IT Implementation and Operations Improvement

Where Will We Get The Resources?

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Intermountain Healthcare
President Awareness & National Healthcare IT Goal

- “By computerizing health records, we can avoid dangerous medical mistakes, reduce costs, and improve care.”
  
  George W. Bush, State of the Union Address, January 20, 2004

- “Within ten years, every American must have a personal electronic medical record.”

  George W. Bush, “President Unveils Tech Initiatives for Energy, Health Care, Internet”, Minneapolis, MN, April 26, 2004
Presidential Awareness & National Healthcare IT Goal

- “By introducing information technology, the health care will be better, the cost will go down, the quality will go up, and there's no telling whether the benefits will inure to our society.”
  

- “Executive Order 13335: Incentives for the Use of Health Information Technology and Establishing the Position of the National Health Information Technology Coordinator”
  
  Executive Order, George W. Bush, April 27, 2004
Additional Presidential Awareness

- “... improved information technology to prevent medical error and needless cost, ...”
  
  George W. Bush, State of the Union Address, February 2, 2005

- “We will make wider use of electronic records and other health information technology to help control costs and reduce dangerous medical errors.”
  
  George W. Bush, State of the Union Address, January 31, 2006

- “We need to reduce costs and medical errors with better information technology.”
  
  George W. Bush, State of the Union Address, January 23, 2007
Infrastructure Standardization

Privacy

HITSP

Security

ONC

EMR

AHI C

RHI Os

CCHI T

NHI N

Interoperability

ONC

HITSP

Standards Harmonization

EHR

HI TSP

HI E

CCHI T

AHI C

NHI N

EMR

Interoperability
But what about workforce issues?

Who’s going to implement it?
Typical Resources

- Project Managers
- Implementation Coordinator
- IT Interface Builder
- Workflow Engineer
- Process Engineer
- Management Engineer
- Management Systems Analyst
- Change Management Specialist
- Systems Analyst
- Informaticist
- Clinical Information Specialist
- Clinical Analyst
- Data Analyst
- Data Architect
- Desktop Specialist
- Database Administrator
- Network Engineer
- Records Management
- QA Specialist
- Privacy Officer
- Security Officer
- Technical Analyst
- Trainer
- Help Desk Specialist

Adapted from ASPE Workforce Expert Panel, Feb, 2007
Hottest IT Job Markets

Source: InfoWorld, 09/18/06
Economic/Business Factor
2004 to 2014

- GDP projected to grow by an annual average rate of 3.1 percent
- Unemployment rate of 5 percent in 2014
- Business labor productivity growth of 2.7 percent annually

Overall Labor Force Impact 2004 - 2014

- Labor force continues to age, projected 4.1 percent annual growth of the 55+ age groups
- “…the baby boomers exit from the workforce, as with their entrance, will have a significant impact on the growth of the labor force.”

## Typical IT & Operations Consultant Future Needs

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>11-3021 Computer and Information Systems Managers</td>
<td>280</td>
<td>353</td>
<td>73</td>
<td>25.9</td>
<td>25</td>
</tr>
<tr>
<td>13-1111 Management Analysts</td>
<td>605</td>
<td>727</td>
<td>122</td>
<td>20.1</td>
<td>82</td>
</tr>
<tr>
<td>13-1199 Business Operation Specialists, All Other</td>
<td>897</td>
<td>1,139</td>
<td>242</td>
<td>27.0</td>
<td>193</td>
</tr>
<tr>
<td>15-1031 Computer Software Engineers, Applications</td>
<td>460</td>
<td>682</td>
<td>222</td>
<td>48.4</td>
<td>54</td>
</tr>
<tr>
<td>15-1032 Computer Software Engineers, Systems Software</td>
<td>340</td>
<td>486</td>
<td>146</td>
<td>43.0</td>
<td>37</td>
</tr>
<tr>
<td>15-1041 Computer Support Specialists</td>
<td>518</td>
<td>638</td>
<td>119</td>
<td>23.0</td>
<td>87</td>
</tr>
<tr>
<td>15-1051 Computer Systems Analysts</td>
<td>487</td>
<td>640</td>
<td>153</td>
<td>31.4</td>
<td>56</td>
</tr>
<tr>
<td>15-1061 Database Administrators</td>
<td>104</td>
<td>144</td>
<td>40</td>
<td>38.2</td>
<td>9</td>
</tr>
<tr>
<td>15-1071 Network and Computer Systems Administrators</td>
<td>278</td>
<td>385</td>
<td>107</td>
<td>38.4</td>
<td>34</td>
</tr>
<tr>
<td>15-1081 Network Systems and Data Communications Analysts</td>
<td>231</td>
<td>357</td>
<td>126</td>
<td>54.6</td>
<td>43</td>
</tr>
<tr>
<td>15-1099 Computer Specialist, All Other</td>
<td>149</td>
<td>177</td>
<td>28</td>
<td>19.0</td>
<td>15</td>
</tr>
<tr>
<td>15-2031 Operations Research Analysts</td>
<td>58</td>
<td>62</td>
<td>5</td>
<td>8.4</td>
<td>7</td>
</tr>
<tr>
<td>17-2112 Industrial Engineers</td>
<td>177</td>
<td>205</td>
<td>28</td>
<td>16.0</td>
<td>13</td>
</tr>
<tr>
<td>29-2071 Medical Records and Health Information Technicians</td>
<td>159</td>
<td>205</td>
<td>46</td>
<td>28.9</td>
<td>14</td>
</tr>
</tbody>
</table>

