



NURSING INFORMATICS

Empowered Care Through Leadership and Technology



Nursing Informatics 101



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Why Nursing Informatics?

“If we cannot name it, we cannot control it, finance it, teach it, research it or put it into public policy.”

Source: Lang, N. 1993



Nursing Informatics *Defined*

Nursing informatics (NI) is a specialty that integrates nursing science, computer science, and information science to manage and communicate data, information, knowledge, and wisdom in nursing practice. NI supports consumers, patients, nurses, and other providers in their decision-making in all roles and settings. This support is accomplished through the use of information structures, information processes, and information technology.

Nursing Informatics: Scope and Standards of Practice, ANA 2008



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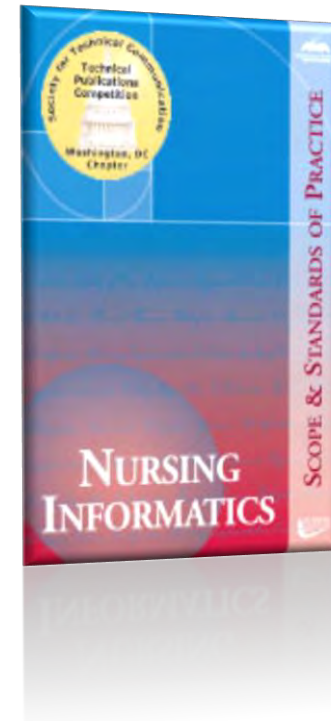
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Who are Informatics Nurses?

- Expert nursing clinicians in utilizing the nursing process
 - Expert analytical & critical thinking skills
 - Understand patient care delivery workflow & integration points for automated documentation
- Clinicians with extensive clinical practice
 - Experienced in utilizing and implementing the nursing process
- Have additional education & experience related to technology and information systems
 - Are excellent project managers because of the similarity between the project management process & the nursing process
 - May be board certified in Nursing Informatics by ANCC

Nursing Informatics is Nursing!

- NI is was recognized as a specialty by the ANA in 1992
 - 1st Scope and Standards of Nursing Informatics Practice published
- Meets Panniers and Gassert's (1996) attributes of a specialty in nursing
 - A differentiated practice
 - A defined research program
 - Organizational representation
 - Educational programs
 - A credentialing mechanism



Nursing Practice

Nursing Process is the cornerstone of Professional Nursing Practice

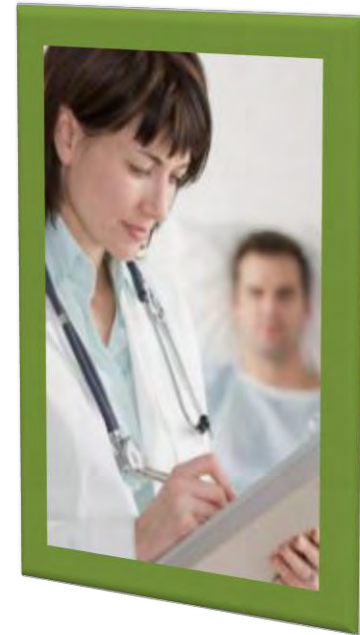
- Defines the “What” and “How” of professional practice
- The steps of the process are measurable
- The process steps can also be used by other clinical disciplines



Nursing Process

Well-documented information provides:

- What care has been provided and what is outstanding
- Outcomes of care provided and responses to the plan of care
- Current patient status & assessments
- Support decisions based on assessments to drive new plans of care



Automation of Documentation

Why automate documentation – not only for nursing but for all of patient care?

Up-to-date, accurate information of each step of the Nursing Process is the Power behind safe, high quality patient-centered care!



Successful Automation

Successful implementation of Information Systems requires:

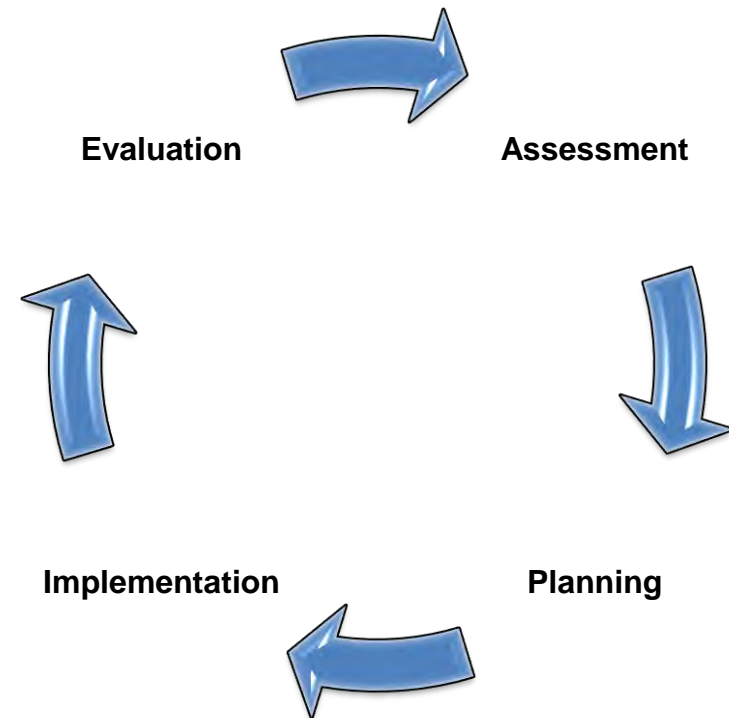


- Well designed systems that support Nursing Process within the culture of an organization and/or specific care providers
- Acceptance & integration of information systems into the regular workflow of nursing process & patient care
- Resources that can support the above

How do Informatics Nurses Impact the Nursing Process?

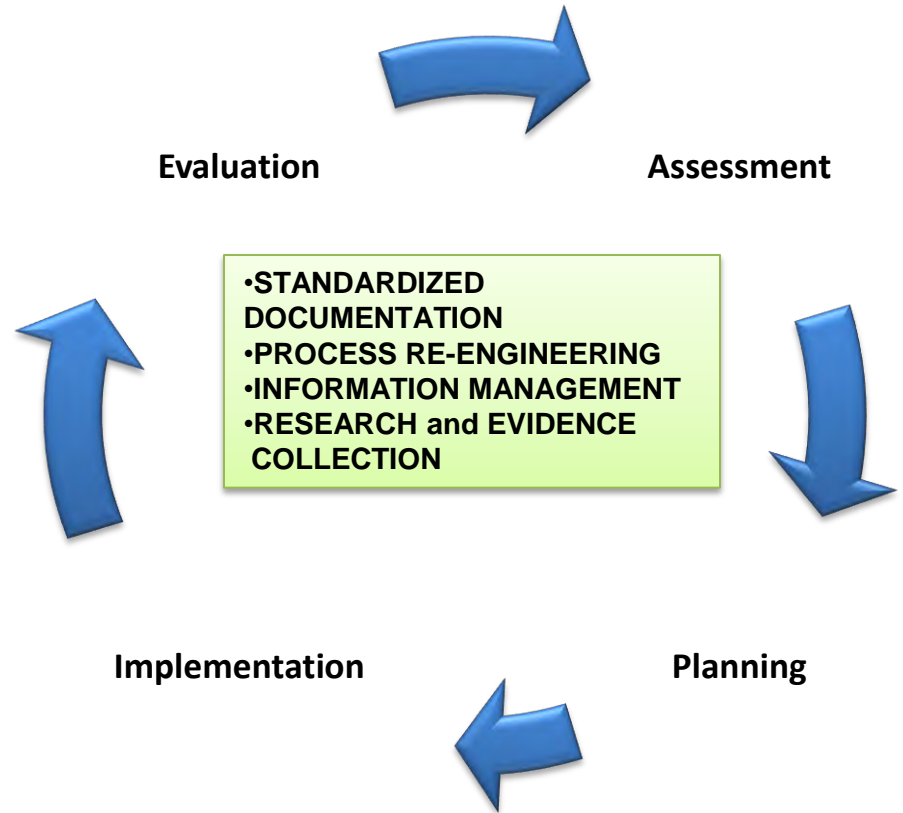
Enable the professional nurse to be the “Coordinator” of each patient’s care

- Communicate & coordinate care with ALL other clinical disciplines
- Coordinate discharge planning, education & teaching, transitions of care
- Manage ALL information related to the nursing process and patient care delivery



How do Informatics Nurses Impact the Nursing Process?

Because information management is integrated into nursing practice, there are now additional steps in the nursing process



How do Informatics Nurses Impact the Nursing Process?

- **Standardized Documentation**

- The collection tool for information management

- **Information Management**

- Key role for Nursing Informatics
- Key to research and evidence collection

- **Process Re-engineering**

- Key to successful implementation

- **Research and Evidence Collection**

- Key to repeatable, standardized care and improved outcomes



The Value of Nurse Informaticists

- **Nurse Informaticists are Bi-Lingual!**
- Support nursing *work* processes using technology
- Re-Engineer clinical workflow & facilitate change management

Acute care – all specialties

Ambulatory care

Redesign work flows

Outpatient settings

Home health

Software development

Long-term care

Telehealth



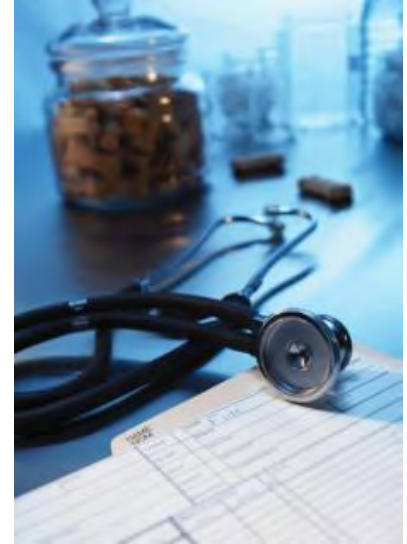
The Value of Nurse Informaticists

- Analyze clinical and financial data
- Promote and facilitate access to resources and references
- Provide nursing content to standardized languages
- Enhance continuity of care
- Improve relationships between providers and recipients of health care
- Enable cost savings and productivity goals



The Benefits of Nurse Informaticists

- Nurse Informaticists promote and facilitate access to resources and references
- Support for their mission to deliver high quality, evidence-based care
- Support for better service by facilitating true interdisciplinary care
- Improvement in key relationships with providers & care recipients
- Enable cost savings and productivity goals
- Facilitate change management
- Enhance continuity of care



The Many Roles of a Nurse Informaticist



- Administration, leadership, & management
- Analysis
- Compliance and integrity management
- Consultation
- Coordination, facilitation, and integration
- Development
- Educational and professional development
- Policy development and advocacy
- Research and evaluation



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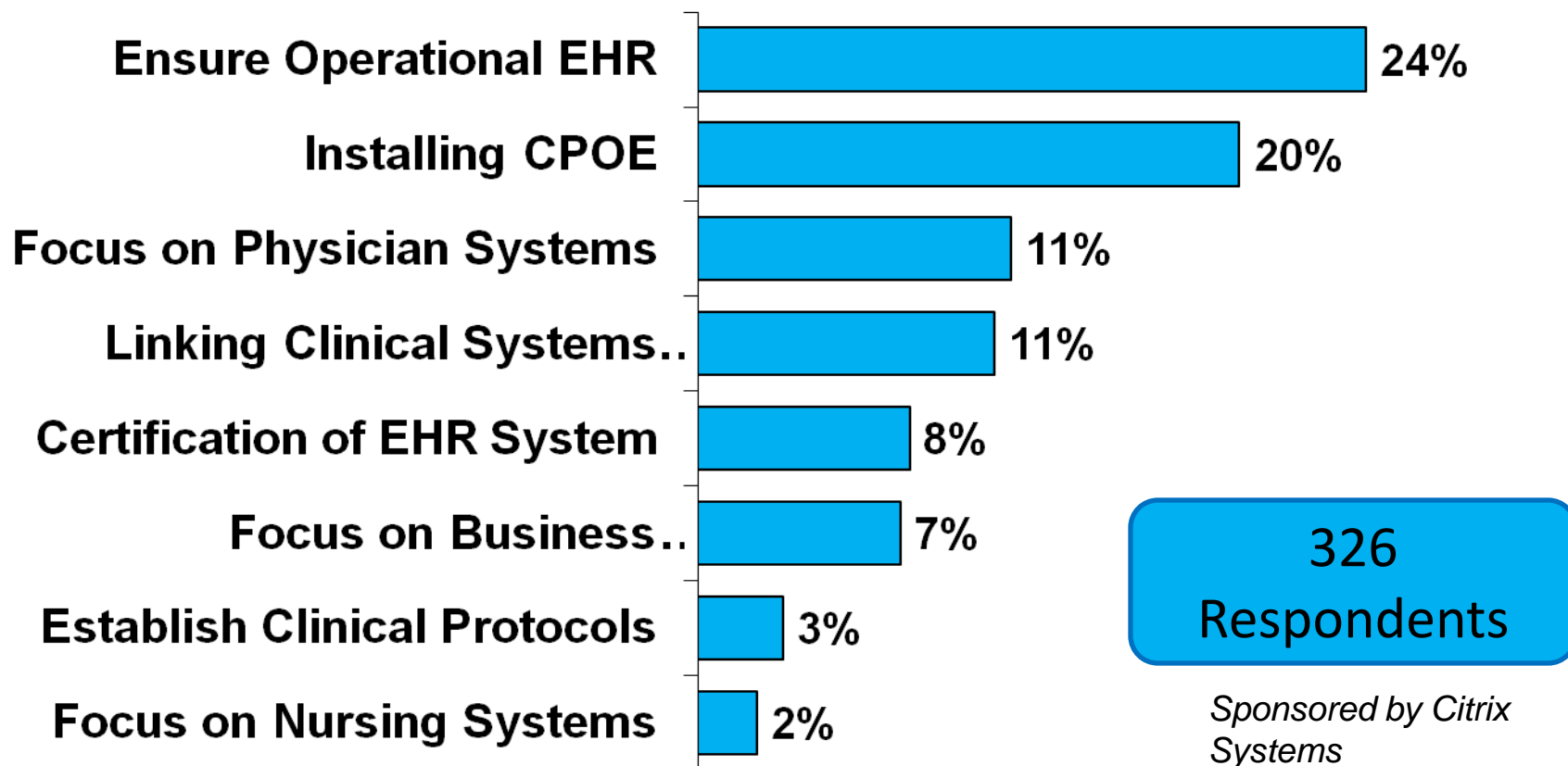
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Data from HIMSS Industry Surveys

