Low Internet Use among Patients with Diabetes in a Safety-Net Population
Edward Wu, MD, MBA, New York University School of Medicine, New York, NY; Nirav R. Shah, MD, MPH, New York University School of Medicine, New York, NY

Abstract

Internet-based strategies can improve chronic care management. These strategies assume Internet access and usage. This questionnaire-based study finds that 16% of "safety-net" patients with diabetes use the Internet. This is much lower than prior estimates, which may have been subject to sampling bias. Other findings include interest in mobile phone strategies. Subgroup differences exist based on language and education level. Providers should be cautious to adopt Internet-based strategies too quickly in safety-net populations.

Background

Websites offer diabetes education, online support groups, and personalized online “health coaches” to motivate behavior change. These strategies assume that patients are able to access and utilize Internet technologies. National estimates suggest that 65% of the general population uses the Internet [1]. Little is known, however, about how urban, underserved, ethnically diverse patients utilize the Internet. Prior estimates of Internet use in this population, which are subject to sampling bias (using telephone or mailed surveys), have ranged from 30-40%. [2,3,4]

Methods

In the Bellevue Hospital Primary Care Clinic waiting areas, 667 patients were screened for diabetes. A questionnaire, based on prior Internet use studies[5], was administered to patients with diabetes from August 2006 to January 2007. Questionnaires were available in English, Spanish, and Chinese. Patients were included in the study if they had a diagnosis of diabetes, consented to the study, and were able to complete the written questionnaire. Descriptive statistics were used to characterize study participants based on questionnaire responses.

Results

Of the 667 patients screened, 163 patients were included in the study. Mean age was 58. 56% had less than GED education, 53% were male, and the ethnic distribution reflects that of the general Bellevue Hospital population: 53% Hispanic, 21% African American, 18% Asian American, and 6% Caucasian.

In our sample, 16% report using the Internet at least once a month (95% CI, 11-23%) and 30% have Internet access at home (95% CI, 24-37%). At present, 1.2% communicate with their physician using the Internet. However, 37% of patients report they would likely begin using the Internet to communicate with a physician, given that communication was secure. 43% of Internet nonusers use a mobile phone, of which 58% are willing to communicate with a physician using mobile phone technology.

Conclusions

Internet-based, chronic care strategies demonstrate promise, but providers must be careful not to assume that patients have access to the Internet. While usage rates are increasing among urban, multiethnic populations, these rates are below national rates. A promising finding is that approximately 37% of Internet nonusers would likely start using the Internet to communicate with a physician. Other technologies, such as Short Message Service (SMS) text messaging on mobile phones, may further enhance doctor-patient communication among patients with limited Internet access.

References

5. Grant RW, Caglierio E, Chueh HC, Meigs JB. Internet Use Among Primary Care Patients with Type 2 Diabetes. Journal of General Internal Medicine 2005; 20 (5), 470-473.