We salute all that you do.

Join HIMSS as we honor nurses across the country through a variety of events and activities.

Learn more at: www.himss.org/national-nurses-week
Speakers

Nancy Beale, MSN, RN-BC, Vice President, Clinical Systems and Integration, NYU Langone Health System

Julie Bowen, MSN, RN, Executive Director of IT & Clinical Education HIPAA Security Officer Gibson Area Hospital

Bonne Farberow, MSN, RN-BC, CCRP, Population Health Executive, Cerner Corporation
Learning Objectives

• Recognize the value of nursing informatics and how to articulate and underscore the value.

• Demonstrate how your identity as a nurse integrates into nursing informatics.

• Examine the role of the CNIO and nurse informaticist and how to advance to these positions in health care organizations.
About

“Informatics nurses are bilingual. They can talk IT and can talk nursing.”

Nursing Informatics
Nursing Informatics Defined

Nursing informatics (NI) is the specialty that integrates nursing science with multiple information and analytical sciences to identify, define, manage, and communicate data, information, knowledge, and wisdom in nursing practice. NI supports nurses, consumers, patients, the interprofessional healthcare team, and other stakeholders in their decision-making in all roles and settings to achieve desired outcomes. This support is accomplished through the use of information structures, information processes, and information technology.

Nursing informatics (NI) is the specialty that integrates nursing science with multiple information and analytical sciences to identify, define, manage, and communicate data, information, knowledge, and wisdom in nursing practice.
Nursing Process and the System Development Life Cycle
Why Nursing Informatics?

- Existence (or lack) of theoretical frameworks that support nurses to conceptualize the application of technology to practice

- Technology will not solve the “Iron Triangle” of access, quality and cost – that view is simplistic

- Use of technology must be guided by greater comprehension of the ultimate goal, impact and benefit

2017 Nursing Informatics Workforce Survey Infographic
Poll: What is your role?

Please utilize the polling option on your screen.
## Top Respondent Titles

<table>
<thead>
<tr>
<th>Title</th>
<th>2017 Results</th>
<th>2014 Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nursing Informatics Specialist</td>
<td>20%</td>
<td>23%</td>
</tr>
<tr>
<td>Director of Clinical Informatics</td>
<td>1%</td>
<td>7%</td>
</tr>
<tr>
<td>Clinical Analyst</td>
<td>5%</td>
<td>7%</td>
</tr>
<tr>
<td>Consultant</td>
<td>4%</td>
<td>3%</td>
</tr>
<tr>
<td>Clinical Informatics Specialist</td>
<td>2%</td>
<td>3%</td>
</tr>
<tr>
<td>Nurse Educator/Instructor</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Application Analyst</td>
<td>3%</td>
<td>6%</td>
</tr>
<tr>
<td>Clinical Applications Specialist</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Associate Professor/Professor</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>Project Manager</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Chief Nursing Informatics Officer</td>
<td>2%</td>
<td>2%</td>
</tr>
</tbody>
</table>

Source: HIMSS North America
What is your practice setting?

Please utilize the polling option on your screen.
Nursing Education

- Bachelor's in Nursing: 42% (2017), 42% (2014), n/a (2011)
- Master's Degree in Nursing Informatics: n/a (2017), n/a (2014), n/a (2011)
- Master's in Nursing: 41% (2017), 35% (2014), 24% (2011)
- Other Master's: 35% (2017), 24% (2014), 9% (2011)
- Other Bachelor's: 24% (2017), 14% (2014), 3% (2011)
- Doctor of Nursing Practice: 13% (2017), 11% (2014), 3% (2011)
- Master's Degree in Other Informatics: 1% (2017), 2% (2014), 5% (2011)
- PhD in Nursing: 3% (2017), 2% (2014), 1% (2011)
- Licensed Practical Nurse: 3% (2017), 2% (2014), 1% (2011)
- PhD in Nursing Informatics: 1% (2017), 1% (2014), n/a (2011)
- Nurse Practitioner: 1% (2017), 1% (2014), n/a (2011)
- Other PhD: 1% (2017), 1% (2014), 3% (2011)