22nd Annual HIMSS Leadership Survey

Primary Clinical IT Focus



22nd Annual HIMSS Leadership Survey

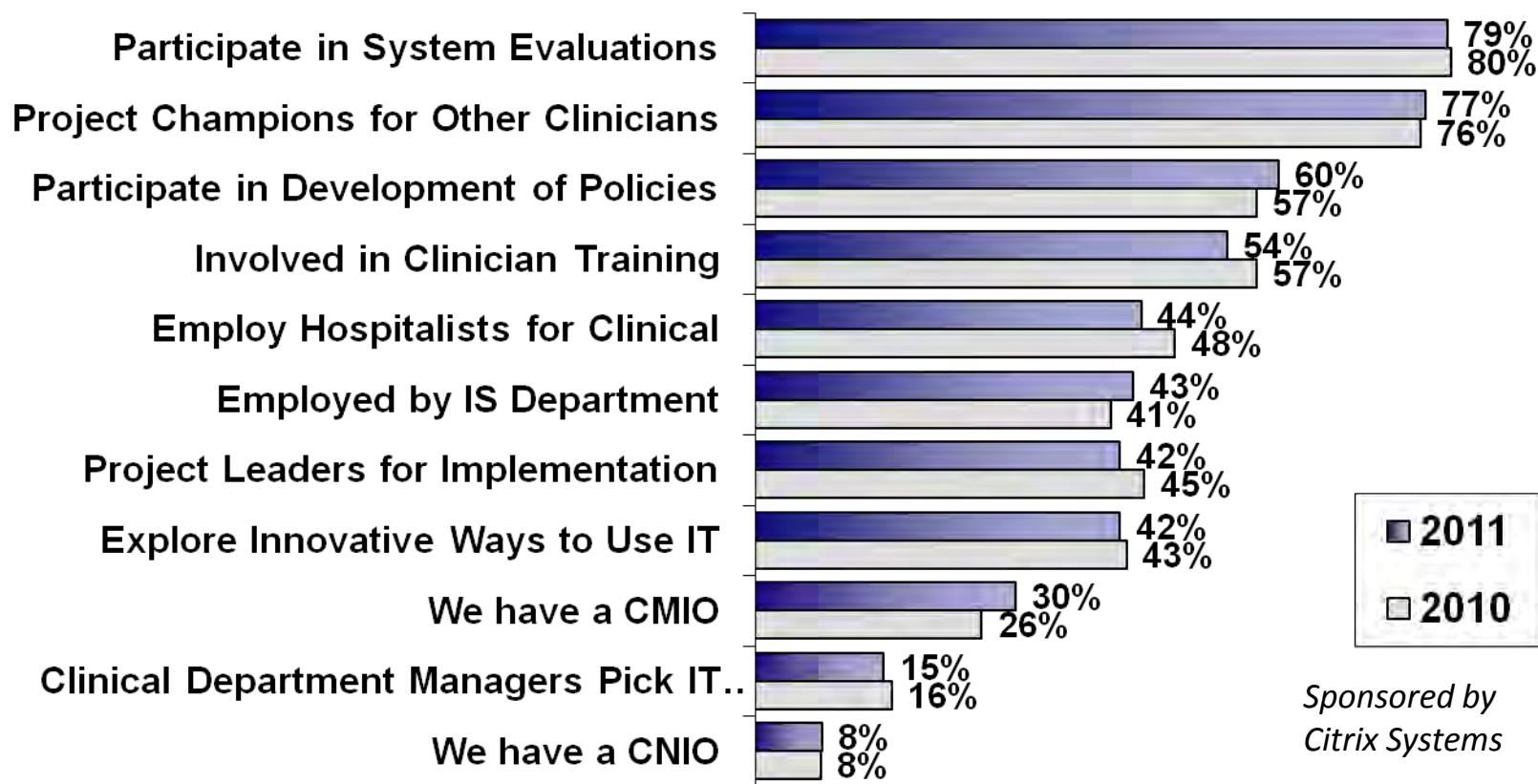
Most Significant Barriers to Implementing IT



Sponsored by
Citrix Systems

22nd Annual HIMSS Leadership Survey

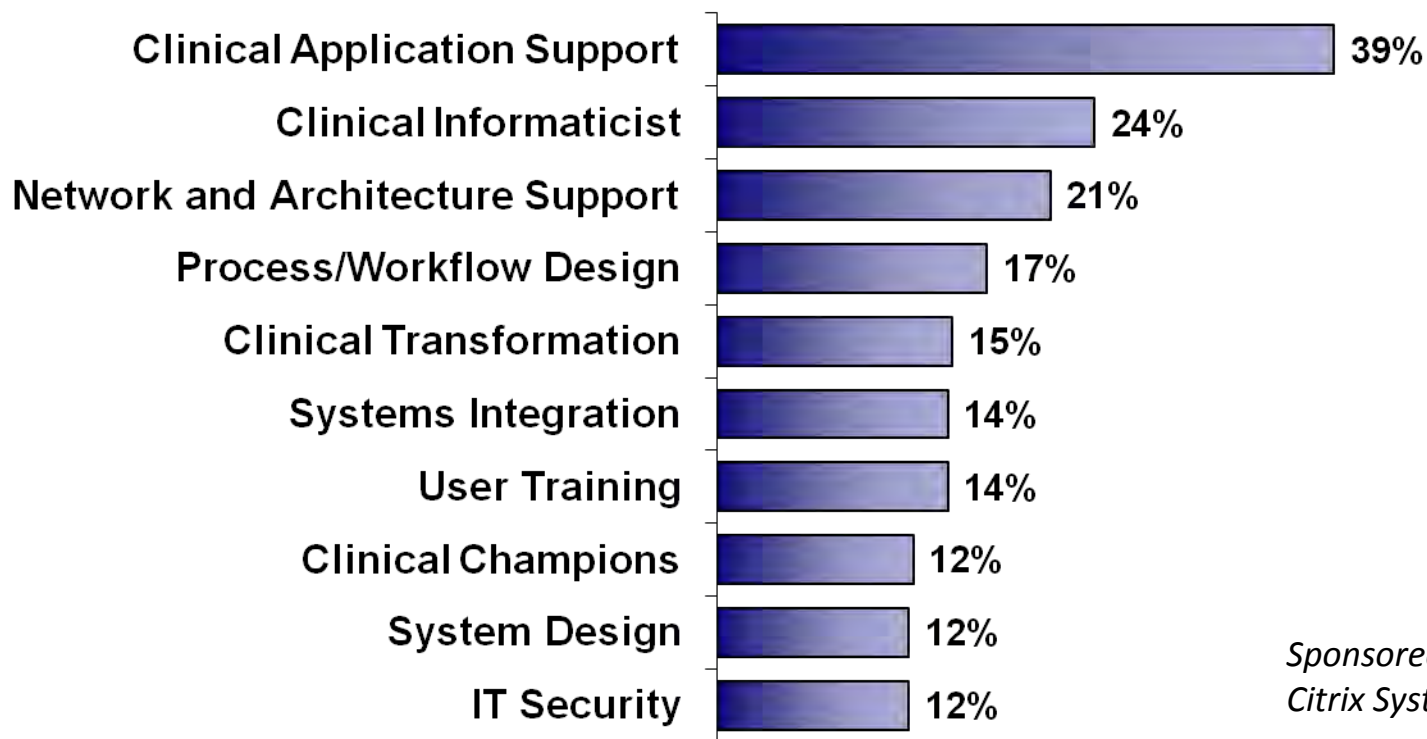
Role of Clinicians



Sponsored by
Citrix Systems

22nd Annual HIMSS Leadership Survey 2011 IT Staffing Needs

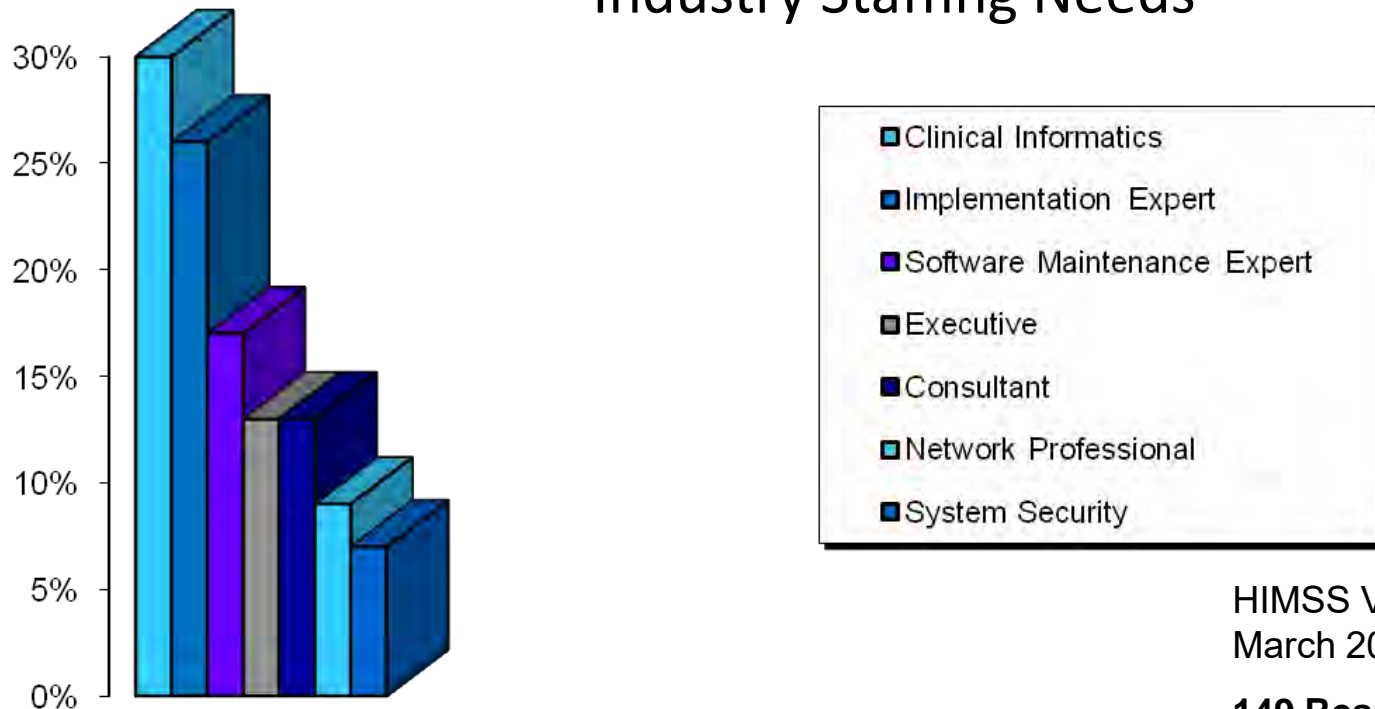
(Top Ten)



