The Changing Landscape Of HIT: What This Means For Early Careerists

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Learning Objectives

• Examine the impact of data and technology on HIT careers
• Illustrate the skills that employers are seeking
• Explain how early careerists can prepare themselves to move into or advance in HIT roles
The Impact of Technology on the Workforce

• Changes in HIT careers have happened rapidly in this age of technological development

• Implementation of the electronic health record (EHR) has been the largest contributor to the changes

• The Health Information Technology for Economic and Clinical Health (HITECH) Act of 2009 was enacted as part of the American Recovery and Reinvestment Act (ARRA)
2015 workforce study defined how health information management (HIM) is shifting to meet future needs and what knowledge, skills, education, and credentials they need to be successful.

- Anticipate a lower percentage of time on diagnosis and procedural coding in the future
- Leadership, teaching, and informatics identified as tasks that will increase most significantly.
Data is Changing HIT Careers

- Associate: 22.5% 61
- Bachelor’s: 44.0% 120
- Master’s: 18.2% 50
- Significantly greater percentage of job postings that require a bachelor’s degree (p<0.001)

Marc, David; Robertson, Janet; Gordon, Leslie; Green-Lawson, Zakevia D; Gibbs, David; Dover, Kayce; Dougherty, Michelle. "What the Data Say About HIM Professional Trends" Journal of AHIMA 88, no.5 (May 2017): 24-31.
Data is Changing HIT Careers

• Entry-level jobs had a significantly greater percentage of postings related to operations and medical record administration (p<0.001)
• Mid-level jobs had a significantly greater percentage of postings related to IT/infrastructure (p<0.001), operations and medical record administration (p<0.001), and revenue cycle management coding and billing (p<0.001)
• Advanced level jobs had a significantly greater percentage of postings related to informatics and data analysis (p=0.04) and operations and medical record administration (p<0.001)
• Master level jobs had a significantly greater percentage of postings related to operations and medical record administration (p<0.001)
Data is Changing HIT Careers

- Master level jobs had a significantly greater percentage of postings related to operations and medical record administration (p<0.001)

<table>
<thead>
<tr>
<th>Job Category</th>
<th>Entry-level</th>
<th>Mid-level</th>
<th>Advanced</th>
<th>Master</th>
<th>JOB CATEGORY TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compliance/Risk Management</td>
<td>0.24%</td>
<td>0.24%</td>
<td>0.72%</td>
<td>0.00%</td>
<td>1.20%</td>
</tr>
<tr>
<td>Education/Communication</td>
<td>0.00%</td>
<td>0.00%</td>
<td>1.92%</td>
<td>0.48%</td>
<td>2.40%</td>
</tr>
<tr>
<td>Informatics/Data Analysis</td>
<td>0.00%</td>
<td>1.92%</td>
<td>4.08%</td>
<td>0.00%</td>
<td>6.00%</td>
</tr>
<tr>
<td>IT/Infrastructure</td>
<td>0.00%</td>
<td>6.00%</td>
<td>0.24%</td>
<td>0.00%</td>
<td>6.24%</td>
</tr>
<tr>
<td>Operations Medical Records Administration</td>
<td>7.19%</td>
<td>51.80%</td>
<td>8.15%</td>
<td>8.15%</td>
<td>75.29%</td>
</tr>
<tr>
<td>Revenue Cycle Management Coding and Billing</td>
<td>0.00%</td>
<td>8.39%</td>
<td>0.48%</td>
<td>0.00%</td>
<td>8.87%</td>
</tr>
<tr>
<td><strong>SKILL LEVEL TOTAL</strong></td>
<td><strong>7.43%</strong></td>
<td><strong>68.35%</strong></td>
<td><strong>15.59%</strong></td>
<td><strong>8.63%</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>
Data is Changing HIT Careers

THE FOLLOWING QUESTION was posed to market research participants: “Next you will see 2 short lists of HIM skills and competencies that some have identified as necessary to align with their future healthcare information management needs. For each skill, please indicate the education level you feel would best prepare a hiring candidate with that particular skill.”

Data is Changing HIT Careers

• The Clinical segment consists of Hospitals and Non-Hospitals (medical groups, alternative living facilities, government community health centers)
• The Clinical sample includes a mix of small, medium, and large hospitals as well as a mix of those located in rural, suburban, and urban areas
• The Non-Clinical segment consists of IT vendors, Clinical research companies, MCO/health insurance companies, and independent retail pharmacies
Data is Changing HIT Careers

Presented with a list of information and technology priorities, Provider and Vendor respondents were asked to indicate using a seven-point scale (1 = “not a priority”; 7 = “essential priority”), the extent to which each issue would be a priority in the coming year.

