise Scheduling

Solid Performance by Best of Breed, Epic Leads Enterprise Vendors

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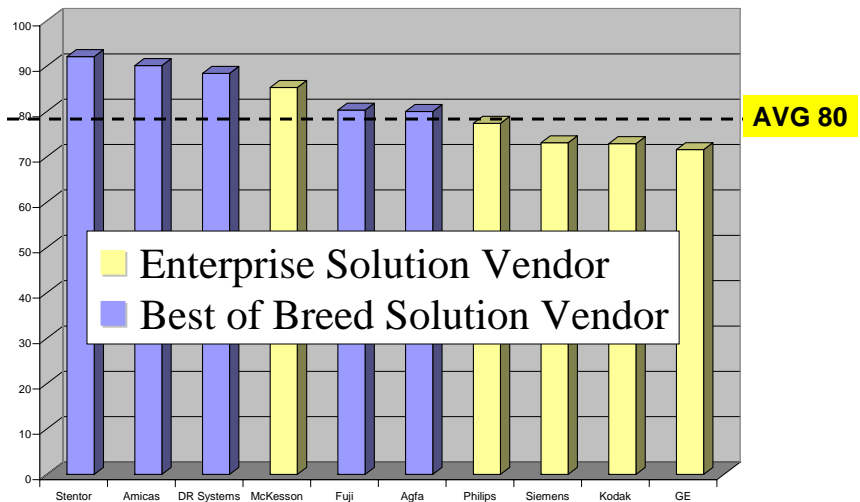


History of KLAS PACS Research



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Enterprise Solution vs. Best of Breed Vendor Product Averages (December 2004)



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PACS Acute Care Results

(November 2004)

Overall Vendor Rankings
Based upon 40 Performance Indicators

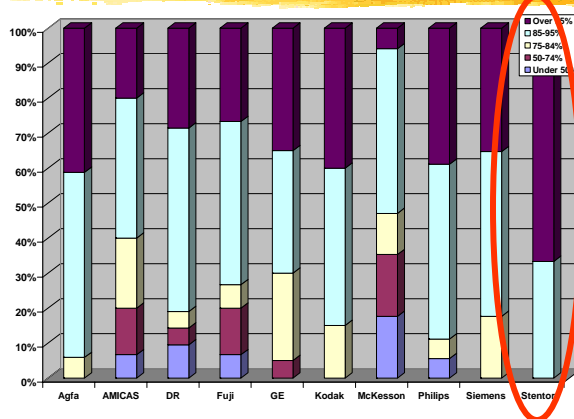
Ranking	Vendor/Product	Total Score (Out of 100)
1	Stentor iSite PACS	92.1
2	AMICAS PACS	90.1
3	DR Systems Dominator	88.4
4	McKesson Horizon Medical Imaging	85.3
5	HIT norm Fuji Synapse	80.3
6	Agfa IMPAX	80.0
7	Philips EasyAccess (Inturis) PACS	77.4
8	Siemens SIENET PACS	73.1
9	Kodak DirectView PACS	72.9
10	GE Centricity PACS	71.6
<i>Not Ranked/NR</i>		
-	Cerner	NR
-	Dynamic Imaging	NR
-	Emageon	NR
-	eMed	NR
-	IDX	NR
-	Intelerad	NR
-	Merge eFilm	NR
-	Misys	NR
-	StorCOMM	NR

Reported ROI Success:

- PACS cost us \$500,000...and we hit ROI in a little over 6 months
- PACS + e-signature + speech recognition = significantly improved turnaround times
- Improved patient care & reduced patient stay times.
- Our productivity has been enhanced by nearly 100%.

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% Radiology Studies Done through PACS

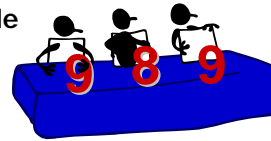


Stentor Leads w/the Highest Percent of Clients Performing the Majority of their Studies through PACS

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PACS Market Trends

- **The good news:**
 - Question of when not if
 - # of companies offering PACS is large
 - Increasingly difficult to provide imaging services w/o PACS
 - Moving from departmental to enterprise-wide image management
- **The challenge:**
 - No vendor out-scores all others in all venues
 - Pick your vendor, pick your challenges
 - PACS must include links to EMR system
 - Healthcare organizations in competitive environments will lose market share w/o PACS