*Sponsored by
Citrix Systems*

Areas in Which Healthcare Organizations Lack Qualified Candidates

Industry Staffing Needs

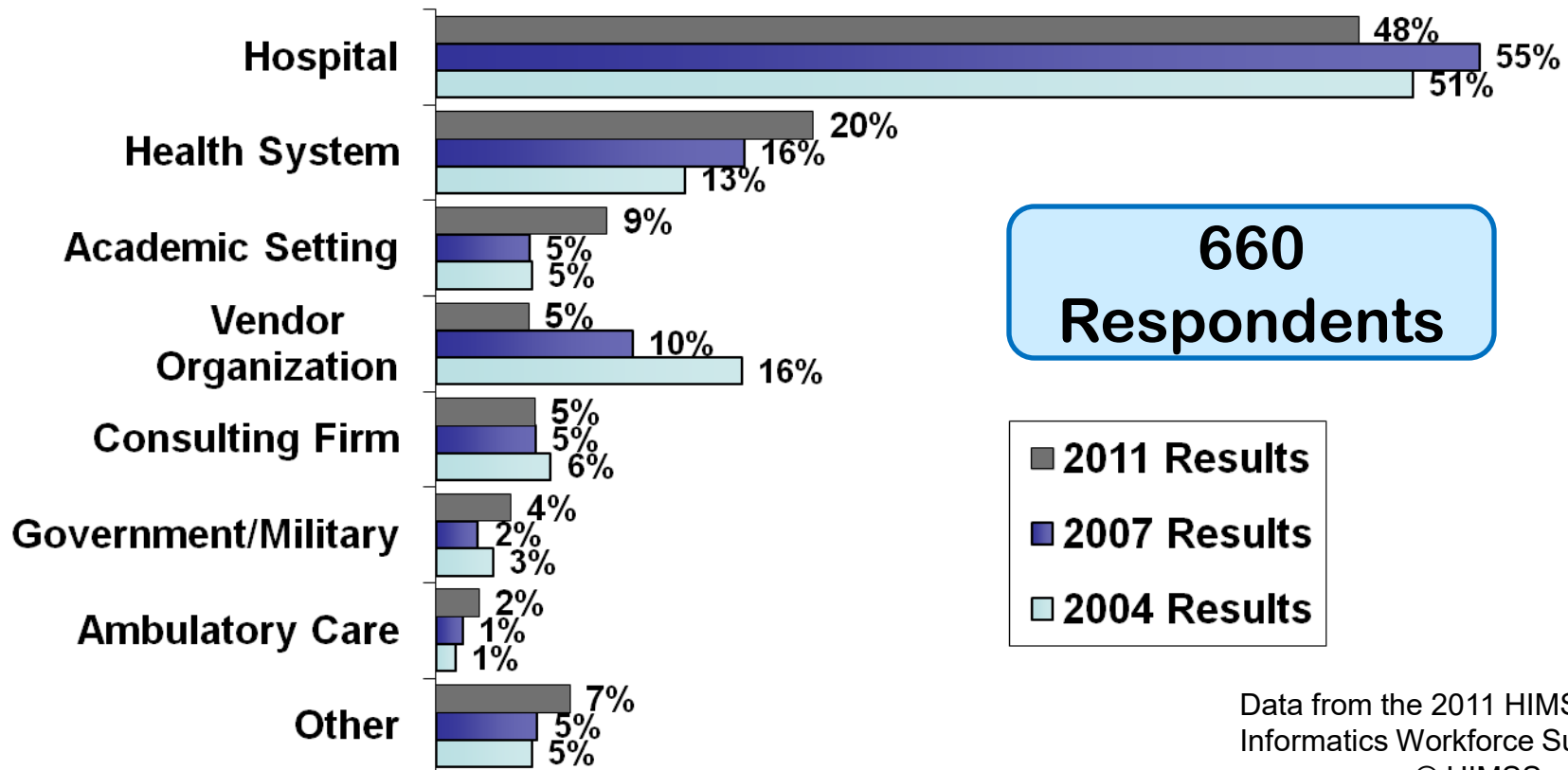


HIMSS Vantage Point
March 2010

149 Respondents

2011 NI Workforce Survey

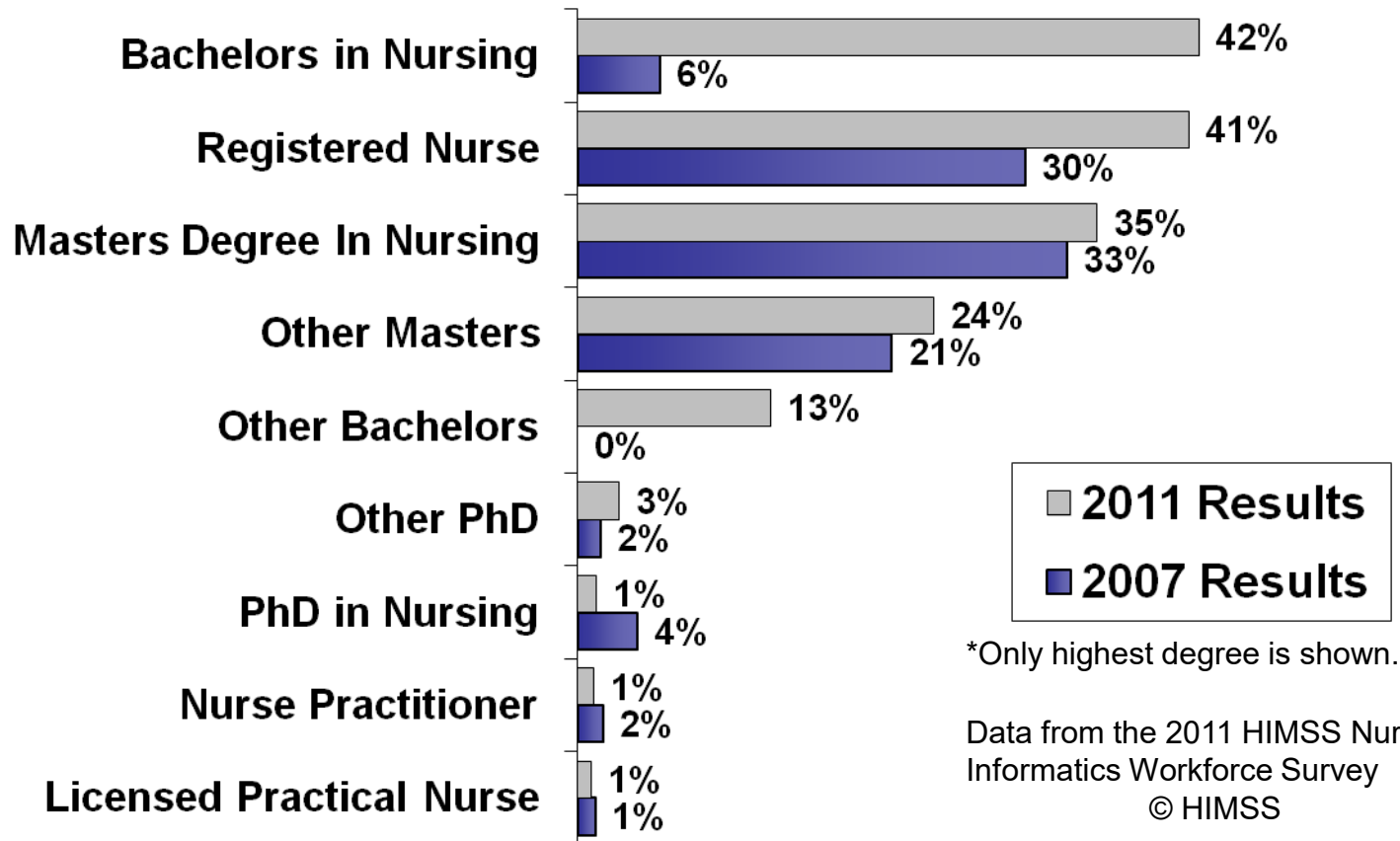
Primary Workplace



Data from the 2011 HIMSS Nursing Informatics Workforce Survey
© HIMSS

2011 NI Workforce Survey

Nursing Education



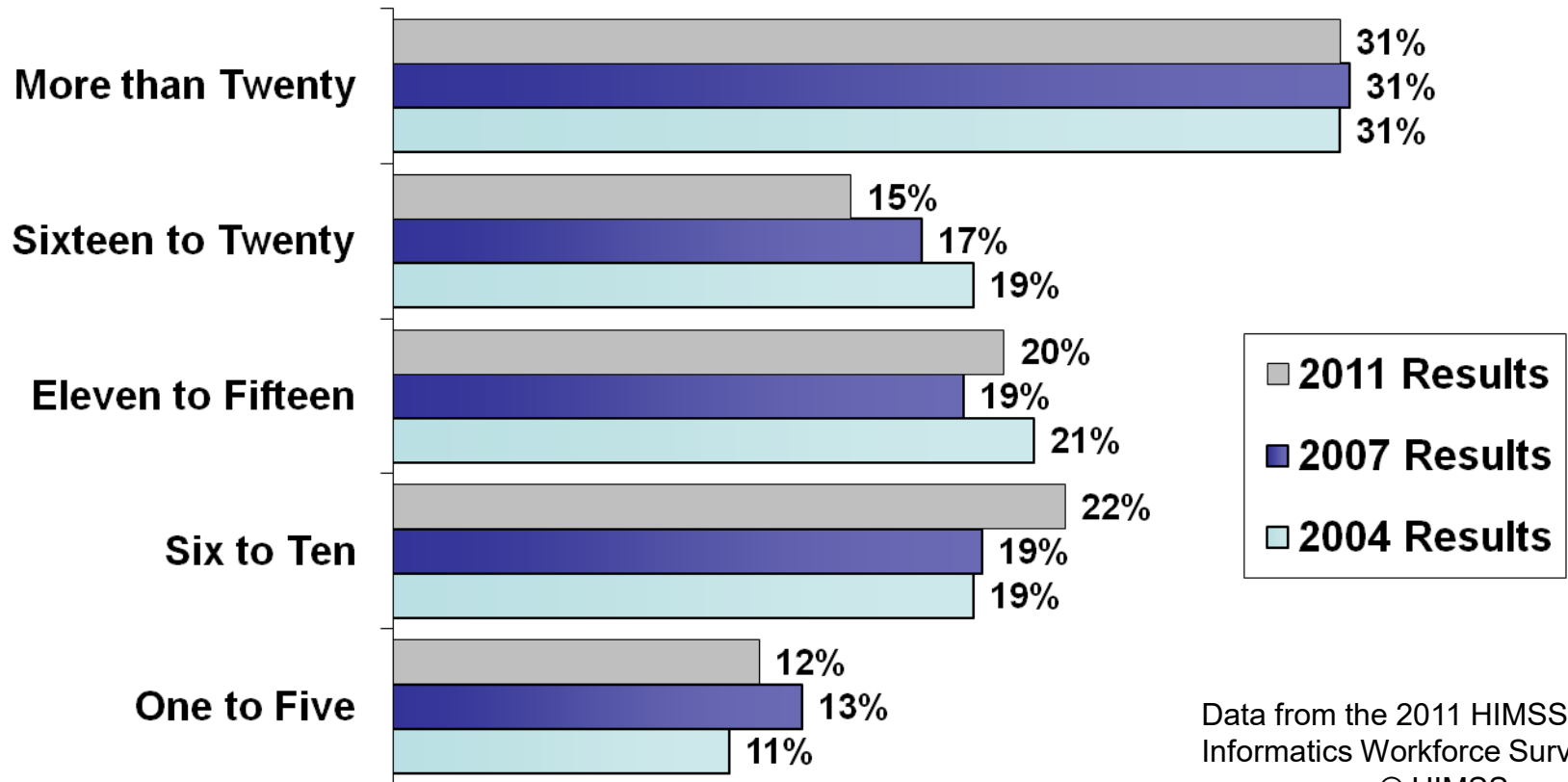
Nursing Informatics Education

- Nursing Informatics courses at the BSN level
- Specialty in Nursing Informatics – MSN
 - Distance learning – online
 - Traditional
- Certificate programs
- Post graduate degree



