

Reducing the burden of diabetic kidney failure in Latinx patients: a community-based, patient-centered approach



Cohort:
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Location:
Denver, Colorado

Focus Areas:
Public, Population & Community Health
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Short Project Summary

To address the “wicked problem” of diabetic kidney disease in Latinx adults, we aim to 1) strengthen community resources and community-health system ties, and 2) increase awareness of diabetic kidney disease by providing education and screening. Specifically, our project will employ evidence-based strategies including clinically-recommended screening tests for diabetes, hypertension, and kidney disease, diabetes self-management education (DSME) classes in the community, and a wide-reaching culturally-tailored health awareness campaign developed through the patient-centered method of Boot Camp Translation to maximize impact. Our interdisciplinary team is composed of experts in diabetes and kidney disease at Denver Health who share a commitment to culturally-responsive care and will partner with the community-based organization Vuela for Health and the National Kidney Foundation to prevent and reduce the progression of diabetes complications including diabetic kidney disease. This project will establish the foundational partnerships and infrastructure needed to sustain improved care for the Latinx community and others with diabetes.

Wicked Problem Description

Chronic kidney disease affects 16% of the global population and 1 in 7 US adults, and is associated with high morbidity, mortality, and healthcare costs. In the US, diabetes will affect 1 in 2 Latinx individuals in their lifetime and is the number one cause of kidney disease among Latinx communities. Latinx adults with diabetes experience faster progression of chronic kidney disease to kidney failure compared to non-Latinx white individuals, resulting in nearly 30% higher incidence of kidney failure despite a similar prevalence of chronic kidney disease. These disparities in kidney failure likely arise from complex interactions among biopsychosocial and cultural factors, plus limited access to health care, which in turn influence health behaviors and disease risk profiles. For example, early identification and treatment are critical to preventing progression of diabetic kidney disease to kidney failure, yet research shows that Latinx patients with diabetes are less likely to be screened for asymptomatic kidney disease or to receive medications known to slow disease progression. This problem is also observed locally in Denver, Colorado, where Latinx comprise the largest minority group, yet there is limited availability of culturally-tailored healthcare services. The wicked problem of diabetic kidney disease among Latinx makes it imperative that we work to resolve this issue through a collaborative, interdisciplinary, community-engaged approach.

Proposed Project Plan

To address the wicked problem of diabetic kidney disease disparities in Latinx adults, we aim to 1) strengthen community resources and community-health system ties; and 2) increase awareness of diabetic kidney disease. Our project will employ evidence-based strategies including clinically recommended screening tests, DSME classes, and the community-engagement method of Boot Camp Translation to maximize impact with a health awareness campaign. Our interdisciplinary team is composed of experts in diabetes and kidney disease who share a commitment to culturally-responsive care and will partner with community-based organizations including Vuela for Health and the National Kidney Foundation.

First, we aim to strengthen community resources and community-health system ties through increased access to community screening for Latinx immigrant adults. For community screening, we will partner with the local National Kidney Foundation to offer screening for asymptomatic kidney disease with urine microalbumin tests, in addition to routine screening for diabetes and hypertension. The National Kidney Foundation conducts screenings in communities around Denver and will partner with us to train two Vuela promotores (i.e. community health workers) and to screen up to 200 individuals. National Kidney Foundation will provide the necessary equipment and train the Vuela team and volunteer nursing students to complete the screenings. Screenings will be offered to individuals participating in Vuela's existing diabetes prevention classes or the new DSME classes described below. Participants will receive education on their results and ways to prevent onset and/or progression of kidney

disease and will be instructed to follow up with a medical provider if the test is abnormal. For example, referrals can be made to Denver Health, which offers services on a sliding scale and maintains a Patient Assistance Fund to aid individuals and families with financial needs.

Second, we will work with Vuela to bring DSME to Latinx in the community. Denver Health currently offers DSME in English and Spanish, including 6 hour-long sessions using the evidence-based Conversation Maps curriculum published by Healthy Interactions. We will adapt a currently available curriculum to include additional education regarding diabetic kidney disease prevention and treatment. We will then support the Vuela team to offer DSME group classes in virtual and community settings for Spanish-speaking adults with diabetes. Participants will be identified among attendees in other Vuela programs, through recruitment in the community, and through referrals from local health providers. We will aim to reach 20-30 individuals with diabetes per year, providing services to the individual plus a family member or other support person if desired. Our focus on providing DSME to both patients and partners is culturally-congruent and based on our previous findings of doubled attendance rates to diabetes prevention classes.

