

Employer Perspectives on Graduates from The University of Texas at Austin Health Informatics and Health IT Professional Education Program

Introduction

The College of Natural Sciences at The University of Texas at Austin offers an innovative Health Informatics and Health Information Technology (Health IT) Professional Education Program, which awards a certificate in Health Informatics and Health IT to program graduates. The program's curriculum was developed in collaboration with the Texas e-Health Alliance and other industry partners and was designed to prepare post-baccalaureate students to rapidly enter the health IT workforce. Since the inaugural class in the summer of 2010, the professional education program has trained 710 graduates in essential health informatics and health IT skills. Within one year of graduating from the program, 96 percent of these graduates seeking positions in the health IT industry and in healthcare organizations were employed.¹

To understand how employers view graduates of the nine-week professional education program, we interviewed representatives from the Health IT companies that have partnered with the program and hired many

¹ Employment statistics were analyzed one year after 551 students in 10 cohorts completed the program between Summer 2010 and Spring 2014. Of these, 461 (83.6%) sought employment in Health IT, 30 (5.4 %) chose to pursue graduate or professional education, 54 (9.8 %) took a job outside of the field of Health IT, and 6 (1 %) were lost to follow-up. Additional analyses performed on the 461 students who sought employment in Health IT, demonstrated that 445 (96.5%) were successfully employed in the field with 87 employers nationwide. The average starting salaries of these graduates was \$52,000. During this time period, our graduates were hired primarily by companies in the health IT industry (48%) and large healthcare systems (37%).

of their graduates. These representatives and their respective companies include Jaclyn Hains, Campus Recruiter with Cerner Corporation, Margaret Malacon, Implementation Services Project Manager with Epic, Tom Valentine, Technical Recruiter with eClinicalWorks, and Dr. Zacharia Varghese, Partner at MAVA Partners (formerly chief medical officer at e-MDs).

Key Professional Education Program Skills

We began by asking the employer representatives to share with us their thoughts on what was unique and compelling about the professional education program from a health IT employer perspective. According to Margaret Malacon, implementation services project manager at Epic, “what differentiates graduates from this program is that they are very clear on the career path they plan to pursue – they know what they’re getting into, a path that may involve the rest of their careers leading to project management, implementation, and other important areas of health IT. They are trained in computer fundamentals, including Boolean logic, workflow analysis, and other relevant areas that prepare these students to be a perfect fit for entry-level positions in healthcare IT.”



Margaret Malacon, Implementation Services Project Manager, Epic

Jaclyn Hains at Cerner Corporation sees the professional education program as very complementary to their corporate business model and



Jaclyn Hains, Campus Recruiter, Cerner Corporation

structure. “Cerner partnered with the professional education program over the last couple of years. The program is a really good flow into Cerner’s consulting roles in our organization. What drew our initial interest in these students was the fact that they have a healthcare and IT background which is primarily what our consultants are learning throughout training, their time spent onsite with clients, or in our Kansas City office helping to implement our systems.”

Jaclyn also commented that the program graduates are very familiar with healthcare IT terminology and applications, which she emphasizes is a real advantage for them as entry-level employees in Cerner’s consulting programs.

Tom Valentine, with e-Clinical works, was very specific about what he and his boss Dr. Raj Dharampuriya, Chief Medical Officer at eClinicalWorks, view as key attributes of the program.

“Number one is the software they are being taught in the program. The students are learning the major versions of EMR software available in the market today which is great, but more importantly they are learning our



Tom Valentine, Technical Recruiter, eClinicalWorks

version which is important to us. Also, they are learning other components like HL7 interfaces, which are key. They are learning about Meaningful Use, which is a big component of what we do. But the biggest component is conflict and change management. That's a big part of the process because a lot of people exhibit resistance to change and if the individual cannot really deal with that scenario or situation, it makes it difficult for them to succeed in this group position. So the program graduates come prepared, well versed and capable of handling these types of challenges. Also the analytics component of the program is key for us because our business model has expanded into business intelligence and analytics. We look for people with that particular skill set and there are many in the professional education program."

