Title: Using Data Analytics to Reduce Clinical Variation in Patient Care while Improving Patient Outcomes and Decreasing Cost

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The Institute of Medicine estimates that $265 billion (30 percent) of healthcare spending is waste that directly results from clinical variation. Efforts to reduce clinical variation involve a complete assessment of the various services, procedures, their respective costs, and the variance in cost for identical conditions within the same healthcare system. By increasing the consistency of patient care delivery, variation can be decreased, resulting in improved quality of care and reduced costs. Conducting a review of literature demonstrated improvement in patient outcomes and cost savings using data analytics. Medical literature indexed in MEDLINE, CINAHL, and PubMed from 2009 to present was searched. Full-text, English-language best practice topics were included. Initial screening was based on relevance of titles and abstracts followed by full examination of each remaining article. Studies including all of the searched criteria were chosen for inclusion. This review showed that variation in care is a source of suboptimal patient outcomes and unnecessarily high costs. Variation is present in clinical practice when a gap between the best and current practice exists. Adopting best practice helps clinicians reduce complications (better patient outcomes) and decreases length of stay (cost of care).

These variations are discovered through data analysis. The importance of integrating data analytics to assist clinical teams in decreasing clinical variation and improving the quality of care for patients cannot be overstated. This undertaking can deliver tremendous cost savings to healthcare organizations.

**Biography**

Tahirah Marks is completing her Masters of Science in Nursing from the University of Pittsburgh, Pittsburgh PA. She is a surgical trauma ICU registered nurse at the Level I trauma center in Atlanta, GA.

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