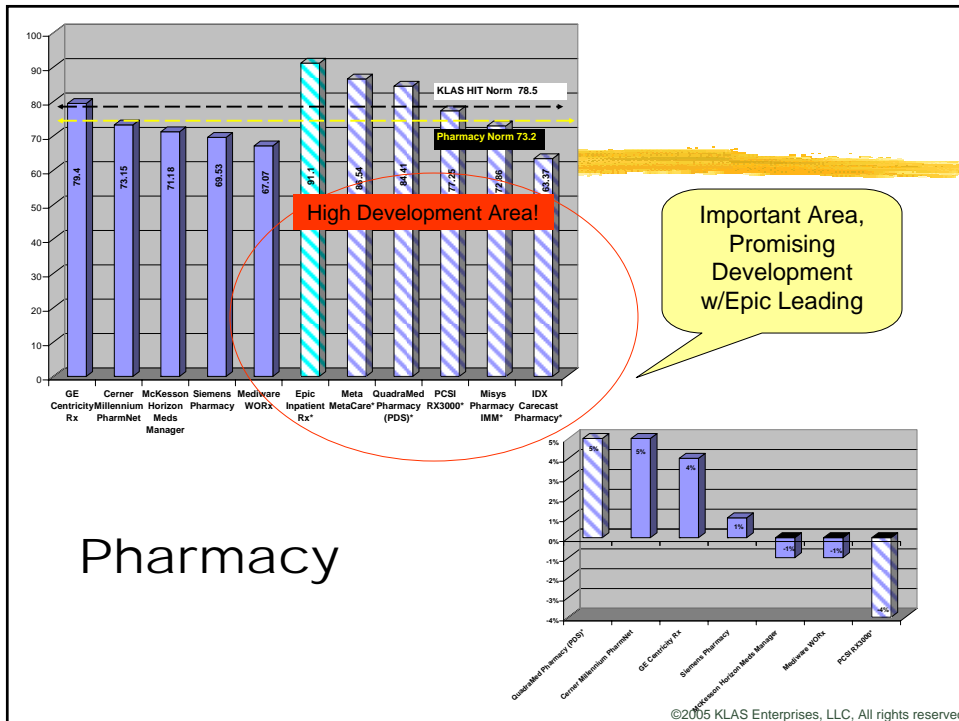
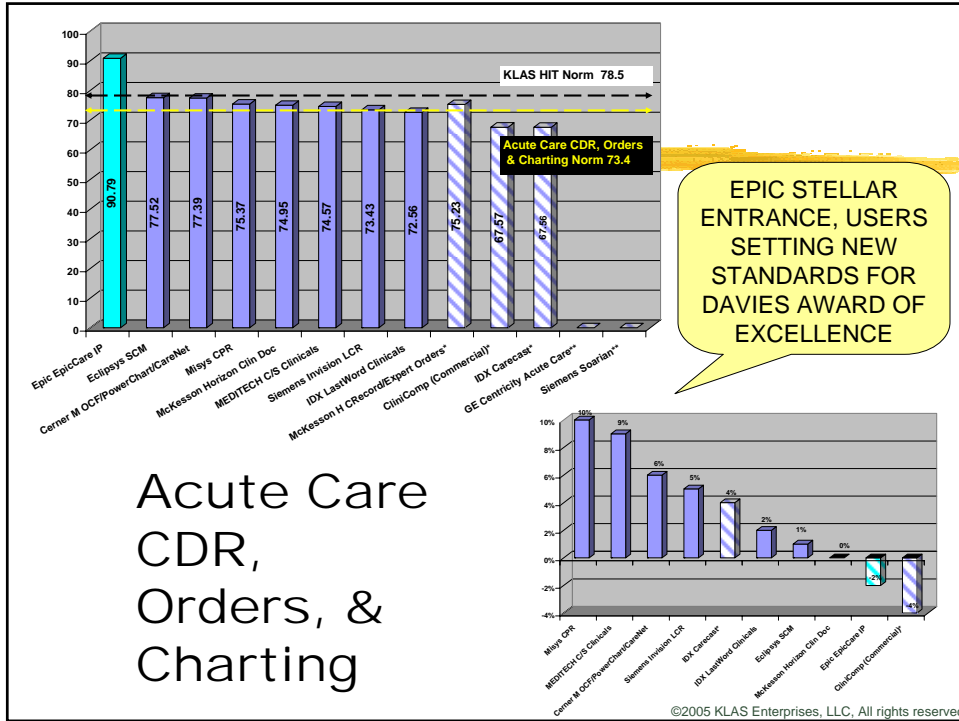


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What's Not

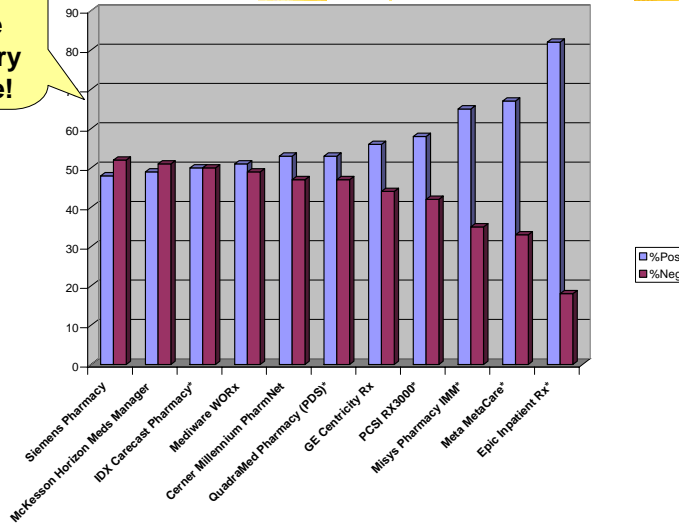


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Pharmacy Positive Commentary

