**What was the research about?**

When a person has type 1 diabetes, their body doesn't make the hormone insulin. The body needs insulin to get blood sugar into cells. Keeping blood sugar levels normal can help prevent health problems that affect the heart, brain, eyes, limbs, and kidneys. People usually develop type 1 diabetes as children or young adults.

Decision aids help people choose between two or more healthcare options taking into account what is most important to them. In this study, the research team created online decision aids for two treatment devices:

- **Insulin pump**, a small device worn outside of the body that delivers insulin through a tube that runs under the skin
- **Continuous glucose monitor**, a sensor under the skin that tells patients if their blood sugar is too high or low

The research team wanted to help youth with type 1 diabetes and their parents make decisions about using the devices. They compared a group that viewed one or both decision aids with a group that didn't view the decision aids.

**What were the results?**

After one year, the two groups didn't differ in skill in using the treatment devices. Of youth who started using one of the devices during the study, 32 percent viewed the decision aids and 37 percent didn't.

The two groups didn't differ in:

- Blood sugar levels
- How often patients had low blood sugar
- Knowledge about treatment devices
- How youth and their parents made decisions

Compared with parents who didn't view the decision aids, those who did reported that their children followed their diabetes treatment plan more closely.

**Who was in the study?**

The study included 133 patients ages 11–17 with type 1 diabetes; each patient was paired with a parent. Of the patients, 78 percent were white, 8 percent were African American, and 2 percent were Asian. The average age was 14, and 51 percent were boys. Patients received care from clinics in Delaware, Florida, and Colorado.

**What did the research team do?**

To create the decision aids, the research team interviewed 53 pairs of youth with type 1 diabetes and their parents. The team also interviewed 12 doctors, nurses, and psychologists. The interviews asked how patients make decisions about devices and what content the decision aids should include. The final decision aids reviewed:

- Treatment options
- Possible treatment results
• How to decide what is most important to the patient

• How to make and discuss treatment decisions

The research team then assigned other patient-parent pairs by chance to view or not view the online decision aids. Patient-parent pairs in the decision-aid group chose whether they received one or both decision aids. After viewing the decision aids, patient-parent pairs met with a diabetes educator. The educator coached them on how to discuss questions with their doctors. Those who didn’t view the decision aids received regular diabetes education and counseling from their doctor.

Patients and parents took surveys at the start of the study and at follow-up visits every three months for a year.

Youth with type 1 diabetes and their parents gave feedback to the research team during the study.

What were the limits of the study?
Many patients and parents in the study already knew a lot about the treatment devices. This knowledge may have reduced the study’s chances to find changes.

Future research could continue to look for ways to help youth with type 1 diabetes and their parents make decisions about treatment devices.

How can people use the results?
Clinics can use these results when considering ways to improve the health of youth with type 1 diabetes.

To learn more about this project, visit www.pcori.org/Wysocki171.