people of note

Helping young patients follow the plan

When a physician asks an adolescent with diabetes if she has been carefully following the prescribed treatment regimen, the reply most likely will involve an affirmative nod. And maybe the patient really believes that to be the case.

But what if she's wrong? In addition to the health risks involved for the patient, the physician is missing an opportunity to dig deeper and perhaps fix the root cause of the problem. *Does she not adequately understand how to use her insulin pump? Did somebody give her improper instructions about managing her diabetes? Is she indifferent or not able to fully understand how disastrous the consequences might be?*

Kimberly Driscoll, assistant professor of medical humanities and social sciences, is trying to help.

COLIN HACKLEY

Her research aims to assist children with diabetes – and the physicians who treat them – by improving understanding of why patients with diabetes don't always adhere to the treatment plan.

She recently was awarded a four-year, $655,000 grant from the National Institutes of Health to pursue a study designed to improve insulin pump adherence in adolescents with Type 1 diabetes.

There are two elements of Driscoll's project: training in the use of technology that has the potential to significantly increase the available data on diabetes regimen adherence; and a four-year study to shed more light on and improve insulin pump adherence.

The study will involve 100 children ages 10-16 with Type 1 diabetes, and data compiled during their four regular visits a year with Tallahassee pediatric endocrinologists Larry Deeb and Nancy Wright, College of Medicine faculty members.

"When children with diabetes receive an insulin pump, they learn about how to use it and they say they know how to use it, but nobody evaluates them after that initial learning period," Driscoll said. "So there is some concern they will incorporate things they are not supposed to be doing or that they didn't learn what they were supposed to at the outset.

"You can't expect someone to adhere to the regimen if they don't have the fundamental skills necessary."

One aspect of diabetes treatment that sets it apart from most other diseases is that it can be managed through the use of

technology: insulin pumps and blood glucose meters are vital tools in the treatment regimen.

Driscoll will be receiving training on the use of data mined through memory chips attached to blood glucose monitoring devices and insulin pumps. The memory chips allow researchers and physicians to get a more accurate account of a patient's medical regimen than would be possible through personal interviews.

For numerous reasons, patients sometimes willingly, or unwittingly, provide misleading answers to questions about how well they are following the treatment plan.

"Diabetes is one of the only diseases where there are electronic data that can be measured on a day-to-day basis as part of the treatment regimen," Driscoll said. "Through this technology, we are able to get completely objective data so we can see what they are actually doing instead of what they say they are doing."

Ambulatory blood glucose profiling (AGP) was developed by Roger Mazze, head of the International Diabetes Center-Mayo Clinic in Minnesota. Once trained to use it, Driscoll will be one of only a handful of researchers authorized to use the software.

It will drastically increase the volume of data she has to work with and it could have a profound effect on the future direction of her research.

"There are very few people using the insulin pump data," she said. "I feel like I hit upon a gold mine of information in an untapped area in diabetes."

Kimberly Driscoll studies how well diabetes patients adhere to their treatment plan.