**Epic
%Positive
Commentary
Impressive!**

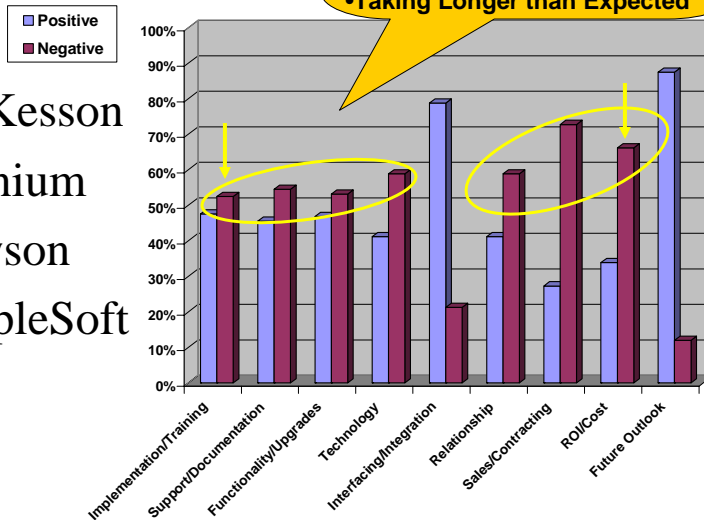


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ERP (September 2004)

ROI & Benefits Challenging:
 •Expensive Solutions
 •Complex
 •Rely Heavily on BPR
 •Taking Longer than Expected

- McKesson
- Infinium
- Lawson
- PeopleSoft



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Crunching the Numbers (Feb/2005)



- 3rd Annual KLAS Report
- 10 Vendors
- Usage Steadily Increasing

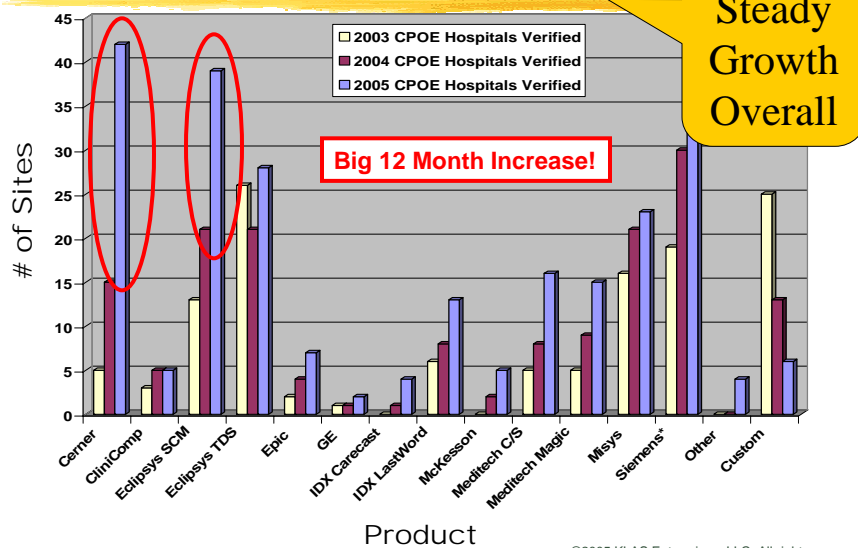
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Interesting Quotes...

- The CPOE project is a journey, a journey that never ends
- The phased approach is the only way to do this. You need to get buy-in as you go
- The software only represents about 15% of what the installation is about
- The installation is never really over, it just moves to a different stage
- CPOE is not a project, it is a paradigm change in the delivery of care

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Approximately 5% of US Hospitals Using CPOE

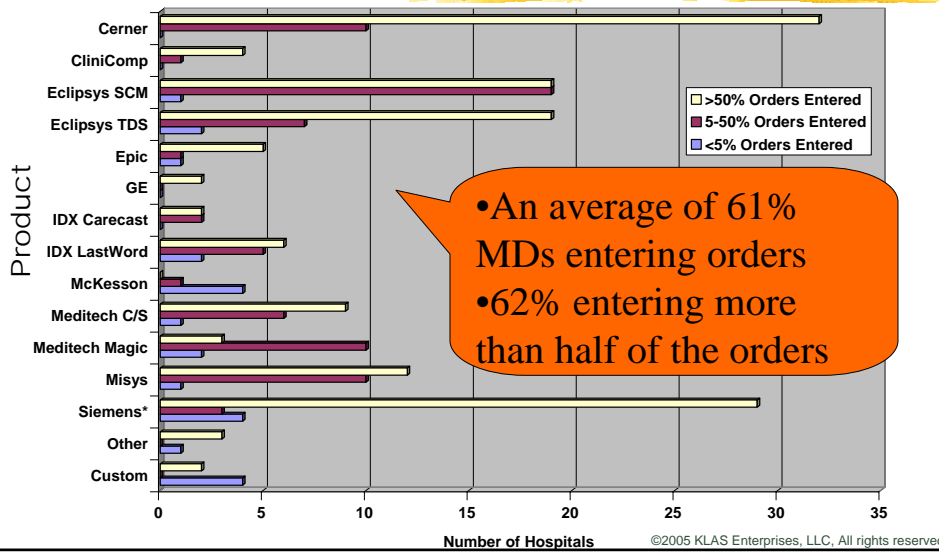


The Math...

