



NURSING INFORMATICS  
Empowered Care Through Leadership and Technology



# Clinical Informatics: Nurses Creating Value with Innovation

Northern California HIMSS Chapter  
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# Objectives

- Describe the objectives of the Alliance for Nursing Informatics
- Summarize the vision and future plans of the TIGER initiative
- Describe the role of the nurse informaticist as it relates to EMR adoption
- Identify best practices for implementation of nursing documentation systems



# HIMSS Nursing Informatics Community

- ***Purpose:*** To articulate a cohesive voice for HIMSS nursing informatics community and to provide domain expertise, leadership and guidance to HIMSS activities, initiatives and collaborations with the global nursing informatics community
- Founded in 2003, this community has grown to just over 2,000 nurses, representing nearly 10% of HIMSS individual members.



# HIMSS Nursing Informatics 2007- 08 Achievements

- International research on the impact of interdisciplinary communication and HIT
- National research on best practices in implementing nursing documentation systems
- Provided > 50 CE programs via the Internet and > 90 education sessions at HIMSS Summit & HIMSS08
- Convened the 2008 NI Symposium with > 500 attendees
- Developed > 60 on-line tools and resources to enhance nursing informatics practice [www.himss.org/ni](http://www.himss.org/ni)
- Awarded the 2008 NI Leadership Award to Patricia Dykes, DNSc, MA, RN, Senior Nurse Informatician, Partners Healthcare

# HIMSS Nursing Informatics

## Goals for 2008-2009

- Create a scenario-based virtual demonstration center for clinicians to show best practices through effective use of IT
- Launch a clinical informatics electronic newsletter sharing hot topics, content, events and opportunities for participation
- Execute and disseminate a survey on the roles/functions of the nurse informaticist in the U.S. and explore the impact of NI on HIT adoption
- Publish TIGER Initiative outcomes to enable all nurses to use technology and informatics to improve the delivery of patient care





# The Alliance for Nursing Informatics is....

a collaboration of organizations,  
representing a unified  
voice for nursing informatics

# Founded in 2004...

- **ANI** represents thousands of nurses and brings together 25 nursing informatics groups in the United States that function separately at local, regional, national and international levels.
- Each of these organizations has their own established programs, publications and organizational structures for their members.



# ANI Member Organizations

- **American Medical Informatics Association (AMIA)**
- **American Nursing Informatics Association**
- **Alabama Society for Clinical Informatics**
- **Association of periOperative Registered Nurses**
- **Association of Women's Health, Obstetric & Neonatal Nurses**
- **Boston Area Nursing Informatics Consortium**
- **CARING**
- **Cerner Nursing Advisory Board**
- **Central Savannah River Area Clinical Informatics Network**
- **Connecticut Healthcare Informatics Network**
- **Delaware Valley Nursing Computer Network**
- **Health Informatics of New Jersey**
- **HIMSS**
- **Informatics Nurses From Ohio**
- **MEDITECH Nurse Informatics Program**
- **Minnesota Nursing Informatics Group**
- **Midwest Nursing Research Section - NI Research Section**
- **NANDA International**
- **North Carolina State Nurses Association Council on NI**
- **Nursing Information Council of New England**
- **Perinatal Information Systems User Group**
- **Puget Sound Nursing Informatics**
- **South Carolina Informatics Nursing Network**
- **SNOMED International Nursing Working Group**
- **Utah Nursing Informatics Network**

*Also affiliated with the American Nurses Association*

# ANI Objectives

- Fostering further development of a united voice for nursing informatics
- Providing a single point of connection between nursing informatics individuals and groups, and the broader nursing and healthcare community
- Providing a mechanism for transforming care, developing resources, guidelines and standards for nursing informatics practice, education, scope of practice, research, certification, public policy, terminology, best practice guidelines, mentoring, advocacy, networking and career services
- Supporting individual membership in the affiliated nursing informatics organizations

# Strategic Goals and Activities

- Maintain and increase communication channels to expand our membership outreach
- Encourage nursing informatics competencies, education, training, publication, and professional development
- Engage in issues of national importance in health information technology and provide leadership
- Promote and enhance the professional practice of nursing informatics
- Support nursing informatics research





# A United Voice

- Clinical Decision Support Request for Proposal
  - Letter of support for the HIMSS Clinical Decision Support Request for Proposal to AHRQ and nursing representation on the Advisory Panel
- American Health Information Community (AHIC)
  - Comments to the Office of the National Coordinator for Health IT on the proposed succession of AHIC to the public/private sector
- Google Health Advisory Council
  - Letter requesting Google to add nursing representation on the Google Health Advisory Council



# A United Voice

- Healthcare Information Technology Standards Panel (HITSP)
  - Active member and participant in standards harmonization efforts
- United States Department of Labor – Nursing Informatics Job Occupational Codes
  - Letter of support and definition of tasks, abilities, knowledge, and work activities of the nurse informatician - effort lead by AMIA-NIWG

# ANI and the TIGER Initiative

- In 2007, ANI became the enabling organization for the TIGER initiative
- The TIGER initiative seeks to better prepare practicing nurses and nursing students to use technology and informatics to improve the delivery of patient care
- ANI is focused on helping TIGER achieve its vision!
- Summary Report published at [www.tigersummit.com](http://www.tigersummit.com)



# Technology Informatics Guiding Education Reform

- Allow informatics tools, principles, theories and practices to be used by nurses to make healthcare safer, effective, efficient, patient-centered, timely and equitable
- Interweave enabling technologies transparently into nursing practice and education, making information technology the stethoscope for the 21st century



# 9 Collaborative TIGER Teams



1. HIT Standards and Interoperability
2. National Healthcare IT Agenda/HIT Advocacy
3. Informatics Competencies
4. Education and Faculty Development
5. Staff Development/Continuing Education
6. Usability/Clinical Application Design
7. Virtual Demonstration Center
8. Leadership Development
9. Consumer Empowerment/Personal Health Record

# Fall 2008 TIGER Deliverables



- 12-15 Webinars (free to all nurses and nursing students – will provide CEU credit)
- Summary Report for each Collaborative Team will include overview of issue, why important to nursing, case studies and examples, and recommendations for the industry
- Virtual Demonstration Center
- Virtual Conference (demos, summary reports, interaction with industry experts, educational sessions, social networking)
- *Nursing Informatics 4<sup>th</sup> Edition: Where Caring and Technology Meet* (available in print late 2009)

# Fall 2008 TIGER Presentations



- **2008 ANCC National Magnet Conference™**  
*Defining Excellence: Magnet*  
Pre-conference Workshop – October 14, 2008  
Salt Lake City, Utah
- **AMIA 2008 Annual Symposium**  
November 8 -12, 2008  
Hilton Washington and Towers  
Washington, DC  
NI Workshop – Sunday, November 9th A.M
- **HIMSS Virtual Conference & Expo**  
November 2008

