

Introduction to Innovations in Health Equity

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Abstract

The equitable provision of healthcare is central to achieving economic, social and human development in any society. It is important that as innovations, especially technological innovations in care delivery develop that we do not create unintended consequences that restrict access to care because of a digital divide. The concept of health equity arises from the belief that differences in social and economic backgrounds of people lead to differences in their ability to access health care. This mini-track features papers that offer contributions to what we know about innovations in the use of Information and Communication Technologies (ICTs) for Health Equity.

1. Introduction

The use of multiple types of data and technologies to support the process of healthcare delivery has brought about opportunities for innovation. Improvements in people's healthcare has to be seen in the context of the individual, community and nation, where the government takes responsibility for ensuring the wellbeing of the individual not just for the sake of that individual but also for the benefit of the community and society. In response to numerous calls for creating a better world with Information and Communication Technology (ICT) and the challenges of doing so, this mini-track offers a specific view into a well-known but often misunderstood topic, the effects of ICTs in the provision of healthcare [1,2].

With the ethical dimension, equitable healthcare provision does not necessarily mean that everyone should have the same access to healthcare, but that people should be able to live the lives that they value [3]. Social inequities arise when groups of people who are already socially disadvantaged due to their

poverty, gender, racial, ethnic or religious backgrounds are further disadvantaged with respect to their health. In understanding the concept of health equity it is important to note that health represents both physical and mental wellbeing in which key social determinants include household living conditions, conditions in communities and workplaces and access to healthcare according to Braveman [4].

2. Innovations in Health Equity Papers

The first paper in this mini-track is entitled "The Feasibility and Acceptability of a Smartphone-Based Music Intervention for Acute Pain". It is co-authored by Peter Chai, Kristin Schreiber, Wade Taylor, Guruprasad Jambaulikar, Anna Kikut, Mohammad Adrian Hasdianda and Edward Boyer. The use of opioids disproportionately affects people in underserved communities. In their paper, the authors investigate how music can improve affect, potentially decreasing anxiety and catastrophizing, both of are associated with greater pain severity. They hypothesize that a machine-learning generative music intervention could be used to modulate the experience of pain. In this pilot study, they recruited participants who were being treated with opioids and used the music intervention (Unwind) during their brief hospitalization.

The authors assessed the participants' response to its use through a semi-structured qualitative interview. Overall, participants responded positively to Unwind, while reporting some technical challenges, participants were willing to continue using it at home. In particular, participants reported using Unwind to address their anxiety, and many used it to facilitate sleep in the presence of pain. This study demonstrates the feasibility and acceptability of Unwind among individuals experiencing acute pain.

The second paper in this mini-track entitled "Towards a participatory methodology for

community data generation to analyse urban health inequalities: a multi-country case study” is co-authored by Godwin Yeboah, Joao Porto de Albuquerque, Vangelis Pitidis, and Philipp Ulbrich. In this paper the authors propose a methodological framework for understanding healthcare access in slums of cities of four different countries: Bangladesh, Kenya, Pakistan and Nigeria. They propose a systematic approach to produce, curate and analyze volunteered geographic information (VGI) on urban communities, based on a combination of collaborative satellite-imagery digitization and participatory mapping, which relies upon open-source technologies and the collaborative mapping platform OpenStreetMap.

Their approach builds upon emerging practices in the humanitarian mapping community, adding a novel systematic methodology to address the twofold challenge of achieving equitable community engagement whilst generating spatial data that adheres to quality standards. They show that this method produces results for community engagement, which have had a positive effect on research progress and spatial data quality.

The third paper entitled “Healthcare Equity: Questions of Access and Security” is co-authored by Cherie Bakker Noteboom and Matthew Noteboom. They note that the rapid growth of mobile technology to assist in the improvement of healthcare conditions, support patient engagement, and patient education is expected to continue its upward trend. Physicians feel simplified access to health information is one of the greatest benefits of technology.

This paper connects the growing mobile application used by patients to access their healthcare data and the growing importance of wireless communication access by answering the questions: “What is the available Wi-Fi coverage?” and “What types of Security Protocols are used in the wireless access points?” to investigate potential healthcare equity barriers.

Their results indicate there is a difference in the communities’ access to available Wi-Fi coverage which could influence healthcare equity barriers. They found that communities had identical security protocol usage. They indicate an opportunity to improve knowledge of security protocols and maintenance of the access points that influence health care equity barriers.

The final paper entitled “The effect of Mobile Health and Social Inequalities on Human Development and Health Outcomes: mHealth for Health Equity” is co-authored by Sajda Qureshi, Jason Xiong and Becky Deitenbeck. They suggest that the equitable provision of healthcare

entails the distribution of resources and other processes to overcome health inequality. The concept of health equity suggests that differences in social and economic backgrounds of people affect their ability to lead the lives they choose to live.

Following a review of what is known about health equity, social determinants of health equity and the role of mobile health, this paper investigates the relationship between mHealth, social inequalities in life expectancy and in education on Human Development and Health and Wellbeing. The analysis discovers a significant relationship between mHealth, social inequalities in human development and health outcomes.

These findings have important implications for the use of mHealth applications to achieve health equity. The contribution of this paper is in understanding the role of social inequalities in and mHealth in enabling people to bring about improvements in the lives they lead and in their health outcomes.

3. References

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