

## Helping Educators Empower Diabetic Patients

University of Illinois, Chicago



Nearly 26 million Americans are affected by diabetes, a disease that impairs the body's ability to produce or use the hormone called insulin that controls glucose (sugar) levels in the blood. The disease, which can lead to devastating health problems, including heart disease, blindness and death, disproportionately affects racial and ethnic minorities.

According to the Centers for Disease Control and Prevention, 7.6 percent of non-Hispanic whites in the United States have diabetes, compared to 13.2 percent of Hispanics and 12.9 percent of African Americans. Experts say minority populations have a combination of risk factors for diabetes, including a lack of access to healthcare and effective diabetes management once a diagnosis is made.

Educators at the Midwest Latino Health Research, Training, and Policy Center at the University of Illinois (UIC) at Chicago developed a diabetes self-management program called Diabetes Empowerment Education Program, or DEEP™ specifically to help low-income, racial and ethnic minority individuals take control of the disease and reduce the risk of complications.

"The program teaches community health workers how to become peer educators on diabetes prevention and self-management using principles of adult education and participatory techniques in a culturally sensitive manner," says

Amparo Castillo, MD, PhD, MS the center's Interim Director.

UIC copyrighted the program and began licensing the program to religious organizations, community health centers and Quality Improvement Organizations in 2013. The university issues a five-year, non-exclusive license for \$600, which gives all employees of an organization access to the DEEP training material.

"I think the DEEP Program is something that hits on all the notes of a great public university: research, education and making the public better off," says Jonathan Gortat, senior technology manager in the UIC Office of Technology Management.

To date, UIC has licensed DEEP to 50 organizations, which have in turn sub-licensed to 150 additional organizations. The program is now utilized in nearly every state and will soon be available in Spanish, Chinese, Korean, and Vietnamese. DEEP was also chosen as one of only three curricula affiliated with the Centers for Medicare and Medicaid's 'Everyone with Diabetes Counts' initiative.

"We offer licensing online to make it as seamless as possible," Gortat says.

Much of the program's success, says Castillo, is the use of interactive exercises and plain language that is relevant to participants.

"It's essential that our participants perceive our trainers to be genuinely interested in their well-being and that the information is delivered in an entertaining and fun, relaxing manner," she says.

Diabetic patients in the DEEP program attend a free 1.5-2 hour class once per week for eight weeks. Topics covered include understanding how the body works, blood sugar monitoring, meal planning, the importance of physical activity and how to identify and prevent complications of the disease. Rather than conducting a PowerPoint presentation, trainers are provided a thick binder of information and suggested activities and materials.

Ardis Reed, MPH, RD, Health Disparities Diabetes Content Expert at the TMF Health Quality Institute in Texas, says the beauty of the program is that it can be conducted anywhere from a classroom to a park or a private home.

"The DEEP program can be used by clinicians and lay leaders as well," says Reed. "Our trainers may refer to the manual to answer a question but they don't read from the manual word-for-word. The program provides suggested tools and a lot of flexibility for forward-thinking educators to think out-of-the-box."

Reed says some of her favorite learning tools have included cutting up a foam pool noodle to simulate how a blood vessel can get 'clogged' and a creating a concoction of ketchup and vinegar in a Ziploc bag to demonstrate how high sugar levels thicken and slow down blood flow.

**“***"We have talented and passionate educators who come up with great ideas for presenting the material," says Reed. "We get a lot of 'aha' moments from these exercises that are much better than trying to explain biophysical changes."*

In addition to conveying information on diabetes-related topics, DEEP educators ask participants how they are coping and what barriers they are encountering in their day-to-day lives. They also encourage both goal setting and creating action plans.

"The adult learner wants to participate and have some fun, not feel like they have sat and listened for an hour," said Reed. "That's why we have such high retention rates."

Reed said up to 78 percent of participants are still attending the program by their sixth DEEP session and upon completion, many experience positive changes in weight loss, blood pressure and blood glucose markers.

The ultimate goal, however, is to get DEEP participants more comfortable with diabetes terminology and to empower them to interact with their healthcare team.

“What we want is for them to speak up for themselves and participate in their care,” says Reed.

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