



# *Georgia Healthcare IT Workforce Needs For Healthcare Providers*

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Presented by



INSTITUTE *for*  
HEALTHCARE  
INFORMATION  
TECHNOLOGY

- Key Findings
- Challenges / Barriers
- Recommendations

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## Georgia Healthcare IT Workforce Needs for Healthcare Providers

The **Institute for Healthcare Information Technology** (IHIT) commissioned a research study to get insight from Georgia's healthcare providers (Hospitals, Healthcare Systems and Federally Qualified Healthcare Centers) regarding IT workforce readiness specifically to learn about their unique challenges related to IT job fulfillment. This study would continue to build onto the research conducted in 2014 about the readiness of Georgia's IT workforce [See 2014's *Georgia Healthcare IT Workforce Readiness Survey* and *Georgia Healthcare IT & Education Working Together* findings at [www.InstituteforHealthcareIT.org](http://www.InstituteforHealthcareIT.org)]. The 2014 studies included healthcare providers as well as Healthcare IT vendors and educators within the state.

The research project included reaching out to more than 3,000 key professionals employed at healthcare providers located throughout the State of Georgia. To participate in the study, these targeted individuals had to be knowledgeable about their organization's current healthcare IT recruitment needs, as well as the related need that is projected for the next five years. An online survey was designed for participants to share their insights, attitudes and perceptions about healthcare IT-related topics, particularly as to how these issues impact [or is anticipated to impact] their organization's business operation. The survey questions were arranged to probe the participants' thoughts about the current and near future (over the next five years) healthcare IT job skills that are / will be in demand at Georgia healthcare providers.

The main objectives of this research study are to:

- Identify the current workforce needs and concerns for Georgia healthcare providers.  
*What are the most significant issues healthcare providers face in recruiting healthcare IT workers?*
- Find out what in-state versus out-of-state recruitment efforts they rely upon for job fulfillment.  
*Where are they concentrating their job recruitment efforts?*
- Better understand what educational requirements or programs are needed in Georgia to meet future demands.  
*What role – and at what level – can the educational system play in addressing the significant workforce development issues identified by survey participants?*

This last bulleted point is intended to learn more about Georgia healthcare providers' perceptions related to the quality of local job candidates who are educated in the State of Georgia, including those with degrees or certifications from Georgia colleges, universities, and technical colleges.

### Survey Participants

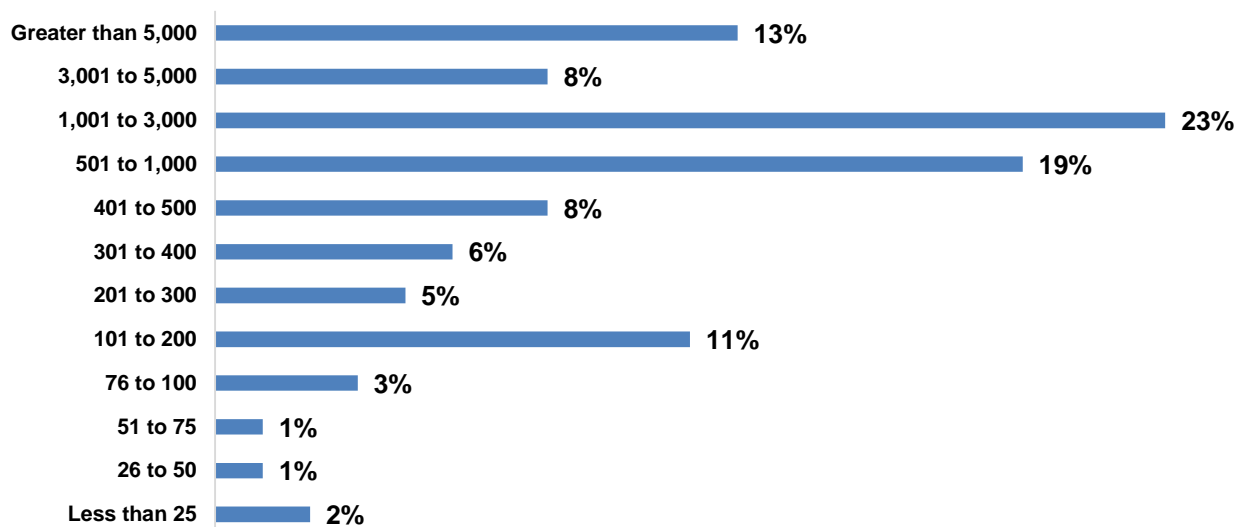
The individuals who took part in this year's survey were predominantly (**85%**) made up of the following three management levels: C-level Executive; Administrator or Director; and Manager. The majority (**97%**) of survey respondents represented Georgia hospitals and healthcare systems.