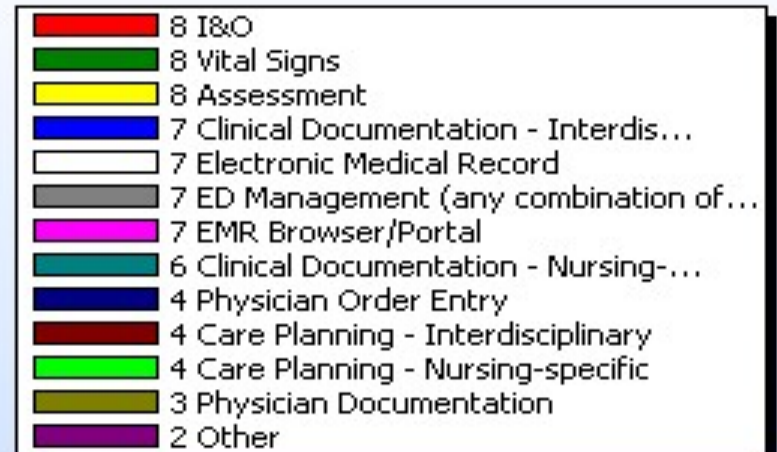
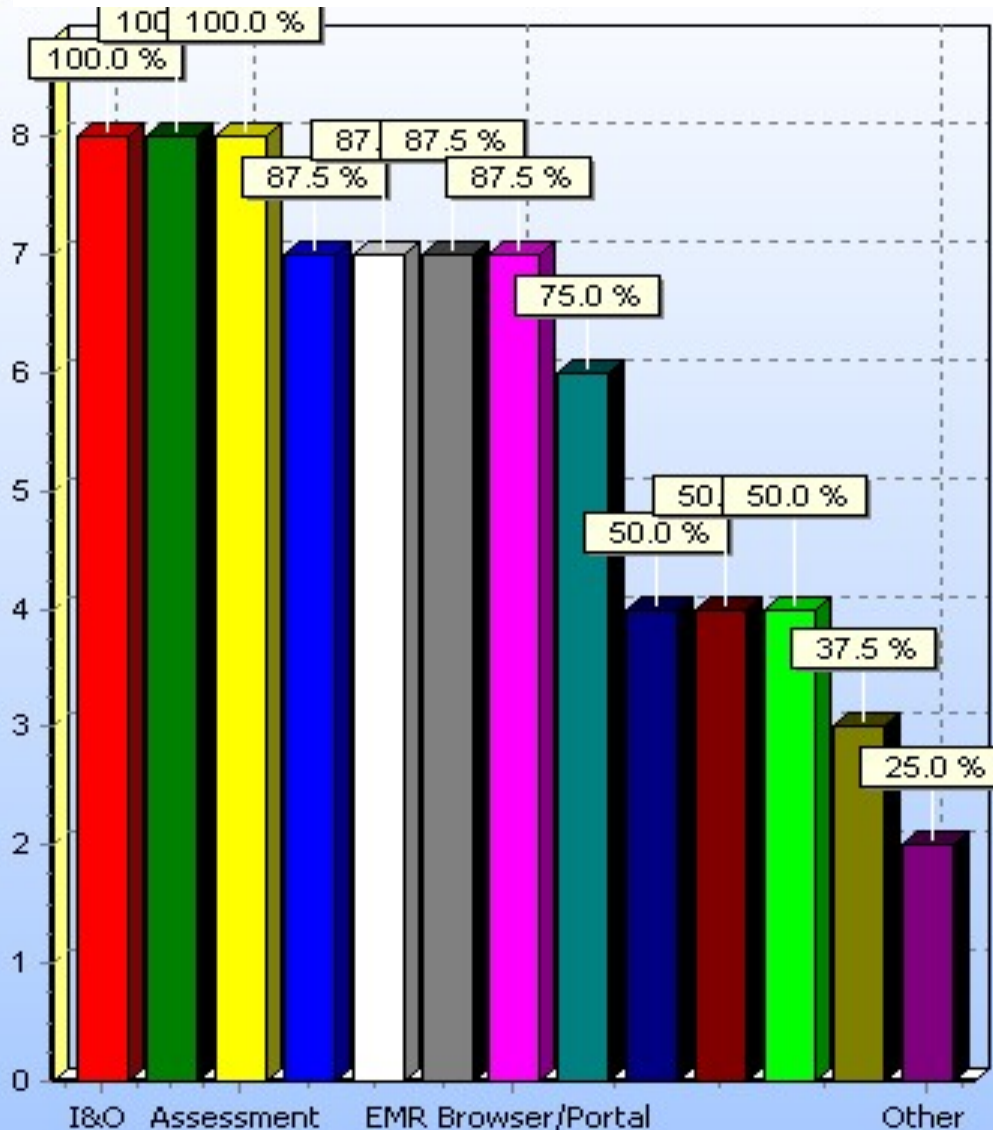


# Identifying Best Practices for Nursing Documentation Implementation

- Interviews with 8 exemplar organizations
  - 88% Integrated healthcare systems
  - 88% Not-for-profit community based
  - Documentation systems live for 1-3 yrs
  - Implementation took >2 years
  - 38% use decision support applications
- Collaboration between HIMSS NI/ME Task Force and Vanderbilt University School of Nursing – May 2007

