Three Ways Analytics Optimizes Health Outcomes

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By Valerie Watzlaf, PhD, MPH, RHIA, FAHIMA

Over the summer I was fortunate to participate in several conferences. I was both honored to be involved and enthralled at the expertise of all of the individuals who participated and presented.

Data is powerful. Data literacy is also powerful. To collect, read, and communicate data in ways that bring value to your organization is so important.

At the National Library of Medicine's "Creating Connections: Advances in the Research Use of EHRs" panel, the presenters demonstrated how powerful data analytics tools have improved research in areas where progress has been stymied, such as pancreatic cancer. It was amazing to see how the results changed and how progress can be made for chronic disease management when many large data sets are brought together.

At AHIMA's Assembly on Education Symposium, the expert panel "Data Analytics: It's All About Integrity" focused on the integrity of data with a proposed definition on health information integrity and how health information professionals "ensure the knowledgeable, contextual, secure, and appropriate use of health data obtained from many, disparate sources across the health eco-system."

At the National Committee on Vital and Health Statistics roundtable on ICD-11, we focused on developing research questions that will be important to address before we move toward ICD-11.

Data analytics tools are used in so many ways to make a difference in health outcomes. For example:

1. **Patients:** Being able to connect large data sets together to make advances in health outcomes and make sure that the data is of high integrity is vital. ICD-11 may be one tool that gets us there. We need to make sure we are ready for these changes and are able to use this classification system effectively. Other tools to know and use to make improvements in patient health outcomes include SQL, Tableau, R, Python, SPSS, SAS, and advanced analytics in Excel.
2. **Prediction:** The use of analytical methods such as regression models can predict the effects of health outcomes when using certain interventions. It can also predict coding productivity when using a regression model, with a certain case mix index and length of stay. Could we then predict whether ICD-11 will be as productive and accurate as ICD-10 if we have large, accurate data sets with coded data in both ICD-10 and 11? This could help with implementation and training with ICD-11.
3. **Precision:** The ability to use biological, behavioral, and environmental factors or social determinants of health makes predictive analytics possible. The precision comes in when we are able to apply this to individuals and see how a certain medication or treatment can be specifically targeted for the individual based on this data. Precision type data makes predictive analytics possible.

This summer was filled with a focus on data analytics. Let's make sure we challenge ourselves to be experts in health information integrity as well as knowing and using the expert data analytic tools that can get us there.

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