The size of the participating healthcare providers can best be characterized, in keeping with purposes of this Workforce study, by their number of employees within the state. Survey participants were asked to provide the current number of full-time employees (FTEs) at their organization. Their responses are reflected below:

**Figure 1**

### Number of Full-Time Employees

- **44%** of respondents surveyed indicated that their organization has greater than 1,000 full-time employees currently employed.



Additionally, most (**56%**) of the respondents indicated that their organization has more than 100 patient beds. In summary, the healthcare providers represented in this study are mainly medium-to-large size hospitals and healthcare systems located throughout the State of Georgia.

### Key Survey Findings

To provide the key takeaways of the survey for readers who just want a brief overview, this section covers the most important statistical findings.

- More than **80%** of respondents stated their IT budget will increase over the next five years, with the top priority areas for IT spending being:
  - Electronic Medical Records (EMRs)
  - Cyber Security
  - Medical Device Integration
- Almost half (**48%**) of respondents stated their organizations are currently using *Telemedicine* technologies and have plans to “expand” their usage in the future.
- **43%** of respondents stated their organizations are currently using *Mobile Health* technologies and have plans to “expand” their usage in the future.
- **72%** of survey respondents stated they have up to 50 healthcare IT jobs currently open.

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- The overwhelming majority (**94%**) of survey respondents stated they expect to have healthcare IT jobs available in the next one to five years.
  - **42%** of respondents surveyed have doubts that they will be able to fill their healthcare IT jobs over the next five years.
  - The most mentioned jobs that are expected to be difficult to fill over the next five years were:
    - Informatics
    - Security
    - Clinical
  - The most mentioned reasons why healthcare IT jobs are difficult to fill were:
    - Lack of healthcare experience
    - Lack of appropriate training
    - Higher demand and less qualified applicants
  - The top hiring requirements for healthcare IT jobs are:
    - College / University (Bachelor degree)
    - Technical College Degree
    - Healthcare IT Certification (University / College sponsored)
  - Respondents stated that the top skills for current healthcare IT jobs are:
    - IT Security & Compliance
    - Healthcare IT Experience
    - Work Ethic
    - Critical Thinking
  - The most mentioned skills that will be important for healthcare IT jobs in five years were:
    - Security
    - Integration
    - Project Management
    - Critical Thinking
  - **57%** of respondents stated that they plan to use both in-state & out-of-state job recruitment efforts in partnership with colleges, universities and technical colleges to find talent for HIT jobs in the future.
  - The top recommended changes for the educational systems in Georgia were:
    - More healthcare training
    - Implementation of healthcare specific programs at the high school level
    - Internships throughout the State of Georgia
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## **Healthcare Provider Survey Input:**

