Welcome to the Data Analytics Toolkit PowerPoint presentation: Introduction to Data Management.
Given the push for healthcare reform and the continued focus on improving care, there is a large need for data in healthcare today. However, vast quantities of data alone are not helpful. We need insight into that data, and that’s where the real challenges lie. This presentation will include an overview of data, providing definitions and explaining some of the complexities of healthcare today including data quality, cost, reporting and analysis. Information shared will also include AHIMA’s Data Quality Management Model and give examples of how data can be used.
Most organizations today are overwhelmed with data, the volume of which is increasing at an alarming rate. It is critical for each organization to determine which data are most relevant and essential for an organization’s overall goals. In theory, the more data we have, the more intelligence we can obtain from it to improve the quality and cost of healthcare in the U.S.

“Rapid advancements in digitizing, integrating, and exchanging health information have given healthcare leaders access to an unprecedented volume of data to drive decisions. But with the amount of raw data bordering on information overload, the challenge these leaders face is finding the best way to use these data to improve operations and patient care.”

~ Healthcare Financial Management Association, November 2013
What is data? Data contains the dates, numbers, images, symbols, letters, and words that represent basic facts and observations about people, processes, measurements, and conditions. Data are the fundamental element of learning and can exist in a variety of formats and include information found in various documents in a healthcare organization.

http://www.aicpa.org/InterestAreas/InformationTechnology/Resources/BusinessIntelligence/DownloadableDocuments/Overview_Data_Mgmt.pdf
Unprocessed data becomes powerful once an organization takes that data, turns it into information and then uses it to further their knowledge of their organization.
The data deluge has created a surge of information that needs to be well-managed and made accessible. The process of how to manage data within a healthcare organization plays a significant role in an organization’s ability to generate revenue, control costs and mitigate risks. Successfully being able to share, store, protect and retrieve the ever-increasing amount of data can be the competitive advantage needed to grow in today’s healthcare environment.

http://www.aicpa.org/InterestAreas/InformationTechnology/Resources/BusinessIntelligence/DownloadableDocuments/Overview_Data_Mgmt.pdf
Primary Data Management Functions

1. Data Governance
2. Data Architecture Management
3. Data Development
4. Database Operations Management
5. Data Security Management
6. Reference & Master Data Management
7. Data Warehousing & Business Intelligence Management
8. Document & Content Management
9. Meta Data Management
10. Data Quality Management

http://www.aicpa.org/InterestAreas/InformationTechnology/Resources/BusinessIntelligence/DownloadableDocuments/Overview_Data_Mgmt.pdf

According to the Data Management Association, here are the 10 primary functions related to a comprehensive data management program. Please check this website if you are interested in the primary functions of an effective data management program.

http://www.aicpa.org/InterestAreas/InformationTechnology/Resources/BusinessIntelligence/DownloadableDocuments/Overview_Data_Mgmt.pdf
The cost of not having an effective data management program can be very high. Many benefits are associated with the act of managing data, including the ability to find, access, understand, integrate and re-use data. If data are well-organized, documented, preserved, accessible, accurate and valid, the result can be that the organization has high quality data, that is easy to share in research and can contribute to providing better care.
The American Health Information Management Association (AHIMA) created a data quality management model as a way for organizations to help ensure that the integrity of an organization's data during collection, application, warehousing and analysis is accurate. The model is used as a framework for the design of management processes and data quality measures, striving to include all healthcare data and limits characteristics to clinical documentation.

**Article citation:**
http://library.ahima.org/xpedio/groups/public/documents/ahima/bok1_049653.hcsp?dDocName=bok1_049653
The Data Quality Management Model was developed to illustrate the different data quality challenges that organization’s face. The domains consist of application, collection, warehousing and analysis. The characteristics of data quality include: Data Accuracy, Data Accessibility, Data Comprehensiveness, Data Consistency, Data Currency, Data Definition, Data Granularity, Data Precision, Data Relevancy and Data Timeliness. Definitions and examples of these terms can be easily viewed on the AHIMA’s website.

An important piece of data quality is the integrity of your data!

The World Health Organization states that data collected and presented must be accurate, complete, reliable, legible and accessible to authorized users if they are to meet the requirements of the patient, doctor and other health professionals, the health care facility, legal authorities, plus state, province and national government health authorities. (WHO 2003)

Linda Kloss, founder of Kloss Strategic Advisors, agrees: “Accuracy and validity of data are persistent concerns for those who use it and are the subject of that data. And the concerns are well founded. Data error is a risk to patient safety.” (Linda L. Kloss APR 4, 2012 Healthcare Data Management)
“The integrity of the clinical data being reporting is essential to support and improve the quality of care to patients as well as the fiscal health of organization providing the care.”

• Journal of AHIMA, January 2014

“The integrity of the clinical data being reporting is essential to support and improve the quality of care to patients as well as the fiscal health of organizations providing the care.”

“Clinical data integrity begins with clinical documentation quality, the foundation of a health record that accurately represents a patient and their history of care. Organizations must strive for an end-to-end process that incorporates technology, education and support to ensure clinical documentation integrity starts at the point of care and follows through until final coding and report of the healthcare record.” (Journal of AHIMA, January 2014)
Healthcare data and its transformation into meaningful information should be a central concern for consumers, healthcare providers, the healthcare industry, and the government. Standards, technologies, education, and research are required to capture, use, and maintain accurate healthcare data and facilitate the transition from paper to electronic systems.

Data that can be trusted enables professionals to optimize health care coverage, quality, and ultimately health status by:

- gathering an accurate picture of the patient’s health needs
- allowing accurate and appropriate planning and decision making
- allocating and using resources effectively and efficiently
- supporting ongoing monitoring
- identifying best practices
- improving quality of care

http://www.wpro.who.int/publications/docs/Improving_Data_Quality.pdf
The concept of data quality is closely tied to the ability of a healthcare organization to support decision making at all levels of the organization. A healthcare organization cannot have high quality healthcare information without first establishing that it has high quality healthcare data. Poor quality data collection and reporting can affect patient care, communication among providers, patients, documentation, revenue generation, outcomes, evaluation, research activities, and public reporting. L/E/O book
Data is being generated in massive quantities daily. Without proper management of data, the healthcare crisis will not be solved. In this example from 2003, Medicare payment errors reached nearly $20 billion dollars due to miscoding and billing errors. While this is an older example, the issues still continue today.

In this study of 60 randomly selected patient records, 1,891 notes from the Veterans Health Administration's computerized patient record system found that 84 percent of notes contained at least one documentation error, with an average of 7.8 documentation mistakes per patient.

In conclusion, with growth of health information technologies, data is accessed with greater ease and thus must be of the highest quality.

“Effective management of information content is key to ensuring that investments in technology pay off. In order for healthcare providers to demonstrate that they are providing quality care at reduced costs, they need to be able to properly and efficiently manage ever-expanding volumes of clinical data.”

~ Linda Kloss, Kloss Strategic Advisors

Thank you for your time today.