THE ROLE OF PREDICTIVE ANALYTICS IN ADDRESSING HEALTH DISPARITIES

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Abstract: If Amazon.com can predict your next purchase or Netflix has the ability to predict which movie you will like to watch the next time you decide to entertain yourself; then certainly we can close the health disparity gap using similar technologies by Amazon and Netflix. Why is it that after 30 years since the Heckler Report - Report of the Secretary’s Task Force on Black and Minority Health, and despite the wealth of data about racial and ethnic minority health and health inequities that have been generated and the advances in our knowledge of the major underlying factors of health disparities, the gap still persist. In the era of advancement in high throughput computation science, big data, movement to personal medicine and the need for a paradigm shift suggest the use predictive analytics as tools to model health and personal data to close the health disparity gap. In support of the concept of using predictive analytics to move from health disparities to health equity, this presentation is a call to action for the effective utility of this analytic approach to improve patients’ health outcomes and lower health care costs, in conjunction with targeted care. The need is urgent 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 the use of predictive analytics in cost-effective medical decision-making and its power to harness integrated big data obtained from electronic medical records, mHealth data collection platforms or devices such as apps deployed via smartphone. In light of ethical and legal concerns, this new technology has the potential to harness the power of large datasets to help identify 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

Acknowledgements: This research is partially supported by the Grant, 5 S21 MD 000100-12, from the National Institute on Minority Health and Health Disparities (NIMHD), National Institutes of Health (NIH), Department of Health and Human Services (DHHS).