Original Contributions

Understanding patients' oral health information needs

Findings of a survey on use of patient portals in dentistry

Supplemental material is available online.

Neel Shimpi, BDS, MM, PhD; Kelsey Schwei, MS, PhD; Sara Cooper, DDS; Po-Huang Chyou, PhD; Amit Acharya, BDS, MS, PhD

ABSTRACT

Background. Patient engagement through web-based patient health portals (PHP) can offer important benefits to patients and provider organizations by improving both quality and access to care. The authors studied the most relevant, patient-identified, oral health information available in the PHP to inform their assessment of patient-centered care.

Methods. The authors distributed a 17-question, paper-based survey to patients aged 18 through 80 years in the waiting rooms of 8 dental centers in Wisconsin. Descriptive statistics, along with differences in percentages by sex, age group, and metropolitan status were reported using the χ^2 and Wilcoxon rank sum test.

Results. A 75% (813 of 1,090) response rate was achieved. More than one-third of patients selected access to previous dental procedures, dental history, routine dental appointment reminders, date of last dental visit, tooth chart, date of last full-mouth radiograph, and dental problem list via the PHP.

Conclusions and Practical Implications. Patients identified and recommended incorporation of different types of oral health data for access via the PHP as vital to strengthening the communication between patients and dental professionals. Incorporating patient-identified oral health information in the PHP will inform strategies for improving patient engagement, strengthen patient-provider communication, and offer a venue for increasing oral health literacy and awareness.

Key Words. Patient-centered care; electronic health records; patient portals; surveys and questionnaires; oral health.

JADA 2018:■(■):■-■
https://doi.org/10.1016/j.adaj.2017.09.051

The National Academy of Medicine—formerly the Institute of Medicine—defines patient-centered care as, "Providing care that is respectful of, and responsive to, individual patient preferences, needs, and values, and ensuring that patient values guide all clinical decisions."[1] In a patient-centered model of care, patients become active participants in their own care and receive services designed to focus on their individualized needs and preferences, in addition to advice and counsel received from health care professionals.[2] This approach not only empowers the patient to take an active role in his or her health care, but also develop a strong patient-physician relationship.[3] A strong relationship helps the clinician identify and respond to the patient's unvoiced needs.

One of the goals of the Health Information Technology for Economic and Clinical Health Act, known as the HITECH Act, is to focus on developing a patient-centered care delivery model for engaging the patients in shared decision making.[4] Patient engagement denotes a broader concept that includes patient activation, interventions designed to increase activation, and patients' resulting behavior, such as obtaining preventive care or engaging in regular physical exercise.[5] Patient activation through web-based patient health portals (PHP) can offer important benefits to patients and provider organizations by improving both quality and access to care through features that enable the patients to communicate electronically and securely with providers.[2,6,7] PHP implements a secure online Web site that is tethered to the electronic health record. It provides

patients with convenient, anytime access to information including patient-specific educational resources, clinical summaries, and patients' health information updated by physicians. PHP differs from a personal health record, which is a stand-alone application that is controlled by the patient in terms of entering information surrounding health information, behavioral change, and self-management; it does not contain any medical record information.[8,9] In general, people using the PHP tend to have greater satisfaction with provider communications and overall care.[10] With the introduction of Meaningful Use Stage 2 objectives that rely on patient-initiated action, engaging patients online has become more critical than ever for health care organizations.[6,11] Although the use of PHP has become common in physician practices, in dentistry, it is still in its infancy.[12] Although some studies have been conducted to understand providers' perspectives on oral health care information needs,[13,14] there is a lack of focused studies targeting better understanding of the oral health information needs of patients, and the relative value PHP access may bring to the dental practices and patients.

Our study's primary objective was to gain the patient's perspective surrounding aspects of the oral health information that were deemed important for sharing via the PHP among patients surveyed in a large, integrated medical-dental health care system. A secondary objective of our study was to gain a better understanding of the usage of the PHP by patients in a large integrated health care system.

METHODS

Description of care setting and PHP

Marshfield Clinic Health System (MCHS) is 1 of the largest physician-owned, private group medical practices in the United States, with more than 50 medical centers and 10 Federally Qualified Health Centers located in central, northern, and western Wisconsin.[15,16] To support integrated care delivery, MCHS developed and implemented an integrated medical-dental electronic health record environment.[16]

MCHS grants patients access to their personal health information through a secure web-based PHP called My Marshfield Clinic. This online portal supports patient engagement in their health care and proactive attainment of optimal health outcomes. The PHP houses patient medical information but no oral health care information. Because dental disease is largely modifiable and highly responsive to preventive care, our study was undertaken to inform the process of expanding the PHP to incorporate oral and dental data. The aim of our study was to identify information that was considered of value by the patient in promoting oral health and disease prevention.

Survey instrument and data collection

We developed a 17-question, paper-based survey instrument in English and Spanish. We then piloted the surveys among a few MCHS employees and the final survey was administered in the waiting rooms of 8 MCHS Family Health dental centers by 2 researchers who directly approached patients aged 18 through 80 years old. The 2 research staff members spent 2 to 3 business days in each of the dental centers to administer and collect the completed surveys from the patients.

The survey instrument collected data on the patients' demographics, Internet usage, various features used within My Marshfield Clinic PHP, reasons for not using the PHP, oral health care information, oral health needs they deemed of interest, and health literacy surrounding oral health topics. We used a 5-point Likert ranging from 1 through 5, in which 1 equaled not useful and 5 equaled very useful—gauge patients' perspectives on the usefulness of My Marshfield Clinic PHP in presenting information they would likely seek out regarding their health.

Our survey also solicited patients' opinions surrounding their comfort level with using the PHP if a secure touch-screen kiosk or computer was made available to them.

Statistical analysis

We reported the descriptive statistics, including the tally and percentage or the mean and its standard deviation, the median, and the range for each of the survey questions. We tested the difference in percentages by sex (men versus women), age group (younger than 40 years versus 40 and older), and metropolitan status (metropolitan versus nonmetropolitan) using the χ^2 test.

We used the Wilcoxon rank sum test (for 2 independent groups) or the Kruskal-Wallis test (for more than 2 independent groups) for comparing the differences in median age by sex and

ABBREVIATION KEY

MCHS: Marshfield Clinic Health System.
PHP: Patient health portals.