2011 NI Workforce Survey

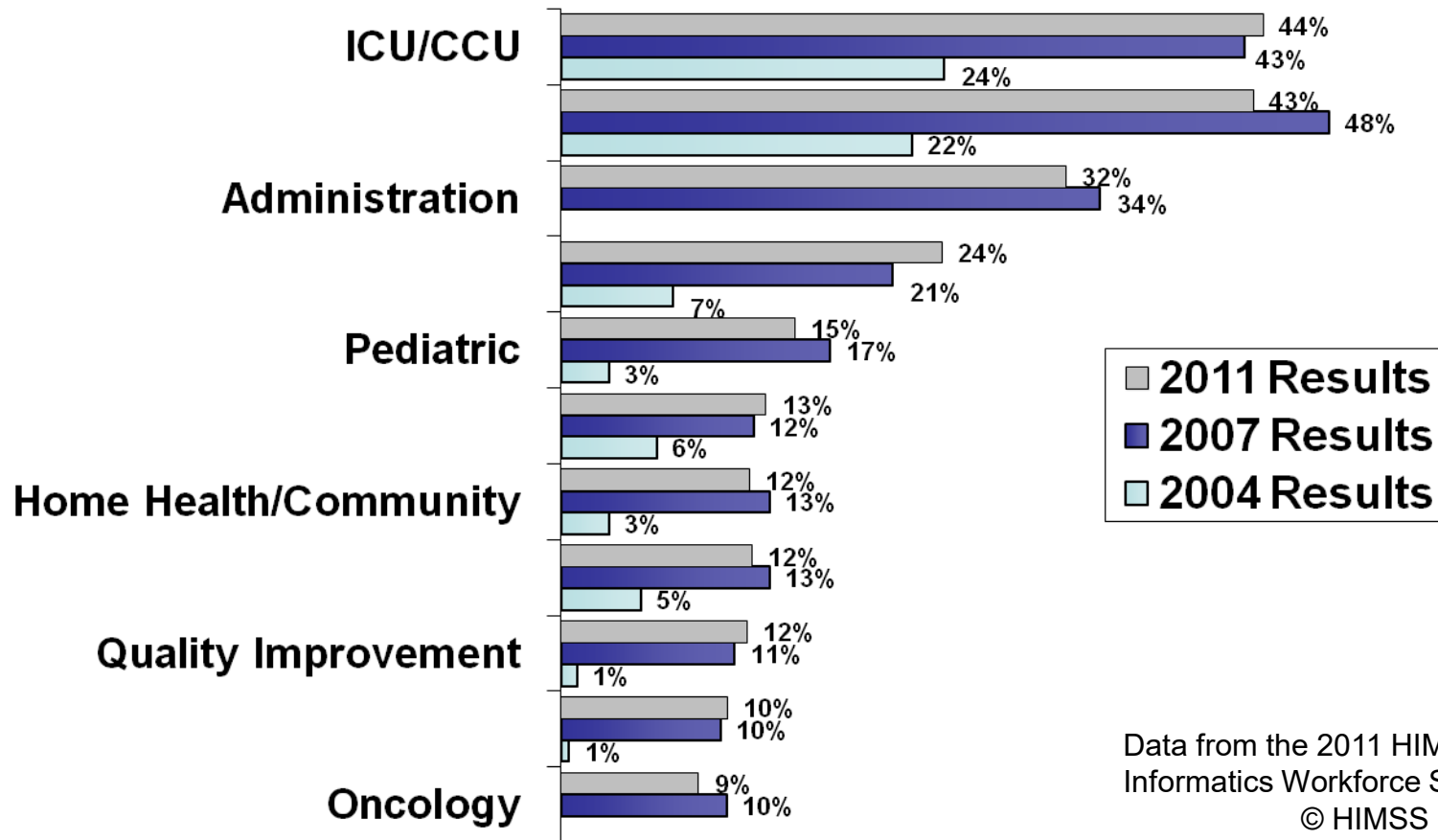
Years of Clinical Experience



Data from the 2011 HIMSS Nursing Informatics Workforce Survey
© HIMSS

2011 NI Workforce Survey

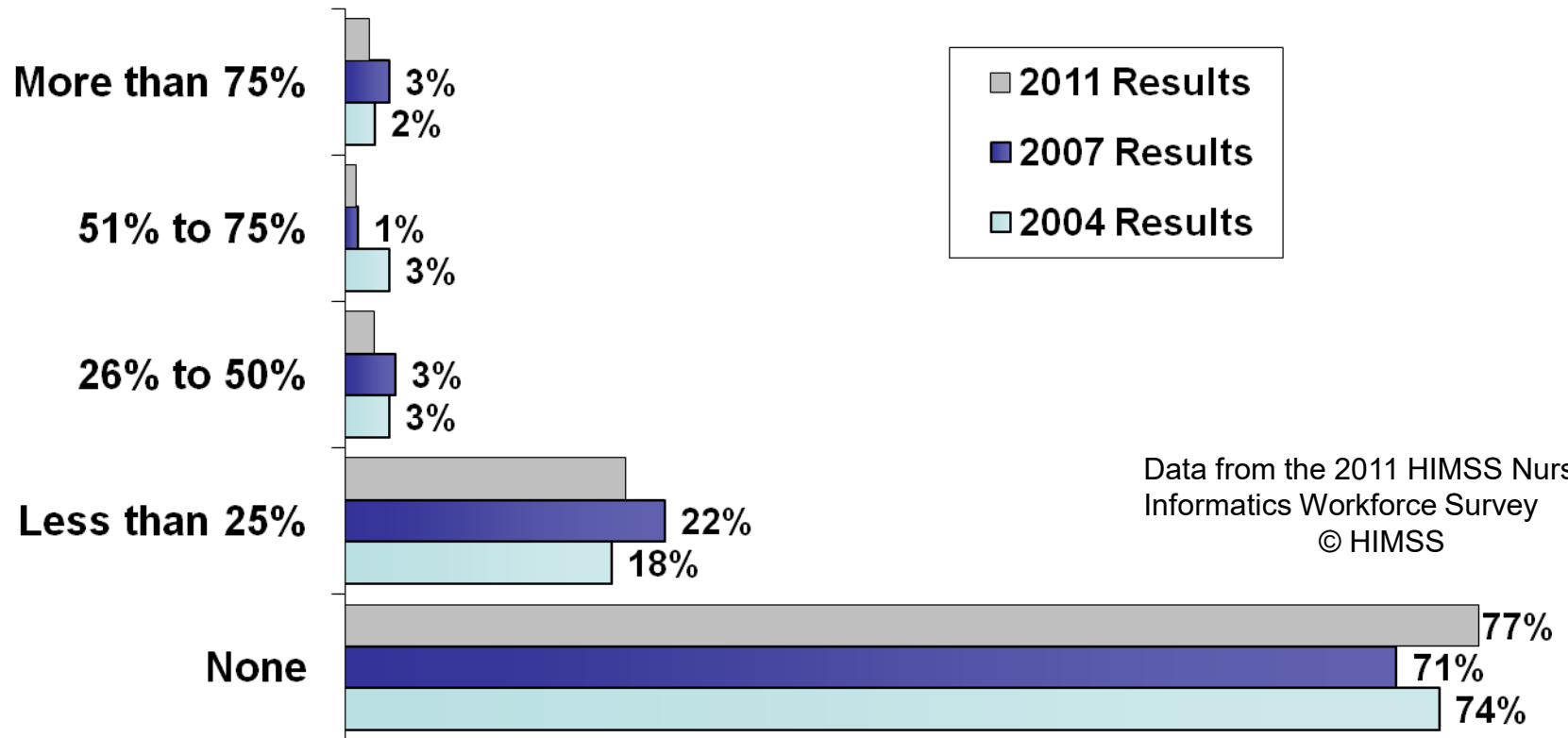
Nursing Experience



Data from the 2011 HIMSS Nursing Informatics Workforce Survey
© HIMSS

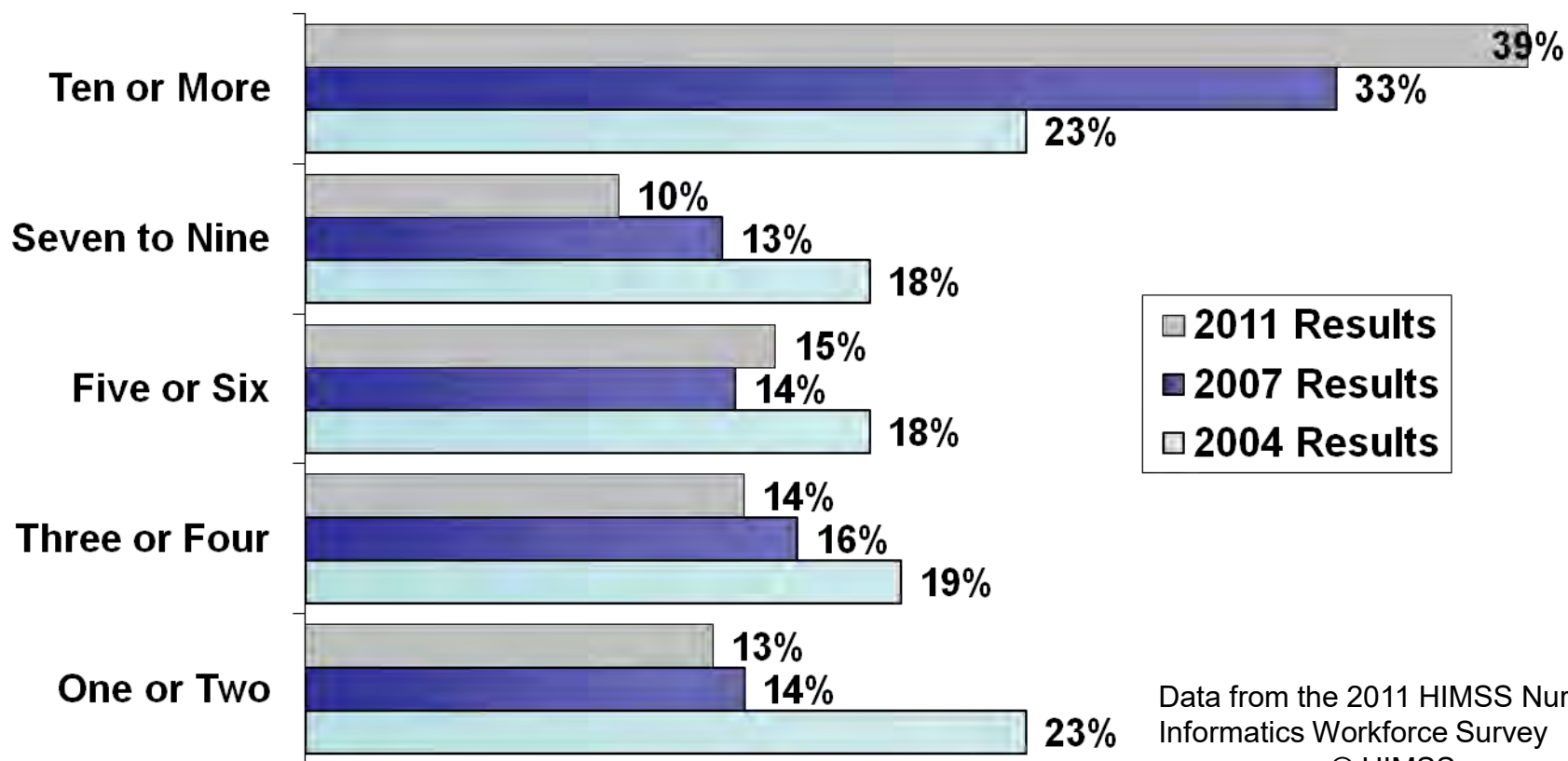
2011 NI Workforce Survey

Time Devoted to Clinical Activities



2011 NI Workforce Survey

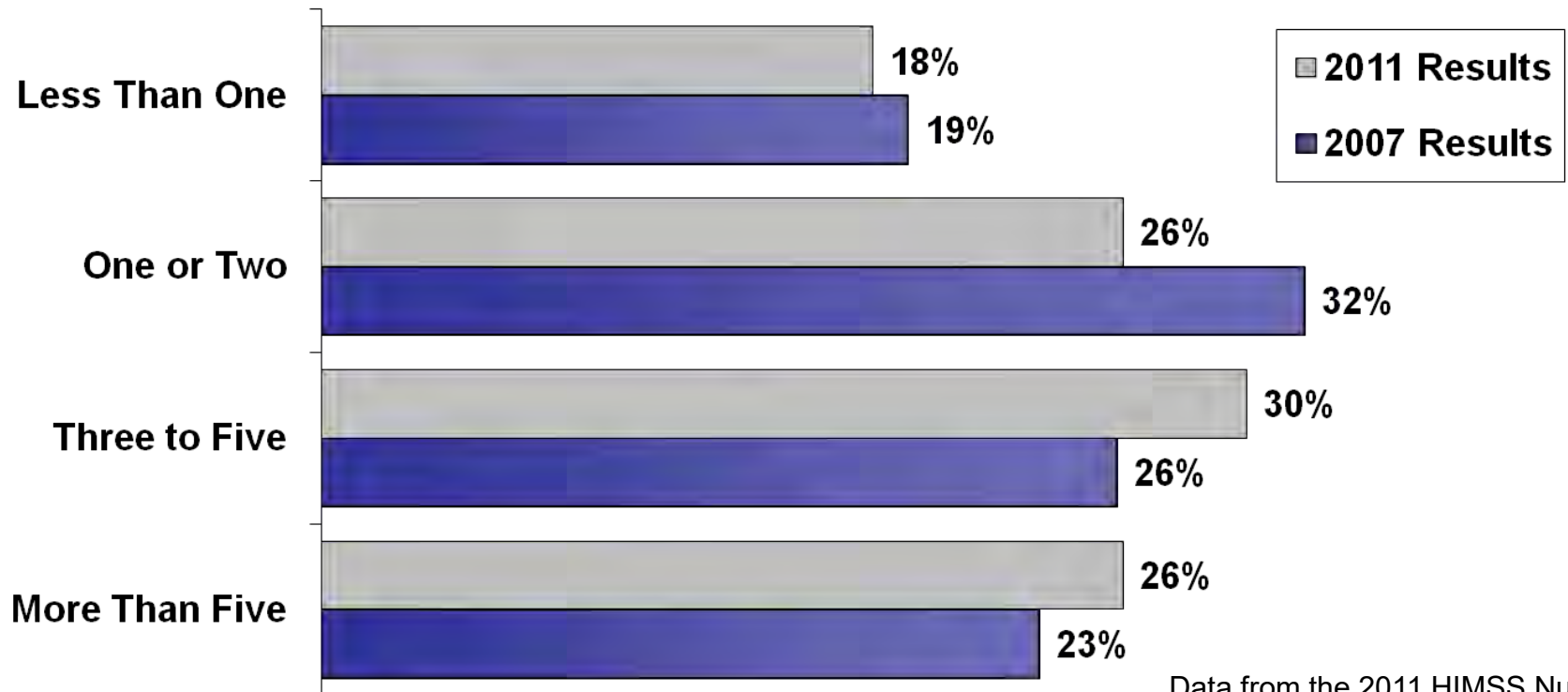
Years of Informatics Experience



Data from the 2011 HIMSS Nursing Informatics Workforce Survey