Practicums – Benefiting Employers and Prospective Employees

The Health Informatics and Health IT Professional Education Program includes a two-week, off-site practicum with prominent healthcare employers in varied medical settings including health IT vendors and start-up companies, office practices, hospitals, health centers, and health information exchanges. Practicums are valuable to both the employers and the students who will be soon entering the health IT job market. Employers have the opportunity to work with students in their corporate environment and gain a sense of how these students might fit into their culture. Conversely, this is an excellent opportunity for students to learn first-hand about the different roles and positions in an employer's organization in a

supportive and non-stressful manner. Margaret Malacon at Epic, was also a graduate of the professional education program. According to Margaret, “I had two weeks exposure to an electronic health record company, e-MDs, located in Austin, Texas. Alongside my peers, I shadowed project managers, technical support folks, marketing staff, and obtained direct experience with many of the roles we were preparing for as a career. It was a great way to gain exposure and to see first-hand which jobs interested us the most in this field. You’re able to get a feel for the difference between customer-facing jobs and support positions behind the scenes, or over the phone. The practicum provides students with exposure to a wide range of career opportunities throughout Health IT.”



Dr. Zacharia Varghese, Partner, MAVA Partners

Dr. Zacharia Varghese, now a partner at MAVA Partners, was formerly chief medical officer at e-MDs. Dr. Varghese completed the Professional Education Program and believes the practicum experience was an important part of his training.

“The practicum gets you into the real world situation. For a student it’s difficult to really engage in a conversation about the industry, and practicums are real opportunities to work in a non-threatening setting. When students were offered practicums it was under the condition there was no expectations of a job tied directly to successful fulfilling the practicum requirements. So in that context, it frees up the individual. Of course all of the students are probably angling for a job at whatever company they are doing their practicum so they are on their best

behavior. At the same time it gives you some freedom to ask questions in a more casual way to get a first-hand understanding of how things work in real business situations from the company's employees. I completed my practicum at e-MDs and was rotated through various departments of the company. The practicum director would make sure you would come out with a product. You would develop something or engage in something that was actually productive for the company, so the company actually deployed it. It gave you a real sense of accomplishment. I had a strong sense of achievement because I was inputting data into a system that was going to be assessed by the people in charge and then put into production. So I was part of the new product cycle. That's something that you of course put on your resume."

Typical Positions Filled by Professional Education Program Graduates

The typical positions that are filled by program graduates include implementation specialists, trainers, consultants, project managers, regulators, advisors, marketing/sales associates, business analysts and content providers. Many graduates are able to advance quickly because they have a foundation in the terminology, concepts and electronic health record formats of health IT from their program training. Many of the health IT companies that hire graduates will be growing rapidly for the foreseeable future ensuring excellent career growth opportunities for the program graduates.

Margaret Malacon of Epic described the types of positions being filled at her company, “Most candidates are great fits for positions in implementation services, technical services, and quality assurance. Some of this is up to the individual depending upon whether they like to travel and be in customer-facing roles or prefer to work behind the scenes.”

At Cerner Corporation, new hires fill roles in the company’s consultative practices as described by Jaclyn Hains, “the majority of the associates that are new hires from the professional education program go into either our professional services consulting roles or our application services consulting roles. Both of these roles are responsible for maintaining client relationships, potentially traveling to the client sites, helping to implement Cerner technology solutions, teaching doctors and nurses how to use these systems, trouble shooting, being a point of contact and really growing the relationship between Cerner and our clients, ensuring that the customers have the best experience possible.”