Selection options expanded for 2017 survey. Added Master’s in Nursing Informatics, Master’s in Other Informatics, and PhD in Nursing Informatics.
Years of Clinical Experience

- More than 20 years: 26%, 28%, 31%
- 16 to 20 years: 13%, 15%, 16%
- 11 to 15 years: 15%, 17%, 20%
- 6 to 10 years: 15%, 20%, 22%
- 1 to 5 years: 12%, 16%, 20%
- Less than 1 year: 2%, 4%, n/a

2017 Results  2014 Results  2011 Results
Nursing Experience

- Medical/Surgical: 45% (2017), 43% (2014), 44% (2011)
- Critical Care: 38% (2017), 44% (2014), 44% (2011)
- Administration: 24% (2017), 26% (2014), 32% (2011)
- Emergency: 20% (2017), 20% (2014), 24% (2011)
- Pediatric: 15% (2017), 16% (2014), 13% (2011)
- Quality Improvement: 16% (2017), 15% (2014), 14% (2011)
- Ambulatory Clinic: 10% (2017), 15% (2014), 13% (2011)
- Oncology: 9% (2017), 12% (2014), 9% (2011)

2017 Results  □  2014 Results  □  2011 Results  □
Current Informatics Education/Training

- Master's/PhD: 5% (2017), 9% (2014), 11% (2011)
- Certificate: 5% (2017), 5% (2014), 7% (2011)
- Program/Course: 4% (2017), 6% (2014), n/a (2011)
- Bachelor's: 1% (2017), 1% (2014), 1% (2011)
Nursing Informatics Certification

Held

2017 Results

- None: 51%
- Other...: 17%
- CPHIMS: 6%
- ANCC: 27%

Pursuing

2017 Results

- None: 49%
- CAHIMS: 4%
- Other...: 3%
- PMP: 5%
- CPHIMS: 14%
- ANCC: 32%
Perceived Value in Holding Certification

<table>
<thead>
<tr>
<th>Benefit</th>
<th>2017 Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prestigious Image</td>
<td>24%</td>
</tr>
<tr>
<td>Recognition from...</td>
<td>35%</td>
</tr>
<tr>
<td>Recognition from...</td>
<td>41%</td>
</tr>
<tr>
<td>Professional...</td>
<td>50%</td>
</tr>
<tr>
<td>Indicates...</td>
<td>53%</td>
</tr>
<tr>
<td>Competitive...</td>
<td>57%</td>
</tr>
<tr>
<td>Enhances Confidence</td>
<td>60%</td>
</tr>
<tr>
<td>Validates...</td>
<td>71%</td>
</tr>
<tr>
<td>Enhances...</td>
<td>79%</td>
</tr>
<tr>
<td>Personal Satisfaction</td>
<td>85%</td>
</tr>
</tbody>
</table>
Impact of Certification to Career Path

- Highly Impactful (6 to 7): 47%
- Impactful (4 to 5): 35%
- Not at all Impactful (1 to 3): 18%

2017 Results

Average: 4.96

New Survey Question added to 2017. Respondents asked to use a scale of one to seven, where one is not at all impactful and seven is highly impactful.
Top Barrier to Certification

Without Certification / Not Pursuing

- 41%
- 19%

Hold Certification / Or Pursuing

- 50%
- 25%
Job Responsibilities

- Systems Development: 53%
- System Optimization/Utilization: 39%
- Systems Implementation: 57%

2011 Results: 38% 31%
2014 Results: 39% 36%
2017 Results: 43% 40%
Career Path for Nursing Informatics
Functional Areas of Nursing Informatics


