Study shows impact of clinical decision support on diabetes care

June 20, 2012
By Omar Ford

Fifteen minutes isn't an awful lot of time in some cases, especially when it comes to diabetes patient's meeting with their physicians to discuss possible changes in medication. However, results from a recent study, "Mobile Diabetes Intervention for Glycemic Control: Impact on Physician Prescribing Behavior," show that a patient's visit with their doctor can be greatly enhanced with **WellDoc**'s (Baltimore) Clinical Decision Support.

The cluster-randomized controlled trial (RCT) included 163 patients and 26 primary care practices assigned to treatment groups or a control group (usual care) for one year.

"Our research shows that this mobile diabetes study intervention impacted how physicians manage medications for their diabetes patients," said Charlene Quinn, PhD, **University of Maryland School of Medicine** (Baltimore). "The WellDoc intervention provided a patient-centric care solution that impacted medication therapy management at the provider level, while simultaneously supporting other key aspects of diabetes self-management, such as glucose testing, diet, and exercise."

For this analysis, physicians who used the WellDoc Clinical Decision Support (seven practices) nearly doubled the number of medication changes they made for their patients vs. those who provided usual care alone (66.5% of treatment group patients experienced medication changes vs. 36.4% in the usual care group).

The one year parent RCT, reported in *Diabetes Care, 2011*, found that the virtual patient coach portion of the WellDoc solution reduced A1c on average by 1.5% and that when physicians utilized the clinical decision support the A1c was further reduced by approximately 30%, or a total of 1.9%.

"The study indicates providers that were receiving WellDoc Clinical Decision Support made more medication changes than those who provided usual care alone," Malinda Peeples, VP of Clinical Advocacy for WellDoc told *Medical Device Daily*.

These results were significant compared to the 0.7% A1c reduction for control group. A1c levels are considered the gold-standard measure for diabetes control and reductions in A1c have been shown to directly reduce the number of complications and costs incurred by a person with diabetes.

The company added that there was significant benefit in the application and that it could help save valuable time during visits with a patient's physician.

"The provider has a snapshot of the patient so they can have a meaningful exchange and focus on the visit, because again people with chronic disease have multiple issues that they're addressing with a provider," Peeples said. "By giving the provider this consolidated information on the patient's diabetes it allows them to focus quickly on that and talk about these other issues they also need to address."

WellDoc's said its diabetes product is the only mHealth solution cleared by the FDA to provide real time, automated clinical and behavioral patient coaching combined with decision support for the patient's doctor. Type 2 diabetes affects 25.8 million Americans, costing the United States $174 billion in 2007. Only 12.2% of these people meet the standards of care for glucose, blood pressure and lipid control. "We're introducing a new therapy or a new category of therapy to the market," Peeples said. "So I think from that perspective we're just at the beginning in terms of adoption and uptake."

She added, "The Diabetes Manager application that was used in the trial had a virtual coach. We describe the coach as software that resides on the patient's phone or the Internet Web Browser. They use the application to collect data around their diabetes - which is for glucose, carbohydrate intake and medications. They can also make additional notes on the application. When they enter data they get real time feedback messaging and they also get messages that are generated off of our automated analytic expert system, which is actually a cloud based analytic system that looks at data and trending. The trending data is compared to clinical rules and evidenced based guidelines to generate treatment recommendations to providers. "

This could be the tip of the iceberg when it comes to improving using Mhealth applications for diabetes, the company said.

"Last year, WellDoc announced the primary endpoint data showing a significant reduction in A1c levels. Today, as we dig deeper into the study data it has become eye-opening how mobile health can not only change patient behavior but also provide doctors with the support and information they need to optimize the treatment plans of their Type 2 diabetes patients," said Ryan Sysko, founder/CEO, WellDoc.