*Source: US Bureau of Labor Statistics*
### Typical Clinical Future Needs

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Total employment</th>
<th>2004-2014 change in total employment</th>
<th>2004-2014 average annual job openings</th>
<th>2004 Median Annual Earnings ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>2014</td>
<td>Number*</td>
<td>%</td>
<td>Due to growth and total replacement needs</td>
</tr>
<tr>
<td>29-1051 Pharmacists</td>
<td>230</td>
<td>287</td>
<td>57</td>
<td>24.6</td>
</tr>
<tr>
<td>29-1060 Physicians and surgeons</td>
<td>567</td>
<td>702</td>
<td>136</td>
<td>24.0</td>
</tr>
<tr>
<td>29-1111 Registered nurses</td>
<td>2,394</td>
<td>3,096</td>
<td>703</td>
<td>29.4</td>
</tr>
<tr>
<td>29-1123 Physical therapists</td>
<td>155</td>
<td>211</td>
<td>57</td>
<td>36.7</td>
</tr>
<tr>
<td>29-2061 Licensed practical and licensed vocational nurses</td>
<td>726</td>
<td>850</td>
<td>124</td>
<td>17.1</td>
</tr>
<tr>
<td>31-1012 Nursing aides, orderlies and attendants</td>
<td>1,455</td>
<td>1,781</td>
<td>325</td>
<td>22.3</td>
</tr>
<tr>
<td>31-9092 Medical assistants</td>
<td>387</td>
<td>589</td>
<td>202</td>
<td>52.1</td>
</tr>
</tbody>
</table>

* In thousand(s)
The U.S. Bureau of Labor Statistics projects that the United States will add 1 million IT jobs between 2004 and 2014 although we may not necessarily have the bodies

<table>
<thead>
<tr>
<th>Job Category</th>
<th>% Increase in Demand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Network systems &amp; data communications analysis</td>
<td>54.6</td>
</tr>
<tr>
<td>Computer software engineers, applications</td>
<td>48.4</td>
</tr>
<tr>
<td>Computer software engineers, systems software</td>
<td>43.0</td>
</tr>
<tr>
<td>Network &amp; computer systems administrators</td>
<td>38.4</td>
</tr>
<tr>
<td>Database administrators</td>
<td>38.2</td>
</tr>
<tr>
<td>Computer systems analysts</td>
<td>31.4</td>
</tr>
<tr>
<td>Industrial engineers</td>
<td>28.0</td>
</tr>
<tr>
<td>Computer hardware engineers</td>
<td>10.1</td>
</tr>
</tbody>
</table>

Who’s Paying For It?

- Architects (IT, enterprise, infrastructure, solutions, operations) - $100K
- Systems architect - $91K
- Sales Support Engineer - $90K
- Project Leader - $86K
- Software Engineer - $85K

Source: 2006 Salary Rates, Information Week, 07/24/06

All while Medicare, Medicaid and Commercial Insurances are under immense pressure to reduce costs (payouts)
Efforts Studying/Impacting Workforce Issues

- AHIMA/AMIA
  - AHIMA/FORE – HIM workforce study (2001)
  - AMIA “10x10” Program (2005)

- CITL – Center for Information Technology Leadership (Partners in Boston)

- ASPE Workforce Expert Panel and Study in conjunction with NHII Advisors

- HIMSS ME-PI/NI workgroup

- You!!!
What Can the ME-PI Community Do to Impact This Situation?

- Leadership - perform and/or support work force planning initiatives within your organization
- Advocacy
  - Write/talk to your local, state and federal legislators to inform them of the issues
  - Speak at a local HIMSS chapter meeting
  - Speak at a local university (upper classmen and freshmen)
- Strategic
  - Participate with programs that go to high schools and junior high schools to inform kids of career possibilities in healthcare IT or operations consulting (based in healthcare organizations and universities)
  - Create an internship or COOP program through a local university
  - Actively participate with your local university and/or alma mater (advisory board, speaker, etc.)
QUESTIONS???
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