



Social

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**BREAKING BARRIERS**

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**Abstract**

**Motivation/Background:** Information system has been expanding globally at an unstoppable rate. Different apps are being developed daily in the quest to educate people about health determinants that could guarantee quality lifestyle for all. However, health literacy is an extremely important factor that must be taking into account when providing this health information.

**Method:** Extensive literature review was completed using, Cochrane, Medline, Elsevier and Psych info. Articles were selected based on information that include health literacy and health information technology.

**Results:** The findings report barriers and benefits that exist when using health information technology to educate people on healthy lifestyle. Health literacy creates elicited more understanding for consumers.

**Conclusion:** patients who fall into the category of vulnerable population face multiple challenges caused by health disparities and obstacles with health literacy. Implementation health literacy into our daily practice can be impactful to positive patients' health outcomes.

**Keywords:** Health Information Technology; Health Literacy; Health Education.

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**1. Introduction**

**What is Health Literacy?**

A report, by the U.S. Department of Health and Human Services (HHS) suggested that healthy people of 2010 final assessment reveals that American are moving towards meeting their program targets, at seventy-one percent which include reducing deaths from coronary heart disease and stroke. However, Koh, H. (2011) who is HHS Assistant Secretary for Health indicated "but to reduce disparities and achieve true sustainable change in public health, we need to create a healthcare approach that reaches people where they live, work, play and pray." Koh's statement demonstrates the importance of health literacy needs as well.

Institute of medicine (IOM), (2011) defines health literacy as the degree to which individuals can obtain, process, and understand the basic health information and services they need to make

appropriate health decisions. Health literacy is an important topic in creating a sense of community among patients and the healthcare team, especially when thinking of the four E's: engage, educate, empower, and enable.

Assessing previous health care delivery approach is important in order to analyze different strategic approaches to reach the mass population. Health information is undoubtedly available everywhere from pamphlets, media and the Internet, however changing this information into knowledge is what needs to be accomplished in health care. The challenge remains the inability to transmit health education to the main public. Many criteria should be taken into consideration in order to tackle the lack of education problem at an achievable rate. To achieve health education, it is important that learning contents be accessible and understandable by that particular audience. Therefore, it is crucial that the interest of the specific population be assessed in order to adopt an educative model similar to that of the targeted population.

## 2. Discussions and Results

Broadcast and print media made up parts of the past and most recent technological approaches taken to deliver health education. Other determinants to be considerate of when delivering health education include environmental, economic and social determinants. They can both impacts directly on health, as well as support healthy lifestyles (Nutbeam, 2009). An approach that needs to be taken into consideration is the use of the most current technological communicative way to affect the media for the promotion of health education. Social media, such as Facebook, Instagram, YouTube as well as reality television (TV) are different avenues that can impact health literacy. Therefore, it is imperative for health professionals using the social media network to educate the public while applying practical languages to avoid errors among users. Zeng and Tse (2006) gave an example where instead of saying to the patient "You have pulmonary congestion," a phrase such as "water in the lungs," was used. This led a patient to take creative steps to get rid of the water. The social network not only can be a useful tool to the general public, but to the health experts. Social networking applications allow health improvement leaders to connect with each other, compare performance, share best practices, and challenge each other (Jordan-Marsh, 2010). These networks also allowed individuals to share their personal health stories, which can be an inspiration to others.

Health literacy is important communication system because it has an impact on health outcomes, quality of care, and healthcare costs (Hargittai, 2002). Consumers must find services within their communities, ability to travel, work out eligibility for services, fill out forms, and monitor billing. Consumers need to inform providers of their personal health status and lifestyle patterns, and outcomes of treatments attempted. Once consumers understand how to properly manage their health through information gain from health literacy, communication exchanges with their health providers can be more effective. Health literacy information delivery reflects a sense of mutual respect between both parties, the providers and consumers. The ultimate goal of health literacy is to assure that the consumers receive the health information they are seeking in order to make positive changes in their lifestyle. Thus, an individualized care plan can be generated for that particular patient.