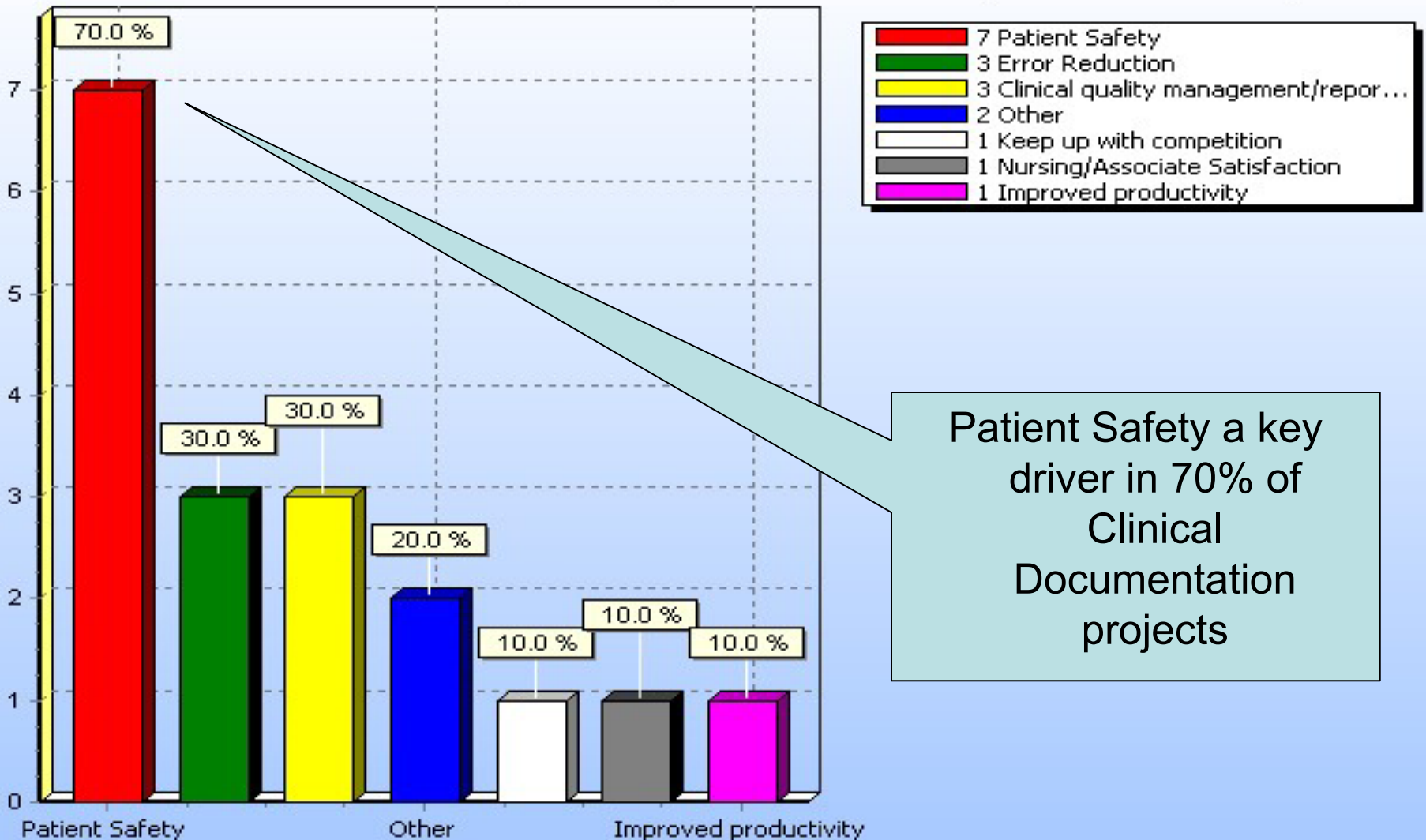


# Mix of Applications In Use



# Main Drivers for Implementation

21) What were the main drivers for implementing clinical documentation (select no more than 2)?



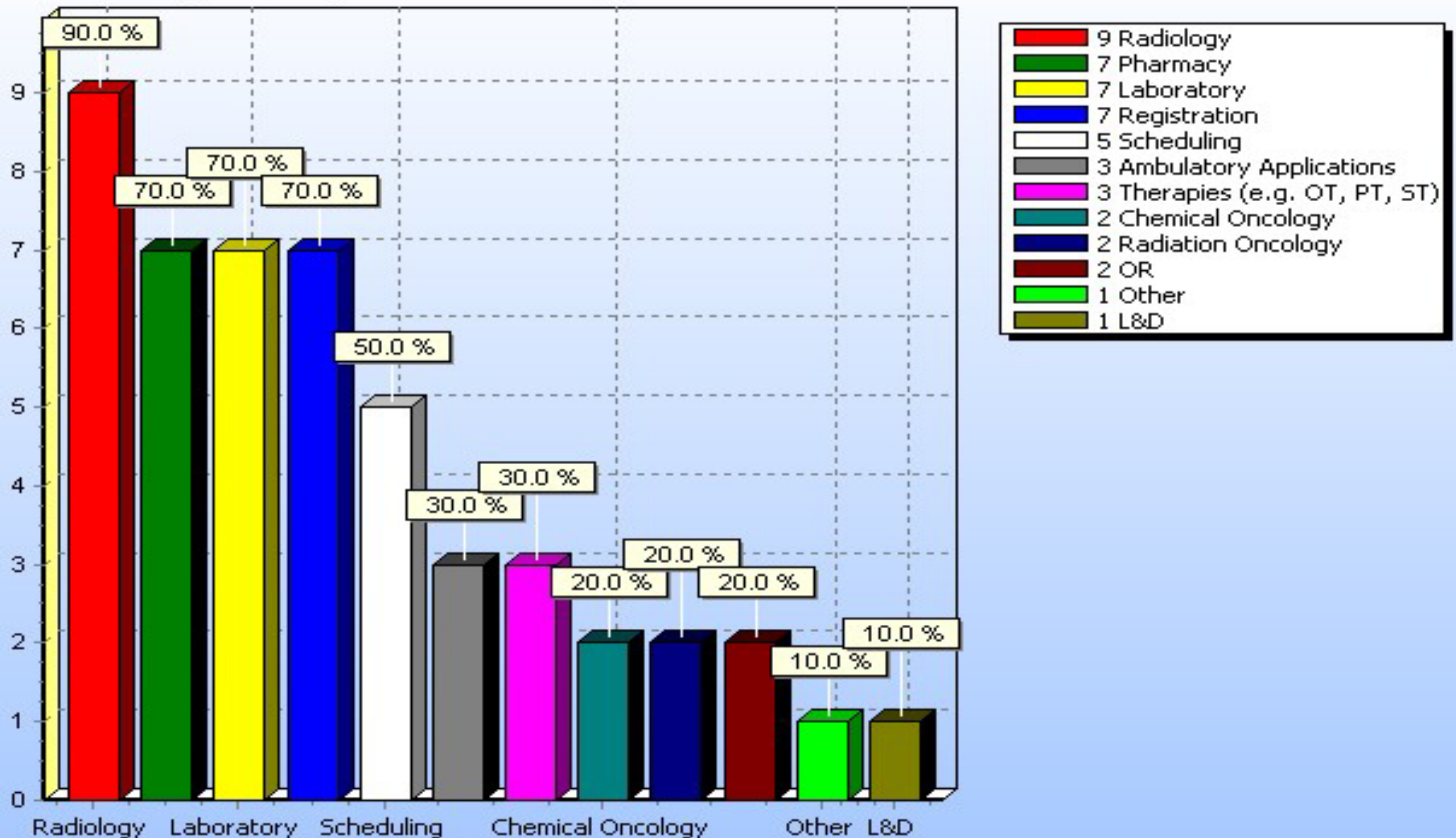
# Project Management - Leadership

- Project management led by:
  - Nursing 13 %
  - IT 25 %
  - Mixed 50%
- 63% used consultants-mostly in an IT capacity
- 100% used super users
- 72.5% used BIG BANG – with the modified rapid rollout preferred



# Applications Integration

86) Is your system integrated with other applications:



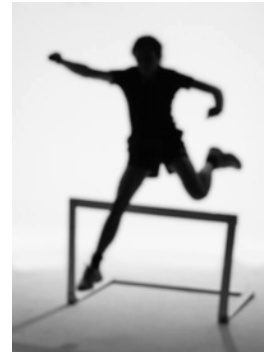
# Baseline Metrics and Benchmarking Fall Short



- 50% collected metrics both before and after the implementation - 37% did not
- The remainder collected metrics either before or after, but not both
- 50% followed the JCAHO requirements as part of their metrics
- Of those who measure metrics, 89% do so quarterly
- Usage metrics are used to determine educational needs for various nursing units

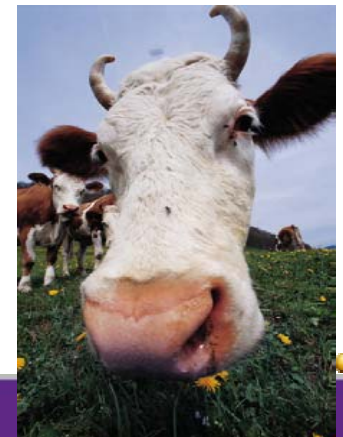
# Adoption advice – “You can never over communicate!”

