

Advances in nursing research: Big data analytics the future

Phyllis Shanley Hansell
Seton Hall University, USA

Big data analytics is the analytical process through which investigators examine large sets of data to find the answers to relevant research questions or hypotheses. These large data sets are readily available through found data from a variety of sources. Especially important for nurse investigators to consider is the vast amounts of data generated through sources such as the electronic medical record, Medicaid/ Medicare data. Typically Big Data is defined as data sets that are too large to be managed by typical computer systems

Data analytics demand the team approach including: Health Professionals (Nurses, Physicians, and Dentists), Statisticians, Information Technology experts. The inter-professional approach to Big Data issues has the potential to identify and solve healthcare problems that were not before possible

The specific purpose of Big Data Analytics is to examine large sets of data to identify and uncover hidden patterns, new correlations, market trends, preferences and patient care outcomes. Unique characteristics of Big Data include: high volume; high variety whereby innovative forms of innovative arise.

Big Data analytics can be used to answer important questions related to patterns of prevention, patient care outcomes to name a few. Some of the benefits of big data include: cost savings, competitive advantage along with new business opportunities.

Big Data provides an accessible source of rich data that can many answer many important patient care questions. The nurse investigator is key to the effective use of Big Data through the generation of important questions and hypotheses whereby results from robust samples are set in the framework of the scientific data base which builds to answer further research questions.

Although Big Data Analytics did not exist in the time of Nightingale who was a statistician and the first nurse researcher, it is important to recognize that she effectively used statistical methods to identify important patterns to manage and prevent disease. Big Data analytics have great potential for the future of nursing research and will do much for the advancement of nursing science.

Biography:

Dr. Shanley is a Professor in the department of nursing at the Seton Hall University College of Nursing. She graduated from the Mount Sinai Hospital School of Nursing in New York and received master's and doctor's degrees in nursing from Columbia University.