Interactivity has been called a defining feature of online technologies, with a particular focus on tailoring content to users, increasing engagement in decision making, improving learning, increasing attractiveness, and enhancing the influence of online services.

It includes structural principles of contingency that tailored responses to user queries, participation that is based on an active rather than passive user behavior, synchronicity which looks at real time rather than delayed exchange, proximity in the geographical sense, and richness of nonverbal contextual information.

Experientially, it includes individual involvement which cognitive, sensory, visceral abilities, mutuality in the sense of interdependence and shared understanding, and individuation which include well-defined actors to simulate the information wanting to share.

With database functions and dynamic Web page technology, online health information systems can collect information from users and adapt content to them immediately, in real time and at any time such as contingent and synchronous. Interfaces can be programmed to permit self-navigation for users' involvement among databases and multimedia programs using seamless hypertext links, without resorting to complicated, expensive expert systems. Chat room, bulletin board, and email technologies can deliver prevention messages to users, and online counseling can heighten a sense of mutuality and individuation.

Interaction management is a concept reflecting another attribute of online support that is more difficult to capture in offline support dynamics. According to Walther and Boyd (2002), interaction management occurs at two levels: the degree of participation a participant wishes to have an online group, and the way that individuals are able to express themselves when they participate. In an online support groups, support seekers may avail themselves of system resources opportunistically, seeking or providing information when the need arises and retreating when their information needs recede. Therefore, there is a sense non-cohesiveness that arises during interaction management and can elicit a barrier in receiving valuable health information.

Online health information systems can create a sense of privacy similar to that achieved in interpersonal interactions because of the one-on-one interaction with the computer. Privacy is important for users in order to disclose risky health behavior. It also may be a factor that determines whether individuals will seek information on health problems, particularly those that carry some stigmatized diseases such as sexually transmitted diseases, HIV and AIDS or are behaviors that are deemed illegal in our society such as, adolescents who are smoking. Since the health IT may be practical to the stigmatized groups, it is important that reliable and valid health information are made readily available in language level that is comprehending to everyone despite the level of their educational background.

Government and private funders should support the development and use of culturally appropriate new measures of health literacy, in collaboration of multidisciplinary health experts.

Finding health information in another language can be quite very difficult. With respect to health, illness, new diagnoses, and new expectations in this era of self-care and the use of health IT can create anxieties for both the patients and medical providers. Patients are more than ever searching

the internet as their medical consultant for their clinical symptoms. This phenomenon has created a burden on medical providers in addition to the health literacy incompetency that most are facing on a daily basis. In order to alleviate some of the patients' anxiety it is advisable to provide health information, if available in their preferred or first language. Therefore, identifying the preferred language and providing health information in the patients' language of choice can minimize extra stress, be beneficial and more attractive to patients who may have had a different language other than the primarily spoken language of the country of residence.

### 3. Conclusion

Given the above information, it is unavoidable to notice the importance of health information technology as it relates to health literacy. However, the lack of accessibility can create a problem reaching out to the most vulnerable population, such as those with no financial resources to afford internet services. Vulnerable populations are exposed to contextual conditions that distinguish them from the rest of the population. In public health practice in the United States, vulnerable groups are generally categorized as: certain race and ethnic minorities, low income, those with a high school diploma or less, immigrants and those with limited English proficiency. Many who fall into these categories face multiple challenges caused by health disparities and obstacles with health literacy. Implementation of health literacy into our daily clinical practice can be impactful to positive patients' health outcomes.

When the American Recovery and Reinvestment Act passed in February 2009, it included a set of incentives for meaningful use of health IT within the healthcare settings. Congress has provided financial resources for those institutions that adapted to health IT. We believe that these funds can additionally help providing accessibility to those in need. Consequently, the improvement of health literacy, a quality, safe, and an efficient healthcare delivery can be provided to the vulnerable groups without any restrictions.

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