- 100% established a communication plan – emphasizing that it was a critical success factor
- 89% reported physician resistance as a barrier to adoption – getting over this hurdle required communication (listening & getting feedback), being responsive, educating, and assisting them with their learning curve
  - Dedicated staff devoted to one-on-one sessions with physicians was effective



# Best Practice for Devices

- 100% had a combination of devices:
  - Computers on wheels (COWs) aka workstation on wheels (WOWs)
  - Hard wired at nursing station, and located in patient rooms
  - Devices in the hallways outside of patient rooms
- Number of devices – 75% recommend one device per one staff member!
- 63% of ancillaries and physicians share devices with nursing

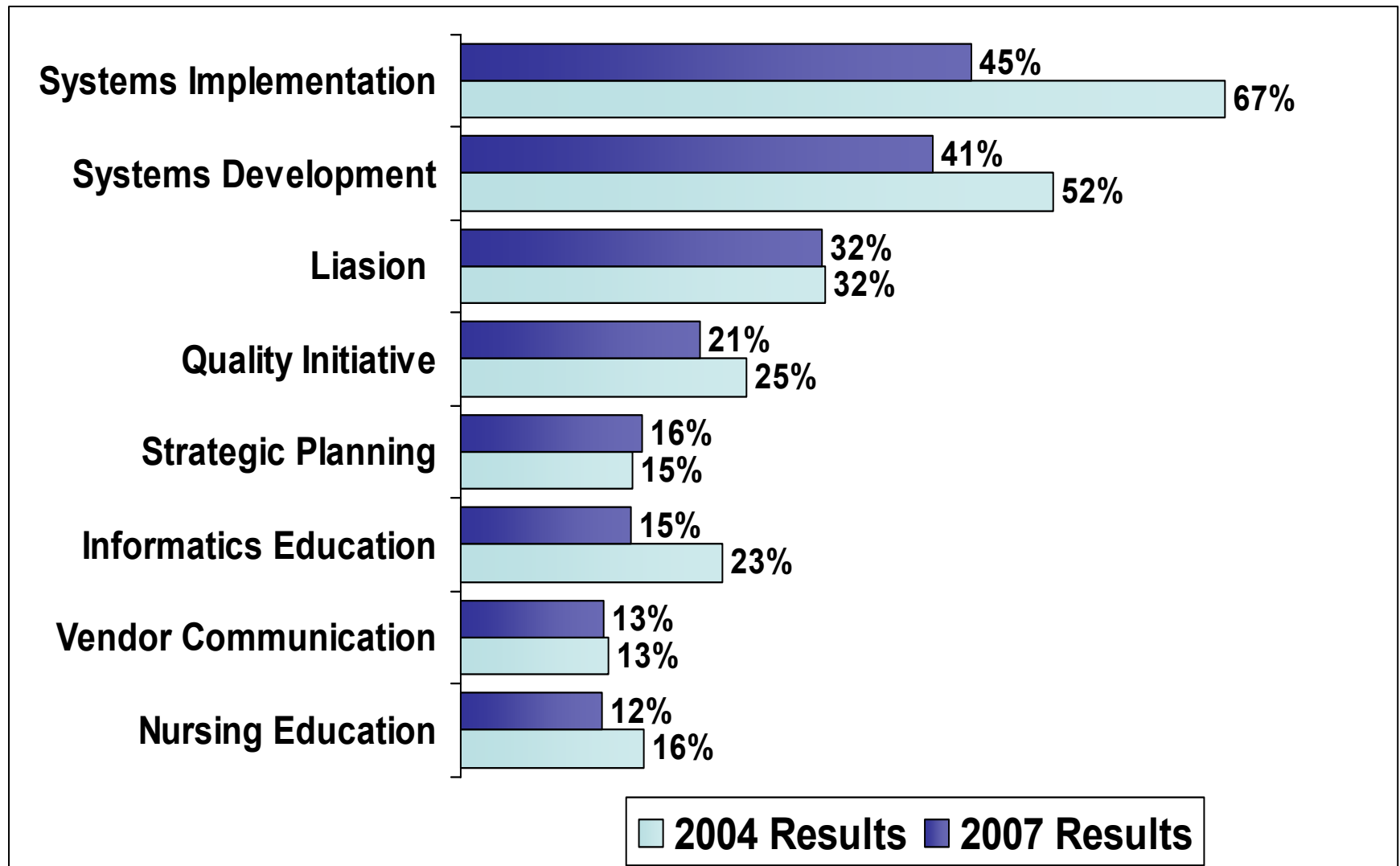


# 2007 HIMSS NI Workforce Survey

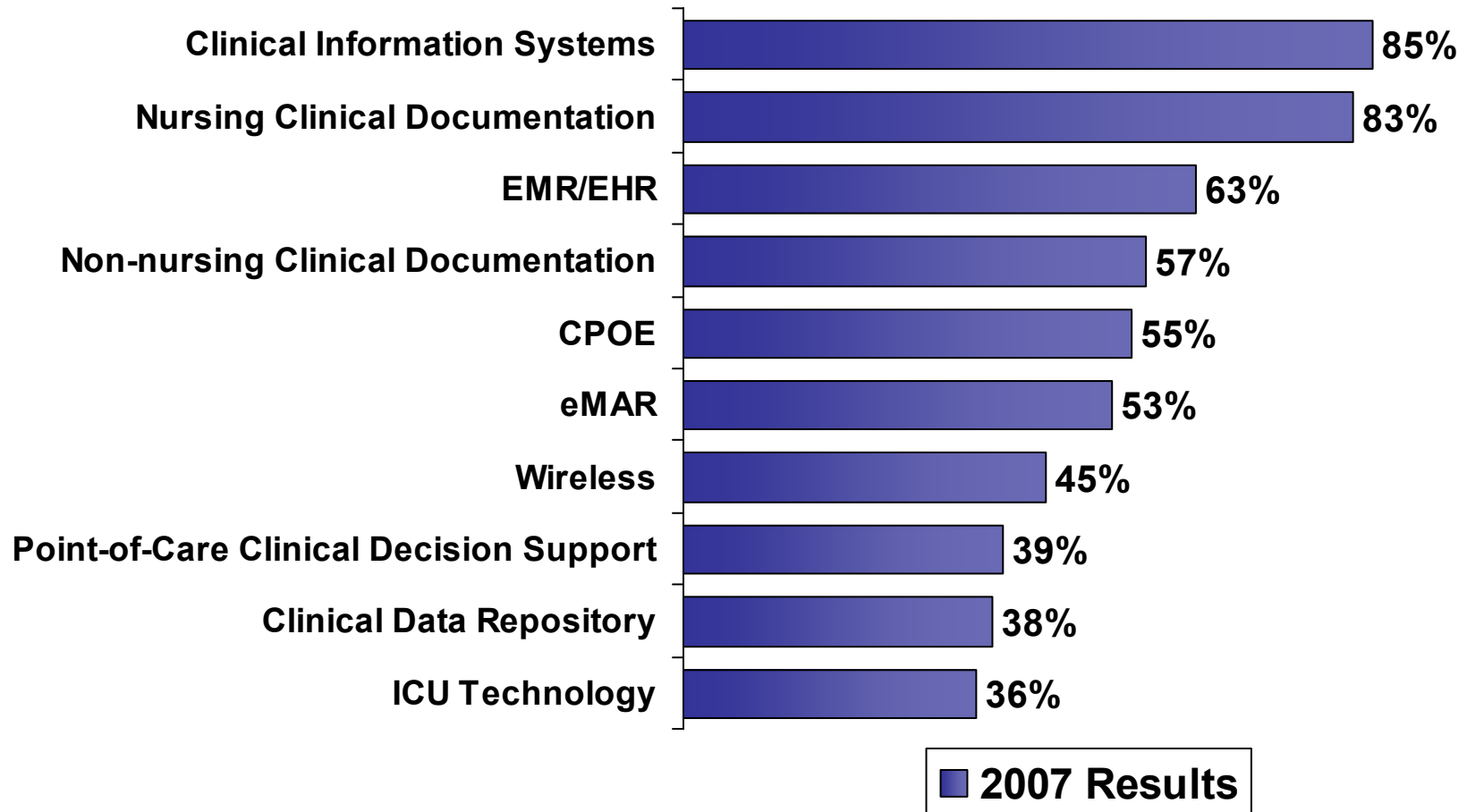
- National web-based Survey conducted by HIMSS and sponsored by McKesson
- 776 Respondents
- Focus on Nurse Informaticists:
  - Issues faced
  - Educational tools used
  - Job responsibilities
  - Credentials and compensation
  - Barriers to success



