How to Break Into Analytics and Informatics

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By Mary Butler

Shawn Wells, RHIT, CHDA, manager of HIM data integrity at the University of Utah Healthcare, put himself on the health information management (HIM) career trajectory that HIM educators dream of using as an example.

Wells, who was also the first person in the state of Utah to earn the certified health data analyst (CHDA) credential, was heading up ICD-10 implementation when he and his boss started discussing what his position would look like post-ICD-10.

Wells had worked in a variety of HIM roles up to this point in his career—as an outpatient coder, inpatient coder, CDI supervisor, and as a developer with a vendor. But when Wells and his manager looked ahead and assessed the needs of their organization and the future of the industry, they decided that analytics and informatics must become a priority.

"When we were researching the role, we looked at our own maturity within the organization and there was a lot going on in data, but it was done by individuals who didn't have a good understanding of the data," Wells says. "What my director and I did is, we kind of looked around the country and looked for job descriptions and picked and chose pieces from each one that we liked."

Wells didn't yet have the CHDA when he was hammering out his new job description, but he did by the time his role was finalized. "[The CHDA] helped me in the sense that we have a better picture of analytics within my organization," he said. "I had a lot of technical knowledge, but when it came to data analysis and data integrity, I took it for granted—until I was forced to make that decision of 'Whoa, where do I want my career to go?'"

Wells' facility has earned national attention for harnessing data as part of its Value Driven Outcomes Program, an initiative that, among other things, helps the health system determine exactly how much procedures and services cost "from the surgical perspective to individual line items, to identify ways to improve efficiencies and lower costs on supplies," Wells explains.

University of Utah Healthcare is far from alone in its quest to make informed decisions based on the data it generates. The realities of healthcare payment reform, widespread adoption of electronic health record (EHR) systems, and the increased consumer interest in cost transparency are pressuring providers across the spectrum to dive deeper into the data.

It's vital for HIM professionals to possess analytics and informatics skills, according to Susan Fenton, PhD, RHIA, FAHIMA, associate dean for academic affairs at the University of Texas Health School of Biomedical Informatics.

"There are estimates that healthcare data will total as much as 25,000 petabytes (1 petabyte equaling 1 million gigabytes) by the year 2020. We already get 'lost' in the data. Everyone in healthcare needs information and knowledge with which to make informed decisions," Fenton says.

Sample Data Analytics, Informatics Job Titles and Descriptions

Thinking about taking a more data-centric career path? Below are some sample data analytics and informatics job titles, job descriptions, and some typical tasks performed in each role.

Clinical Health Analyst[1]

Job Purpose: Clinical analysts can coordinate and manage specific clinical applications such as online documentation tool development (i.e., electronic forms, clinical screens) and serve as the interpreter between clinical staff and IT technical programmer/analysts in the development of the EHR or clinical report development.

Tasks include:

- The analyst will format, design, and build relevant content into online forms, mapping data collection and documentation to clinical workflows
- Provide key knowledge on implementation of standardized, streamlined clinical content
- Design clinical content for software applications across all care processes (including documentation, ordering, alerting and notification actions, and reporting needs)

Clinical Applications Coordinator

Job Purpose: Primary functions include hands-on development and maintenance of clinical EHR applications. Clinical application coordinators ensure that the product being integrated meets the needs of clinical staff through workflow analysis. Depending on their role, clinical application coordinators can report to IT, HIM, or the clinical department (i.e., laboratory or pharmacy).

Tasks include:

- Work with IT and clinical staff to develop processes to address access to historical information, manual documentation tools, and remediation for EHR downtime events
- Partner with HIM to coordinate efforts to correct errors that occur in the electronic record (i.e., incorrect ordering physician chosen at the point of care)

Systems Analyst

Job Purpose: Responsible for overall management and support of the health information management systems, including implementation, planning, and maintenance.

Tasks include:

- Serves as a liaison for the EHR vendor and electronic master patient index applications by facilitating effective communication between customers and technical system resources by translating operational language into technical terminology
- Collaborates on implementation of new software installations, upgrades, and integration
- Evaluates integration with legacy systems

Get Ahead in the Job You Have

Most people don't have the ability to write their own job description and create their own job title the way Wells did, and it may not always be feasible to go back to school for an advanced degree. Still, there are many ways a driven individual can add to their skill set. For example, many HIM professionals do not have to go back to school to get their CHDA credential. With some additional training and studying added to their current skill set, many HIM professionals can sit for the CHDA exam.

