

## **MITIGATING HEALTH DISPARITIES IN THE ERA OF BIG DATA**

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**Abstract:** Over 30 years after the United States' recognition of the mitigation of health disparities as a national priority, based the Heckler Report - Report of the Secretary's Task Force on Black and Minority Health, health disparities still persist. Within the last 30 years, there have been significant advancements in technology, medical care and an explosion of research focused on furthering our understanding of the biological and social determinant of health. However, the report card on health disparities elimination reads a "C." Given advancement in high throughput computation science, big data, a movement to personal medicine and the need for a paradigm shift, predictive analytics is an emerging tool in the efforts to close the health disparity gap. In the era of big data and a shift from health disparities to health equity, this presentation is a call to action for the effective utility of analytics of big data to improve patients' health outcomes, lower health care costs, and increase targeted and personalized care. There is an urgent need for a new tapestry of addressing health disparities which include collaborative science, reframing of the questions and hypotheses, new analytic approaches, socio-cultural factors that address both personal and societal responsibilities, political will, and basic common-sense approaches. By means of scientific reviews and meta-analytic methods, this presentation will demonstrate how predictive analytics will aid the mitigation of health disparities via the harness of integrated big data obtained from electronic medical records, mHealth data collection platforms or devices such as apps deployed via smartphone, medical administrative and consumer databases. In light of ethical and legal concerns, this new technology has the potential to harness the power of large datasets in identifying which medical and/or behavioral interventions will benefit which patients or at-risk groups. Additionally, this analytic approach provides the opportunity to observe emerging public health threats in real-time and provide more effective interventions addressing health disparities in our communities.

**Key words:** Health Disparities, Paradigm Shift, Heckler Report, Predictive Analytics

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