© HIMSS

2011 NI Workforce Survey

Years in Current Position

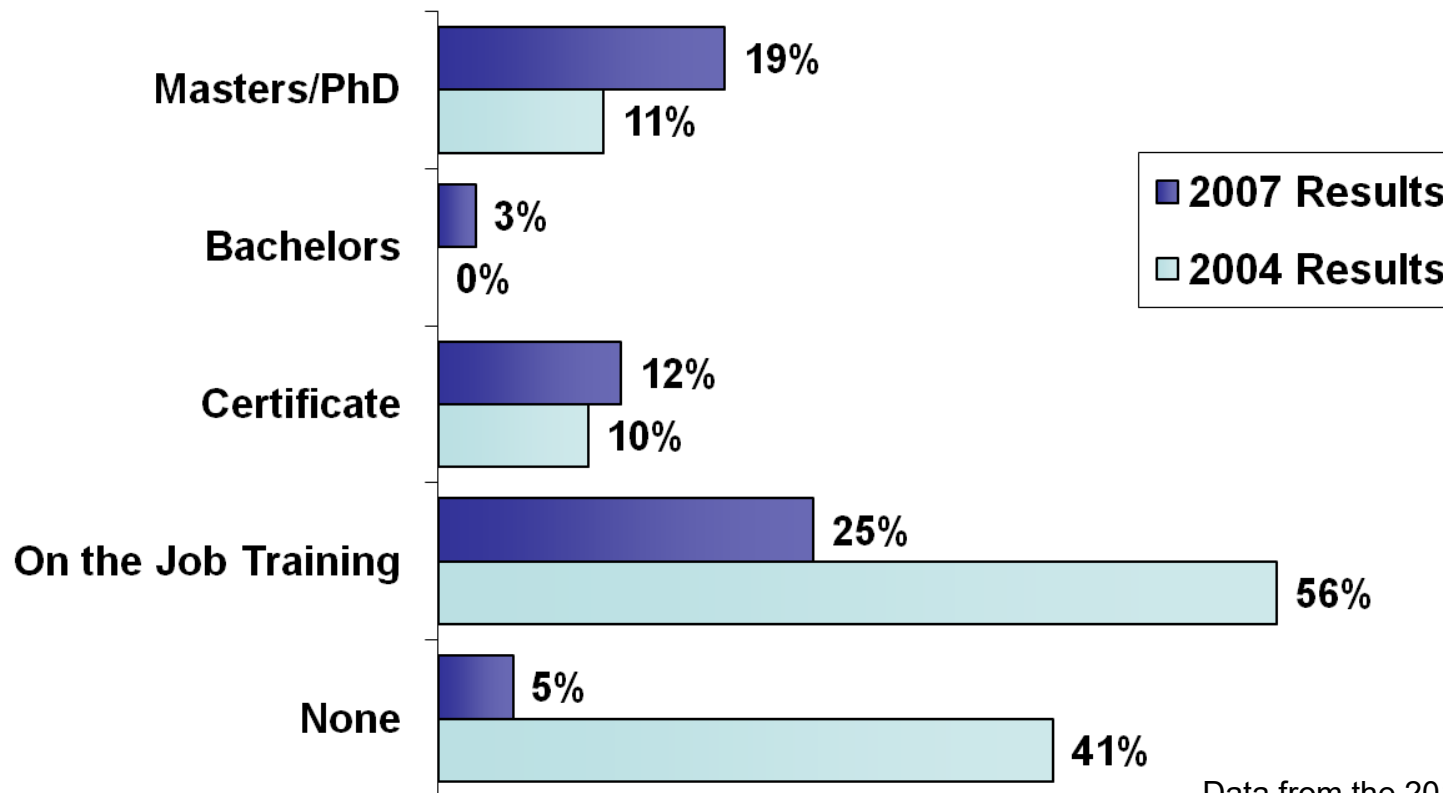


Data from the 2011 HIMSS Nursing Informatics Workforce Survey
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*This question was not included in the 2004 survey.

2011 NI Workforce Survey

Training as Nurse Informaticist

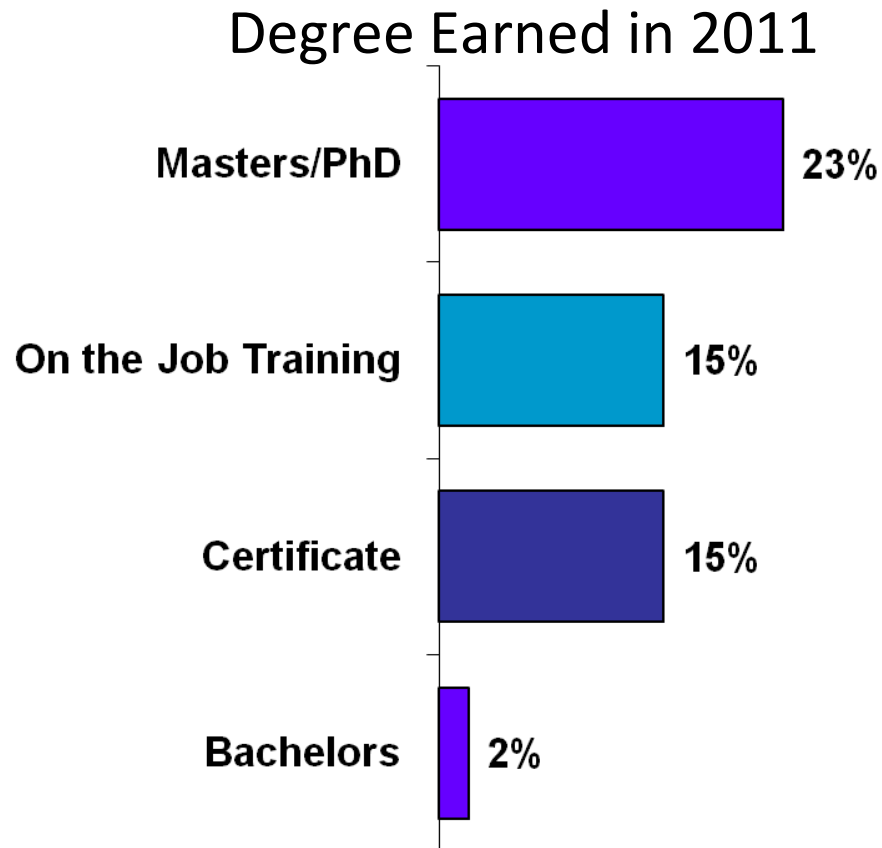


Data from the 2011 HIMSS Nursing Informatics Workforce Survey

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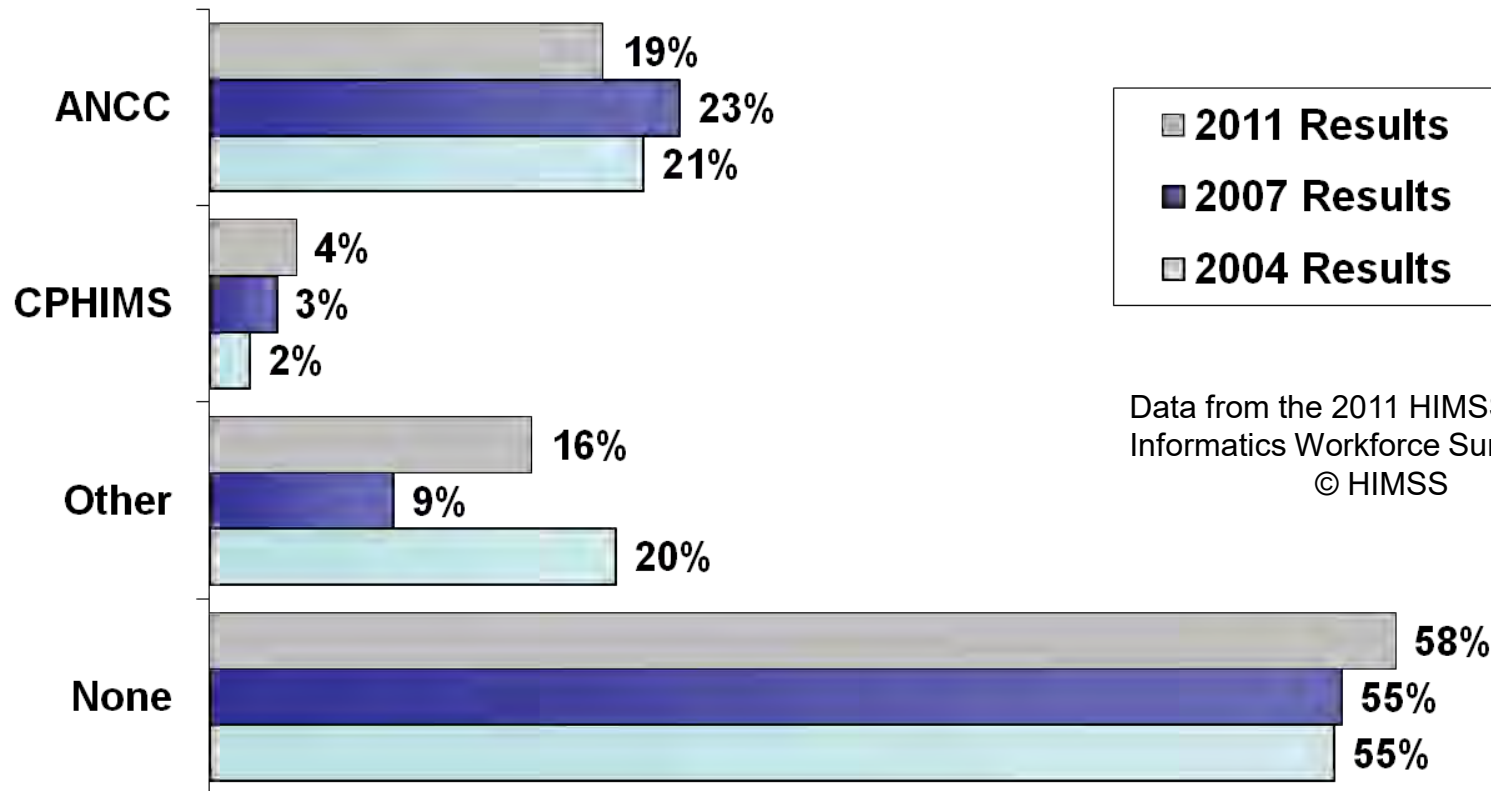
2011 NI Workforce Survey

