Utilizing Health Informatics as a Means of Assisting in Eliminating Health Disparities in Diverse Populations and Improving Health Care Quality

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Abstract

Purpose: Health informatics is the process of collecting, analyzing, and managing health data, as well as applying medical principles in combination with information technology systems to help doctors provide better treatment. Health informatics has however been faced with quite a number of challenges over the past time.

Methodology: Overall Patient care and Satisfaction are important methods to measure success in the healthcare industry. This statistic is critical for verifying that present methods and procedures are effective and identifying those that are not and should be changed accordingly.

Findings: It is often defined as the achievement of care goals from both a provider and a patient perspective. Measuring patient outcomes yields vast data sets that can be utilized to enhance outcomes in a variety of ways. In this process, health informatics can play a crucial role.

Unique Contribution to Theory, Practice and Policy: In the pursuit of improving patient outcomes, professionals may utilize data to detect at-risk patients, streamline procedures, boost productivity, and support research by appropriately gathering, analyzing, and using these figures.

Keywords: *Health Informatics, Patients Disparity, Healthcare*

Introduction

According to Veinot et. al (2018), one of the greatest difficulties confronting the nation's healthcare delivery system is the result of health disparities among diverse populations, and this in turn results in poor healthcare quality. Unfortunately, disparities based on race, socioeconomic background, and ethnicity are common reasons why most people are deprived of having access to a good healthcare system. Health informatics, on the other hand, has an impact on one's standing access to health care and the quality of the care they can get. Health inequalities are a continuing global phenomenon that is typified by unequal access to healthcare and varying health outcomes across various demographic groups. As a result, a viable approach to understanding and reducing these inequities is the intersection of big data analytics and health information. The term "health informatics" according to Demiris (2017), refers to the study of how people's bodies work. The impact of a developing field in the healthcare industry on populations with health issues is significant and plays a huge role in inequities and the delivery of high-quality healthcare to a large number of people who are uninsured, impoverished, or underserved medically.

Furthermore, it is a branch of science and engineering dedicated to the development of new methods and technology for patient data collection, processing, and analysis which might come from a variety of places and sources. Electronic health records, diagnostic test findings, and medical scans are examples of these sources. Lastly, Health Informatics uses diverse technologies and computational breakthroughs to improve healthcare quality for marginalized communities. However, various obstacles prevent it from completely achieving this duty.

Health Disparities and Health Care Quality

Socioeconomic position, age, geography, language, gender, disability status, citizenship status, and sexual identity and orientation are all areas where discrepancies exist. According to research, discrepancies exist throughout one's life, from birth to mid-life and later in life. People of color, low-income populations, women, children/adolescents, older persons, those with special health care requirements, and people living in rural and inner-city regions are among the priority demographics targeted by the federal government in its attempts to minimize inequities. These groupings aren't mutually exclusive, and they frequently cross paths in interesting ways. Furthermore, disparities exist within subgroups of populations as well. For example, Hispanics' health and health care fluctuate depending on their period of stay in the nation, major language, and immigration status.

According to Wisdom et. al (2018), studies done in the early 2000s highlighted differences in tobacco use and access to mental health care by race and ethnicity, which marked the beginning of widespread acknowledgment of health disparities about two decades ago. Many discrepancies have persisted and, in some cases, widened despite decades of observation and documentation of inequities and general advances in population health. Prior to the COVID-19 pandemic, data showed that people of color faced worse than White people on a variety of health metrics, including infant mortality, pregnancy-related deaths, the prevalence of chronic illnesses, and general

physical and mental health. As of 2018, black people had a four-year lower life expectancy than White people, with Black men having the lowest expectancy. Disparities in other factors have also been documented by research.

The Role of Health Informatics in Eliminating Health Disparities and Improving Healthcare Quality

According to Zhang et. al (2019), today's health IT systems, ranging from electronic health records (EHRs) to smartphone apps, can assist nurses in developing new solutions to close the gap between racial and ethnic health disparities. Through the "meaningful use" of EHR technology, President Barack Obama's Health Information Technology for Economic and Clinical Health (HITECH) Act of 2009 aims to minimize health inequalities, such as the disproportionately high prevalence of chronic diseases in racial and ethnic minority populations. Understanding the Impact of Health IT in Underserved Communities and Those with Health Disparities. "Health IT offers promising tools to address chronic diseases by facilitating the continuity of care and long-term follow-up needed for successful management of these conditions," the report concludes, citing examples ranging from the rural Mississippi Delta to immigrant and low-income communities in large metropolitan areas Zhang et. al (2019).

