

Innovation Title: imHealthy – A comprehensive health status assessment system for everyone

Featured Innovators: Leming Zhou, PhD and Valerie Watzlaf, PhD

Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. The current U.S. healthcare system places significant emphasis on disease treatment, however, it is well-known that human beings are complex and critical factors such as relationships and socioeconomic status can directly affect an individual's health. Consequently, treating only the apparent physical disease and not addressing these other factors results in poor outcomes.

Millions of people in the United States live in medically underserved communities (MUCs). In these communities, many people do not have health insurance coverage, or do not have a primary doctor, or have financial or linguistic difficulties that hinder their access to healthcare services. Great effort goes into improving their health and well-being. However, this task can be very challenging because achieving well-being is complex, requiring medical, social, and financial interventions.

Technology Description

To improve the health and well-being of the medically underserved in a free clinic in Pittsburgh, Pennsylvania, a multidisciplinary team consisting of faculty, students, researchers, and clinicians, created a novel IT system called imHealthy. The system includes four critical components: a multidomain wellbeing questionnaire, a mobile app for data collection and tracking, a customization of an open-source electronic health record (EHR), and a data integration and well-being evaluation program leading to recommendations for personalized interventions to caregivers serving the medically underserved.

The well-being index was conducted via mobile apps to collect data not only relevant to patients but also to the family, community, and environment. The data analysis algorithms were used to integrate and analyze data collected from multiple sources using statistical methods. The health status evaluation program applied the data analysis results in a sophisticated evaluation algorithm and provide graphical explanations for each patient's health status.

Advantages

- Holistic approach to wellness assessment by integrating multiple components together
- Analyzes data from multiple sources including social determinants of health
- Provides qualitative and quantitative values for designing individualized healthcare intervention
- Covers both children and adults

Applications

- Data can be used to determine the impact of childhood experience
- Chronic disease care management and counseling
- Community-based healthcare providers

Enhancement & Validation Personalized

imHealthy links patients, caregivers and clinicians to provide focused assessments of well-being enabling personalized holistic health improvement

Stage of Development Prototype

IP Status Copyright

Can be used by multiple generations in families and communities

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