<table>
<thead>
<tr>
<th>Information and Technology Priority</th>
<th>Vendors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cybersecurity, Privacy, and Security</td>
<td>5.38</td>
</tr>
<tr>
<td>Improving Quality Outcomes Through Health Information and Technology</td>
<td>5.35</td>
</tr>
<tr>
<td>Data Science/Analytics/Clinical and Business Intelligence</td>
<td>5.05</td>
</tr>
<tr>
<td>Clinical Informatics and Clinician Engagement</td>
<td>4.95</td>
</tr>
<tr>
<td>Consumer/Patient Engagement &amp; Digital/Connected Health</td>
<td>4.95</td>
</tr>
<tr>
<td>Health Information Exchange, Interoperability, Data Integration and Standards</td>
<td>4.92</td>
</tr>
<tr>
<td>Process Improvement, Workflow, Change Management</td>
<td>4.73</td>
</tr>
<tr>
<td>User Experience, Usability and User-Centered Design</td>
<td>4.73</td>
</tr>
<tr>
<td>Healthcare App and Tech Enabling Care Delivery</td>
<td>4.49</td>
</tr>
<tr>
<td>Population Health Management and Public Health</td>
<td>4.46</td>
</tr>
<tr>
<td>Culture of Care and Care Coordination</td>
<td>4.32</td>
</tr>
</tbody>
</table>

Table 4: Vendors – Mean Scores (2019)

Based on a 1 to 7 scale where 1 = “not a priority”; 7 = “essential priority”

Observation: “Cybersecurity, Privacy, and Security” and “Improving Quality Outcomes Through Health Information and Technology” are shared top priorities by Vendors and Providers.

Implication: The synergies emulating from a shared understanding of top priorities can be leveraged to generate significant change on the selected issues.

# Data is Changing HIT Careers

## Table 5: Providers – Mean Scores (2019)

*Based on a 1 to 7 scale where 1 = “not a priority”; 7 = “essential priority”*

<table>
<thead>
<tr>
<th>Information and Technology Priority</th>
<th>Hospitals</th>
<th>Non-Acute</th>
<th>Providers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cybersecurity, Privacy, and Security</td>
<td>5.81</td>
<td>5.43</td>
<td>5.69</td>
</tr>
<tr>
<td>Improving Quality Outcomes Through Health Information and Tech</td>
<td>5.28</td>
<td>5.13</td>
<td>5.23</td>
</tr>
<tr>
<td>Clinical Informatics and Clinician Engagement</td>
<td>5.24</td>
<td>4.90</td>
<td>5.14</td>
</tr>
<tr>
<td>Culture of Care and Care Coordination</td>
<td>4.92</td>
<td>4.94</td>
<td>4.93</td>
</tr>
<tr>
<td>Process Improvement, Workflow, Change Management</td>
<td>5.03</td>
<td>4.61</td>
<td>4.90</td>
</tr>
<tr>
<td>User Experience, Usability and User-Centered Design</td>
<td>4.86</td>
<td>4.94</td>
<td>4.88</td>
</tr>
<tr>
<td>Data Science/Analytics/Clinical and Business Intelligence</td>
<td>4.91</td>
<td>4.33</td>
<td>4.73</td>
</tr>
<tr>
<td>Leadership, Governance, Strategic Planning</td>
<td>4.90</td>
<td>4.18</td>
<td>4.68</td>
</tr>
<tr>
<td>Safe Info and Tech Practices for Patient Care</td>
<td>4.62</td>
<td>4.67</td>
<td>4.63</td>
</tr>
<tr>
<td>HIE, Interoperability, Data Integration and Standards</td>
<td>4.62</td>
<td>4.22</td>
<td>4.50</td>
</tr>
<tr>
<td>Consumer/Patient Engagement &amp; Digital/Connected Health</td>
<td>4.80</td>
<td>3.64</td>
<td>4.44</td>
</tr>
</tbody>
</table>
Convergence of Disciplines

