The Role of Analyzing Healthcare Data: Health Data Analysts Aggregate, Evaluate, and Validate Information for Key Healthcare Stakeholders

By Julie Dooling, RHIA

Data are the assets that healthcare relies upon to provide needed information for making decisions and ultimately, hopefully, improving patient care. The volume of data collected today is staggering and continues to grow with the advent of electronic health records (EHRs). The healthcare data analyst role is pivotal to helping healthcare organizations aggregate, evaluate, validate, report, and forecast findings to key stakeholders.

Data Analysts Can Have Varied Backgrounds

Today's data analysts possess a variety of educational and operational backgrounds. Job descriptions for a mid-level healthcare data analyst may require a higher degree such as a master's in health administration, public health, or informatics, and require experience in data management and analysis. In addition, certain professional certifications and work experience in clinical and/or non-clinical areas are typically sought.[1]

The analyst interprets data from many different health information systems—internal and external to their respective organizations. Focus and duties are often dependent upon the particular care setting, the organizational strategic and operational goals, or requirements and mandates set by federal, state, or accreditation agencies. High-level daily responsibilities may include:

- Identifying data in problematic areas and conducting research to determine the best course of action
- Analyzing and problem-solving issues with current and planned systems as they relate to the integration and management of patient data
- Monitoring for timely and accurate completion of select data elements
- Identifying, analyzing, and interpreting trends or patterns in complex data sets
- Monitoring data dictionary statistics[2]

Pamela F. Tobias, MS, RHIA, CHDA, administrator of oncology services for Lehigh Valley Health Network, has a health information management (HIM) background. She has worked in a variety of roles where particular knowledge of data related to the revenue cycle and informatics was invaluable. These skills helped her to read, interpret, and communicate performance metrics, performance improvement successes, and overall operational efficiency for key stakeholders. "My ability to fully understand how information is captured on the front end, what point in time it is captured, and with what 'meaning' it brings is critical to understanding clinical and clerical operations and ultimately improving them," Tobias says. "It has allowed me to guide data requestors, question reports/results and accurately interpret and summarize findings for decision making."

In comparison, Mark Inge, CHDA, CHTS-TR, the business solution advisor for the Epic project security team at Johns Hopkins Medicine, based in Baltimore, MD, has an information technology (IT) background and relates that "real life responsibility of a data analyst is inspecting for issues like missing values." He has worked with EHR reporting from both a clinical and operational perspective. In his career he has analyzed various dimensions of encounter-level reports such as patient volume by type, department, and provider, as well as workflow that focused on wait times. The transition into his current position allowed him to focus on developing reports for the EHR as well as working with user access and security.

"It's easy to get caught up in data analytics, encounters, research, transactions, volume, etc., but we need to remember that central to all of these functions is the person," Inge says. "We need to remember that there is a person behind all of the data."

Data Types and Tools

Data analysts need a solid understanding of the healthcare landscape, and they must be able to recognize the importance and flow of the data life cycle throughout the healthcare continuum.

Types of financial, administrative, and clinical data that Tobias analyzes are revenue, expenses, volume, market share, capacity, payer mix, wait times, bottle necks, and throughput. Throughput is the time it takes for a patient to move between point A and point B. Tobias also studies readmission rates, pain intensity evaluation, cancer staging completeness, and reporting using metrics under the "meaningful use" EHR Incentive Program.

Inge says he sees "working with clinical or financial data in IT being a lifelong career because there is so much to learn and there is a great deal of crossover into the HIM domain." Inge uses many tools in his position to create reports, including the EHR's report generation utility, reporting database, and issue documentation systems.

Translating Between Clinical, Technical Teammates

Tobias likes being part of a larger clinical team that has provided her with a different perspective on her work. "I enjoy the rewards of being able to participate from a 'different angle' with the goal of providing excellent care for our community of patients," Tobias says, adding that she sees herself as a translator between the clinical and technical members of the team.

She credits her strong and versatile HIM background as the reason why she has been asked to participate in a wide variety of projects, including those in finance, informatics, and leadership. "HIM professionals are quietly taking over many data roles because our education has given us the ability to be flexible throughout the healthcare organization," Tobias says.

Inge also sees himself as a translator and teacher. While many IT individuals may focus on how to use particular programs or applications for report writing, the knowledge that came with his certified health data analyst (CHDA) credential has helped him to evolve and help others. "I see my role as teaching and working with managers and other individuals to help further their understanding of reporting formats and understanding the data," he explains.

The IT space can be very chaotic, Inge says, but he has seen firsthand where data standards and best practices have become the foundation to success. "Without standards and best practices, many IT shops will stay in the firefighting mode."

Continuing Education Essential for Analysts

Tobias acquired AHIMA's CHDA credential earlier this year and views it as a symbol of all the hard work and dedication she's exhibited to get to this point in her career. A continuing challenge includes keeping updated on all core competencies she learned for the RHIA designation. "In order to keep up with all areas of learning, I make a concerted effort to read various journals to stay abreast of a variety of HIM topics," Tobias says.

Inge sought a certification from his EHR vendor, which secured his position on the reporting team, but also took the CHDA in 2010 to give him an edge. "The CHDA gave me something that a lot of my peers don't have," Inge says. He saw the credential as an enabler to evaluate better design practices and offer a better or different way of doing things—especially in the report writing space.

Notes

1. White, Susan. *A Practical Approach to Analyzing Healthcare Data.* Chicago, IL: AHIMA Press, 2013.
2. AHIMA. "Health Data Analysis Toolkit." January 2011.

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CHDA Credential Information Available Online

www.ahima.org/certification/chda
Visit AHIMA's website for more information on the Certified Health Data Analyst (CHDA) credential, related job roles, and exam preparation tips.

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