At eClinicalWorks, training is the key entry-level position in their organization as described by Tom Valentine, “number one is the software training specialist position that is really a gateway position for recently hired graduates into the organization. We like to hire them as trainers because they learn the software quickly, but more importantly, they learn about our customers, they understand how our customers function, they understand their workflow and their business models. Once they’ve been a trainer for about a year, then we talk to them about advancement

opportunities, whether it's being a business analyst, working as a meaningful use consultant for certain positions or healthcare facilities, or project management. There's a host of different opportunities the trainers are eligible to be hired for. They are like rock stars in our eyes, they really are. At eClinicalWorks when a position opens up internally the team leads immediately ask me 'do you have any trainers that are available and would like to come in-house?' The trainers are the first group of people we go to. So that's why I say they are rock stars because everyone wants a trainer to join their team."

Future Career Opportunities

Multiple recent surveys have highlighted the bright career opportunities for individuals with education and skills in health IT.

In a July 17, 2014 blog post by Cornerstone OnDemand titled [*In Switch to Electronic Health Records, Companies Address IT Talent Shortage*](#), the opportunities in this sector are discussed. "Demand is booming for health information technicians. The U.S. will need an estimated 41,000 more HIT professionals by 2022, according to [research](#) from the U.S. Bureau of Labor Statistics. That's a 22 percent increase, much higher than the projected 11 percent growth in overall employment."

In another survey, HIMSS (Healthcare Information and Management Systems Society) commissioned HIMSS Analytics in 2013 to benchmark and track the IT staff hiring practices among healthcare providers, industry

vendors and consultants. In 2014, the second installment of the annual HIMSS Workforce Survey was published. The findings in these reports are based on responses from 200 individuals representing healthcare providers, vendors and consulting organizations.

The 2013 survey findings indicated that “approximately 1/3 of healthcare provider organizations indicated they had to place an IT initiative on hold because of staffing shortages, and many expressed concern that these lower priority issues created risks to patient care and revenue generation. The lack of a qualified talent pool was the biggest reported challenge to fully staffing both healthcare providers and vendor organizations.”

Other highlights of the 2014 HIMSS Workforce Survey included:

- The health IT industry is expected to continue hiring health IT workers at a substantial rate in 2015. Four out of five (80 percent) healthcare organization respondents, for example, reported their organization had plans to hire additional IT staff in the next year, with almost all vendors indicating similar plans.
- Similar to the 2013 survey results, healthcare provider organizations in 2014 faced challenges completing IT initiatives because of staff shortages. In fact, over one-third of respondents working for a healthcare provider organization reported scaling back or putting an IT project on hold because it could not be fully staffed.
- The 2014 HIMSS Workforce Survey results not only reinforces the argument that IT professionals are critical to the success of the

healthcare industry, but that health IT represents as an attractive career opportunity for IT professionals.

We asked our employer representatives about new job opportunities within their organizations that may represent opportunities for graduates of the professional education program. Several representatives cited the emerging field of big data as a significant driver of new job opportunities.

Tom Valentine from eClinicalWorks commented, “As they say big data is the new sexy thing out there in the marketplace and it’s all about capturing certain information such as with mobile applications or mHealth applications. But for us as a healthcare IT business, we use that information to change healthcare and improve it in significant ways. e-Clinical Works software is well established and represents a third of the U.S. population’s health records. That number of health records speaks volumes about our ability to help with analytics and big data.

In addition, we are excited about the world of accountable care organizations (ACOs) and managed healthcare so we have expanded our net in terms of whom we hire as trainers. New hires with public policy and public health administration majors are a great fit for us. We can utilize that person not necessarily as a trainer, but rather down the line a year from now working with ACOs and involved with managed care where they become more of a business consultant helping with these managed care services. So we do look for a broad range of skill sets.

Dr. Zacharia Varghese weighed in as well with his thoughts on new opportunities that may be available to program graduates. “The companies that are generating the most buzz within the industry are aggressively pursuing the most efficient data mining algorithms and processes possible. I believe that overall revenue generated from EHR software package sales will be a lesser percentage. This is because they will be selling their software as part of a services package that includes population health management, performance, and quality metrics. So frankly ways to mine and manipulate that data will be the major industry driver.”