### **IT Spending & Priorities**

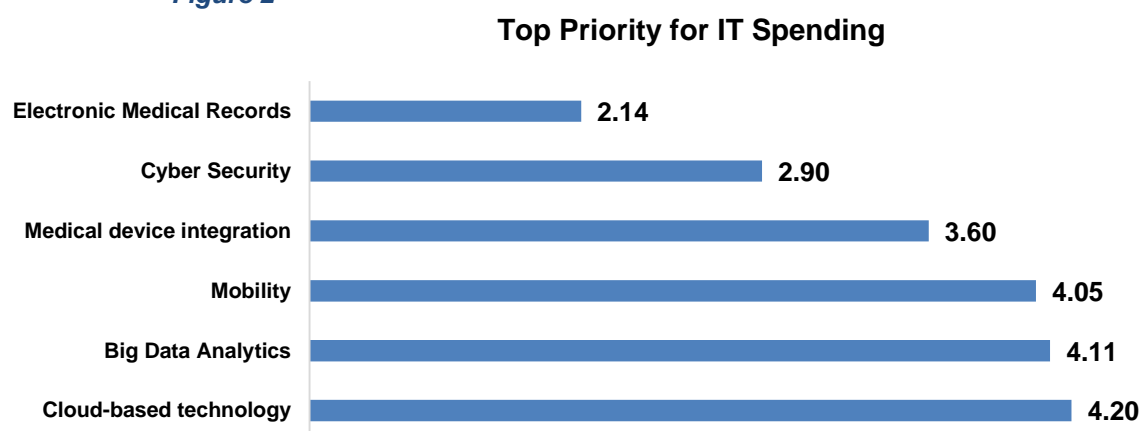
As a means to find out about the future trends projected for IT budgeting at healthcare provider organizations, the survey included the question: *“Over the next one to five years, do you expect your organization’s IT spending budget to increase, decrease or remain the same?”* Overwhelmingly, **84%** of respondents anticipate that the IT budget at their organization will “increase” over the next five years. This projected growth in IT activity at hospitals and healthcare systems indicates that the demand for qualified IT personnel will also likely be on the rise.

To learn more about where, in particular, they foresee their organization’s IT expenditures being allocated, the survey included a follow-up question: *“What technology areas are a priority for your organization to invest spending dollars over the next one to five years?”* Based on responses, the top three priority areas projected for IT spending during this time correlate to:

- Electronic Medical Records (EMRs)
- Cyber Security
- Medical Device Integration

Participants had the opportunity to rank the order of the top priority areas anticipated for IT spending at their organization over the next five years. Below in *Figure 2* are the overall survey responses, where they ranked their priorities numerically, beginning with #1. Therefore, the lower the number, the higher is the level of importance indicated by the respondent.

***Figure 2***



EMR, network security, system integration, mobility and other IT mainstays were indicated as areas that would likely require future investment. These areas are going to require having a well-trained IT team in place to operate and maintain this infrastructure, whether directly on location or off-site.

The survey also asked respondents about their organization’s particular usage in the areas of *Telemedicine* and *Mobile Health*, as these technologies are becoming more available throughout the overall healthcare industry.

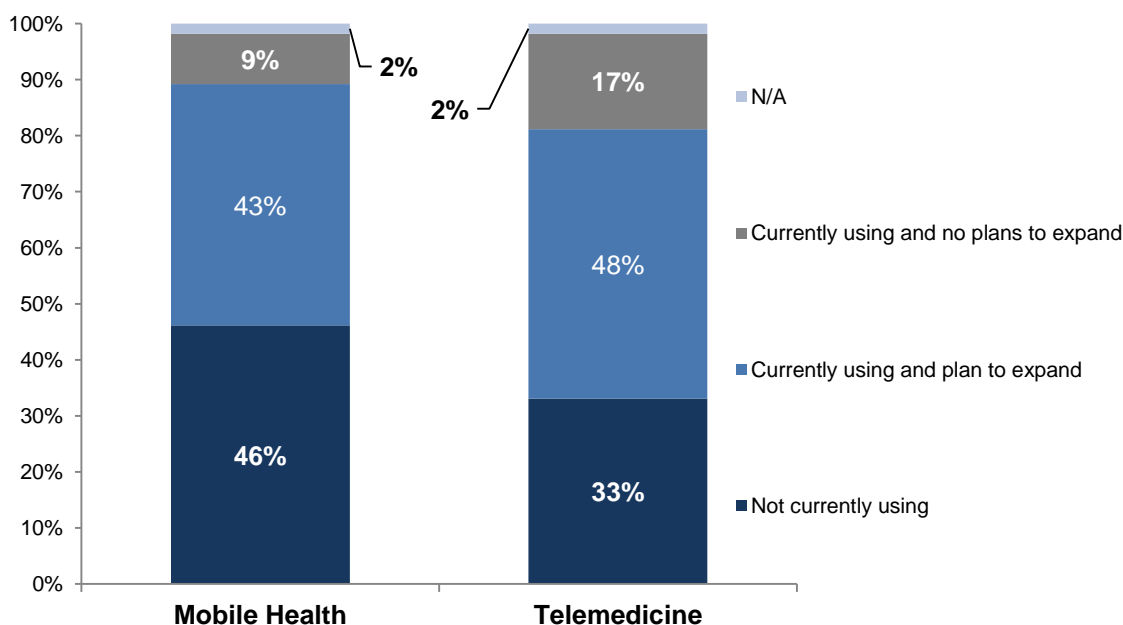
*Telemedicine* allows clinicians to treat patients, who are in a separate physical location, through the use of telecommunications and IT to transmit images, sound, diagnostic monitoring and informatics data in a 'real time' setting. *Telemedicine* has been used at many rural clinics that provide care for a medically underserved population as a means to allow access to physicians and other clinicians. This line of questioning was asked to learn about the future plans of Georgia's healthcare providers. They were asked about their organization's current usage and/or future expansion plans in *Telemedicine*. Almost half (**48%**) of respondents stated that their organizations are currently using *Telemedicine* technologies and also have plans to "expand" their usage in the future.