Training as Nurse Informaticist

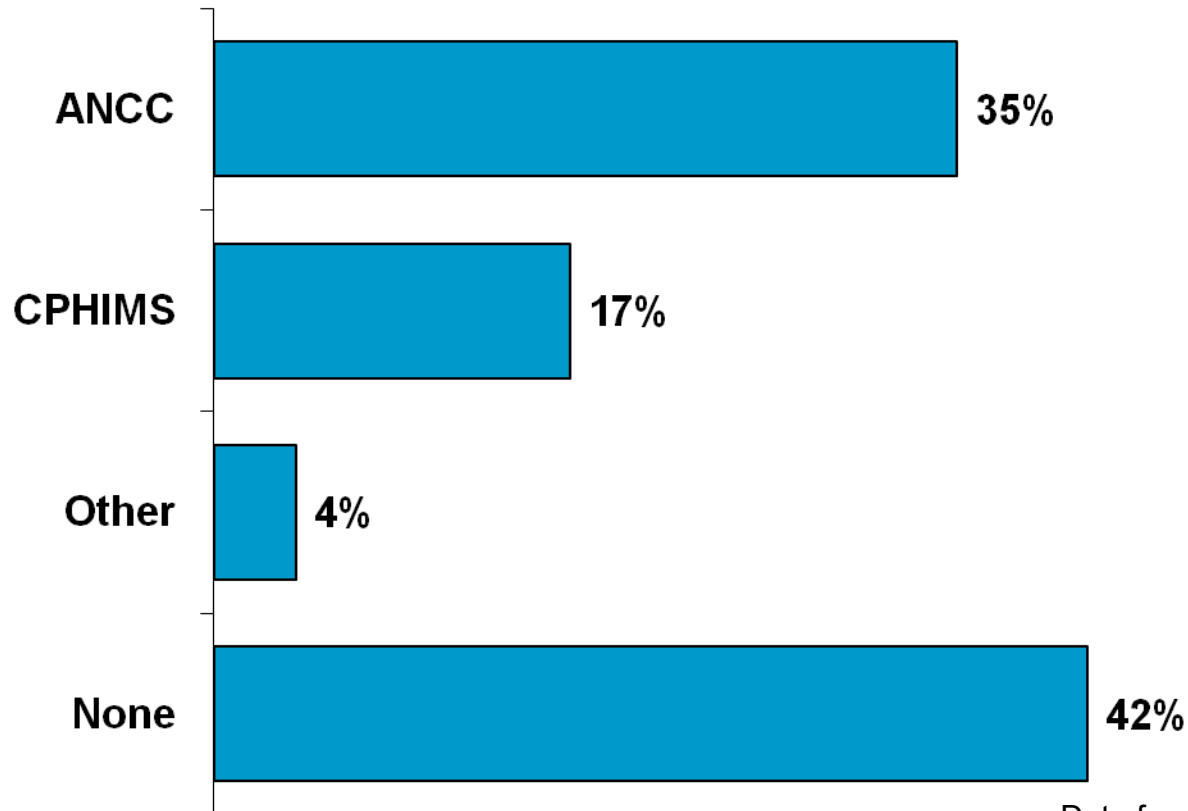


Data from the 2011 HIMSS Nursing Informatics Workforce Survey
© HIMSS

2011 NI Workforce Survey Nursing Informatics Certification



Nursing Informatics Certification – Anticipate Obtaining



Data from the 2011 HIMSS Nursing Informatics Workforce Survey
© HIMSS

2011 NI Workforce Survey

Salary Impact of Certification



Nursing Informatics Certifications

American Nurses' Association Credentialing
Center Board Certification in
Nursing Informatics



<http://nursingworld.org/ancc/certification/cert/certs/informatics.html>

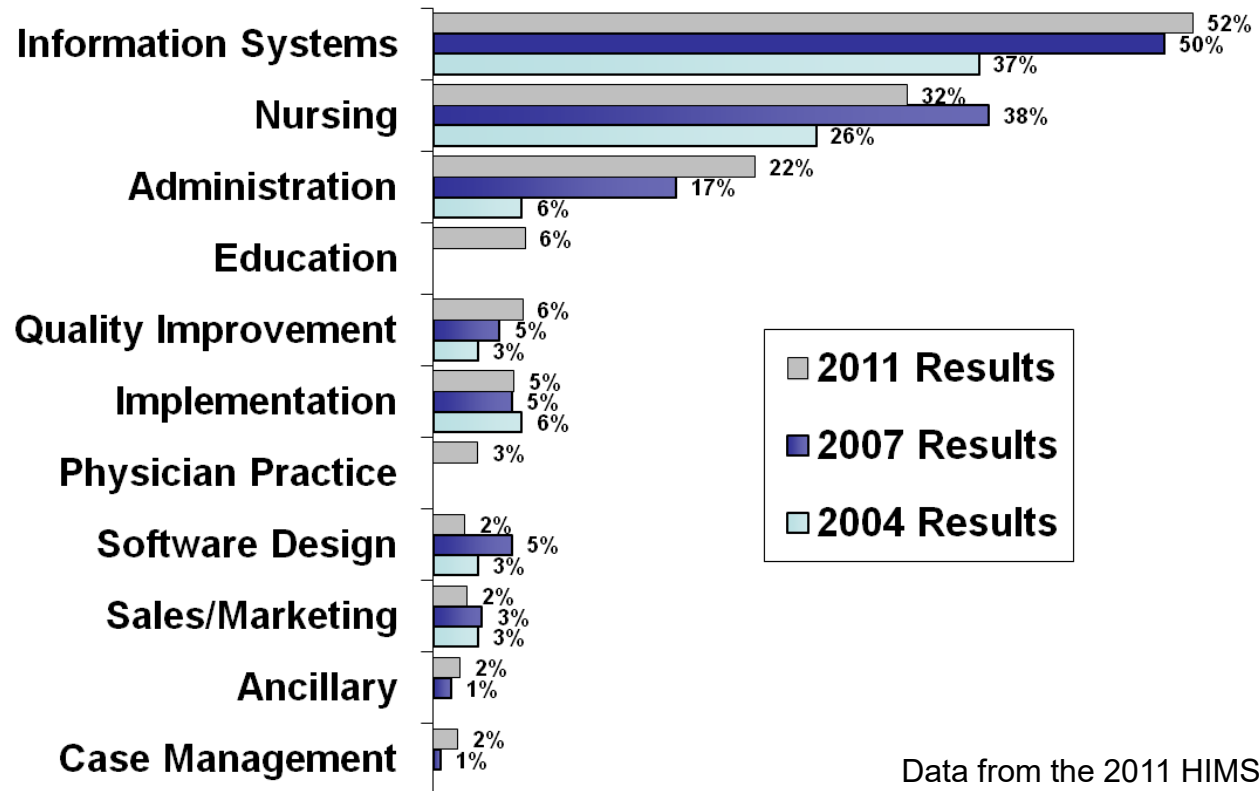
HIMSS – CPHIMS (Certified Professional in Healthcare
Information and Management Systems)

<http://himss.org/ASP/certificationHome.asp>



2011 NI Workforce Survey

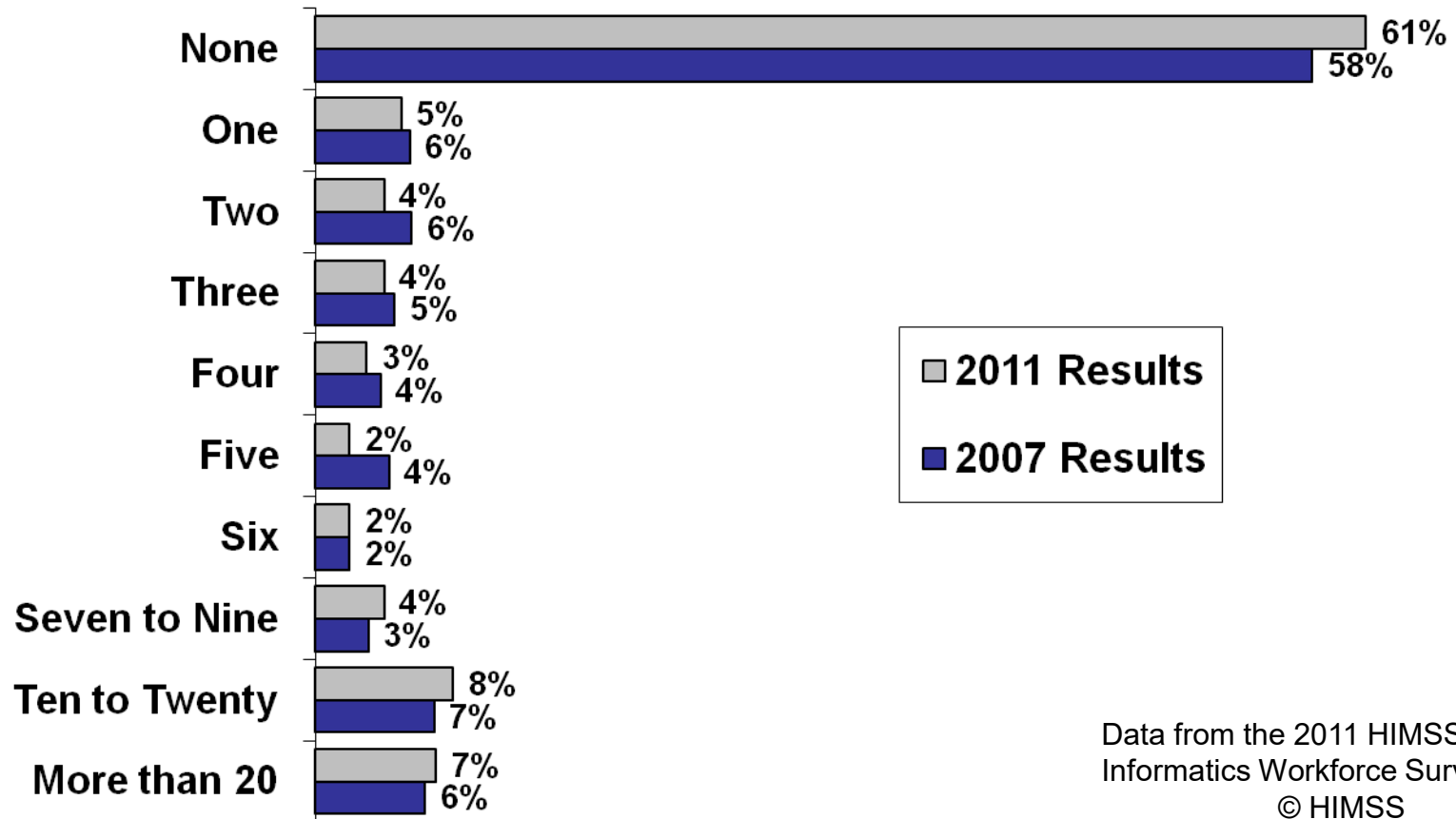
Reporting Department



Data from the 2011 HIMSS Nursing Informatics Workforce Survey
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2011 NI Workforce Survey

