Safety-Net Patients Use Mobile Health Devices for Self-Care Management, and Clinicians See Value in Mobile Health Tools to Improve Healthcare Quality: Patient and Provider Findings

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Background: Mobile health technologies (mHealth) like smartphones and mobile health apps can improve patient engagement, care access, and quality of care. Evaluations of patient mHealth practices and healthcare providers' insights about the value of digital healthcare tools for patient care, can inform efforts to support cost-effective and quality care.

Objective: This quantitative and qualitative study evaluated community health center (CHC) patients' mHealth practices, and healthcare providers' (HCPs) perceptions of the value of these tools in care delivery. Questions guiding this research were: (1) To what extent are safety-net patients using mHealth tools for healthcare management? (2) What are healthcare providers' perceptions of the value of mHealth tools to support patient care?

Planning and Research Methods: A multidisciplinary team of psychologists and healthcare specialists designed the study. Researchers partnered with HealthPoint Community Health Centers, a community-supported health system in Western Washington that offers comprehensive health services to low-resource patients. HealthPoint permitted access to patients and healthcare providers, and onsite data were collected from September 2014 to November 2016.

Implementation Methods: <u>Patient data</u>: N=103 patients completed a 47-item questionnaire; they were asked whether they used: smartphones for wellness, medical apps and health apps. Patients received a $10 gift certificate for participation. <u>Healthcare provider data</u>: N= 20 HCPs comprising primary care physicians, medical assistants, behavioral health specialists, nurses and social workers engaged in two 60-minute focus group sessions. Respondents were offered a $75 gift certificate; responses were audiotaped and transcribed.
Data Analysis: <u>Quantitative</u>: Patient survey responses were analyzed using STATA/IC Version 14.2 (StataCorp LLC, College Station, TX). <u>Qualitative</u>: Transcripts from HCP interviews were reviewed. Codewords (words used more than 2x in a narrative) were identified and recorded on three separate trials. Codewords with similar information were grouped into codeword clusters and themes derived based on a single idea from codeword clusters.

Results: Patient and provider results demonstrate the potential value of mHealth tools to patient quality of care
Patients: Safety-net patients actively use mobile health devices to advance self-care health management
• 83% accessed online health information with 34% doing so weekly
• 47% used mobile apps for preventive care including calorie counting, step counting and meditation
• 54% used medical apps including prescription refills, medication reminders and health status tracking
Providers: HCP responses to three questions below, show perceived value of mobile technology in patient care
Q#1: How do you perceive mobile technology and how can it improve patient care?
• Providers agreed that having patients record daily health information can <u>improve accuracy</u> of health status recording, and enable them to <u>implement personalized treatment</u> plans for their patients
• *"We missed something completely and so let's take a look at that so that I can tailor my treatment more to the day-to-day of what that person is just bringing on the day they see me."*
Q#2: What is the role of mobile technology in increasing access for diverse communities
• Providers stressed the value of mobile health technologies in <u>building trust and improving communication</u> among diverse patient populations
• *"Again, just having that conversation and rapport and that dual goal-setting of building goals together and (discuss) how can things work with your goals."*
Q#3: How can a mHealth Clinical Practice Guide help in your work with patients?
• Providers saw a strong potential for a mHealth clinical practice guide to effectively <u>engage and educa</u>te patients by improving <u>bidirectional information exchanges</u> between patient and provider.
• *"...especially if it is something that we're (hoping) to use in our practice with just as much information as possible. I can make sure it is a good fit for that patient so that I can help make a decision if it is helpful."*

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