

High-tech US project tackles low-income word gap

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Six-month-old Jaiven James doesn't even notice the pager-sized recorder that fits snugly into the pocket of his shirt, recording every gurgle, every cry, every word he hears.

The boy is an early participant in a Providence city project that aims to boost the language skills of low-income [children](#) by using recorders to count the words they're exposed to. Studies show poorer children enter school having heard millions of fewer words than more affluent children, a disadvantage that can limit future educational success and occupational opportunities.

"We want to close that gap, and the best way to do it is by training parents from Day 1," says Stephanie Taveras, a [social worker](#) who is coaching Jaiven's mother, Ashley Cox, on ways to boost her children's [language skills](#).

The project, called Providence Talks, beat out proposals from more than 300 U.S. cities last year to win a \$5 million prize offered by then-New York Mayor Michael Bloomberg. The voluntary program began last month with 75 families and hopes to serve 2,000 families by mid-2016.

The initiative targets what early childhood development experts call the word gap, a problem that takes a lasting economic and educational toll on America's poor. A landmark 1995 study found that children in families receiving welfare hear less than one-third as many words per hour as their more affluent peers, and they reach age 4 having heard 32

million fewer words than children from wealthier families. Students who begin school with this disadvantage are less likely to succeed academically or professionally later in life.

It's a problem with long-term implications for Rhode Island's capital city, where one-third of children live in poverty and two-thirds of kindergarteners enter school already behind on national school readiness benchmarks.

Providence Mayor Angel Taveras, who isn't related to the social worker, said he wants his city to prove the word gap can be bridged by giving parents just a little help.

The recorder acts as a language pedometer, counting the number of words and conversations throughout the day and distinguishing between young and adult voices and electronic noises like radio and television. Data from the device can show how often a parent interacts with a child and how often the television is on.

Parents of participating children are advised to record an entire day's worth of audio every few weeks. A social worker picks up the device from the home and uploads the data to a computer. The social worker then returns to review the results with parents and offer suggestions for how they can better engage their children.

"The science is solid: Children who hear more language—not just more, but richer language that's relevant, that's positive—are associated with better outcomes," said Stanford University psychology professor Anne Fernald, who has used the device in her research and who is a scientific adviser to Providence Talks. "Talking to children really matters."

Jaiven's older brother Jaiden has been participating in Providence Talks for just a few weeks but is already seeing progress. The number of

words the 16-month-old heard jumped by a few thousand from the day of his first recording to his second.

"I was expecting it to go up, but I'm very happy," said their mother, Ashley Cox, 25, who has four sons in all. She said that since enrolling in Providence Talks, she's started reading to her children more, engaging them in more conversations and limiting the time the television is on.

City officials insist data from the devices will be kept confidential and it would be nearly impossible for anyone to use the devices to obtain actual recordings of a family's conversations. Still, the idea of city officials strapping recording devices to toddlers attracted the interest of the state chapter of the American Civil Liberties Union.

ACLU policy associate Hillary Davis said her organization looked into who would have access to the records and how the privacy of families—or guests who happen to stop by when a recording is underway—would be protected.

"The intent is obviously to serve the families and the community, but there hadn't been any real conversation about how this could be misused," Davis said. "We're not sure the safeguards are 100 percent there yet."

Parents who enroll in the program are asked to sign a release and to inform any friends or family who stop by if the recorder is in use. They're also given two other bits of advice: Don't get the device wet and don't let curious toddlers see the contraption being slipped into the pocket of their specially designed onesie. The device is sturdy, but toddlers can be remarkably clever.

"The key," Taveras, the social worker, told Cox with a smile, "is to do it without him noticing."

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