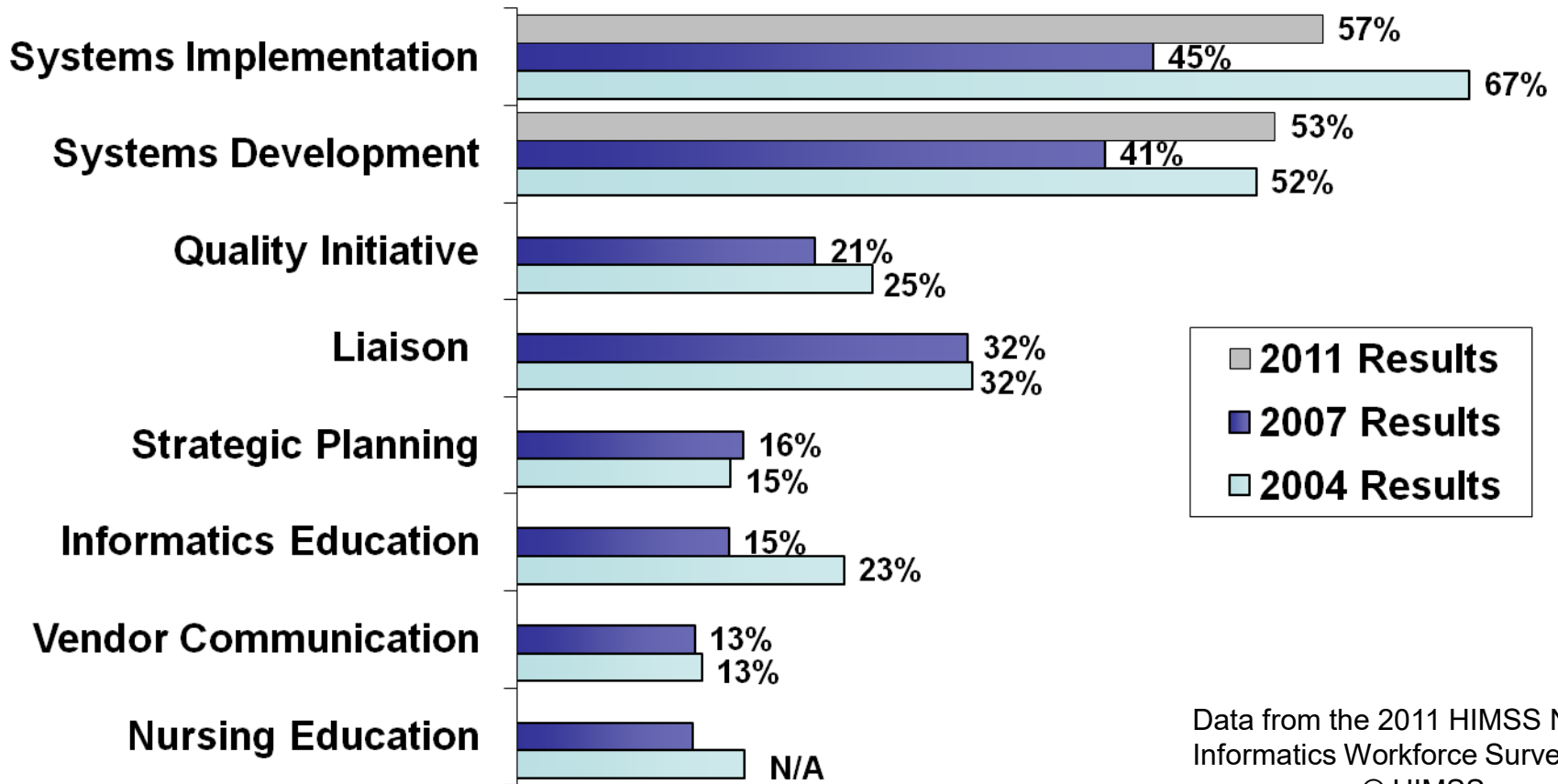
Number of Reports



Data from the 2011 HIMSS Nursing Informatics Workforce Survey
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2011 NI Workforce Survey

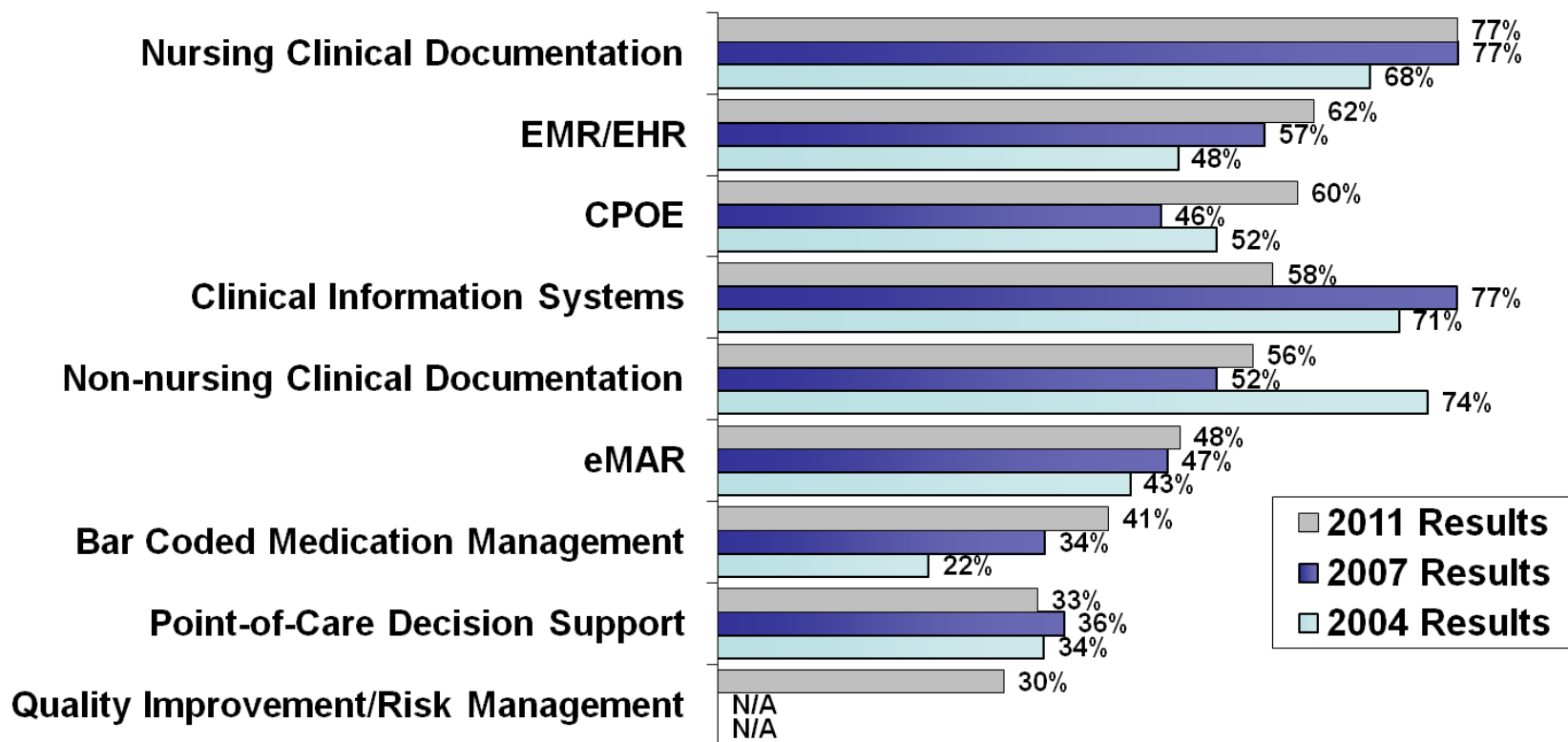
Top Three Job Responsibilities



Data from the 2011 HIMSS Nursing Informatics Workforce Survey
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2011 NI Workforce Survey Developing/Implementing

*Top nine responses shown.



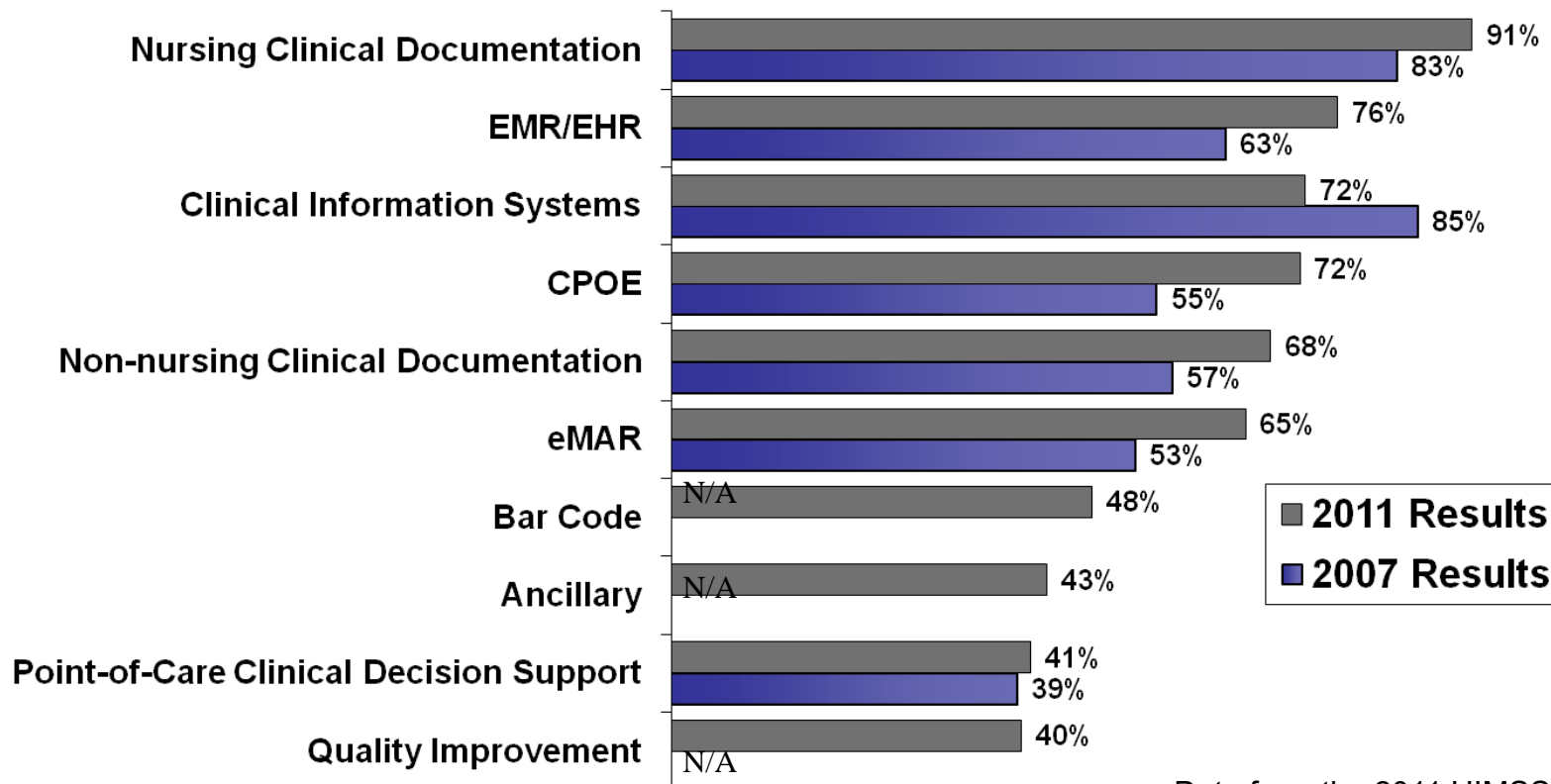
Data from the 2011 HIMSS Nursing Informatics Workforce Survey

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2011 NI Workforce Survey

Applications with Experience

*Top responses in 2011 shown.

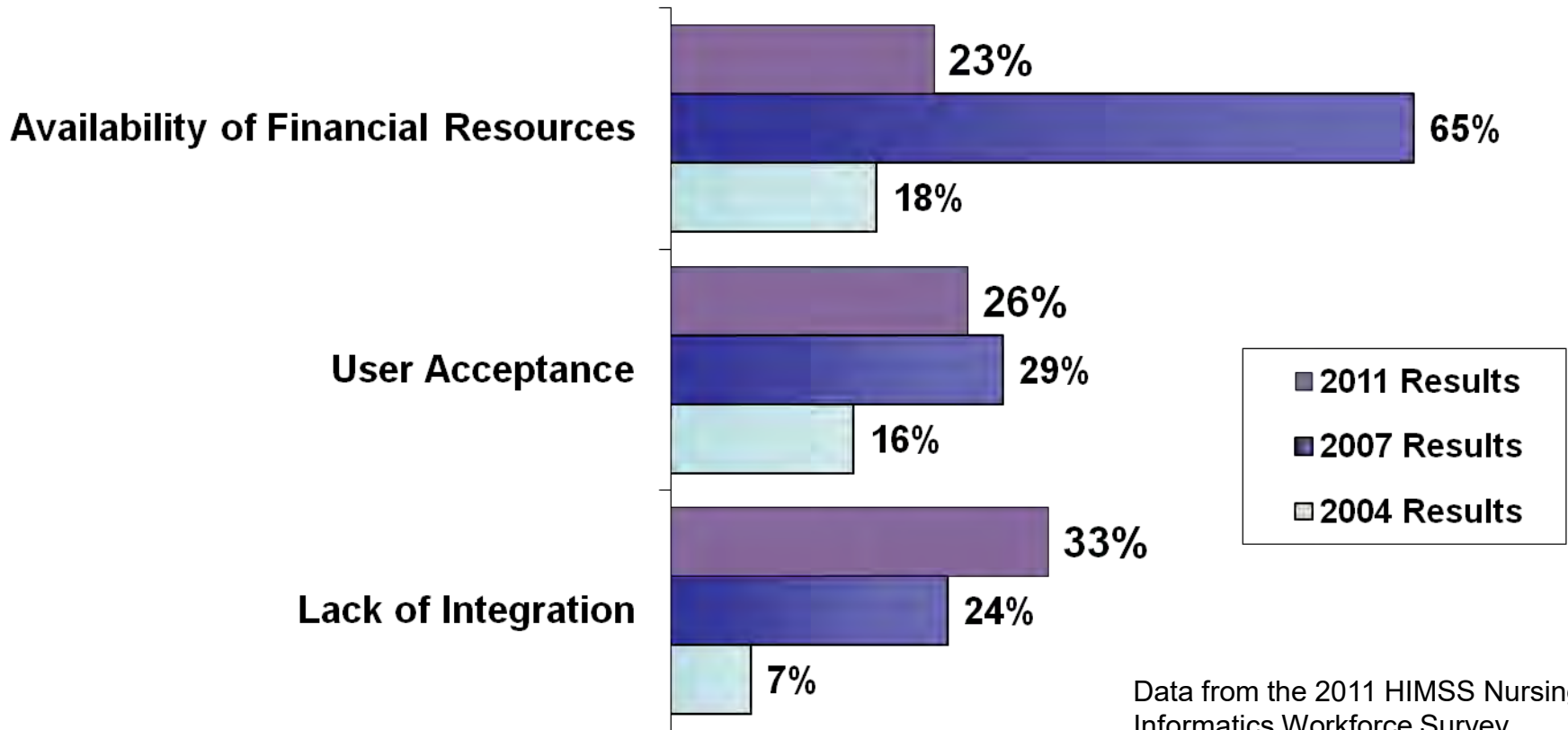


Data from the 2011 HIMSS Nursing Informatics Workforce Survey

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2011 NI Workforce Survey

Largest Barrier to Success



Data from the 2011 HIMSS Nursing Informatics Workforce Survey
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Healthcare Transformation: Opportunities for Nursing Informatics