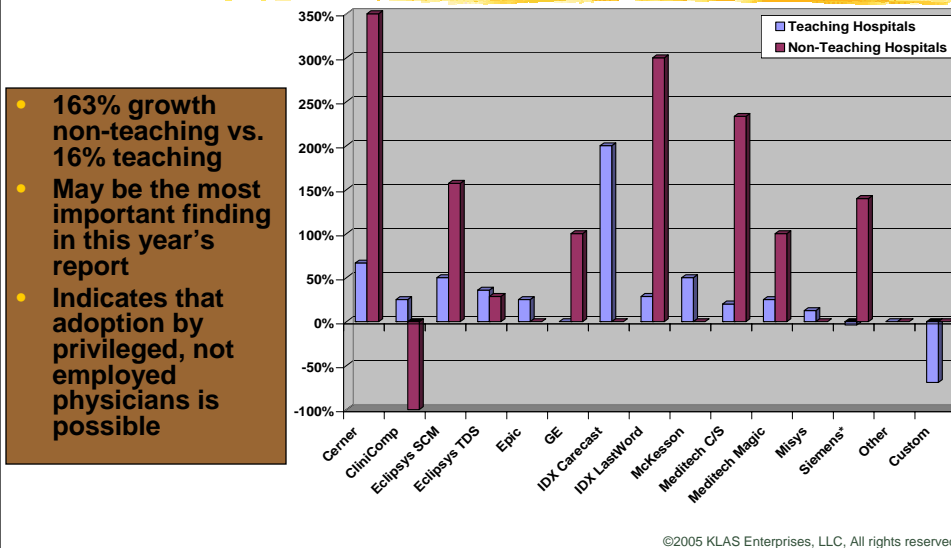
- AHA reports 5,764 US hospitals
- KLAS validated 233 in US or 4%
- Of the 233, 144 had over 50% orders entered by physicians or 2.5% "active use"
- 3 sites reported but not verified, if all doing active CPOE would change the numbers to 4.1% and 2.6% respectfully
- Study statistics do not include 137 VA hospitals and 60 DoD, if all doing CPOE, an absolute maximum of 7.5% CPOE U.S. usage
- Actually verified 245 sites, 12 of which were Canadian

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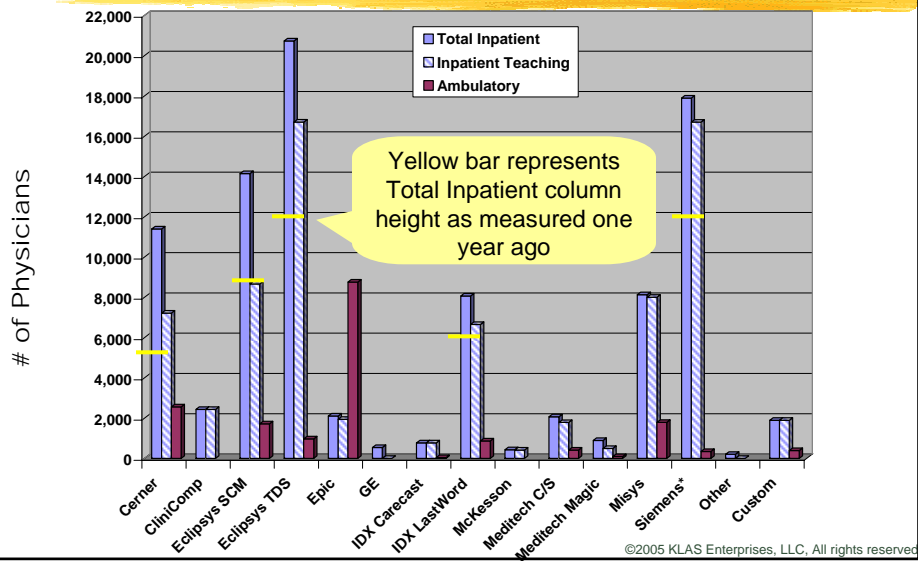
Inpatient - CPOE Use by Physicians



