

Increasing Prediabetes Awareness and Screening in an Underserved Hispanic Community

Miriam Ramos DNP, RN, FNP-C
miramos@utmb.edu

Background

- The age-adjusted % of patients diagnosed with diabetes was 11.2% for Texas in 2015; 9.8% for Galveston County in 2013; and 12.2% for TX Hispanics in 2015.
- The American Diabetes Association (ADA) defines **Prediabetes** as a fasting blood glucose 100-125 mg/dl, an impaired glucose tolerance test 140-199 mg/dl, or a hemoglobin A1C 5.7-6.4%.
- 86 million Americans (1 in 3 adults) are currently **Prediabetic**; 90% are unaware.
- Without effective prevention, 30% of adults with **Prediabetes** will advance to Type 2 diabetes within 5 years.

Purpose

To increase awareness & screening for **Prediabetes** to prevent/delay the onset of Type 2 diabetes in the Hispanic community. Population was primarily uninsured, undocumented persons living in Galveston County, Texas who are members of a Christian Community Church.

Intervention

- Target population: Hispanics 18 years and older, non-pregnant, or diagnosed with diabetes. Project was IRB approved.
- Recruitment flyers with study description study were distributed 2 weeks prior to initial screening activity.
- Prediabetes educational material (English and Spanish) was distributed to church members at 3 recruiting sessions.
- Participants were screened using the Prediabetes Risk Test (PRT)
- Participants with PRT scores ≥ 5 were offered an HbA1c POCT to confirm or refute a diagnosis of prediabetes or diabetes.
- Participants with HbA1c (and any family member present) received a one-hour written and verbal educational intervention about **Prediabetes** and how it can be treated.
- Participants were surveyed to assess the efficacy of the educational intervention.

Tools

DO YOU HAVE PREDIABETES?

Survey of Educational Intervention

1. What prediabetes knowledge did you have before this intervention?
2. How likely are you to make lifestyle changes now that you know you are at risk for diabetes?
3. Which lifestyle change are you most likely to implement to decrease your risk of diabetes?
 - Decrease intake of carbs in diet
 - Increase amount of daily activity
4. How do you consider your knowledge about prediabetes after this intervention?
5. How likely are you to seek medical follow up after this intervention?

Results

Age and Gender Distribution of Initial Screening Participants			
Age Range	Male n=38	Female n=52	Total N=90
<40	10 (26.3%)	20 (38.5%)	30 (33.3%)
40-49	22 (57.9%)	19 (36.5%)	41 (45.6%)
50-59	5 (13.2%)	9 (17.3%)	14 (15.6%)
>60	1 (2.6%)	4 (7.7%)	5 (5.6%)

p-value*0.2374
*p-value from Fisher's Exact test comparing the difference between male and female participants

Screened Participants at Risk for Prediabetes by Age & Gender			
Age Range	Male n=14 (36.8%)	Female n=16 (30.8%)	Total (N=30) (33.3%)
<40	1 (7.1%)	1 (6.3%)	2 (6.7%)
40-49	10 (71.4%)	7 (43.8%)	17 (56.7%)
50-59	2 (14.3%)	4 (25%)	6 (20%)
>60	1 (7.1%)	4 (25%)	5 (16.7%)

p-value* 0.4863
*p-value from Fisher's Exact test comparing difference in risk of prediabetes among age between female and male participants

- 30 of 90 participants (33.3 %) scored ≥ 5 on the PRT.
- 16 of 30 at-risk participants screened with POCT Hgb A1c
- Males > risk than females for prediabetes per the PRT (36.8% vs 30.8%).
- More males diagnosed with prediabetes, 3 vs 1 for a total of 4 (25%); 1 female dx with diabetes.

Prediabetes Risk Factors by Gender				
Risk Factors	Male n=14 (64.3%)	Female n=16 (68.8%)	Total (66.7%)	p-value*
Overweight/ Obese	9 (64.3%)	11 (68.8%)	20 (66.7%)	1.0000
History of hypertension	5 (35.7%)	10 (62.5%)	15 (50.0%)	0.2723
Family History of diabetes	10 (71.4%)	13 (81.3%)	23 (76.7%)	0.6746
Gestational diabetes	N/A	4(25.0%)	N/A	N/A

*p-value from Fisher's Exact test comparing the difference of risk factors between males and females.

Discussion

- Created Community partnership between a Community Health Clinic, UTMB, and a Community Christian Church. Sustainable and expanding partnerships can reduce ethnic disparities for prediabetes and diabetes care.
- Lack of health insurance coverage is a barrier that limits access to traditional clinic-based preventive care for prediabetes.
- Language Barrier/lack of English proficiency affects preventive medical care & affects access to social services and other available resources.
- Lack of knowledge about **Prediabetes** impairs the Hispanics' ability to seek screening or/and medical treatment.
- Preference of diet vs exercise. More studies are needed to assess Hispanics' perceived benefits, barriers, and self-efficacy with respect to physical activity for prevention of prediabetes and diabetes.
- Males are at higher risk for Prediabetes and Diabetes; however, Hispanic males are underrepresented in community-based diabetes prevention programs.

Conclusion

- Participants in the project expressed a clear need for more screening and education about **Prediabetes**.
- Cultural and ethnic strategies specific to the Hispanic population are needed for prevention and management of prediabetes.
- Strategies need to include interventions focused on early detection and lifestyle changes.

References

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