Furthermore, by enabling effective redesign of healthcare systems to improve the entire patient experience of care, improve population health, and reduce healthcare costs, health informatics has the potential to benefit the health of populations experiencing health disparities. According to Zhang et. al (2019), underserved people have a higher prevalence of chronic diseases like cancer, asthma, obesity, and behavioral health issues, as well as evidence of poor chronic disease management.

The Pros and Cons of Utilizing Health Informatics in Eliminating Health Disparities and Improvement of Health Care Quality.

According to Benabentos et. al (2017), Health informatics is now assisting in the elimination of health disparities among various demographics and communities. Heath Informatics can help with EHRs, HER-based clinical decision support (CDS), and patient registries, among other things. Addressing a variety of health inequalities leads to increased efficiency, quality effectiveness and enhances the efficacy of healthcare services, and improves health outcomes. The field of health informatics is through optimizing health system performance, beneficial in improving healthcare quality, and at the same time, working to improve the patient experience of care which includes quality and satisfaction.

According to Alcaraz et. al (2020), the ways in which Health informatics addresses disparities and improves healthcare quality includes:

1. Raising Public and Provider Awareness: The actions (or lack thereof) made to improve policy and procedures are frequently influenced by how a problem is perceived. It can be difficult to direct resources to address a problem if the public or providers are uninformed of the problem

or misinterpret the nature of the problem. Efforts to enhance public awareness of racial/ethnic inequities in health care have had mixed results. In 2006, nearly 6 out of 10 respondents polled thought African Americans and Latinos received the same quality of treatment as whites, and 5 out of 10 thought African Americans and Latinos received the same quality of care as whites. In contrast to the general public's persistent lack of understanding, medical awareness has risen dramatically. In 2002, the vast majority of physicians (69 percent) claimed that the healthcare system "rarely or never" treated people unfairly because of their race or ethnicity. 8 In 2005, just around a quarter of physicians (24%) believed that "minority patients often got inferior quality care than White patients." Alcaraz et. al (2020).

2. **Improving the Number and Capacity of Providers in Underserved Communities:** Despite several efforts since the 1970s to improve the number of health professionals in medically underserved areas, racial/ethnic minorities remain underrepresented in the healthcare professions and are more likely than Whites to live in areas with inadequate health resources. For example, 28 percent of Latinos and 22 percent of African Americans say they have little or no choice in where they seek care, compared to only 15% of Whites Margarita et.al (2002). In addition, African Americans and Latinos are twice as likely as Whites to use a hospital outpatient department as their primary source of treatment, rather than a doctor's office, where there are more prospects for continuity of care and patient-centered care. This is due to a variety of causes, including greater uninsured rates and restricted primary care provider availability in some minority communities. In addition, Language and cultural barriers can be a challenge even when healthcare resources are geographically accessible. Greater use of medical interpretation services, enhancing the racial/ethnic diversity of the health professions workforce, and developing provider training programs and tools in cross-cultural education are all strategies for improving communication and relationships between patients and clinicians. Because minorities are more likely than whites to work in minority and medically underserved areas, a more diversified health staff could help to increase access and treatment adherence (Alcaraz et. al 2020)

3. **Increasing the Knowledge Base:** Although there is extensive evidence of racial and ethnic differences in health care, the evidence base for developing interventions to address these disparities is inadequate. For example, researchers are looking into how training health-care providers to provide culturally and linguistically appropriate services, increasing the use of electronic medical records to reduce medical errors and improve care coordination, and increasing the use of financial incentives to promote high-quality health care can all help to reduce racial and ethnic health disparities. Furthermore, there is a rising effort to address issues outside of the healthcare system, such as socioeconomic level, education, and geography, which have been demonstrated to influence health status and access to healthcare services.

4. Expanding Health Coverage: Health insurance affects whether and when people receive critical medical care, as well as where they receive it and how healthy they are. However, racial/ethnic minorities, who make up around one-third of the population in the United States, are disproportionately represented among those without health insurance. Uninsured people are less likely to have a regular doctor or receive prompt and routine care than insured people, and they are more likely to be hospitalized for preventable illnesses. As a result, health insurance coverage expansions are especially important for racial/ethnic minorities (Alcaraz et. al 2020).
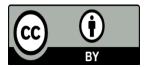
Conclusion

One of the greatest difficulties confronting the nation's healthcare delivery is health disparities among diverse groups. Ethnicity, race, and socioeconomic status all have an impact on status, access to healthcare, and healthcare quality. Health informatics, a new discipline in the healthcare business, has the potential to help eradicate health disparities among various populations and enhance healthcare quality, access to care, and overall health outcomes. However, a number of obstacles, including a lack of funding and access to technology and skilled individuals, limit the use of health informatics as a tool for reducing health disparities among different population.

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