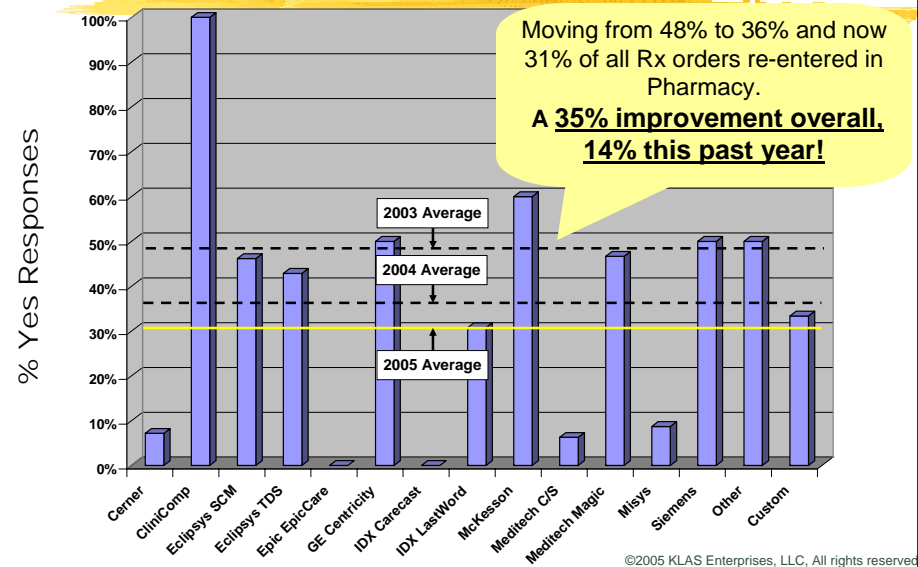
Significant Growth in Non-Teaching Hospitals



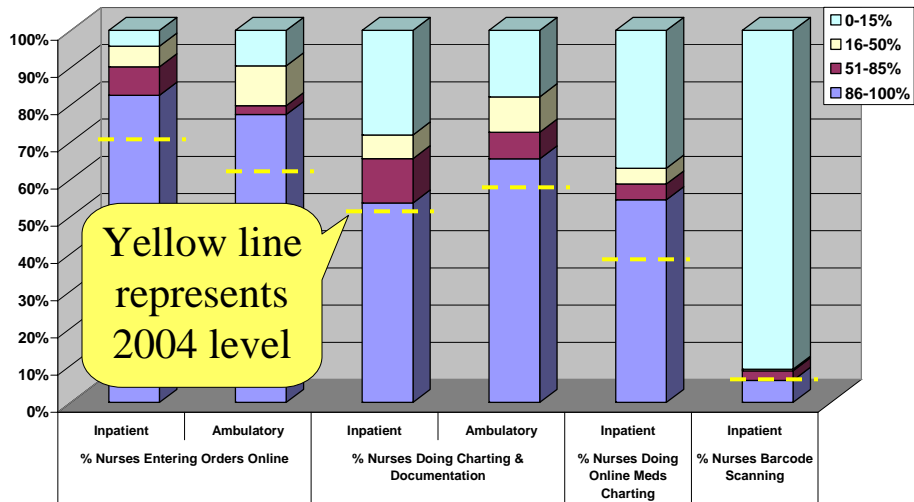
Teaching Sites Lead the Way w/Physician Use



InPatient - An Average of 31% Med Orders Re-entered by Pharmacy

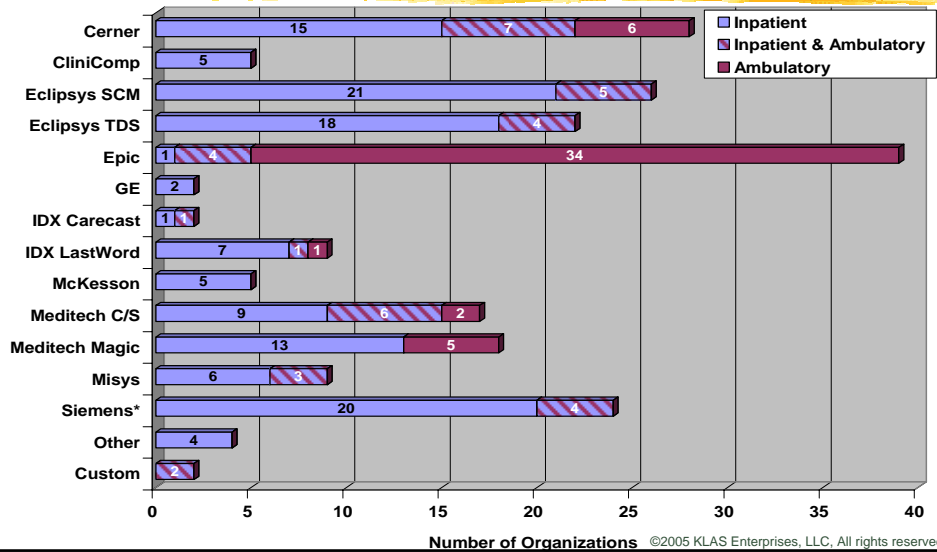


Overall Nurse Interaction



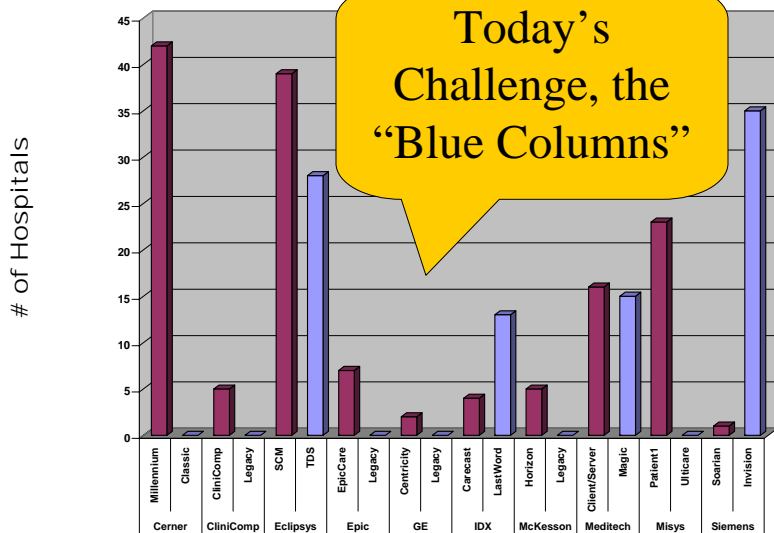
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How the Vendors Stack Up