Employer Perspectives on Program Graduates

In closing, we asked our representatives to comment about their experiences with the UT Health Informatics and Health IT P Professional Education Program overall. We were especially interested in learning how knowledge and skills gained in the program made a difference to graduates and to the employers hiring these graduates.

According to Tom Valentine of eClinicalWorks, “I can’t say enough positive things, I really can’t. There are other schools that we have partnerships with but this program is unique, it’s like coming home. I don’t say that to sound corny or anything like that. I go to many universities and you don’t get the type of welcome that you do here. And the students are different, they really are. They come in with a certain focus, they understand where they want to go and for us it’s a no-brainer. The poster sessions at the end

of the semester are key because they open your eyes to things you may not know, or you may be so immersed in your area of the healthcare industry that you may not have a broad perspective on other topics. Then you come to one of the poster competitions and you think, wait a minute, that's what I should really be focusing on right there."

Jaclyn Hains from Cerner Corporation had very positive comments about the professional education program and the graduates that have been hired by her organization. "The program itself has been fantastic – everyone that I've worked with is a great point of contact and resource. After the professional education program graduates are hired at Cerner the majority of their managers have reported that these students do have a strong advantage as they understand the terminology and are more mature about their work. It's definitely a partnership we want to grow and continue to hire even more graduates. Cerner is at the intersection of healthcare and IT. Healthcare IT is a strong, powerful industry to be a part of, it's meaningful every single day, and it's growing at a rapid rate. So there's certainly a need for graduates from the professional education program and that will continue to be the trend over the next several years nationwide throughout healthcare IT. It's exciting for Cerner to be right in the middle of it.

We do hire for a number of different roles at Cerner – the professional education program gives us a leg up because the graduates do understand a lot about what happens in the industry already. Of course we do a lot of

training all the way up to the executive level so that all employees are kept up to date with the latest trends and terminology as they continue their career at Cerner.

Finally, we love the program, they're great students, and we are excited to be a part of it. We saw some really great hires come through last year – six for example in the Spring – we are kind of switching our mind set to what's going to work best to recruit these students and I think we are on a good path.”

Dr. Zacharia Varghese spoke enthusiastically about value of the professional education program from his personal perspective as a graduate and now partner in a firm that provides companies with IT solutions in the healthcare, membership management and agricultural industries. “I came to the field with a medical background and a public health background. So, I was familiar with healthcare and the general terminology of the healthcare industry, but I had no experience whatsoever in IT. So there would be no real reason for an employer to scoop me up into an IT field even if it was health related apart from perhaps some consulting. First of all, the program gave me the confidence to speak to people that were evaluating me on the basis of what I could deliver in an IT setting. I was exposed to the jargon, I was exposed to some of the trends within the industry, certainly exposed to concepts that I previously had no interaction with such as database programming, the basics of HL7, all of these kinds of things they don't teach you in medical school. Just knowing

the terminology gave me the confidence to engage in conversations where, without the program, I would have been at a significant disadvantage.

Another important thing to keep in mind is that our skills may map to the wider IT industry. You will develop skills here that can be applied generally in a wide variety of IT careers. I think it's really an important value-add to the program."

Organizations Employing Program Graduates

Eighty seven prominent health IT and healthcare organizations including many industry leaders partnered with the Health Informatics and Health IT Professional Education Program and hired over 445 graduates between the summer 2010 and spring 2014 semesters. These include employers such as Allscripts, Ascension Health Information Services/Seton Healthcare Family, athenahealth, Austin Regional Clinic, Baylor Scott & White Health, Cerner Corporation, Corepoint Health, eClinicalWorks, e-MDs, Epic, Greenway Health, Memorial Hermann Healthcare System, NextGen Healthcare, The University of Texas Southwestern Medical Center at Dallas, and University Health System. As the health IT industry continues to expand, all healthcare organizations must compete to find trained personnel to support their rapid growth and they view the UT Austin professional education program as a primary source for recruiting qualified talent.