*Mobile Health* refers to the use of handheld devices (tablet computers, PDAs, etc.) during the clinician-patient interaction. Mobile devices can be used for patient monitoring, collecting and sharing treatment data, and for a variety of other uses for 'real time' updates. Asked a similar question, but about *Mobile Health*, **43%** of respondents stated their organizations are currently using it and have plans to "expand" their usage in the future. The graph below displays the matrix of overall survey responses:

**Figure 3**

### Future Needs for Mobile Health & Telemedicine

*Which of the following best reflects your organization's current usage or future expansion of the following?*



Continuing with the subject of *Mobile Health* and *Telemedicine*, the survey included a follow-up question about being able to fill the jobs that correspond with these future plans: "How confident are you that your organization will be able to fill your healthcare IT jobs in the area of *Mobile Health* and *Telemedicine* over the next five years?"

These same healthcare providers that indicated plans for future growth also have doubts about being able to locate the right people to fill their *Mobile Health*, *Telemedicine* positions. According to survey responses:

- **62%** of survey respondents have doubts that their organization will be able to fill their healthcare IT jobs in the area of *Mobile Health*.
- **58%** of survey respondents have doubts that their organization will be able to fill their healthcare IT jobs in the area of *Telemedicine*.

Many healthcare providers plan to expand their *Telemedicine* and *Mobile Health* usage, but survey participants perceive that the available job candidate pool in Georgia over the next five years may not be sufficient to meet their job requirements.

### Job Fulfillment & Confidence

To gauge the volume of IT jobs that are available, today and projected over the next five years, survey participants were asked about their organization's current IT job openings, as well as those anticipated for the near future. They indicated:

- **72%** of respondents stated they have up to 50 healthcare IT jobs currently open.
- **94%** of respondents stated they expect to have healthcare IT jobs available in the next one to five years.

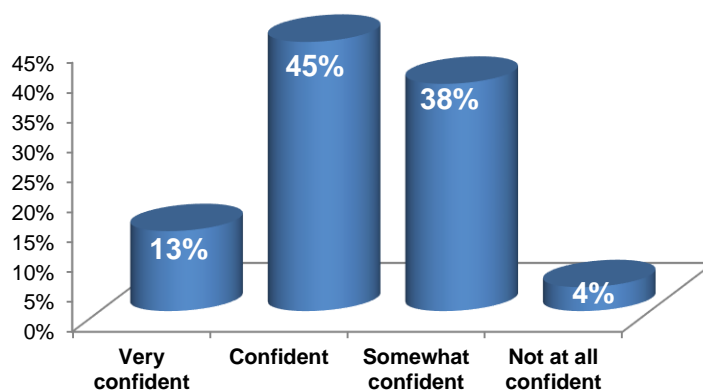
Most (**72%**) of these Georgia healthcare providers are hiring for IT positions today, and an even a greater number of them (**94%**) expect to be hiring for these types of positions over the next five years. There is a significant demand for IT jobs within Georgia, which is encouraging news for prospective employees. Therefore, the next survey questions addressed the confidence levels of healthcare providers about their ability to locate talent in the regional area to fill those jobs.

