Understanding How Vulnerable Populations Use Common Information and Communications Technologies (ICTs) to Access Health Care Information

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ABSTRACT

Overview

The goal of this study is to investigate patterns of internet access via computers and cellular telephones among the population being served by the Drexel University Eleventh (11th) Street Health Center (Here after, the Center) and to determine which Information and Communications Technologies (ICTs) will be most appropriate for delivering health care information to this population. This two-part study examines 2 concepts: 1). Which ICTs do patients at the 11th Street center use to connect to the internet; 2) How these patients use the internet through the identified ICTs. Results of the project will be used to improve the ways the Center communicates with its patients by developing new approaches for using ICTs that better reflect the existing patterns of use in the population. The study will also provide researchers with a better understanding of the barriers and facilitators to internet access in this vulnerable population.

Background

Healthcare information technology (HIT) holds great promise for improving patient outcomes, increasing cost-effectiveness and both patient and staff satisfaction. However, implementation of HIT has been fraught with problems as organizations have struggled with the transition to e-health. Few settings experience this frustration more keenly than those that operate using a care delivery model that differs from the "normal" physician centered, medical model. One example of such a model is the nurse-managed, primary care clinic that coordinates patient services from a variety of health care professionals to deliver patient-centered care to populations that are medically under-served. Such nurse-managed care is likely to gain importance as the prevalence of chronic conditions requiring trans-disciplinary care increases in our society, especially among vulnerable populations, those who have little or no access to insurance-supported medical care.

To improve and manage the health status among the area residents, the center provides a wide variety of health and wellness services including physical exams, diagnosis and treatment of illness, family planning, health maintenance/disease prevention services, behavioral health services, physical fitness programs, dental services, nutrition services, and adolescent health initiatives. In particular, the center employs an innovative and trans-disciplinary care model that fully integrates behavioral and various wellness services into primary care to form a team approach.

Research Questions

- How do patients at the 11th Street Family Health Center access the internet?
- How do these patients use the internet?
- What barriers exist to internet access for these patients?

Setting

The Center serves an area of Philadelphia that the U.S. Department of Health & Human Services has designated as "medically underserved." The area population of 19,642 people is 90 percent African-American with a growing Latino (6%) population. The unemployment rate of 49 percent is the highest in the city. In addition, the median family income of less than $13,000 is the lowest in Philadelphia. With a focus on health education and chronic disease management, the Healthy Living programs of the Center help ensure that area residents can achieve their optimum state of long-term health and well being. The programs address priority community health concerns – diabetes, obesity, hypertension and prenatal care – while fostering social inclusion, reducing health inequalities, and increasing residents' use of health services and programs that complement city-wide and national strategies. The Healthy Living programs coincide with The Center's trans-disciplinary model of clinical care, through which health professionals cross-train in multiple specialties and create an integrated care team where knowledge and skills overlap. This allows a single provider to see a more complete picture of each patient and gives providers the opportunity to assess, and in some cases treat, patients in other health areas.

Methods

Initial data were collected in 53 face-to-face semi-structured interviews with patients at the Center (No identifiable data was collected). The interviews were tape-recorded for referential accuracy, and data are currently being analyzed for themes and patterns. In addition to the interviews, focus groups will be held to further explore key concepts identified from the interview data.

Preliminary Findings

Access:

- 72% of survey respondents reported having access to the internet, slightly lower than the 77% reported by the 2009 Pew Internet & American Life survey for total adult internet access in the general population. [http://pewinternet.org/Static-Pages/Trend-Data/Whos-Online.aspx <accessed 2 Nov 2009>]
- Results suggest that cell phones are used more frequently than computers to access the internet, especially by women 25 – 34.

Use:

- 45% of the sample report to use a computer several times a day
- Barriers to use include having no computer/internet connection; not knowing how to use one and being frustrated with use.

Searching for information:

- Email and recreational use of the internet were most frequently reported by computer users, while general information seeking was most common among cell phone users.
- Computer users are more likely to search for health information on the internet than those who use cell phones, but only 21% (8 of 38) of the patients reported using the internet for this purpose. The 2009 Pew study on The Social Life of Health Information reports that 61% of the general population shows similar use patterns. [http://www.pewinternet.org/Press-Releases/2009/The-Social-Life-of-Health-Information.aspx <accessed 2 Nov 2009>]
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Next steps

- Identify patterns/trends in interview data to begin to inform the design of mobile interfaces as well as improve health information systems
- Examine potential to use cell phone technology to communicate health care information
- Investigate specific barriers and facilitators to seeking health information on the internet by this population
- Identify patterns/trends in interview data that support model of information-seeking behavior of patients at the Center