- Administration, leadership, and management
- Systems analysis and design
- Compliance and integrity management
- Consultation
- Coordination, facilitation, and integration
- Development of systems, products, and resources
- Educational and professional development
- Genetics and genomics
- Information management/operational architecture
- Policy development and advocacy
- Quality and performance improvement
- Research and evaluation
- Safety, security, and environmental health
Senior Nursing Informatics Executive (CNIO) at Organization

<table>
<thead>
<tr>
<th>Response</th>
<th>2017 Results</th>
<th>2014 Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>32%</td>
<td>30%</td>
</tr>
<tr>
<td>No</td>
<td>60%</td>
<td>67%</td>
</tr>
<tr>
<td>Do Not Know</td>
<td>4%</td>
<td>3%</td>
</tr>
</tbody>
</table>

Do Not Know

Reporting Structure for Senior NI Executive

CNO/Nursing Executive: 28% (2017), 41% (2014)
CIO/IT Executive: 25% (2017), 25% (2014)
CEO/Administrator: 12% (2017), 15% (2014)
Other: 9% (2017), 7% (2014)
CMO/CMIO/Physician Executive: 10% (2017), 16% (2014)
Do Not Know: 14% (2017), 17% (2014)
COO/Operations Executive: 2% (2017), 4% (2014)

2017 Results  ▪  2014 Results

2014 study allowed respondents to select more than one as compared to 2017 which allowed one selection.
Job Satisfaction in Informatics Career Choice

Respondents were asked to use a scale of one to seven, where one is not at all satisfied and seven is highly satisfied.

<table>
<thead>
<tr>
<th>Satisfaction Level</th>
<th>2017 Results</th>
<th>2014 Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highly Satisfied (6 to 7)</td>
<td>80%</td>
<td>81%</td>
</tr>
<tr>
<td>Somewhat Satisfied (4 to 5)</td>
<td>16%</td>
<td>17%</td>
</tr>
<tr>
<td>Not Satisfied (1 to 3)</td>
<td>4%</td>
<td>3%</td>
</tr>
</tbody>
</table>
Applications Currently Developing/Implementing/Optimizing

- Nursing Clinical Documentation
  - 2011 Results: 71%
  - 2014 Results: 80%
  - 2017 Results: 77%

- EMR/EHR
  - 2011 Results: 55%
  - 2014 Results: 62%
  - 2017 Results: 69%

- CPOE
  - 2011 Results: 41%
  - 2014 Results: 62%
  - 2017 Results: 60%

- Non-Nursing Clinical...
  - 2011 Results: 47%
  - 2014 Results: 59%
  - 2017 Results: 59%

- Clinical Information Systems
  - 2011 Results: 38%
  - 2014 Results: 55%
  - 2017 Results: 58%

- eMAR
  - 2011 Results: 33%
  - 2014 Results: 51%
  - 2017 Results: 48%

- Bar Coded Medication...
  - 2011 Results: 26%
  - 2014 Results: 41%
  - 2017 Results: 41%

- Point-of-Care CDS
  - 2011 Results: 37%
  - 2014 Results: 36%
  - 2017 Results: 36%

- Quality Improvement/Risk...
  - 2011 Results: 31%
  - 2014 Results: 33%
  - 2017 Results: 36%

HIMSS North America
Potential Financial Impacts

- CMS Reporting
- eCQM's
- MIPS
- MACRA
- CPC+2
- Pay for Performance (P4P)
- Value Based Purchasing (VBP)
- Clinical Research Reporting
Enabling better health through information technology.
A strategic roadmap for effective EMR adoption and maturity

For over a decade HIMSS Analytics has guided healthcare organizations around the globe in electronic medical record (EMR) adoption and implementation. You could be the next to join this elite group of over 250 Stage 7 EMRAM organizations.

Improve care delivery through better use of technology with HIMSS Analytics assessment and strategy services.

Why EMRAM?

The Electronic Medical Record Adoption Model (EMRAM) is an eight stage (0-7) model that measures the adoption and utilization of EMR functions required to achieve a near paperless environment that harnesses technology to support optimized patient care.