*"How confident are you that your organization will be able to fill your healthcare IT jobs over the next five years?"*  
In reply to this question, **42%** of respondents surveyed expressed doubts that they will be able to fill their healthcare IT jobs over the next five years. This percentage shows that confidence levels do not align with the healthcare provider's IT job needs. Overall confidence levels responses are shown below:

**Figure 4**

### Confidence of Filling IT Jobs in Future

**42%** of respondents have doubts that they will be able to fill these projected IT positions over this timeframe.



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To find out about the challenges that healthcare providers face in trying to fill these positions, they were asked: *“Which healthcare IT jobs do you think will be the most difficult to fill over the next one to five years?”* The most mentioned jobs that are expected to be difficult to fill in the near future were in the areas of:

- Informatics
- Security
- Clinical (patient care utilizing advanced technology)

In reference to the last bulleted item, one survey respondent pointed out, *“Clinical experience is necessary to maintain and improve workflows, and it is difficult for a clinical person to learn the IT aspect without formal training.”* The comment was made to point out how clinical and IT knowledge go hand-in-hand in the healthcare provider setting, forming an integrated healthcare delivery system that impacts all levels of patient care.

Asked about the barriers or the challenges of filling these anticipated jobs, *“What do you perceive as the reason(s) why these healthcare IT jobs are difficult to fill?”*, the most mentioned reasons had to do with the quality of job candidates. Critiques about the available pool of job candidates include:

- Lack of healthcare experience
- Lack of appropriate training
- Higher demand and less qualified applicants

As another survey respondent shared, *“Healthcare IT is a fairly new science to the world of information technology. Transitioning from a paper environment to electronic formats creates challenges in our highly regulated industry...and [job] skill sets are difficult to match from an IT perspective.”* There appears to be a perception among survey participants that there is a gap that exists between the kind of job candidate they need for their organization and the actual job candidate training/skill level that they are encountering during the hiring process.

### **Workforce Education & Skills**

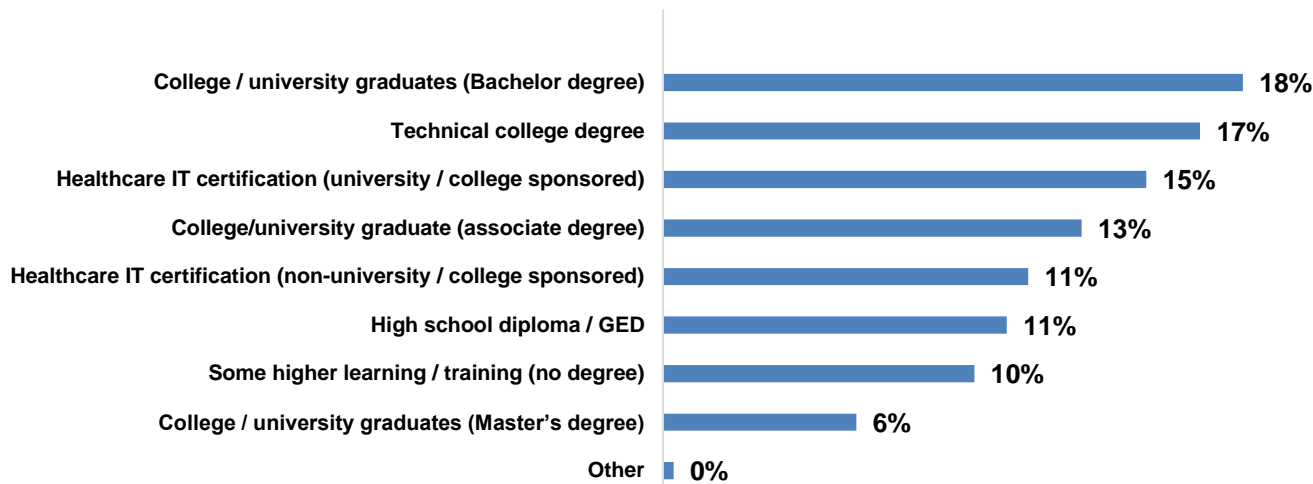
Therefore, what backgrounds are healthcare providers looking for in a potential job candidate? To get the answer, respondents were asked about the hiring requirements for healthcare IT jobs at their organization. Perhaps not surprising, the majority of these organizations want individuals who have acquired higher education and training for their technical jobs. The following graph indicates the educational requirements for the healthcare providers' IT job openings:



