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HEALTHCARE EDUCATION

Using Consumer Health Informatics to Address Health Disparities

Consumer health informatics as a field is developing rapidly as the delivery of health care in the United States is changing the traditional roles of patient and provider. The roles of consumers and providers are changing in ways that support a patient-provider-information technology partnership. Virtual, in addition to physical, structure for health care and health care information delivery should be an integrated part of the healthcare consumer's life.

Technology has made possible additional avenues for communication possible. Implementation of eHealth is now considered an effective way to address patients' health concerns. This can be accomplished through research, provider support, and information access.

However, patients with limited health literacy may not have the requisite skills to effectively interact with the health system and engage in appropriate self-care, such as know how to take their medications and to understand labels and other health information. Literacy for health information, that is, the degree to which individuals have the capacity to obtain, process and understand basic health information and services needed to make appropriate health decisions, is emerging as a key factor related to health status. One common, but incorrect, assumption is that all health consumers understand medical and health information related to their illness and are thus able to make informed decisions about their treatment protocols and health care options. In fact, physicians often overestimate patients' literacy levels.

Information technology-based interventions for consumer health such as those



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that promote health literacy and medication adherence have the potential for being readily available over the Internet and on hand-held devices such as smartphones and tablets. The field of eHealth is promising in that it can support and enable health behavior change and aid in the prevention and management of disease.

The impact of new healthcare information technologies has been studied by a number of researchers to better understand the complex interactions between general literacy, health literacy, information technologies, socio-cultural and language implications, and the existing health care infrastructure. Due to the multiple variables involved with health care, any eHealth application will need to be multi-faceted, comprehensive, and culturally-linguistically appropriate. As the paradigm in health care shifts toward a belief in personal responsibility for one's health and away from the attitude that physicians can cure any and all health problems that arise, it is important to understand patients'

individual health decision-making abilities.

There is evidence to suggest low levels of health literacy are associated with inferior health outcomes, increased hospitalization rates and non-adherence to medications across a number of diseases, particularly among certain racial/ethnic minority populations who may be prone to lower health literacy rates. Studies have indicated that an interest exists in using technology in low-income minority communities, but little is known about the extent to which certain racial/ethnic minority groups have access to, or interest in, using the Internet for health-related activities. What remains unclear is the extent to which patients will feel comfortable using a computer or handheld electronic device or will have access to interactive eHealth programs using these modalities. Before eHealth interventions can be hailed as an intervention of the future, the effective components and mechanisms need to be identified, rigorously tested, and its cost-effectiveness established in different contexts. The Biomedical Informatics Program at Nova Southeastern University's College of Osteopathic Medicine (COM) offers interprofessional clinical informatics training for endeavors such as developing and evaluating consumer health e-Health interventions.

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