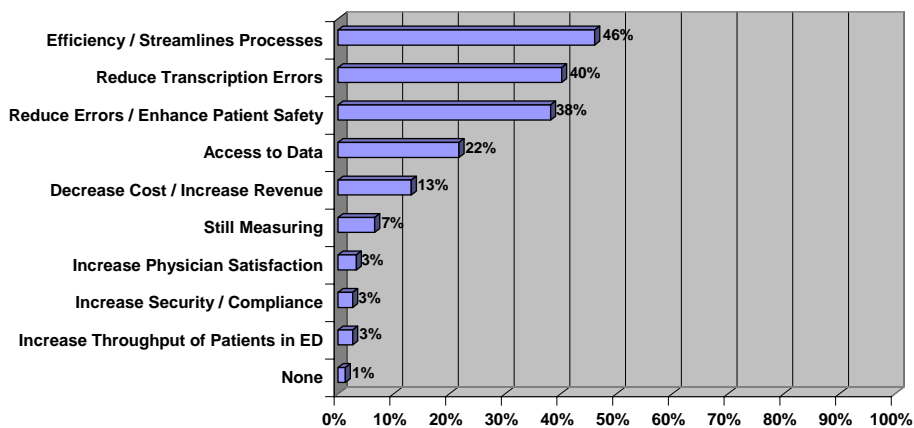
Number of Organizations ©2005 KLAS Enterprises, LLC. All rights reserved

LIVE CPOE w/most Current vs. Previous Generation Product



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Quantifiable Benefits Overall



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New Product Delivery



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Our Goal: Meter Delivery at Today's Early Adopter (incl. alpha/beta) sites



- Provider-based solutions for CDRs, CPOE, Clinical Charting, Pharmacy and Physician Notes
- Cerner Millennium, Eclipsys SCM/XA, Epic Inpatient EpicCare, IDX Carecast, McKesson Horizon, Meditech Client/Server & Siemens Soarian
- Reflects projects attempting to go live between January 2003 and June 2006
- Where possible compare current experiences w/that observed in previous study May 2001 – March 2004
- Participating facility's project plan drove reference to time & whether or not a project was considered "on-time", "on-schedule" or "late"

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Definitions

- On-Time – project proceeding as originally planned, no adjustment to plan needed
- On-Schedule – Not yet live, but project on track according to original plan
- Late – Adjustment to plan needed extending original live date

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Definitions (continued)

- Delivered – making the system available to the end user for its intended purpose and their productive use
- System – supports end user automation (application sw, system sw, hw, network, interfaces, etc.)
- Vendor – source of application software

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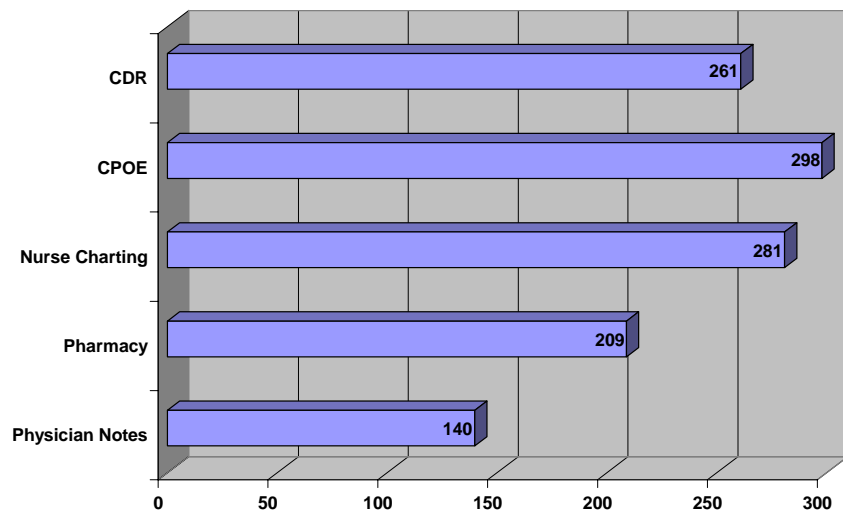
Survey Pool (August 2005)

- Note there are differences between vendors and # sites surveyed based on applicability for this study

Vendor (Core Clinical Product)	Respondents
Cerner Millennium	34
Eclipsys SCM/XA	30
Epic Inpatient EpicCare	22
IDX Carecast	11
McKesson Horizon	20
Meditech Client/Server	21
Siemens Soarian	17
Addendum Reported Vendors	Respondents
GE	4
Misys	4