Implications for Informatics

Nurses must be supported by a healthcare environment that adequately enables their knowledge-based work as:

- Leaders in the Effective Design and Use of EHR Systems
- Integrators of Patient Information
- Full Partners in Decision Making
- Care Coordinators Across Disciplines
- Advocates for Engaging Patients and Families
- Contributors to Standardize EHR Infrastructure



Source: ANI Testimony to the October 2009 Forum on the Future of Nursing

The Future of Nursing: Leading Change, Advancing Health

Nurses constitute the largest segment of the nation's health care workforce at 3.1 million

In their front-line roles, nurses can play a vital role in helping realize the objectives set forth in the 2010 Affordable Care Act

A number of barriers prevent nurses from being able to respond effectively to rapidly changing health care settings and an evolving health care system

These barriers must be overcome to ensure that nurses are well-positioned to lead change and advance health

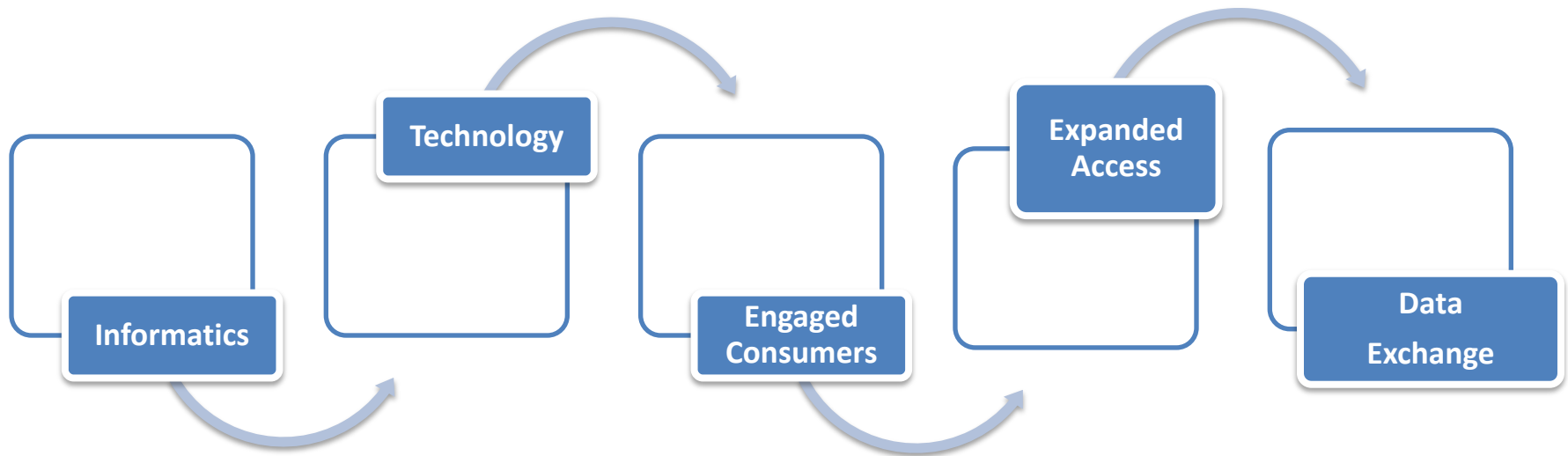
ROBERT WOOD JOHNSON FOUNDATION

INITIATIVE ON THE FUTURE OF NURSING

AT THE INSTITUTE OF MEDICINE

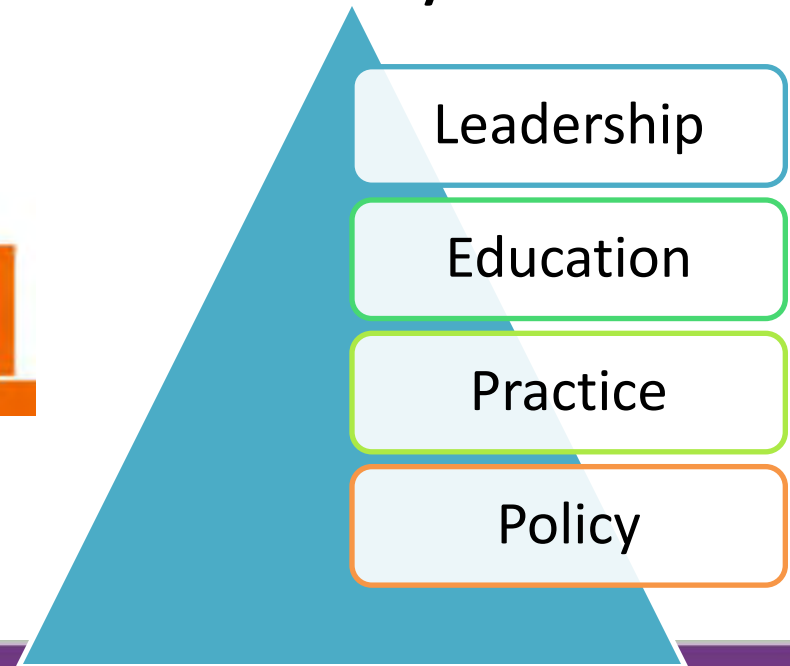
- 1) **Nurses should practice to the full extent of their education and training**
- 2) **Nurses should achieve higher levels of education and training through an improved education system that promotes seamless academic progression**
- 3) **Nurses should be full partners, with physicians and other healthcare professionals in the redesigning of health care in the United States**
- 4) **Effective workforce planning and policy making require better data collection and an improved information infrastructure**

New Ingredients in Transforming Nursing



HIMSS Position

Together, nurses and nursing informatics must lead, and be visible, vocal and present at the table to achieve healthcare delivery transformation.



Steps for Transformation

Leadership

- Partner with nurse executives to lead technology changes that advance health and the delivery of healthcare.
- Support the development of informatics departments and nurse informaticists in analyst, leadership and officer roles.
- Foster the evolution of nurse informaticists in leadership roles such as a Nursing Informatics Executive or Chief Nursing Informatics Officer (CNIO).

Education

- Transform nursing education to include informatics competencies and demonstrable behaviors at all levels of academic preparation.
- Promote the continuing education of all levels of nursing, particularly in the areas of EHRs and health IT.

Practice

- Ensure that data, information, knowledge and wisdom form the basis of 21st century nursing practice by incorporating informatics competencies into practice standards in all healthcare settings.
- Facilitate the collection and analysis of interprofessional healthcare workforce data by ensuring data can be collected from existing health IT systems.

Policy

- Enable nursing informatics leaders to be knowledgeable and engaged in current public policy initiatives.
- Government agencies must recognize that regulations and reimbursement policies that remain exclusively physician-focused will not achieve the goals of healthcare transformation in the U.S.



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Improving Nursing Care through Technology

- Technologies can create better work environment for inpatient nurses:
 - Improve efficiency, safety and quality
 - Add value to the way nurses coordinate and provide care
 - Alarm/event messaging
 - Biomedical device integration
 - Medication administration



Source: California HealthCare Foundation, www.chcf.org, 2008

Improving Nursing Care Through Technology



- Nurses do not want to be passive consumers of technology
- Nurses want devices that are integrated, voice activated, handheld, use biometrics, provide translation, are portable, are wireless, auto populate, and are “smart”
- Greater nurse satisfaction leads to greater patient satisfaction

Source: Cipriano, P., Nurse Scholar in Residence, IOM 2011

Growth in the Nursing Market

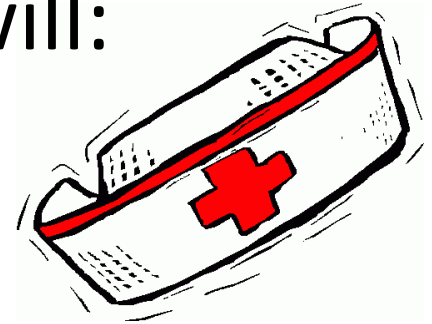
Nursing Applications w/ Highest Expected Purchase Rates for Hospitals over Next 24 Mo.

- eMAR
 - Closed Loop Medication Administration
 - Impact on patient safety
- Nursing Documentation
 - Supports quality outcomes reporting
 - Makes CPOE more effective
 - Vital signs, flow sheet data
- Nurse staffing/scheduling
- Nurse acuity



Source: HIMSS Analytics™ Database 2010

Transforming Practice through Technology & Informatics will:



- Improve safety and efficiency
- Free clinicians from tasks
- Bring evidence for decisions to point of care
- Empower patients to be involved in care
- Enable nurses to:
 - Integrate data into health information
 - Consult in the home, LTC, Assisted living
 - Coordinate care across settings

Source; Cipriano, P. , Nurse Scholar in Residence, IOM 2011



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Explore the HIMSS Nursing Informatics Community

HIMSS Nursing Informatics Community

- The first “official community” within HIMSS for Nursing Informatics formed in 2004 – now represents over 4,400 individuals
- Community Framework
 - Clinical Informatics
 - Leadership
 - National Initiatives
 - Informatics Practice
- www.himss.org/ni



About HIMSS

- ***Vision*** Advancing the best use of information and management systems for the betterment of health care.
- ***Mission*** To lead healthcare transformation through the effective use of health information technology.



HIMSS NI Milestones

Community
Population:
4,400+



*HIMSS is proud
cosponsor/collaborator

Community Participation



- 4400 nurse members at HIMSS



- 2287 list serv subscribers



- 450+ attendees at NI Symposium



- 60+ NI Task Force call monthly participants



- 25 Deliverables

As of October 1, 2011

NI Community Framework



- Committee (*Strategy*)
- Task Force (*Education & Networking*)
- Workgroups (*Participation*)
- Multidisciplinary activities
- External collaborations



NI Community Tools

- NI Toolbox & NI Knowledge Repository (website)
www.himss.org/ni
- NI Community (website)
www.himss.org/nursing
- List serv NI@LIST.HIMSS.ORG
- Webex (conference calls)
- Wiki (online workstation)
<http://himssni.pbworks.com/>
- NI Facebook
<http://www.facebook.com/profile.php?ref=name&id=100000434371377>
- Twitter: #HIMSSCI
- Clinical Informatics RSS feed
<http://www.himss.org/ASP/himssNewsRSS.asp>
- Clinical Informatics Insights
http://www.himss.org/ASP/topics_FocusDynamic.asp?faid=305
- HIMSStv Nursing Informatics Channel
http://www.himss.org/ASP/topics_nursinginformatics_videos.asp?faid=398&tid=30
- HIMSS Blog
<http://blog.himss.org/>
- HIMSS NI Standards Practices Discussion Forum
www.himss.org/niforums

Resources and References

- Alliance for Nursing Informatics
<http://www.allianceni.org>
- American Nurses Association
<http://www.nursingworld.org>
- American Nurses Credentialing Center
<http://www.nursecredentialing.org/>
- CPHIMS
<http://himss.org/ASP/certificationHome.asp>
- HIMSS Nursing Informatics Community
<http://www.himss.org/ni>

