

## Communication Plays a Critical Role in Web-Based Monitoring

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### Abstract

#### **Background:**

Patient–health care practitioner (HCP) interaction via a Web-based diabetes management system may increase patient monitoring of their blood glucose (BG) levels.

#### **Methods:**

A three-center, nonrandomized, prospective feasibility study of 109 Native Americans with poorly controlled type 1 diabetes mellitus and type 2 diabetes mellitus were recruited from Alabama, Idaho, and Arizona. The study intervention included the use of a Web-based diabetes management application (MyCareTeam<sup>®</sup>) that allowed timely interaction between patients and HCPs. Information about diabetes, nutrition, and exercise was also available. Finally, patients were able to provide BG readings to their HCP via the MyCareTeam system.

#### **Results:**

As a result, 59.6% of the patients sent one or more messages to their HCP, 92.67% received one or more messages from their HCP, and 78.89% received one or more person-centered messages from their HCP. Additionally, the number of times a patient logged into the system and the frequency with which they tested their blood sugar were correlated with (a) the number of messages sent to their HCP, (b) the total number of messages received from their HCP, and (c) the number of person-centered messages received from their HCP. Thus patients who sent more messages also tested their BG more frequently, as measured by the number of BG readings uploaded from their meter to the MyCareTeam database. Person-centered messages seem to be particularly important to motivating the patient to monitor their BG levels and use the Web-based system.

#### **Conclusions:**

These results suggest that patient–HCP interaction and, in particular, more personalized interactions increases patient frequency of BG monitoring.

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**Abbreviations:** (BG) blood glucose, (CDC) Centers for Disease Control and Prevention, (HCP) health care practitioner, (T1DM) type 1 diabetes mellitus, (T2DM) type 2 diabetes mellitus

**Keywords:** communication, diabetes management, health information technology, self-monitoring of blood glucose, telemedicine

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