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**Figure 5**

### Hiring Requirements for IT Jobs



Next, the survey asked: “What healthcare IT job skills do you feel are necessary to fill your current healthcare IT job needs?” This was asked to find out about the depth and scope of education and skills that these employers seek out in potential job hires. They indicated that the top skills needed for healthcare IT jobs at their organizations are:

- IT Security & Compliance
- Healthcare IT Experience
- Work Ethic
- Critical Thinking

The complete list of healthcare IT job skills, and the corresponding percentage indicating its necessity, is shown below:

**Figure 6**

### Necessary Healthcare IT Job Skills for Current Job Openings

*What healthcare IT job skills do you feel are necessary to fill your current healthcare IT job needs?*

Healthcare IT Skills	Demand
➤ IT Security & Compliance	74%
➤ Health IT Experience	68%
➤ Work Ethic (attitudes, ethics, personal integrity)	67%
➤ Critical Thinking / Problem Solving	65%
➤ Systems / Network Administration	64%
➤ Communication Skills (verbal, written, etc.)	61%
➤ Data Analytics	61%
➤ Systems Integration	60%

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➤ EMR Implementation	57%
➤ Project Management	56%
➤ Data Management	53%
➤ Cloud & Enterprise Solutions	45%
➤ Mobile Programming & Security	39%
➤ IT Programming Languages	33%
➤ Billing / Coding	28%
➤ Six Sigma Process	20%
➤ Math	15%
➤ RCM experience	11%
➤ Other	3%

Many of the top responses for new hires indicate that healthcare employers are seeking individuals who have prior work experience as well as a high quality of personal character traits ['soft skills']. These valued job skills show a level of development that extends beyond the realm of a having a successful classroom education and an accompanying degree. It appears more indicative of a job candidate with on-the-job experience, demonstrating where he/she may have encountered a "real world" situation that would likely take place within the healthcare provider environment.

Next, the Healthcare IT Skills list was re-presented to survey participants; this time asking which job skill improvements were needed for their organization's current employee population for the near future: *"From those selected healthcare IT job skills [in Figure 6], which do your current employees need to improve in order to be better qualified for employee retention five years from now?"*

The Healthcare IT Skills list gets reordered when survey participants shared their thoughts on the continued education and training that is needed for their current employees. They point out specific skillsets that are likely to be needed over the next five years to keep pace with the ongoing technological changes. Below is the reordered list:

**Figure 7**

### Healthcare IT Job Skills That Need Improvement

What skills does your current employee population need to improve to be better qualified for employee retention five years from now?

Healthcare IT Skills	Needs Improvement
➤ <b>Six Sigma Process</b>	<b>100%</b>
➤ <b>Data Analytics</b>	<b>80%</b>
➤ <b>Mobile Programming &amp; Security</b>	<b>79%</b>
➤ Systems Integration	75%
➤ Billing / Coding	72%
➤ Cloud & Enterprise Solutions	68%
➤ Project Management	65%

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➤ Critical Thinking / Problem Solving	63%
➤ RCM Experience	60%
➤ Communication Skills (verbal, written, etc.)	57%
➤ EMR Implementation	56%
➤ Data Management	55%
➤ Systems / Network Administration	55%
➤ IT Security & Compliance	54%
➤ IT Programming Languages	52%
➤ Health IT Experience	47%
➤ Work Ethic (attitudes, ethics, personal integrity)	39%
➤ Other	33%
➤ Math	23%

The job skills, which are perceived as needing further training to keep pace with the healthcare providers' needs, denote specific areas for educational intervention. Unlike the issues related to 'experience' and 'soft skills' in Figure 6 for new/potential hires, these job skills [Six Sigma Process, Data Analytics, Mobile Programming & Security...] could be addressed for healthcare providers through continuing education coursework that fits the employees' work schedule.

