

Pilot study supports adolescent diabetes patients through personalized text messages

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Jennifer Dyer, MD, MPH, an endocrinologist at Nationwide Children's Hospital, has developed and completed a pilot study that uses weekly, customized text messages to remind adolescent diabetes patients about their personal treatment activities. At the conclusion of the study, Dr. Dyer found an increase in overall treatment adherence and improved blood glucose levels.

Dr. Dyer began developing this pilot study after realizing the potential of a simple reminder, in the form of a text message, which can be sent to her teenage [patients](#). During the study, she sent personalized questions and reminders specific to diabetes adherence activities in addition to friendly, supportive messages to her patients. By asking questions about glucose testing, meal boluses and frequency of high and low glucoses, Dr. Dyer has seen an increase in teens taking their medications.

"If adolescent [diabetes patients](#) do not adhere to their treatment and medication plan, it can result in difficulty concentrating in school or functioning throughout the day," said Dr. Dyer, also an assistant professor of Pediatrics at The Ohio State University College of Medicine. "Excellent control and treatment can have a long term positive effect on a patient with diabetes."

The average teen sends about 50 texts each day while 75 percent of teen cell phone users have a cell phone plan with unlimited texting capabilities. Studies have shown that adolescent patients have a greater difficulty adhering to treatment and medication activities than adults.

Thus, there is a significant correlation between increased independence and decreased treatment adherence in adolescents. The rate of medication non-adherence among adolescent recipients is approximately four times higher than that among adult recipients.

"This form of communication allows for real-time health management which is extremely valuable for patients that suffer from a chronic illness like diabetes," said Dr. Dyer, also a principal investigator in The Research Institute at Nationwide Children's Hospital.

Due to the success of this study, Dr. Dyer has applied for an internal grant in order to test an iPhone application that she has developed. This application will allow endocrinologists to send personalized, yet automated texts to multiple patients at a specific time.

Provided by Nationwide Children's Hospital

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