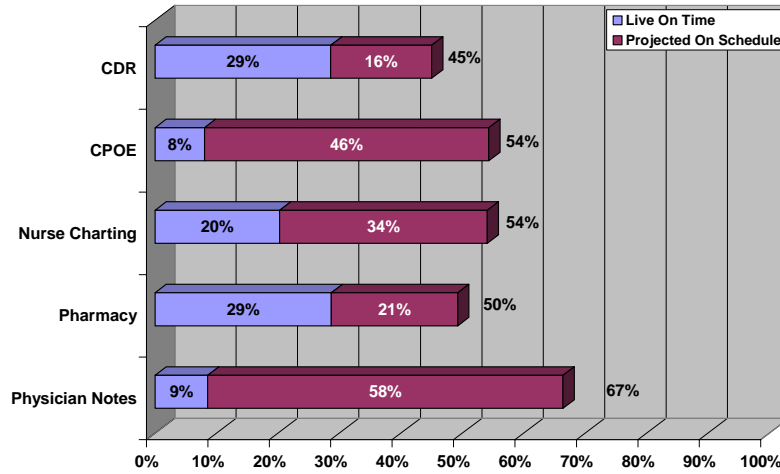
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Active Implementation Projects (Jan03 - June06)



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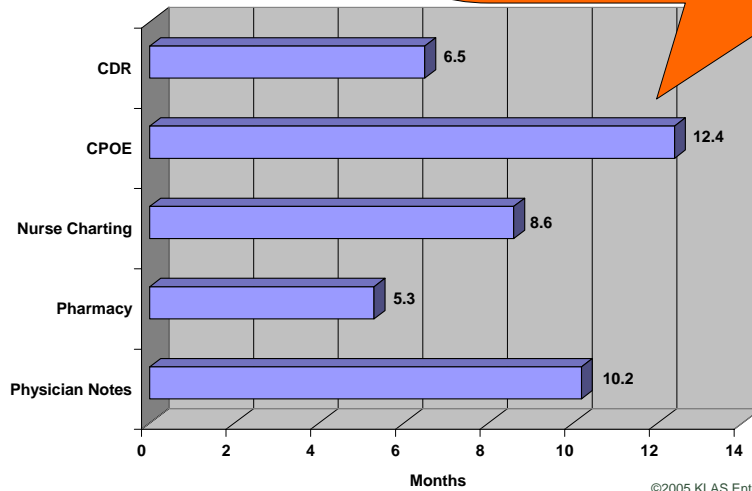
Slightly more than half of all projects are delivered "on time"



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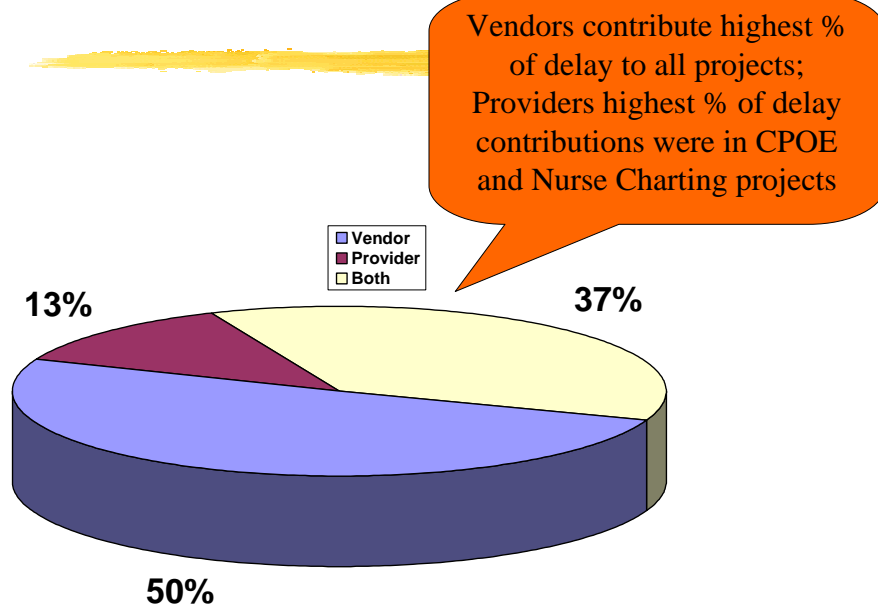
Late Delivery Averages