# Top Three Job Responsibilities



# Which Applications do you Have Experience With

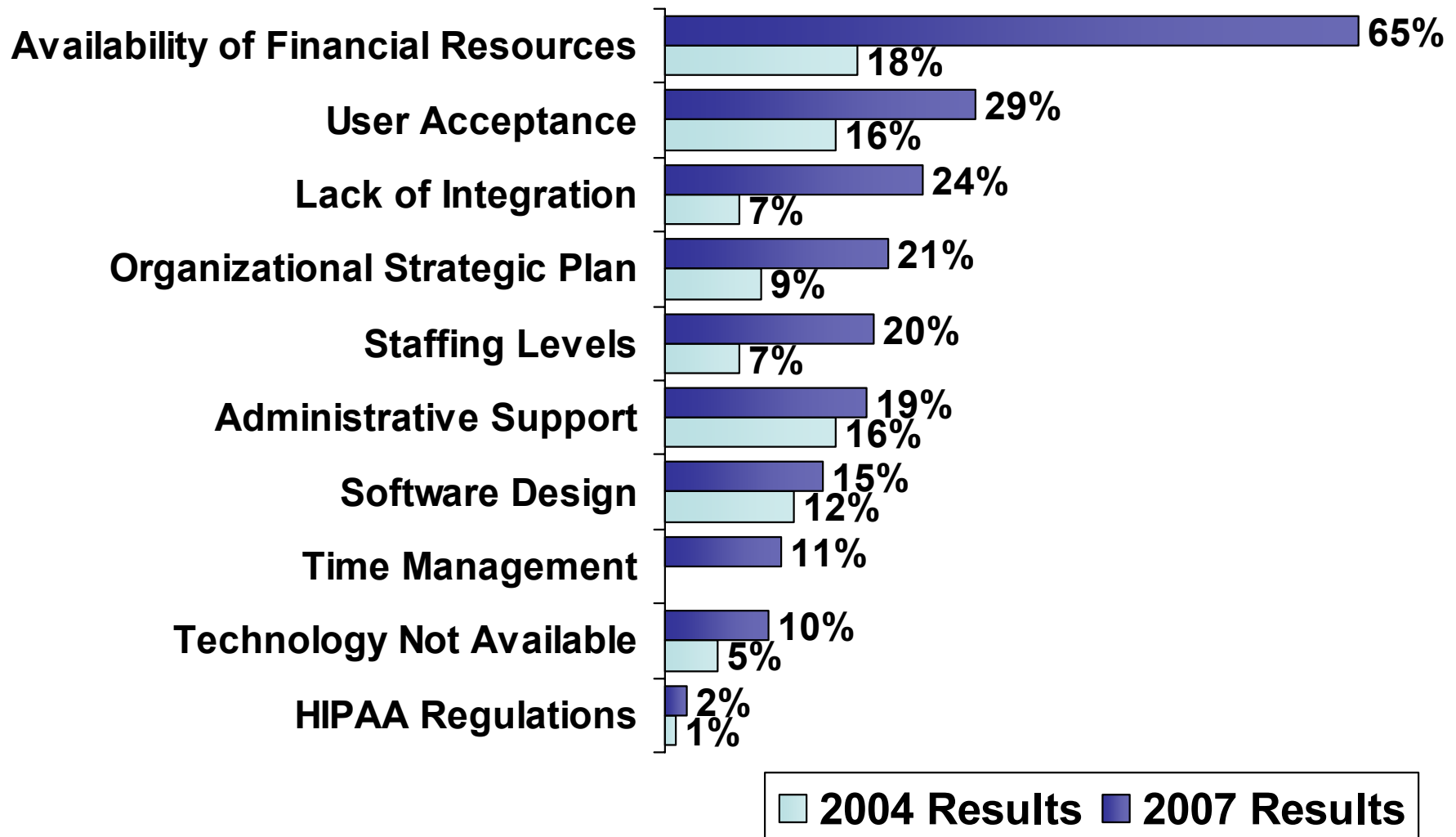


Data from the 2007 HIMSS Nursing Informatics Survey sponsored by McKesson

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Top ten responses shown.

# Largest Barrier to Success



# Impact of Nursing Informatics

“I see nursing informatics as one of the most critical pieces in getting physicians and other clinicians to use electronic medical record technology. Informatics nurses tend to be able to bridge gaps in communication that exist among all of the parties.”

Quote From 2007 *HIMSS Nursing Informatics Survey Respondent.*





# Observation

“Nursing informatics is the leading edge solution that can positively impact the delivery of state of the art health care, lower its cost and dramatically improve patient safety across the entire industry.”

Quote From 2007 *HIMSS Nursing Informatics Survey Respondent.*

# Need for Qualified Nurses

“With the electronic medical record becoming more important and documentation moving to electronic format, nursing informatics will need many qualified nurses who understand the documentation process.”

Quote From 2007 *HIMSS Nursing Informatics Survey Respondent.*



# Reaching Expectations



- Four Common Missteps

- Lack of Measurement

- No evaluative definitions for “success” leave goals unmet; full value inaccessible

- Not Designing for Users

- Prioritizing system install and budget over process change creating “clunky” systems;
    - necessitates inefficient and often unsafe workarounds

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# Reaching Expectations

- Four Common Missteps

- Settling for Low Adoption

- Under-preparing users for change and under-selling IT leads to low adoption;
    - no utilization prohibits value creation

- Implementation as End-State

- Viewing project as “complete” post-install leads to stagnation;
    - prevents continued value extraction

