

Interactive companions help children learn and feel supported

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When Aaron Horowitz was in college, he co-founded Design for America, an organization that brings students together to solve socially impactful problems with a human centered design approach. His team project focused on type 1 diabetes, a condition that affects more than 240,000 children and adolescents in the U.S. While visiting children diagnosed with type 1 diabetes, Horowitz noticed that nearly every child had a stuffed animal they would pretend had diabetes. "That was our quintessential lightbulb moment. We saw kids using imaginative play to act out everything that was going on in their lives that they couldn't understand," said Horowitz.

Two years later, in 2012, Horowitz co-founded Sproutel, a Rhode Island-based company that uses interactive companions to provide behavior change and emotional support for children with illnesses. The company's first product was Jerry the Bear, a plush robotic bear that had an integrated tablet with storybooks to help comfort and educate children about type 1 diabetes. In 2015, Sproutel received a Small Business Innovation Research (SBIR) grant from The National Institute of Diabetes and Digestive and Kidney Diseases to further develop the interactive curriculum and conduct a pilot feasibility study to assess how children and their families used Jerry the Bear.

"The SBIR grant was transformational for us," said Joel Schwartz, Chief Technology Officer of Sproutel. The grant came at the same time the first continuous glucose monitor was approved for use in pediatrics, and families were now getting smartphones for their children to receive and monitor the data. "The pilot study gave us an opportunity to be immersed with families,

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see how the patient experience for kids with type 1 diabetes was evolving, and the ability to redesign Jerry the Bear to better fit with these changes.”



Sproutel

60 Valley St., Suite 29
Providence, RI 02909

State-District

RI-2

Technology

Medical Device

Primary Institute

Diabetes, Digestive, and Kidney
(NIDDK)

Project Details from NIH RePORTER [Sproutel](#)

Contact

Aaron Horowitz
aaron@sproutel.com

sproutel.com

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The Sproutel team designed 21 animated storybooks and relaunched Jerry the Bear as an augmented reality-enabled plush with a mobile app. Today, Sproutel is proud to partner with the JDRF – Beyond Type 1 Alliance, and the technology behind Jerry the Bear is now part of JDRF's long-standing mascot: Rufus, the Bear with Diabetes®. JDRF makes Rufus available to families newly diagnosed with type 1 diabetes around the world.

Insights and technology developed with the SBIR grant became the backbone of Sproutel's My Special Aflac Duck®, an interactive cancer companion that reacts to touch, feeling cards, and medical play accessories. "Doctors and medical professionals can use the duck to talk about a child's illness without putting the child in the hot seat. The value of these products is that they're proxies that can reduce stress in the home," described Horowitz. To date, Aflac has donated more than 18,000 My Special Aflac Ducks to children at more than 450 hospitals and organizations in the U.S. and Japan.

Most recently, Sproutel partnered with the Committee for Children to develop their first consumer product, the Purrrble, that helps children and adults to find calm. Sproutel products are used in more than 100,000 homes around the world, but the company is still eager to make an impact. Sproutel is developing companions that can be customized to match the same protocols children will experience during clinical trials to help recruit children, improve their experiences, and potentially accelerate new therapies and cures.

In addition to helping Sproutel build the technology that underlies all of its products, SBIR funding served as a foundation for the entire business. "At the time, we weren't a company that could go out and raise venture capital," said Horowitz. "We were a company looking to create a tremendous amount of impact for pediatrics, which is traditionally overlooked because it's considered to be a small market in the business world. Just because something might be a small market doesn't mean it has small impact."