### Recruitment Strategies & Challenges

To find out what IT job skills the survey participants foresee to be in greatest demand at their businesses in the near future, they were asked: *"Over the next five years, which skills do you feel will be most important for healthcare IT jobs within your organization?"* The most often mentioned job skills were:

- Security
- Integration
- Project Management
- Critical Thinking

The list of highly valued IT job skills projected for tomorrow has similarities to the respondents' stated need for today, particularly for the areas of *IT Security* and *Critical Thinking*. Employers are seeking problem solvers, a highly-valued quality that will be continuously sought after in the job market. Like today, healthcare providers are going to need individuals with IT competency as well as the ability to apply that knowledge and skillset to overcome any obstacles and challenges as they arise. The 'image' that is developing of the healthcare providers' ideal job candidate is one who has the educational and skill background as well as the practical experience for implementing the knowledge to solve complex operational problems in the business setting. Respondents identified which IT job skills they anticipate a need for at their organization, so the next question inquired about their confidence in being able to locate such an individual to fill the job: *"Over the next five years, do you think the available healthcare IT workforce within Georgia will be large enough to meet the demand of healthcare providers?"* Based on responses, about three out of four survey participants (76%) have doubts that the healthcare IT workforce will be able to meet their demands during this timeframe.

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Where are healthcare providers going to find job candidates to fill their open IT positions? The survey asked about the healthcare providers' job recruitment strategies: *"Of the following strategies, please indicate how your organization plans to address the recruitment of talent for your healthcare IT jobs for the future?"* More than **60%** of respondents stated they plan to use both *referral-based recruiting* and *online recruitment via human resource staffing agencies* to find talent for healthcare IT jobs for future placement. Additionally, many healthcare providers plan to partner with higher education institutions for job recruitment. The overall response matrix is shown below:

**Figure 8**

### Recruitment Plans for Healthcare IT Jobs

- **57%** of respondents stated they plan to use both local & regional recruiting of "partnership with colleges, universities and technical colleges" to address the recruitment of talent for healthcare jobs in the future.

Recruitment Strategies	Local Recruiting (within GA)	Other Recruiting (outside of GA)	Both	N/A
➤ Partnership with local colleges, universities and technical colleges	26%	3%	<b>57%</b>	14%
➤ Online recruitment via human resource staffing agencies.	22%	2%	<b>67%</b>	9%
➤ Referral-based recruiting	20%	3%	<b>67%</b>	9%
➤ Contracting / Outsourcing	14%	3%	55%	28%
➤ Consulting firms	6%	4%	40%	50%

Asked if they expected any obstacles or barriers to their future job recruitment plans, healthcare providers indicated that the most likely factors that would make IT workforce recruitment difficult over the next five years were:

- Competition in Healthcare field for skilled jobs.
- Insufficient number of college graduates with relevant skills.
- Job candidates with no qualifications that meet their needs.

To gauge the confidence levels of survey participants regarding the individual job skills they think will be lacking among future IT job candidates, they were questioned: *"How confident are you that the healthcare IT workforce population will have the necessary skill level to meet your organization's entry-level requirements?"* The chart below shows the array of responses, including the specific job skill areas where healthcare providers have expressed 'Not at All Confident' in recruiting:

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**Figure 9**

**Confidence Levels: Necessary Skills for Entry-Level Jobs**

Healthcare IT Jobs	Very Confident	Confident	Somewhat Confident	Not at All Confident	N/A
➤ Six Sigma Process Improvement	5%	24%	34%	<b>28%</b>	9%
➤ Health IT Experience	6%	39%	34%	<b>19%</b>	2%
➤ Systems Integration Experience	5%	35%	44%	<b>14%</b>	2%
➤ Billing / Coding	8%	33%	41%	12%	6%
➤ RCM Experience	3%	33%	39%	11%	14%
➤ Mobile Programming & Security	6%	36%	46%	10%	2%
➤ EMR Implementation	7%	43%	35%	9%	6%
➤ Work Ethic (attitudes, ethics, personal integrity)	14%	34%	42%	9%	1%
➤ Critical Thinking / Problem Solving	5%	30%	55%	9%	1%
➤ IT Security & Compliance	8%	49%	34%	8%	1%
➤ Communication Skills (verbal, written, etc.)	10%	33%	48%	8%	1%
➤ Cloud & Enterprise Solutions	5%	40%	42%	8%	5%
➤ Data Analytics	6%	37%	47%	8%	2%
➤ Data Management	7%	52%	32%	7%	2%
➤ Systems / Network Administration	3%	53%	38%	5%	1%
➤ Project Management	6%	39%	50%	4%	1%
➤ IT Programming Languages	8%	47%	33%	3%	9%
➤ Math	8%	57%	31%	1%	3%

These important job skills – particularly in areas where healthcare providers anticipate difficulty finding during job recruitment – should be reviewed by Georgia colleges, universities, technical colleges, certification programs, and continuing education providers that offer IT educational programs to identify any potential skill shortfalls in their coursework. Targeting these skills could help change existing perceptions held by employers. The subject of job experience will be covered more in the next section, *Workforce Recommendations*.