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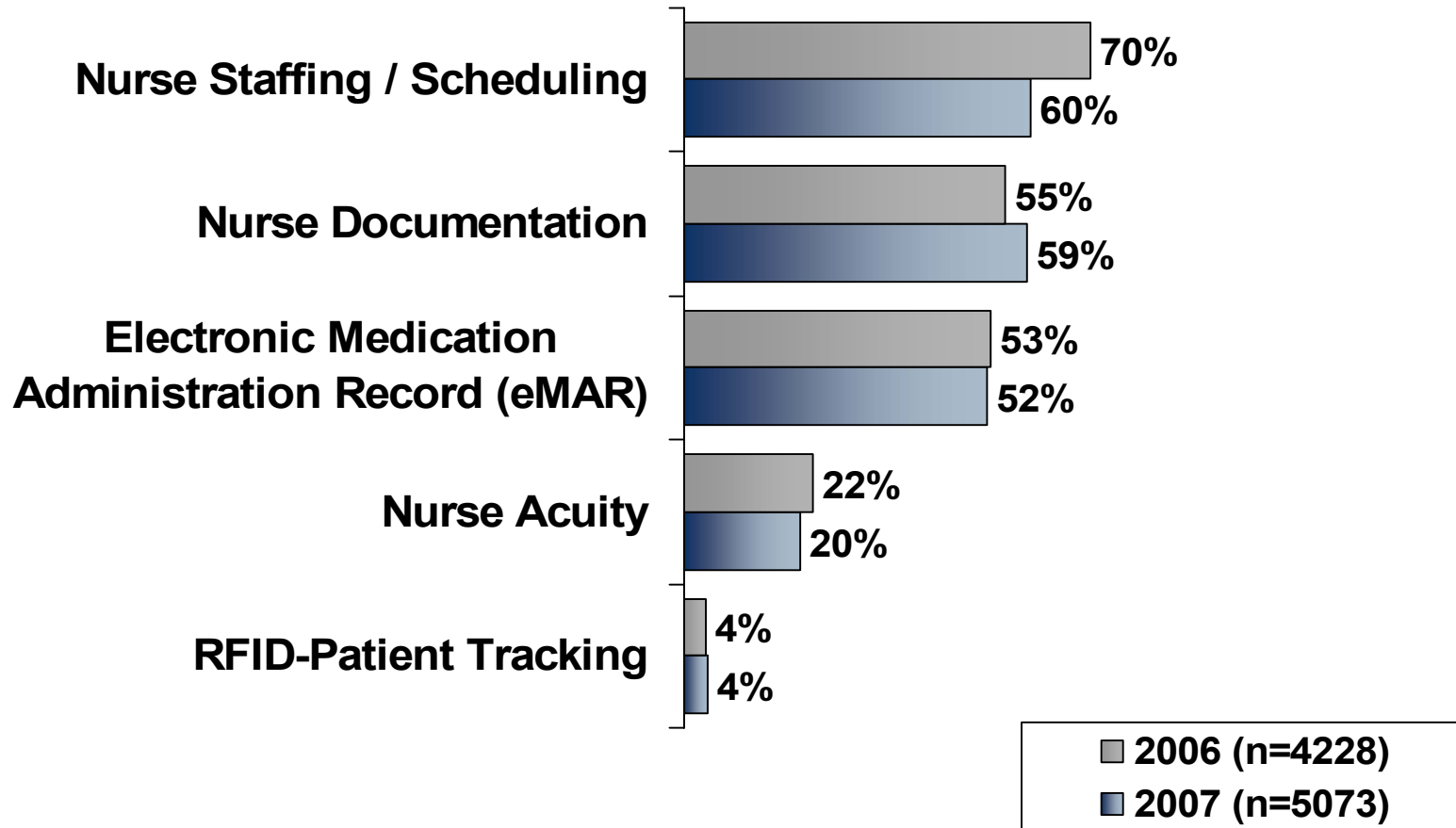
# EMR Adoption Model Trends

## 2007 - 2008

		2007 Final	Q1 2008
Stage 7	Medical record fully electronic; HCO able to contribute CCD as byproduct of EMR; Data warehousing/minim	0.0%	0.0%
Stage 6	Physician documentation (structured templates), full CDSS (variance & compliance), full R-PACS	0.8%	1.0%
Stage 5	Closed loop medication administration	1.4%	1.3%
Stage 4	CPOE, Clinical Decision Support (clinical protocols)	2.2%	2.1%
Stage 3	Clinical documentation (flow sheets), CDSS (error checking), PACS available outside Radiology	25.1%	28.4%
Stage 2	Clinical Data Repository, Controlled Medical Vocabulary, CDSS inference engine, may have Document Imaging	38.8%	35.3%
Stage 1	Ancillaries – Lab, Rad, Pharmacy – All Installed	14.0%	13.1%
Stage 0	All Three Ancillaries Not Installed	19.3%	18.9%

# Nursing Applications

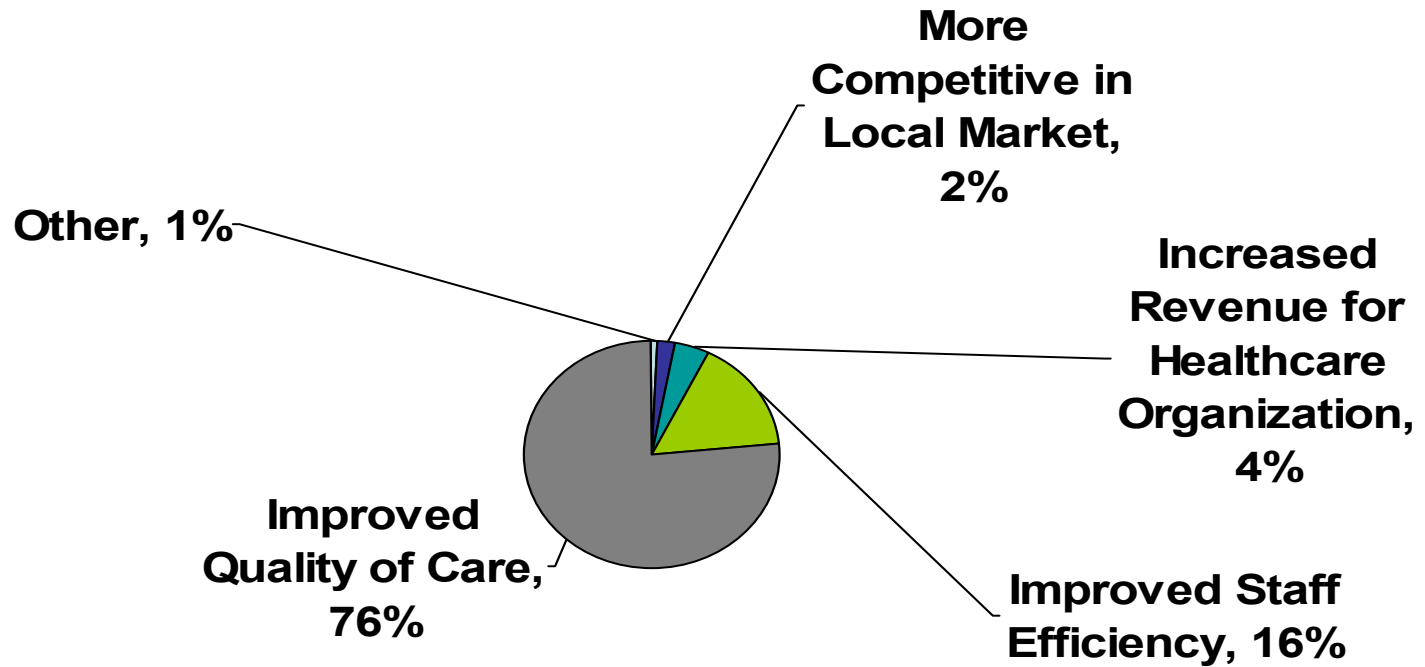
## Summary of Installation (2006/2007)



