Understanding the Digital Divide in the Clinical Setting: The Technology Knowledge Gap Experienced by U.S. Safety Net Patients during Teleretinal Screening

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Abstract and Objective

Differential access to everyday technology and healthcare amongst safety net patients is associated with low technological and health literacies, respectively. These low rates of literacy produce a complex patient "knowledge gap" that influences the effectiveness of telehealth technologies. To understand this "knowledge gap," six focus groups (2 African-American and 4 Latino) were conducted with patients who received teleretinal screenings in U.S. urban safety-net settings. Findings indicate that patients' "knowledge gap" is primarily produced at three points: (1) when patients' pre-existing personal barriers to care became exacerbated in the clinical setting; (2) through encounters with technology during screening; and (3) in doctor-patient follow-up. This "knowledge gap" can produce confusion and fear, potentially affecting patients' confidence in quality of care and limiting their disease management ability. In rethinking the digital divide to include the consequences of this knowledge gap faced by patients in the clinical setting, we suggest that patient education focus on both their disease and specific telehealth technologies deployed in care delivery.

Keywords:

Telemedicine; Community Health Education; Diabetic Retinopathies; Digital Divide

Introduction

U.S. safety-net health care settings have been challenged by disproportionate numbers of patients with chronic diseases. The Chronic Care Model (CCM) includes the use of health information technologies (HIT) as one avenue for addressing chronic disease care management through the use of clinical information systems. [1] However, patients need to understand the purpose and use of such technologies so that they can be better informed about their health status and more effectively engage in their own care management. Such patient engagement can be difficult to attain in the safety net health care settings because the typical patient may not understand technology or the implications for its use due to the digital divide faced by underserved populations.

Methods

Focus group techniques [2] were used to assess the acceptability of the teleretinal screening conducted in six safety-net primary care clinics in South Los Angeles. The interviews were conducted in English among two groups of self-identified African Americans and in Spanish among four groups of self-identified Latinos, most of whom spoke Spanish as a primary language.

Focus groups were transcribed, coded, and analyzed using grounded theory methodologies.

Results

Findings indicate that in teleretinal screening, the patients' "knowledge gap" is primarily produced at three critical points: (1) When patients' pre-existing personal barriers to care became exacerbated in the clinical setting - For example, because of health literacy and linguistic challenges, the majority of the participants expressed uncertainty or confusion about the pathology of their disease and indicated difficulty communicating these concerns to their providers, particularly due to the medical language and communication styles of the clinical setting; (2) Encounter with technology during the screening - Patients demonstrated a similar lack of clarity as to the teleretinal screening process, specifically, and retinal screening, generally. Despite having received teleretinal screening in-clinic, patients were uncertain about a) the role of the retinal screening in their disease management and b) their encounter with technology during the screening ; and (3) During the doctor-patient follow-up after the screening - Some of the patients felt that their providers did not take enough time to answer all their questions, particularly those physicians that simply told patients "Everything is fine," without offering any further information. Consequently, these patients were concerned that teleretinal screening had not resulted in on-going, quality care.

Conclusions

This study's significance lies in its identification of how patient disparities in health literacy, technological literacy and access to healthcare interact to produce a knowledge gap in their experience of teleretinal screening. Patient education regarding the function and purpose of telehealth technologies is critical to ensuring effective teleretinal screening, improving patient engagement in self-management of chronic illnesses and addressing the digital divide, particularly among urban underserved patients in U.S. community clinical settings.

References

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