



Mobile Phone-Based System Tied to Lower Glycated Hemoglobin

August 8, 2011

A mobile phone-based treatment/behavioral coaching program significantly improves glycated hemoglobin levels over 12 months in patients with type 2 diabetes, according to a study published online July 25 in *Diabetes Care*.

Charlene C. Quinn, R.N., Ph.D., from the University of Maryland School of Medicine in Baltimore, and colleagues investigated whether using mobile application coaching and patient/provider Web portals in addition to community primary care compared with standard diabetes management would reduce glycated hemoglobin levels in 163 patients with type 2 diabetes. The patients were divided into four stepped groups, with three receiving the mobile and Web-based self-management patient coaching system and provider decision support, and one group acting as a control. Patients received automated messages in response to individually analyzed blood glucose levels, diabetes medications, and behaviors. The providers received quarterly reports on the patients' glycemic control, medication management, behaviors, and treatment options. The primary outcome measure was the change in glycated hemoglobin levels over a treatment period of one year. Secondary outcomes included changes in patient-reported symptoms, diabetes distress, depression, and blood pressure, and lipid levels.

The investigators found that the maximal treatment group exhibited a significant mean decline of 1.9 percent in glycated hemoglobin levels versus 0.7 percent in the control group, a difference of 1.2 percent over the 12-month period. No significant differences were observed between the groups for patient-reported diabetes distress, depression, diabetes symptoms, or blood pressure and lipid levels.

"A mobile phone-based treatment/behavioural coaching intervention improved glycated hemoglobin by 1.9 percent, compared with 0.7 percent for usual care," the authors write.

The study was partially funded by WellDoc, Life Scan, and Sprint.