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

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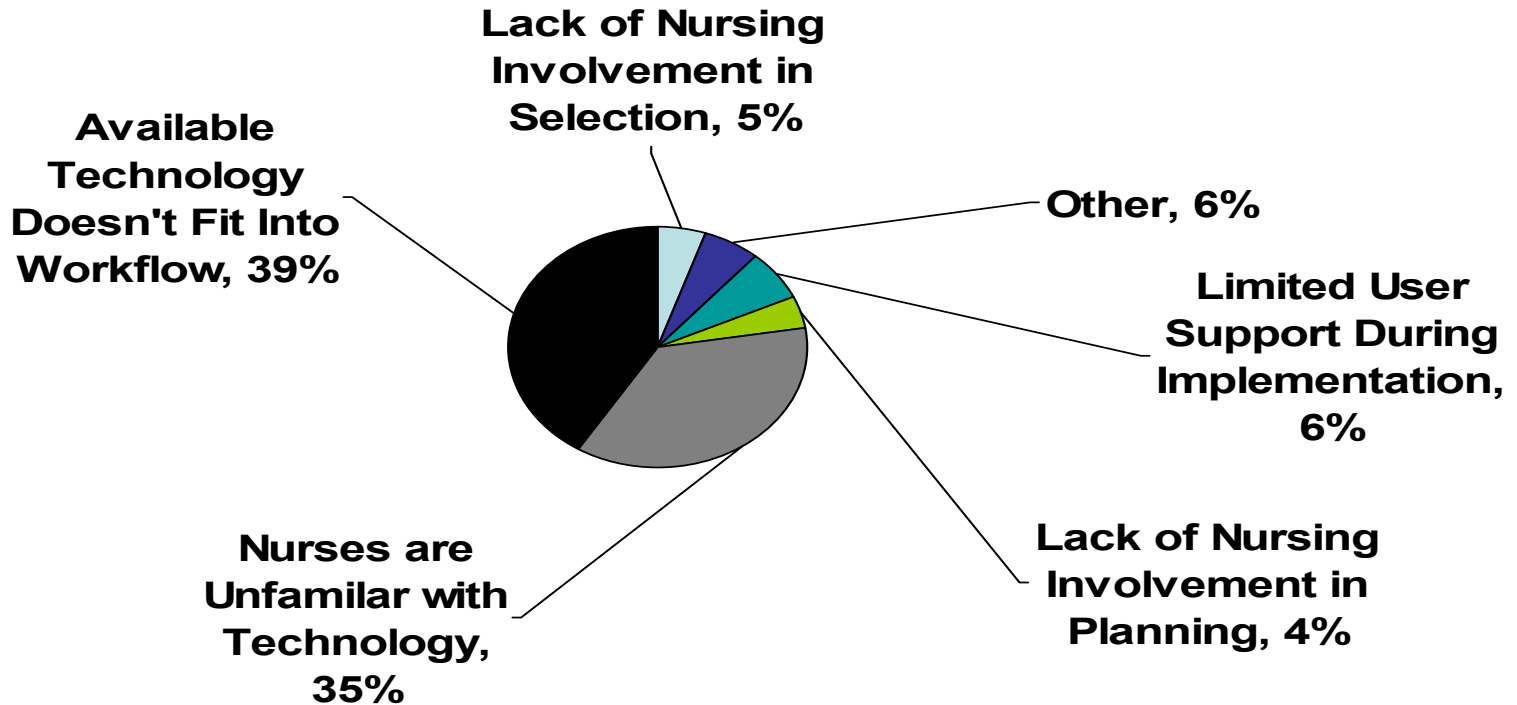
# Biggest Impact IT Can Have on Clinicians' Day-to-Day Jobs



Source: HIMSS Vantage Point, February 2008

N = 263

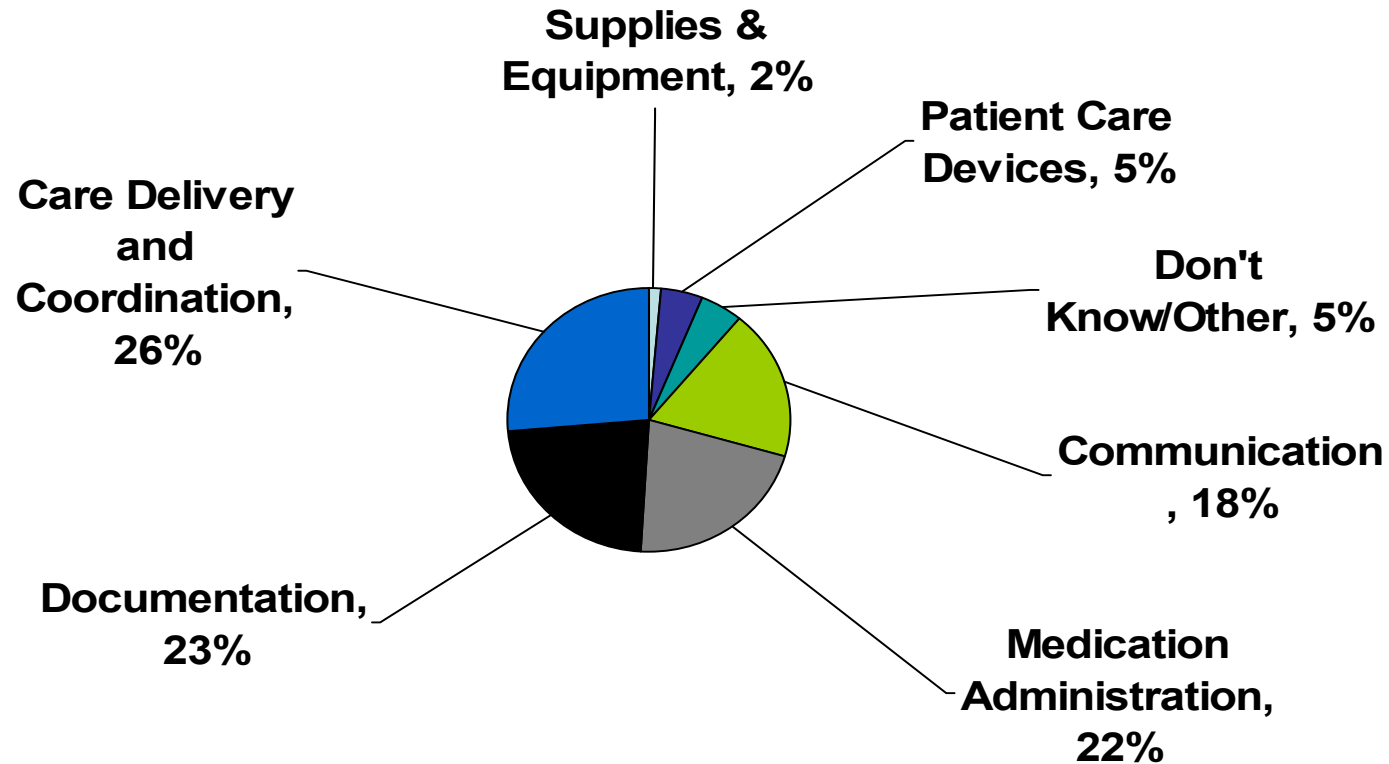
# Biggest Barrier to Getting Nurses to Use IT for Patient Care Activities



