CyberMed Summit:
The Digitazation of Healthcare: Big Data

March 25-28, 2018

ASSOCIATION FORUM®

Healthcare Collaborative

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On March 26-28, 2018, Association Forum and Visit Phoenix collaborated to bring a team of healthcare and medical association executives to Phoenix for a CyberMed Summit. The CyberMed Summit is an outcome of the Association Forum Healthcare Collaborative, a program designed to engage an interdisciplinary community of healthcare associations and stakeholders in conversations that lead to action on common issues to address collectively, rather than individually.

A major discussion topic at the January 25, 2018, Healthcare Collaborative was Big Data. Association Forum and Visit Phoenix teamed up to explore the topic in more detail with the goal of producing relevant resources to help the healthcare association community ask the right questions as it approaches the Big Data Tsunami.

Drawing on the local resources in the Phoenix community, such as the University of Arizona expansion of its footprint into a 30 acre Phoenix Biomedical Campus, located within walking distance to the convention center and thought leaders from academia and entrepreneurial healthcare incubators who served as speakers and panelists, the CyberMed Summit focused on the digitalization of healthcare, with an emphasis on Big Data.

Overview

Data, Data, Data! Now there is Big Data. What does all this mean? How do you process, manage, understand, yet try to explain? Data has become pervasive. We collect it, store it and try to turn it into business intelligence, which leads to organizations and individuals being overwhelmed with data analysis, paralysis and unable to engage in measured decision making.

Healthcare and medical associations are thinking more strategically about data and the role it should play internally and externally. So, what is Big Data?

What is Big Data?

Big Data, defined as data sets that are so voluminous and complex that traditional data processing and application software are inadequate to deal with them, is one of the largest disruptive forces across all industries today. Projections are that Big Data is going to become an even more powerful disruptor in the future. It has been said that data is the new oil and that the value is in refining data into information.

Most organizations have heard about Big Data, but the reality is very few are prepared to access, store, manipulate, analyze and report information derived from Big Data. The key reason is that Big Data is too big, too complex, too different, growing too fast and widely inaccurate.

In 2012, IBM defined four "V"s of Big Data. Volume, Variety, Velocity and Veracity.

• **Volume -** describes the sheer amount of data produced every second across all online channels.
• **Variety -** refers to different types of data that exists or is being collected. Most of the data being generated today is not easily categorized into tables or labels.
• **Velocity -** describes the speed at which new data is being generated, collected and analyzed at any given time.
• **Veracity -** defined as the accuracy and validity of the data versus the amount of biases, noise and abnormality it contains.

Big Data in Healthcare is a growing challenge for many organizations. The volume of data is growing at an astronomical rate and projections indicate that data in healthcare will exceed 2,300 Exabytes by 2020. For reference, one Exabyte is equivalent to 1,000,000 Terabytes.

The volume of data being collected, evaluated, shared and communicated today within the healthcare system itself is impacting physicians' ability to focus on clinical care. And it will only continue to grow.

The two primary types of data in healthcare are Administrative Data and Clinical Data. The growth of Administrative Data (billing, claims, and provider information) is fueled by regulatory compliance and EHR implementation.

Clinical data (diagnoses, findings, labs, procedures, encounters, appointments) is being driven by new technology, IoT (Internet of Things), and regulatory compliance. The result is that practicing physicians are overwhelmed.

In addition to this tsunami of data within the current healthcare system, massive disruptions from outside the traditional healthcare environment threaten to add another layer of complexity as IT companies and consumers connect directly to create user (patient) generated data through pervasive self-monitoring and sensing.

CyberMed Summit Data Model

The CyberMed Summit attendees identified four pillars to start the development of a framework to understand Big Data for healthcare associations.

Key elements:

- Data Governance
- Data Quality
- Data Strategy
- Organizational Resources

Getting Started by Asking the Right Questions

If you are ready to introduce the Big Data conversation to your association, how do you get started? How can you engage others in your organization to explore the value and importance of addressing this overwhelming topic? The first step is to ask questions.

Let's get started . . . .

Data Governance

Defined: Overall management of the availability, usability, integrity and security of data.

10 Key Questions to Ask:

1. How do we define our data?
2. How do we view data in our organization? Risk, Asset or Value?
3. Who owns the data governance process?
4. How is the data governed?
5. What policies and procedures are in place to manage the data process?
6. What industries or regulating standards should be supported?
7. Who is allowed access to our data?
8. Do we have consistent data definitions across the organization?
9. What is our business continuity strategy?
10. How are we held accountable to the board for a data governance process?

Data Quality

Defined: The data fitness for use for an intended purpose.

10 Key Questions to Ask:

1. How do we maintain the quality of our data?
2. How are we currently using our data?
3. What is the current condition of our data?
4. How accurate do we want the data to be?
5. How do we address improving our data?
6. What are our current and future business goals for the data?
7. How often is our data updated?
8. How do we measure the quality of our data?
9. How is our data categorized or organized to deliver value and knowledge?
10. How do we hold staff accountable for data quality management?

Data Strategy

Defined: The view and use of data to create value engagement and organizational growth.

10 Key Questions to Ask:

1. How is data viewed in our organization?
2. How is data used to support our strategic direction?
3. How are we using data to anticipate needs?
4. How can we scale our data?
5. What type of data do we need to leverage?
6. What data do we need to solve problems or achieve goals?
7. How do we commercialize our data?
8. Where is the data located?
9. What type of data do we own?
10. How important is the data to us?

Data Operating Model:

Defined: Required functions in the organization required if data is considered an asset.

Five Key Questions to Ask:

1. What human resources are needed to support our data model?
2. What are the technology requirements to support our needs?
3. What operational and cultural changes are necessary to maximize the data's value?
4. What systems do we need in place to collect and analyze the data?
5. What vendors should help us refine our thinking?

Save the date for the next Healthcare Collaborative July 24, 2018 Chicago, Illinois

Phoenix Participants:

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Neel Mehta, Co-Founder & Chief Strategy Officer, EpiFinder, Inc. (Speaker/Presenter)

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Laura Reiben, Executive Director, EpiFinder, Inc.

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