CPOE Projects Most Challenging; Pharmacy Least Challenging



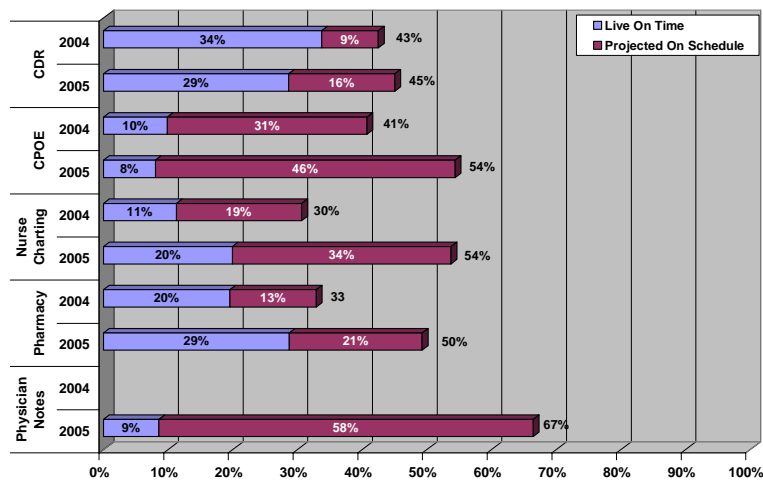
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Source of Delay Summary



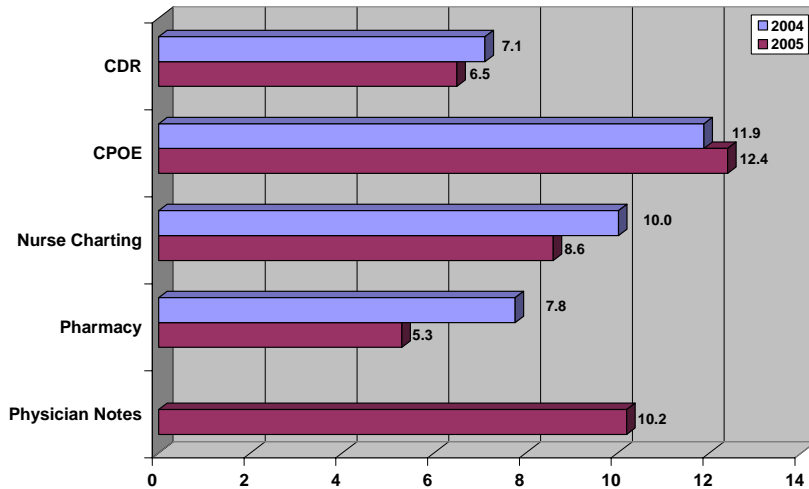
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Trending On-time Delivery



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Trending Late Delivery Averages by Project



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More OTD Insight

- Majority (73%) used a phased in approach
- 24% utilized 3rd party assistance for project management
- Staffing expectations "as expected" 59%, "worse" 36%
- 65% able to complete project within budget
- No relationship between on time delivery & provider size

LIVE PRODUCT PERFORMANCE:

- 88% product performance as expected
- 94% expected uptime
- 88% expected response time
- 78% achieved expected benefits, 4% to early to tell, 18% No



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Conclusions



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Industry Trends – KLAS Interpretations

- IT planning must be driven by business strategy.
- Emphasis on patient safety and consumerism (consumer = employees, physicians, patients, vendors and other customers includes attracting, retaining, and anticipating needs).
- Plan for government and other influential interventions (HIPAA, Medicare reform, Leapfrog Group).
- Convergence of IT and medical technologies.
- Healthcare transactions will migrate to and benefit will be derived from the internet.
- Selective sourcing.

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Industry Trends – KLAS Interpretations

- Expect vendor consolidation. Lining up to be 3 tier: mega (Agfa, GE, McKesson, Philips, Siemens), niche (Cerner, Epic, IDX), and specialty (eScription, USA RMS, Amicas, etc.)
- Pendulum movement away from best of breed to sole source when “commodity” designation.
- To get significant ROI and maximize value expect to change workflow and spend \$ for service in process re-design.
- Security is at all levels, physical, network infrastructure and data. Data confidentiality and need-to-know security deployment and tracking are a given.
- Wireless, WEB, and PDA use in its infancy (early adopter stage). Progress relatively slow and expensive. Success being observed in order listed.
- To be good expect IT budget to increase, amount is dependent on current spending level (operating and capital).

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Most Significant Barriers to Successfully Implementing IT

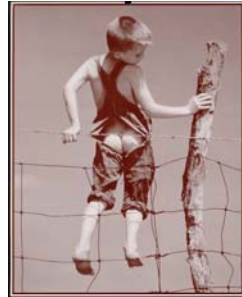
- Lack of Financial Support
- Vendor’s Inability to Effectively Deliver
- Proving Quantifiable Benefits/ROI
- Achieving End-User Acceptance
- Lack of Staffing Resources
- Lack of Clinical Leadership
- Lack of Top Mgt Support
- Lack of Common Data Standards
- Lack of a Strategic IT Plan

Source: 15th Annual HIMSS Leadership Survey sponsored by Superior Consultant Company

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In Summary

- **The good news:**
 - Access to clinical data by clinicians is common
 - Medication Admin Check is proving successful
 - Physician ordering and “documentation/notes” is doubling this year
 - Nurse charting and documenting is successful
- **The challenge:**
 - Several options work but many don't
 - Pick your vendor, pick your set of issues
 - Partnering is critical
 - Executive commitment is paramount and the foundation of every success



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GET INVOLVED, GIVE US YOUR
OPINION
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QUESTIONS ?

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