<table>
<thead>
<tr>
<th>STAGE</th>
<th>HIMSS Analytics EMRAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Complete EMR, Data Analytics to improve care</td>
</tr>
<tr>
<td>6</td>
<td>Physician Documentation (templates), Full CDSS, Closed Loop Medication Administration</td>
</tr>
<tr>
<td>5</td>
<td>Full R-PACS</td>
</tr>
<tr>
<td>4</td>
<td>CPOE; Clinical Decision Support (clinical protocols)</td>
</tr>
<tr>
<td>3</td>
<td>Clinical Documentation, CDSS (error checking)</td>
</tr>
<tr>
<td>2</td>
<td>CDR, Controlled Medical Vocabulary, CDS, HIE Capable</td>
</tr>
<tr>
<td>1</td>
<td>All Three Ancillaries Installed — Lab, Rad, Pharmacy</td>
</tr>
<tr>
<td>0</td>
<td>All Three Ancillaries Not Installed</td>
</tr>
</tbody>
</table>

HIMSS North America
Ten Years of EMRAM

The United States HITECH Act has driven near universal adoption of Electronic Medical Records systems for both inpatient and outpatient care settings. 97% of US hospitals utilize an EMR versus 74% of Canadian hospitals. Additional Meaningful Use requirements have incited hospitals to utilize advanced EMR features. Hospitals at or above Stage 5 on the HIMSS Analytics’ EMR Adoption Model use Closed Looped Medication Administration at the point of care.
Percentage of Hospitals Above Stage 4

In 2013, only 38% of US Hospitals were above Stage 4.

In 2017, 71% of US Hospitals are above Stage 4.

Data from HIMSS Analytics® LOGIC™ n = 5,269

Data from HIMSS Analytics® LOGIC™ n = 5,436
Number of Hospitals below Stage 5

States below the national average in 2013 were really below average, with nearly double the number of hospitals below Stage 5.

In just four years, 1,687 hospitals reached Stage 5. 132 hospitals in Texas alone reach Stage 5.
Top Barriers to Success as a Nurse Informaticist

- Administrative Support (2017: 21%, 2014: 17%)
- Staffing Resources (2017: 14%, 2014: 13%)
- Organizational Strategic Plan (2017: 12%, 2014: 12%)
- Financial Resources (2017: 12%, 2014: 12%)
- Infrastructure (2017: 9%, 2014: 6%)
- User Acceptance (2017: 7%, 2014: 7%)
- Integration/Interoperability (2017: 7%, 2014: 7%)
- Time Management (2017: 6%, 2014: 5%)
- Software Architecture/Design (2017: 3%, 2014: 6%)
- Regulations e.g. Meaningful Use (2017: 21%, 2014: 14%)
- Technology (2017: 1%, 2014: 1%)

Percent of respondents who rated option as the top/largest barrier.
Sources of Information for Day-to-Day Activities

2017 Results

- Networking with Peers: 68%
- Websites: 64%
- Professional Organizations*: 61%
- Electronic Journals: 53%
- Association Newsletters: 46%
- Print Journals: 21%
- Blogs: 18%
- Social Networking: 19%

* New selection option for 2017 survey
Online Journal of Nursing Informatics (OJNI)

• Launched in 1996 with readership spanning over 49 countries
• Complimentary, international, peer reviewed journal published three times a year that supports all function areas of nursing informatics
• View the latest issue www.himss.org/ojni
• Explore the submission guidelines and submit a manuscript. Student submissions welcome!
TIGER (Technology Informatics Guiding Education Reform)

• Focused on education reform and maximizing the integration of technology and informatics into seamless practice, education and research resource development
• Explore the reimagined TIGER Virtual Learning Environment (VLE)
• Join the TIGER Community, tiger@himss.org
• www.thetigerinitiative.org
Questions
Check out the 2018 HIMSS National Nurses Week Page!