Third, we aim to increase broader awareness of diabetic kidney disease through a culturally-informed health awareness campaign developed in collaboration with patients, who are the experts in their disease process. Specifically, patient panels will be assembled to work with the Clinical Scholars to identify knowledge gaps related to diabetic kidney disease and to develop culturally-meaningful messaging for dissemination. We will use Boot Camp Translation as a focused strategy to identify key information and messaging that best engages the community. We will assemble two patient panel groups (one of Spanish-speakers, and one of English-speakers) recruited from Vuela and Denver Health. During a series of monthly meetings, panel groups will share their knowledge of diabetic kidney disease, with patients serving as the experts through their lived experience, and Clinical Scholars serving as technical experts. The Clinical Scholars will then work with panel groups to iteratively develop communication material that increases awareness of kidney disease. Based on panel group consensus, the final patient-informed products may include media such as radio spots, picture brochures, video storytelling, and/or social media messaging. While we will focus on a locally-tailored campaign for the Latinx community, we will align our efforts with the National Kidney Foundation's new national campaign to promote awareness of kidney disease, including encouraging people to learn more, get tested, and talk to their doctors.

Anticipated Outcomes

We aim to decrease progression of diabetic kidney disease in Latinx adults through the following outcomes over the three year project: Our first long-term outcome is to increase the number of Latinx immigrants with limited access to healthcare services who adhere to recommendations for diabetic kidney disease screening and prevention (long-term outcome 1). Toward this objective, we will partner with the Latinx immigrant-serving organization Vuela and the National Kidney Foundation to

conduct community-based diabetic kidney disease screening to ≥ 500 community adults with or without diabetes (short-term outcome 1a). Additionally, we will partner with Vuela to provide DSME to ≥ 80 adults with diabetes, plus their family members or support persons (short-term outcome 1b). Our second long-term outcome is to lower the number of Latinx adults with declining kidney function through adherence to prescribed medication regimens (long-term outcome 2). To accomplish this, we will develop and disseminate a culturally-informed awareness campaign for diabetic kidney disease to ≥ 1500 individuals (short-term outcome 2).

Timeline

Year 1

Train 2 Vuela promotores to provide screening and DSME; Screen ≥ 100 adults for kidney disease; Enroll approximately 10 DSME participants & deliver 1 DSME class.

Year 2

Screen ≥ 200 adults for kidney disease; Enroll approximately 40 DSME participants & deliver 4 DSME classes; Assemble 1 patient panel and conduct Boot Camp Translation; Start to develop and disseminate health awareness campaign.

Year 3

Screen ≥ 200 adults for kidney disease; Enroll approximately 30 DSME participants & deliver 3 DSME classes; Assemble 1 patient panels and conduct Boot Camp Translation; Develop and disseminate health awareness campaign.

Partnerships

Vuela for Health is a community organization providing outreach, health education and referrals, and leadership and self-care services to Latinx immigrant communities in Denver and surrounding areas. Vuela's promotores and Executive Director Diana Pineda have worked together for over 10 years and are themselves Latina immigrants living in the communities they serve. In 2019 Vuela offered tailored services at over 50 community locations across Denver, reaching over 1000 individuals. Vuela has much experience providing evidence-based educational programming, including for diabetes prevention. The local National Kidney Foundation has also agreed to partner as an organization dedicated to preventing kidney disease while improving the health of individuals and families affected by kidney disease. The National Kidney Foundation has been conducting community-based screening for kidney disease in the Denver area and will offer training assistance and equipment needed for the screenings. Recently, the National Kidney Foundation announced a partnership with CVS on a national effort to promote kidney disease awareness through a national media campaign encouraging people to learn more, get tested, and talk to their doctors. As clinicians at Denver Health, we are also grateful for the opportunity to

connect with Latinx adults who receive care with us to share their insights and experiences to inform a kidney disease awareness campaign tailored for their community.

Evaluation Strategies

The project will be evaluated by process measures, patient-reported outcomes, and clinical outcomes. Process measures include: 1) number of individuals screened; 2) number of Vuela promotores trained; 3) number of DSME classes held; 4) number of DSME participants; 5) mean number of DSME sessions attended; 6) patient panels convened; 7) number of health awareness campaign materials developed; and 8) number of health awareness campaign materials disseminated. Patient-reported outcomes include 1) seeing a provider after abnormal screening tests; 2) change in medication adherence among DSME participants (assessed at first/last sessions attended with the Morisky Medication Adherence Scale); 3) change in diabetes-related distress (assessed at first/last sessions attended with the Diabetes Distress Scale, as selected by a prior patient stakeholder group with diabetes as the outcome of greatest personal importance). Both measures are validated and available in Spanish. Clinical outcomes include: 1) frequency of positive screenings, and 2) change in HbA1c over 3 months, the standard measure of diabetes control, among DSME participants, as well-controlled diabetes can prevent progression to kidney disease. We will conduct t tests to examine unadjusted pre-post outcomes (e.g., HbA1c change), and multivariate linear regression to examine covariate-adjusted differences.

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