Source: HIMSS Vantage Point, February 2008

N = 263

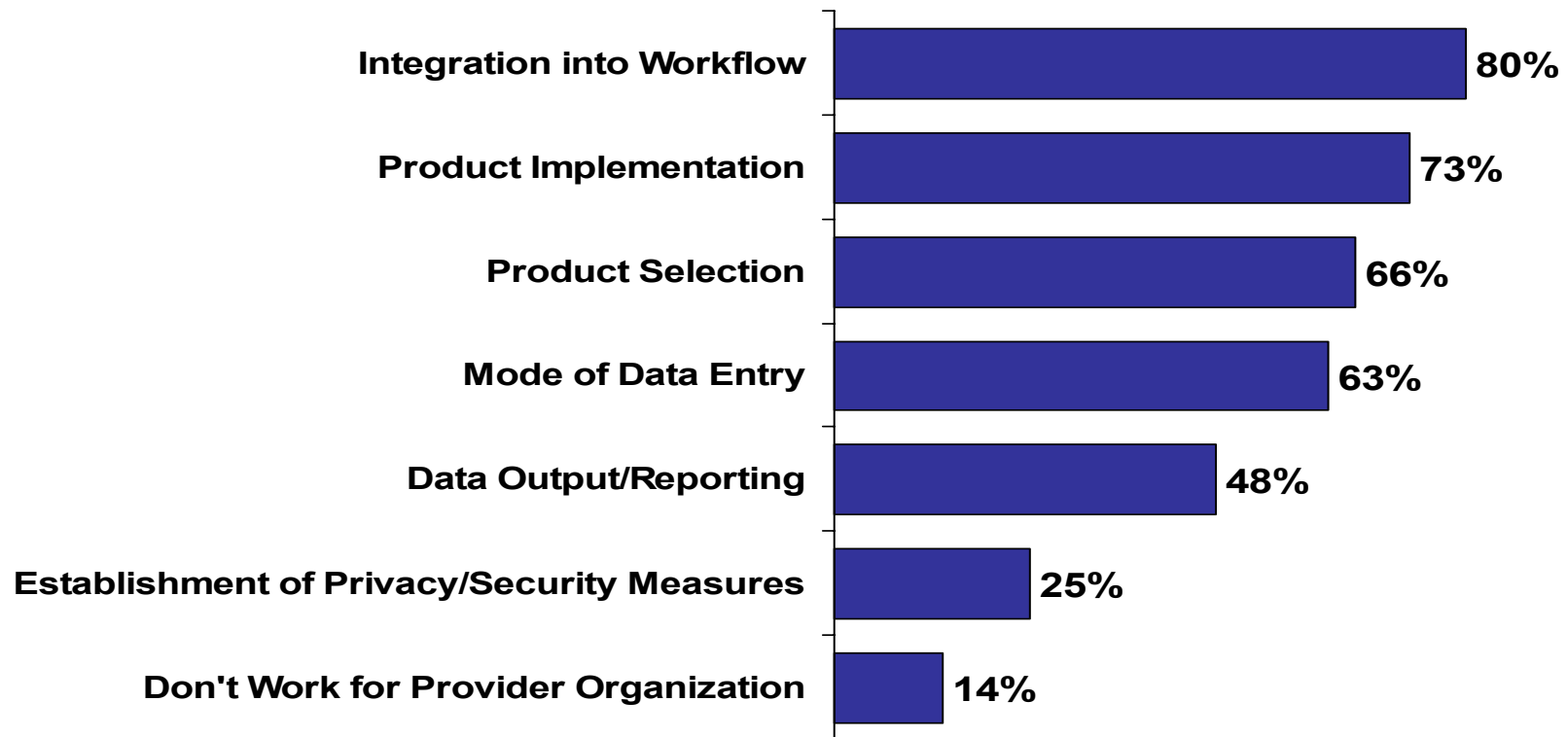
# Greatest Potential Impact on Workflow



Source: HIMSS Vantage Point, February 2008

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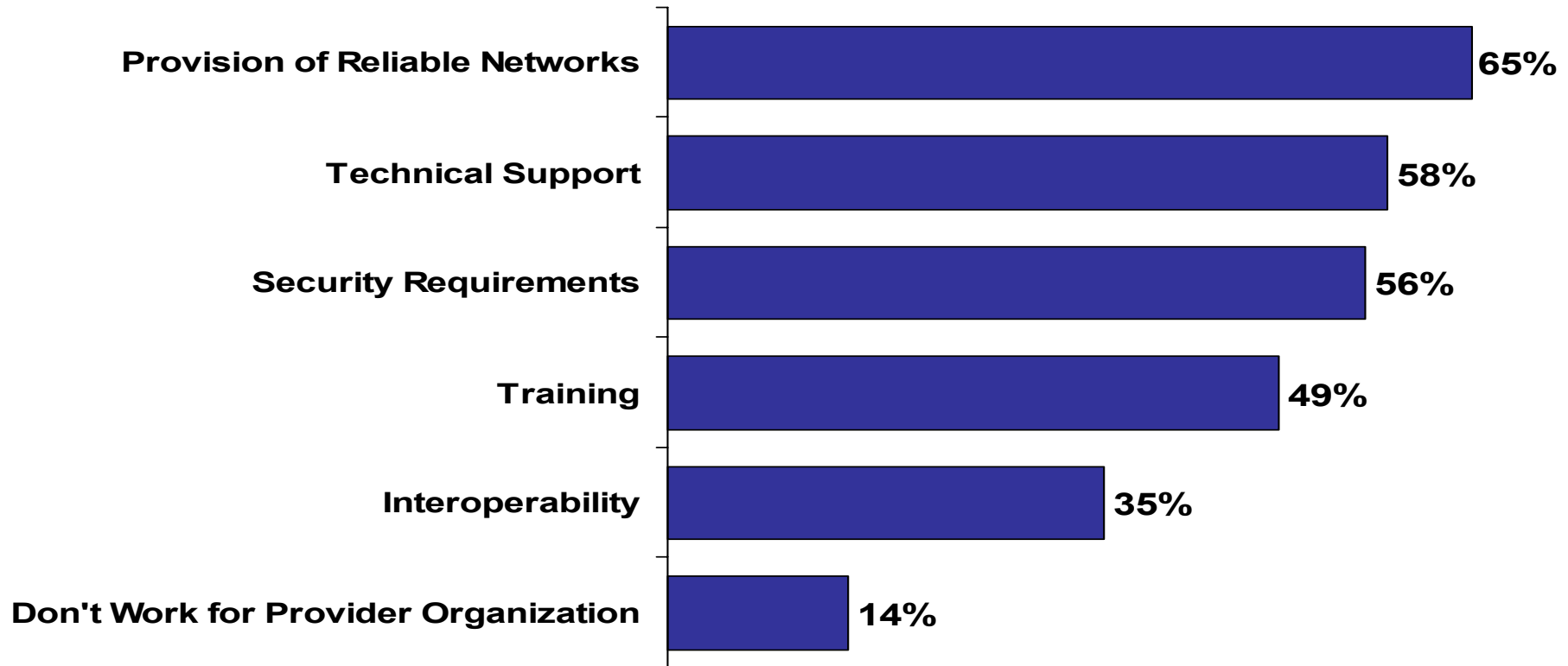
# Nursing Involvement in Implementation and Planning of Technology Solutions



Source: HIMSS Vantage Point, February 2008

N = 263

# Availability of Technology Infrastructure to Promote Integration of Point-of-Care Technology into Workflow



Source: HIMSS Vantage Point, February 2008

N = 263

# Factors for Successful EMR Implementation

- Select the right internal leadership team
- Communicate the “what’s in it for me?”
- Analyze the current workflow
- Create specific and measurable goals
- Develop a strategy for entering existing data
- Devote sufficient time to training
- Plan to create super users to help others
- Create an ongoing plan for answering questions
- Leave time buffers throughout the day
- Plan to succeed, and you will !



Arnold, S. 2007

# Questions?



# Thank you!

# Contact Information

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