Shared knowledge concepts between HIM and HI

### Jobs Related to Informatics

<table>
<thead>
<tr>
<th>Role Title</th>
<th>Role Description</th>
<th>Domain</th>
<th>Role Type</th>
<th>Level</th>
<th>Service Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrative Assistant in Clinical Informatics</td>
<td>Administrative assistants in clinical informatics provide work in a variety of areas. An example could be supporting the Informatics Learning Network (ILN) and coordinating, planning, and executing electronic health records implementations, including patients' data, results, and policy.</td>
<td>Informatics</td>
<td>Operational/Technical</td>
<td>Basic</td>
<td>Auxiliary</td>
</tr>
<tr>
<td>Health Library Assistant</td>
<td>The Health Library Assistant is responsible for cataloging and retrieving library materials and resources. They also provide support for research and learning activities.</td>
<td>Informatics</td>
<td>Operational/Technical</td>
<td>Basic</td>
<td>Auxiliary</td>
</tr>
<tr>
<td>Audit Specialist</td>
<td>The Audit Specialist is responsible for conducting internal audits of the organization's financial and operational processes. They ensure that the organization is in compliance with regulatory requirements.</td>
<td>Informatics</td>
<td>Operational/Technical</td>
<td>Intermediate</td>
<td>Auxiliary</td>
</tr>
<tr>
<td>Clinical Workforce Specialist</td>
<td>The Clinical Workforce Specialist is responsible for ensuring that the clinical workforce is effectively utilized. They also conduct research and analyze clinical data to identify areas for improvement.</td>
<td>Informatics</td>
<td>Professional</td>
<td>Intermediate</td>
<td>Auxiliary</td>
</tr>
<tr>
<td>Clinical Nurse Specialist</td>
<td>The Clinical Nurse Specialist is responsible for managing patient records and ensuring the accuracy of the data. They also conduct research and analyze clinical data to identify areas for improvement.</td>
<td>Informatics</td>
<td>Professional</td>
<td>Advanced</td>
<td>Nursing</td>
</tr>
<tr>
<td>Information Analyst</td>
<td>The Information Analyst is responsible for analyzing and interpreting data. They also conduct research and analyze clinical data to identify areas for improvement.</td>
<td>Informatics</td>
<td>Operational/Technical</td>
<td>Basic</td>
<td>Auxiliary</td>
</tr>
<tr>
<td>Information Analyst</td>
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<td>Informatics</td>
<td>Operational/Technical</td>
<td>Intermediate</td>
<td>Auxiliary</td>
</tr>
<tr>
<td>Clinical Applications Specialist</td>
<td>The Clinical Applications Specialist is responsible for ensuring that the clinical applications are efficiently utilized. They also conduct research and analyze clinical data to identify areas for improvement.</td>
<td>Informatics</td>
<td>Operational/Technical</td>
<td>Intermediate</td>
<td>Auxiliary</td>
</tr>
</tbody>
</table>

**HIMSS**

Transforming Health through Information and Technology
# Jobs Related to Informatics

| Health Informatician | Health Informaticist | Health Informaticists are responsible for overseeing clinical application systems and databases. The job can include duties related to all aspects of the system, from implementation and modification, to training and solving any problems that might arise with the software itself. Health informaticists are often charged with developing and creating an electronic system to document all patient medical information, commonly called an electronic medical record or electronic health record. Health informaticists can be clinical or nonclinical. Health informaticists must be expert in concepts such as business process and clinical workflows, computer science, medication administration and delivery, health information organization, clinical decision support, medical image processing, and organizational and sociological issues. | Informatics | Operational-Technical | Intermediate | Ancillary |
Hard vs. Soft Skills

Hard Skills
- Databases
- Data preparation and manipulation
- Analytics
- Data visualization
- Data mining
- Data management
- Understanding of the healthcare setting

Soft Skills
- Problem solving
- Critical thinking
- Communication
- Teamwork
- Work ethic
- Attitude
- Time management
Importance of Soft Skills

• Students with stronger hard and soft skills are likely to survive and succeed professionally
• Students who succeeded in the workplace have the right attitude, personality, and behavior
• Employers tend to "recruit for attitude and train for skill"
• Students should understand the basic expectations of employers in order to present themselves accordingly
• Both faculty and students must be open and receptive to honing soft skills in order to survive and succeed in the corporate world

Tell me and I forget. Teach me and I remember. Involve me and I learn.

- Benjamin Franklin

Considerations to Advance Your Career

- Credentials
- Need for advancements in education
- Trainings and conferences
- Networking opportunities
- Social media presence
- Professional associations (local and national)
- Resume building
- Transferrable skills
The importance of education and training

- Initiate skill advancement through:
  - Formal education (Degree programs)
  - Free courses (MOOCs)
  - Workshops (Local or national)
  - Webinars
  - Trial and error
Topics to consider for skill advancement

• Technology and data
  – Analytics/data science, software development/programming, privacy/security

• Project Management
  – Process improvement, setting expectations/timelines, management tools

• Leadership
  – Managing people/team, conflict resolution, strategic planning, change management

• Health humanities
  – Holistic view of healthcare
How to sell yourself

• LinkedIn
  – Well rounded profile
  – 500+ connections

• Networking
  – Event spaces
  – Professional Organizations
  – Conferences
Final Remarks

- We will continue to collect massive amounts of healthcare data
- There is a need to find better ways of using that data to benefit healthcare organizations
- HIT careers are pivoting to cover this need by advancing technical skills of graduates
- You are positioned to fill the need in healthcare to advance the use of data while also advancing HIT careers
Questions?

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