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Fifteen years ago, when he was an undergraduate in need of a job, Jason Gillikin was happy to land a part-time administrative position at Spectrum Health Hospitals in Grand Rapids, MI. Without a medical background, he often found himself documenting contentious medical-staff meetings on perioperative process improvement. This activity would prove an eye-opening and defining start to a successful career in health data analytics and quality improvement (QI).

Today, Gillikin serves as manager of clinical analytics for Spectrum Health's insurance arm, Priority Health. He leads a team of informatics specialists composed of biostatisticians, database designers, and clinicians—all "very well educated, high-functioning professionals who represent various subject matter expertise," he says. "They work well together in terms of [fostering] a true and open exchange of ideas."

Gillikin is well suited to lead high-level collaboration at work and through his active involvement in NAHQ, most recently as a co-leader of NAHQ's Health Data Analytics work group that developed competencies. "Working with the work group, a small group of knowledgeable peer professionals who know the material, helped me understand the real state of the industry. Sharing real-time knowledge and debating how certain competencies fit into practice settings of varying sizes and organizational complexity drive home the fact that health data analytics is just as much about building a data-driven culture as about acquiring technical expertise and sophisticated tools."

Gillikin, NAHQ's Rising Star of 2014, notes that, in general, NAHQ membership opens the door to a vast network of colleagues who readily share best practices and career-growth opportunities. He points out that his engagement in various NAHQ work groups and the annual conference played a role in his chartering an exploratory-analytics project to build a zero-defect care model using a mix of claims and electronic medical record (EMR) data. "You can't beat the accessibility or the relevance of NAHQ's educational offerings!" he says.

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In his current position, he relishes being the first to view new population health data or to replicate recently published studies using in-house data. He and his team recently developed a preliminary model for predicting a diabetic's glycemic control by comparing consumer socioeconomic data from Nielsen, including household income and education level, to hemoglobin A1c levels of diabetics. Plans call for refining their analysis using more targeted information from external sources.

Gillikin, who holds a bachelor's degree in moral philosophy and is enrolled in a graduate-certificate program in applied statistics, is quick to turn to colleagues for advice or guidance, whether his QI director (a former hospital nurse manager); the associate vice president of his department, whose Socratic teaching style he strongly admires; or a colleague who expertly analyzes episode-treatment groups for insurance claims.

GOALS AND CHALLENGES

His collaborative spirit is aimed at achieving his main goal of using health analytics to help save lives, and he strongly encourages his colleagues in healthcare quality to join the effort.



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GILLIKIN'S RECOMMENDED READING LIST:

- Postings from online communities, including the American Statistical Association and NAHQ Network
- *The Certified Manager of Quality/Organizational Excellence Handbook*, by Russell T. Westcott
- *Evaluation Theory, Models, and Applications*, by Daniel L. Shufflebeam and Anthony J. Shrinkfield
- *Learning Python*, by Mark Lutz
- *Murach's Oracle SQL and PL/SQL*, by Joel Murach
- *Beginning R: The Statistical Programming Language*, by Mark Gardener
- *The Certified Six Sigma Black Belt Handbook*, by T. M. Kubiak and Donald W. Benbow
- *Data Analysis with Open Source Tools*, by Philipp K. Janert
- *Statistics in a Nutshell* by Sarah Boslaugh

"Our organization, Priority Health, has had some opportunity to improve efficiency and effectiveness with analytics, but we in healthcare quality are a good decade behind our colleagues in industry in general. We are on the verge of doing a massive catch-up. The question is, What is that going to look like? My career goal is to help serve as a voice in that catch-up so that we can set an agenda for healthcare quality."

To move forward, Gillikin emphasizes that healthcare quality professionals (HQPs) must shift from conducting routine reports and registries to performing true analytics. "The future of quality improvement is with large-scale analytics," he explains, stressing that HQPs must either learn health data analytics or hire biostatisticians to do it and then teach them basic tenets of healthcare quality.

Meanwhile, he stresses that all HQPs would be wise to develop subject-matter expertise in at least one clinical area. "If you can pick one or two areas that are important and in which you can become a driver, you're better positioning yourself as a career professional," he says, adding that although he is not a licensed clinician, he has expertise in both acute-care operations and end-of-life care.

Gillikin also recommends that HQPs attain a "reasonable degree" of statistical competence ("If you can't take a data set into your organization's statistics tool and run a univariate regression on it, you're not up to speed yet"); know how to extract or scrub their own data, or at least be able to find an expert to help evaluate SQL statements or Star diagrams; master a DMAIC or PDCA cycle and use those tools to manage even routine workflow; and earn certifications such as the Certified Professional in Healthcare Quality credential, which he earned 10 years ago.

He also believes that to be competent in the health data analytics role, HQPs need

to acquire a broad array of talents, which at various times may include serving as journalist, statistician, data scientist, engineer, or diplomat. Core competencies can be learned on the job or through formal education, Gillikin says. He learned about optimization and defect-free care years ago outside of healthcare, when he worked on a QI team at a metal stamping plant using statistical process control.

Today, he is a big fan of using data visualization tools. "With a graphical display, I get a sense of what the entire data set is telling me from a rhythm-and-flow perspective," Gillikin says. "It's only after I've wrapped my head around what the numbers say that I can begin to scope out a project and seek out necessary clinicians. Neither PDCA nor DMAIC appropriately addresses the need to visualize and explore before you start to form a hypothesis."

FUTURE TRENDS

Gillikin foresees a deluge of personal health data as trends in wearable technologies and apps for metric self-monitoring grow. "Taking that information and integrating it into the EMR or claims database is a gold mine in terms of helping providers and insurers deliver the right kind of care," he says. "With the vast majority of people not thinking about health in their daily living, we can permeate that white space by pulling information from these devices."

Gillikin's organization and parent company are fielding different mobile apps for members to use in registering appointments, checking lab results, and engaging with education resources. Next, they plan to use short surveys and instruments, such as PSQ-3 or PAM, to help gauge the engagement of users with their own plan of care.



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