Clarice P. Smith, RHIA, CHP, director of HIM at AnMed Health, encourages HIM professionals to embrace technology as much as they can in their current roles. She says the traditional HIM role of managing "charts" is disappearing. In many hospitals that have implemented EHRs, the HIM departments have shrunk in size, and the movement toward combining services into a centralized location has reduced the presence of HIM but has created new opportunities in the centralized processing centers.

"Learn the systems you are working with from the user's perspective and as much of the technology perspective as possible. The more the person understands the system, the more value they can add," Smith says. "To transition to an informatics role, the person must have expertise in the processes of HIM."

Some of the most powerful yet underutilized analytics tools are programs that any HIM professional probably already has on their computer, such as Microsoft Access and Excel.

"A lot of HIM folks don't have robust Access skills, and you can do a lot in Microsoft Access for sure," says Grant Landsbach, RHIA, CHDA, MSHSA, data integrity and MPI manager at SCL Health, based in Denver, CO. "When you take the CHDA exam, there are a lot of questions about foundational databases in Access, because Access is a tool where you can do analytics. Excel too."

Landsbach says anyone who plans to work with Big Data and analytics should know these programs. Go-getters should also become familiar with Pivot tables, a powerful feature in Excel that allows users to extract significance from a large, detailed data set, as well as the database querying language SQL. AHIMA offers data analytics workshops that teach HIM professionals basic analytics skills using Excel that can apply on the job.

"I would recommend starting with what is more or less readily available to you already," says Laura Blabac, MS, RHIA, CHDA, senior business analyst for eHIM business solutions at Allina Health. "There are a lot of Excel classes that are offered through community education, through Microsoft online, or avenues like lynda.com, where you can really hone in on specific skills.

"If you can do that without earning a degree, it's not a bad option to pick up a course or two. You can learn the bare bones of it and then take that knowledge and apply that to your current situation."

One hurdle that HIM professionals will have to jump as they move into these rolls is their relationship with information technology (IT) departments. Typically, IT professionals are the ones that extract data and put it in another system to manipulate it. But this is the same sort of task a HIM person in an analyst role might do.

An analyst with a clinical documentation improvement background might need to drill down into EHR data to see what codes are missing for reimbursement purposes and render that data so management can make decisions with it. A person who has the technical skills and the clinical skills to use the data adds the most value to their organizations. But to better compete with IT for those positions, new credentials and advanced degrees offer the best bet for HIM professionals.

Resources for Obtaining Data Analytics Skills

For HIM professionals with a desire to acquire new data analytics skills, there are a multitude of resources for both online and in-person learning:

- AHIMA offers a variety of data analytics educational sessions, including the Data Analytics Workshop: Get Your Thinking Cap On, taking place October 14 at the Baltimore Convention Center in Baltimore, MD. AHIMA also offers CHDA exam prep workshops for HIM professionals looking to earn the credential. The next workshop is occurring October 15 at the Baltimore Convention Center. There are also informatics and data analytics toolkits available free to AHIMA members. To access the toolkits, and learn more about other data analytics and informatics educational opportunities offered by AHIMA, visit www.ahima.org/topics/ida.
- Lynda.com offers a wide variety of online courses and tutorials for software and programming skills relevant to health data analysts. There are courses covering: Access, Excel, SQL Server, Tableau, R, Mathmatica 10, and many others: www.lynda.com/Big-Data-training-tutorials/2061-0.html.
- New Horizons provides online learning and onsite training for Access, Excel, SQL Server, and other business and technical platforms: www.newhorizons.com/courses-and-certifications/microsoft-office/access.
- The College of St. Scholastica's Massive Open Online Courses (MOOCs) are worth 12 CEUs to HIM professionals and offer a free foundation on data analytics: www.css.edu/graduate/non-degree/massive-open-online-courses/health-data-analytics-mooc.html, and www.css.edu/graduate/non-degree/massive-open-online-courses/health-data-analytics-with-microsoft-excel.html.

When to Seek Advanced Degrees or Certifications

Tina Esposito, MBA, RHIA, FACHE, vice president of the Center for Health Information Services at Advocate Health Care, wasn't seeking an informatics role—but soon found out how much she enjoyed that area. She had moved on from outpatient coding, which she did while going to college, and into a supervisory role. She found that as a supervisor she was frequently asked to pull information about congestive heart failure patients, lengths of stay, and emergency room visits. Esposito got hooked on the feeling she got when she was able to answer a physician or administrator's question with coded data. She then started looking for jobs that leveraged those skills, such as roles in clinical decision support and statistical analysis.

