


## Chapter 8

# Minority Health and Wellness: A Digital Health Opportunity

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### ABSTRACT

*With the advancement of the technologies of the internet of things (IoT), we are witnessing great advances in the areas of analytics, sensors, platforms, 3D printing, and mobile. At the same time and unrelated, we are also witnessing a growing increase in the decreasing health and wellness of people in minority communities especially with regard to increase in chronic conditions such as diabetes and obesity. Thus, there exists an opportunity to leverage these IoT technologies to try to support better minority health and wellness. This chapter explores this opportunity.*

### BACKGROUND

As the worldwide population continues to diversify, the prevalence of health disparity is expected to increase with the health inequalities deemed to become harder to diagnose especially amongst the marginalized communities. Gibbons (2011) argues that the number of people in America who are the members of the minority populations will increase by 10% by the year 2050 making it difficult to consider health disparities. However, recent digital technology in healthcare system indicates that the usage of tools such as mobile, sensors, and video conferencing technologies will be of great help in delivering health services to minority communities if adopted appropriately. This paper therefore seeks to present and discuss some of the major technological solutions that the healthcare system has implemented to address health issues and wellness for the underserved groups.

The developments in Information Technology that have been revolutionizing the present-day society have incredible potential to advance healthcare system in areas such as medical care, public health, consumer health, biomedical research, and clinical professional education. Indeed, IT is seen to have

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a central role in the remodeling of the healthcare system if considerable advancements in medical care quality for all people is to be attained (Gibbons, 2011). However, interest is growing in comprehending the latent role of digital health technology in solving healthcare inequalities amid racial and cultural minority communities.

## **HEALTHCARE DISPARITIES IN SOUTH CHICAGO**

Despite the current improvements in medical care and disease interventions, health inequalities persist and may be escalating for chronic illnesses such as diabetes, cardiovascular ailment, obesity, and cancer. In southern Chicago, this health disparity exist among particular population groups and it can be measured by variance in disease incidence, burden of illness, adverse health situation, mortality, and disease occurrence. Current interventions activities to reduce health disparities in in this region have been disease-specific, often targeting individuals and the healthcare system determinants without addressing the social factors. This paper, therefore, seeks to present and discuss healthcare disparities in South Chicago and the various interventions taken to solve the issue. It will also seek to discuss specifics about diabetes and obesity conditions in South Chicago.

Though the term disparity is commonly interpreted to reveal gaps between racial and ethnic groups, it can also exist across many other extents such as age, geographic condition, socioeconomic status, gender, and disability condition. Healthy people (2020) indicates that all of these aspects help to shape a person's capability to attain optimal health. Additionally, the conditions at which people live, play, work, and learn can affect health and cause disparities. Social factors that negatively affect health and welfare of people in South Chicago include poor and unhealthy housing, lack of access to education, unemployment, unfavorable working conditions, poverty, and exposure to neighborhood violence (Thornton et al., 2016). For example, a study carried out by Sinai Community Health Survey (2017) show that the Chicago Lawn community has few resources to inspire physical activity as well as healthy eating. Compared to other southern Chicago communities, the neighborhood has fewer grocery stores to buy fresh foodstuff or places for physical activities. More than 40% of houses in Southern communities in Chicago have been recorded to be food insecure in the past years, compared to about 13% of households nationally (Tung et al., 2018). Chicago south side, therefore, faces numerous challenges including a significant shortage of broad range outlets, crime, and safety problems. Assessing these social determinants is really important, and unfortunately, ignored when talking about traditional health measures. According to Shah & Silva (2006), social and behavioral aspects have a larger impact on health as compared to traditional health measures such as clinical care. Exposure to these disadvantages can have detrimental neurodevelopment as well as biological effects that start at childhood and accumulates to produce illness. Therefore, the solution to these disparities must be multifaceted. Improving the patient's know-how and growing their drive to make healthy lifestyle changes will have little or no effect if limited access to healthy foods and physical activities is not addressed.

In South Chicago, particularly in the Lawndale community, more than 40% of male and approximately 50% of women gender are reported to have poor general health. Nationally, this figure represents nearly 12%. These study findings are among the many health inequalities detailed by a research carried out by the Sinai Community Health Survey. The study evaluated more than 1900 houses within nine South Chicago neighborhoods (Sinai Community Health Survey, 2017). According to the research, the data points out a complex depiction of health and wellbeing in numerous Chicago communities, difference

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