www.himss.org/national-nurses-week
Years of Informatics Experience

- 7 to 10 years: 2017 - 10%, 2014 - 20%, 2011 - 21%
- 5 to 6 years: 2017 - 16%, 2014 - 13%, 2011 - 15%
- 3 to 4 years: 2017 - 14%, 2014 - 15%, 2011 - 17%
- 1 to 2 years: 2017 - 9%, 2014 - 16%, 2011 - 13%
- Less than 1 year: 2017 - 8%, 2014 - 8%, 2011 - 8%
Years in Current Position

- **More than 5 years**
  - 2017: 24%
  - 2014: 26%
  - 2011: 31%

- **3 to 5 years**
  - 2017: 29%
  - 2014: 30%
  - 2011: 35%

- **1 to 2 years**
  - 2017: 24%
  - 2014: 26%
  - 2011: 32%

- **Less than 1 year**
  - 2017: 11%
  - 2014: 15%
  - 2011: 18%

2017 Results  2014 Results  2011 Results
Percent of Time Spent on Clinical Activities

2017 Results

- None: 4%
- <25%: 2%
- 26-50%: 71%
- >75%: 21%

North America
Total Number of Reports (direct & indirect)

- None: 64% (2017), 67% (2014), 61% (2011)
- 1 to 5: 15% (2017), 14% (2014), 25% (2011)
- 6 to 10: 6% (2017), 7% (2014), NA (2011)
- 11 to 15: 2% (2017), 3% (2014), NA (2011)
- 16 to 20: 3% (2017), 2% (2014), NA (2011)
Job Satisfaction in Current Position

<table>
<thead>
<tr>
<th>Satisfaction Level</th>
<th>2017 Results</th>
<th>2014 Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highly Satisfied (6 to 7)</td>
<td>58%</td>
<td>57%</td>
</tr>
<tr>
<td>Somewhat Satisfied (4 to 5)</td>
<td>33%</td>
<td>33%</td>
</tr>
<tr>
<td>Not Satisfied (1 to 3)</td>
<td>9%</td>
<td>10%</td>
</tr>
</tbody>
</table>

Respondents asked to use a scale of one to seven, where one is not at all satisfied and seven is highly satisfied.
Salary Range

Question asked for salary range only starting in 2017
Salary Range & Certification

<table>
<thead>
<tr>
<th>Salary Range</th>
<th>Certification Held</th>
<th>No Certification Held</th>
</tr>
</thead>
<tbody>
<tr>
<td>Above $200,000</td>
<td>1%</td>
<td>4%</td>
</tr>
<tr>
<td>$186,000 - $200,000</td>
<td>1%</td>
<td>2%</td>
</tr>
<tr>
<td>$161,000 - $185,000</td>
<td>1%</td>
<td>3%</td>
</tr>
<tr>
<td>$146,000 - $160,000</td>
<td>4%</td>
<td>7%</td>
</tr>
<tr>
<td>$131,000 - $145,000</td>
<td>4%</td>
<td>7%</td>
</tr>
<tr>
<td>$116,000 - $130,000</td>
<td>5%</td>
<td>10%</td>
</tr>
<tr>
<td>$101,000 - $115,000</td>
<td>6%</td>
<td>17%</td>
</tr>
<tr>
<td>$86,000 - $100,000</td>
<td>17%</td>
<td>22%</td>
</tr>
<tr>
<td>$61,000 - $85,000</td>
<td>19%</td>
<td>22%</td>
</tr>
<tr>
<td>$46,000 - $60,000</td>
<td>22%</td>
<td>28%</td>
</tr>
<tr>
<td>$30,000 - $45,000</td>
<td>28%</td>
<td>28%</td>
</tr>
</tbody>
</table>

Question asked for salary range only starting in 2017
Salary Range & Education

- Post Graduate Degree
- No Post Graduate Degree

Question asked for salary range only starting in 2017
HIMSS Nursing Informatics Community
Contact Information

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Trisha Pongco
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