To keep advancing in the jobs she was interested in, she decided to pursue her MBA. That degree has been beneficial to Esposito as Advocate Health Care has become the second biggest accountable care organization (ACO) in the United States.

"What we're doing [at Advocate] is aligning ourselves with businesses in the organization. So that takes a broader hat in terms of where the organization is going, where it wants to be, and how we're going to get there," Esposito says. "The MBA helped. It tied me back to a very broad view of the industry—what's going on, what are the key business issues we need to work through with data and analytics."

Since Advocate is part of an ACO, being able to measure the effectiveness of interventions for chronic conditions and focus on population health really requires advanced analytics skills. Esposito works on a team of 30 people, many of which have HIM backgrounds, but there are also people with PhDs in data science and statistics, as well as individuals with their master's in public health.

If a HIM professional doesn't have the resources to get a PhD or a master's level degree, the CHDA credential is a good first step, according to Esposito. "I think it [the CHDA] helps create a foundation that's necessary to support a role that would support the data component," Esposito says.

She adds that whether or not ACOs are here to say, value-based purchasing, which in some cases ties 80 percent of reimbursement to quality, will require HIM professionals to have deep knowledge in data analytics and measurement. "It's clear things are shifting," Esposito says.

In his current job at SCL Health, Landsbach is responsible for corrections to the system's master patient index (MPI), which includes cleaning up duplicates and looking for errors, as well as keeping statistics on those errors.

Landsbach says getting his CHDA taught him that, as strange as it sounds, there's information within information.

"Data alone is not information. Data is just whatever. It takes an analyst to be able to put that together and get meaning out of it," Landsbach says. "…Getting the CHDA has definitely opened my eyes to what else I can glean from this data—what we can pull out from this data, what trends that might be hidden. In addition it helps me to manage better overall because I have an even keener sense of the data and how I can use it too. I used it to lobby for a full-time employee a year ago because I keep good enough productivity numbers on everybody as a team."

Getting the credential drove home his mantra "if you can't measure it, you can't manage it." One MPI project he worked on relied heavily on skills honed by his CHDA—a baby name cleanup which used tools including Excel and Pivot.

"We did a query to see how many babies are left as 'Baby Boy' or 'Baby Girl' as their default name. If they're not getting updated by the clerk they'll never be found because they're going by their name," Landsbach says.

The project uncovered thousands of instances where the babies were never matched up to their nondescript name and records in follow-up visits. A similar analysis of data from an SCL clinic revealed that for years registrars had been putting an "X" in the middle name field to denote a deceased patient.

Fenton says that in hospital settings informaticians apply their programming and analytics skills in a couple ways.

"The first example is in programming quality measures for automatic extraction from the EHR. There are specifications using Boolean logic that require an understanding of both the data and the quality measures for the measure reporting to be accurate," Fenton says. "The second example is in the correct use of clinical decision support reminders and alerts. Experience has taught us clinical decision support (CDS) can improve care; however, we also know that reminders and alerts

used incorrectly can lead to alert fatigue and clinicians ignoring the CDS system. By applying informatics principles and adjusting the algorithms, informaticians can work with clinicians to improve the accuracy of the CDS alerts."

Raymound Mikaelian, RHIA, an HIM and Epic business systems analyst at Memorial Care Health Care in Orange County, CA, is pursuing a master's degree in informatics because he feels it's the best way to obtain and stay in managerial and director roles. Typically getting these types of jobs requires a master's degree, he's found, so it made more sense for Mikaelian to pursue an informatics degree than a CHDA credential.

In Mikaelian's first job after obtaining his RHIA, he had to step into a coding manager's role when his boss left. It was that job that left him with an impression of how important it was to understand the clinical and technical aspects of working with data.

Taking on his boss's job "gave me a lot of insight into cleaning up data and how important data is, because all of it impacted the revenue cycle so heavily," Mikaelian said. "In my mind it's the most important piece of merging the administrative and clinical side. It's ensuring you have the right clinical documentation. If it's not accurate then it's impacting patient care. In that sense it's crucial knowledge to have—that understanding of how it all ties together."

Chart Your New Professional Course with the Career Map

http://hicareers.com/careermap/

This tool developed by AHIMA allows aspiring informaticians and data analysts to see just how to advance from their current role into an advanced one. The Career Map also includes updated salary study results, job data, and self-assessments to measure if you are ready for a new role.

Note

[1] AHIMA. "e-HIM Practice Transformation (Updated)." *Journal of AHIMA* 81, no. 8 (August 2010): 52-55.

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