Participants were next asked: “Over the next five years, do you think the healthcare IT workforce available to Providers within Georgia will be qualified and well-trained?” **59%** of them expressed doubt about the workforce being qualified and well-trained to meet the projected needs in the marketplace. And asked if they thought the healthcare IT workforce available to healthcare providers within Georgia would be large enough to meet the demands of the market over the next five years, **76%** of respondents had doubts that future demand would be met.

The confidence levels of healthcare providers participating in the study indicate a perception that their demand for IT skills is not going to be completely met in-state, and so they are planning to widen their recruitment strategies beyond the state's borders. As shown in *Figure 8*, healthcare providers are planning to partner with local colleges, universities and technical colleges as a major part of their job recruitment strategies. This may present an opportunity for Georgia's colleges, universities, technical colleges, certification programs, and continuing education providers to work together to present healthcare providers with a more comprehensive job recruitment strategy that addresses the individual needs and perceptions covered in this section.

### Workforce Recommendations

Survey participants had the chance to write in any recommendations that they had about changes the education systems in Georgia need to implement to improve training for the healthcare IT workforce. The most commonly recommended suggestions were:

- More healthcare training
- Implementation of healthcare specific programs at the high school level
- Internships throughout the State of Georgia

Several people taking part in the survey weighed in on the fact that healthcare training provided by educational institutions needed to better match with what actually occurs on-site at the healthcare provider setting. Comments included that training needed to help students *"understand the hospital / healthcare workflow...[such as how] the network of electronic data is used in an EMR system"* and that *"tailored degree programs and courses need to provide students with technical (and soft skills) that are marketable...and helps them transition smoothly into an entry-level healthcare IT role."*

Another commonly expressed suggestion was to establish "pathway" programs at the high school level, to identify IT students earlier and promote the path for future job opportunities available in the healthcare industry. A "pathway" program could include the chance for these targeted students to intern at a nearby hospital (or other healthcare facility) so they can *"learn the business"* to better understand how healthcare delivery actually occurs. Additionally, the program would be designed to include *"more relevant classes"* to help students transition to the next level of education after graduation, such as programs offered at Georgia's higher learning institutions. *"[Georgia's educators] need to target high school and community college populations more. Start in high school, and continue throughout college,"* concluded one commentator.

Also brought up by survey respondents was the need for more internship opportunities, available throughout the state including in rural areas. The common theme about internships, conveyed by the recommendations, was that students need *"hands on training prior to graduation"* if they want to be competitive during the job application process. Also, as mentioned before, respondents pointed out that internships provide an opportunity for students to understand the workflow and processes that take place within healthcare provider environment. This understanding (or lack thereof) of job candidates about 'how the business works' can be the deciding factor when hiring.

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## About IHIT

IHIT was founded for the purpose of connecting resources for the advancement of healthcare through technology in a way that has not yet been achieved elsewhere. IHIT plays a unique role in this coordination by leveraging the strength of the Healthcare IT industry within Georgia and the Southeastern U.S. to expand technology throughout the broader U.S. healthcare system. Specifically, IHIT will engage in projects that deliver on the mission of economic development and improvement of access and quality of care.

IHIT will achieve this mission by going beyond talk, and taking action firsthand by leading and partnering on projects aimed at leveraging the nation's leading Healthcare IT cluster. This approach will allow us to contribute to the ongoing development of these technology resources for future adoption and expansion across the nation.

If you would like to follow our progress, or have a project that might benefit from IHIT involvement, or otherwise want to stay in touch, please contact us at [info@InstituteforHealthcareIT.org](mailto:info@InstituteforHealthcareIT.org), or visit [www.InstituteforHealthcareIT.org](http://www.InstituteforHealthcareIT.org). We appreciate your interest, and we look forward to exploring how we might advance healthcare through information technology.

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This IHIT-commissioned research study was performed by **Porter Research** and **Billian's HealthDATA**.