

Adapting a national diabetes prevention curriculum for rural Hispanic communities

Alicia was facing a problem more than one in three Americans experience today—she learned from her doctor that she was prediabetic. At only 25 years old with a young son, she knew she needed to make changes in her life so she could be there for him as he grew up. She had a family history of diabetes and knew how challenging and expensive it could be to manage. However, time constraints, language barriers, and transportation challenges made it difficult for her to get the support she needed. She heard through her husband's cousin that a free Spanish diabetes prevention class was hoping to start in her community. Alicia reached out to the organizers and opened her home as a meeting location for this new class.

The Minority Diabetes Prevention Program (MDPP) is a state-funded diabetes prevention initiative aimed at lowering rates of type 2 diabetes in racial and ethnic minority populations, where the condition is more prevalent. Type 2 diabetes is a chronic disease where the body's blood sugar levels are too high, which can lead to complications such as blindness, hearing loss, nerve damage, and cardiovascular disease. Prediabetes is the stage right before type 2 diabetes, where an individual's blood sugar levels are higher than normal, but not yet at the diabetes threshold. Prediabetes is preventable and reversible through lifestyle changes.

[Granville Vance Public Health](#) (GVPH) manages state funds for MDPP throughout an 8-county region spanning Granville, Vance, Franklin, Nash, Halifax, Johnston, Wake, and Warren counties (known as Region 7). In Fall 2022, GVPH and [El Centro Hispano](#), a nonprofit dedicated to advocating for equity and inclusion for Hispanics in North Carolina, developed a partnership. Community Health Workers (CHWs) at El Centro would now be trained diabetes prevention lifestyle coaches and deliver Spanish MDPP classes throughout the region in community locations.

MDPP classes utilize the evidence-based [Prevent T2](#) curriculum developed by the Centers for Disease Control and Prevention. This year-long curriculum has 22 required hour-long modules. In the first 6 months of the program, lifestyle coaches cover 16 modules and participants meet weekly or biweekly. In the last 6 months of the program, 6 modules are covered—one each month. State-funding makes the program free for eligible participants to attend. Eligibility for the program requires that participants are:

1. 18 years or older,
2. Overweight (have a BMI of 25 or greater, or 23 or greater for Asian Americans),
3. Not diagnosed with type 1 or type 2 diabetes and,
4. Not currently pregnant.

Additionally, participants must have either been diagnosed with prediabetes via a blood test, been previously diagnosed with gestational diabetes, or have a high-risk result from the [prediabetes risk test](#).

In late Fall 2022, El Centro Hispano CHWs led their first two Spanish MDPP cohorts. One took place at a church in Cary (Wake County) and the other took place at a Hispanic community

organization's office in Henderson (Vance County). When reviewing participant weight and physical activity data across all cohorts in Region 7, GVPH's MDPP coordinator, Wendy Ji, and UNC Associate Professor of Nutrition embedded at GVPH, Dr. Carmen Samuel-Hodge, noticed that participants in the English cohorts were achieving much higher percentages of weight loss, higher weekly physical activity minutes, and higher consistent weekly attendance rates than participants in the Spanish cohorts, despite lifestyle coach training and other factors being consistent across coaches in the region.

From her research focusing on chronic disease prevention in African American populations, Dr. Samuel-Hodge theorized that Spanish-speaking populations could benefit from receiving the curriculum in a different way. Instead of modules being delivered in one large cohort of random people in a public meeting location, perhaps modules could be delivered in small groups of people who intimately knew one another in their homes. Luckily, Region 7 American Rescue Plan Act (ARPA) funds were available to help test this hypothesis. Thus, the concept of the "MDPP Pods Pilot" was born.

El Centro CHWs worked to find small groups, or "pods", of Spanish speaking individuals. CHWs blasted out recruitment messages on WhatsApp. They hosted community screening events in Hispanic neighborhoods throughout the region. They partnered with local health departments who had referrals for prediabetic patients wanting to join a Spanish class. Ultimately, 4 pods were formed with a total of 14 people:

1. Las Chicas de Rolesville I: This pod was 4 friends living in the same neighborhood. Classes met at one of the friends' homes.
2. Las Chicas de Rolesville II: This pod was a mom and her adult daughter. Classes met at the mom's home.
3. Brito Franklinton: This pod was a family of 5 consisting of a dad, a mom, their 2 adult daughters, and their niece. Classes met at one of the adult daughter's homes.
4. Chicas Poderosas Raleigh: This pod was a family of 3 consisting of a mom and her 2 adult daughters. Classes met at the mom's home.

The pilot spanned 6 months, from January to July 2024, and focused on the first 16 modules in the curriculum. In addition to the smaller, home-based classes, participant incentives were also distributed differently in the pilot versus in regular cohorts. In the regular cohorts, lifestyle coaches would give out incentives to all participants present on a certain day. In the pods, lifestyle coaches gave participants fake money whenever they participated in class or completed weekly "homework," such as tracking their physical activity minutes. Pod participants could then use their "money" to purchase an array of available incentives. Wendy and Dr. Samuel-Hodge met with the lifestyle coaches participating in the pilot on a monthly basis to hear reflections and troubleshoot any problems that arose.



At the conclusion of the pilot, 9 of the 14 participants (64%) lost at least 4% of their starting body weight or averaged 150 minutes of physical activity a week. In comparison, only 2 out of 12 participants (17%) met these same metrics in El Centro's Cary cohort. In the Cary cohort, only one participant lost weight, losing 5% of their starting body weight, and one participant exercised an average of at least 150 minutes a week, at 165 minutes per week. In the pilot cohort, of those who lost weight, the percentage of starting body weight lost was greater as well as the average number of physical activity minutes per week.

Pilot participants and coaches also noted positive qualitative changes associated with the new class format. The coaches commented on how the smaller class sizes allowed for deeper conversations and the ability to better demonstrate at-home exercises that participants could try.



The coaches felt having classes within someone's home built more trust and also led to more accountability with participants, as it was much harder for participants to miss a class when it was taking place in their home versus when they needed to travel somewhere to attend. Having class in their homes also allowed for participants to easily share what they were eating and drinking with the lifestyle coaches. This was especially important as many commonly purchased items from Hispanic grocery stores are not packaged with nutrition labels.

Participants noted numerous diet and physical activity changes they made due to the pilot. Participants had often heard they needed to "eat healthier" and "exercise more," but the classes helped them understand how this looked in action and could be applied to their lives. Many participants noted that one of the most important things they learned through the classes was how to read nutrition labels. They felt less shame asking questions and felt comfortable being in a learning environment with people they intimately knew. Being in a class with people they were close to also led to some healthy competition as well as more motivation between classes. Almost all participants noted they would continue the physical activity and diet changes they implemented into their lives post-pilot. Even though not all participants lost weight, many noted other positive health changes, such as sleeping better at night, waking up well rested in the morning, and having more motivation and energy throughout the day.



At the end of the pilot, Alicia lost 10% of her starting body weight and averaged 181 minutes of physical activity per week. Alicia's doctor also told her she was no longer prediabetic. The

beginning of Alicia's story is one that is all too common. Her happy ending can be one that is common as well through increased funding for culturally responsive interventions.