Exploring Barriers to Diabetes Management Among Mexican Immigrants in the U.S: Are Current Interventions Effective?

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Background

- Rates of Diabetes Type 2 or T2DM, and Diabetes related complications are higher among Mexican immigrants compared to other Latino sub-groups (Clark et.al 2009)

Diabetes related health complications include (Chaufan & Weitz 2009)

- Poor glycemic control
- Blindness
- Kidney Failure
- Foot amputations
- Mortality

- The burden of Diabetes among this community has been mostly attributed to genetic predisposition, cultural beliefs and individual level factors, undermining the effect of **inequity and intergenerational poverty** in low income immigrant community structures
- **Culturally competent interventions** have emerged as a response to this public health concern addressing language barriers, increasing health literacy and healthcare access (Page Reeves et.al, 2017)
- However, interventions that address barriers to Diabetes management specific to low income immigrant communities remains scarce
- Assessing the environmental characteristics of low-income immigrant communities will reveal similar patterns of a lack of infrastructure that do not support efforts to engage in Diabetes management

Age-adjusted percentage of diagnosed diabetes for adults age 18 and over, 2013-2015

Population	Percent	Population / Non-Hispanic White Ratio
Non-Hispanic White	7.4	--
Hispanic	12.1	1.6
Central/South American	8.5	1.1
Cuban	9.0	1.2
Mexican	13.8	1.9
Puerto Rican	12.0	1.6

Source: CDC 2018. National Diabetes Statistics Report, 2017. Table 1c.

Methods

Articles searched through a systematic literature review using the following
PubMed
CINAHL

Key Terms: Diabetes Management, Mexican Immigrants, Cultural Competency, Socioeconomic Status, Healthcare Access and Barriers to Care

Results

A diagnosis of Diabetes Type 2 can be a stressful experience for the patient and their family alike, especially if financial resources are already limited. Medical professionals and many advocate groups for Diabetes Management recommend following a specific Diabetes care regimen to avoid complications (Vest et.al 2013**).**

This includes:

- Diet modification
- Regular exercise
- Blood glucose monitoring
- Medication adherence

Given that **Mexican Immigrants** in the U.S are more likely to have worse Diabetes Management (Clark et.al 2009), **barriers** to achieving these four recommendations of diet, exercise, blood glucose monitoring and medication adherence have been identified at different levels of the **healthcare process** as well as in the **environmental context** patients reside in.

Barriers to Diet

Food Insecurity & Poverty (Seligman et.al 2007) (Chaufan et.al 2011)

- Dependence on food pantries and government assistance
- Financial resources utilized for medical expenses
- Limited availability of fresh, nutrient dense food
- Associated with neighborhood quality
- Abundance of high calorie, high carbohydrate food
  - Associated with higher BMI

Patient-Physician relationship

- Latino Diabetes patients are less likely to be referred to specialist for Nutrition compared to other ethnic groups (Clark et.al 2009)

Support Network

- If possible, transitioning to a healthier diet affects the entire family, and can sometimes be met with disapproval creating pressure for the Diabetes patient (Ramal et.al 2012)

Barriers to Exercise

Safety & Neighborhood Quality

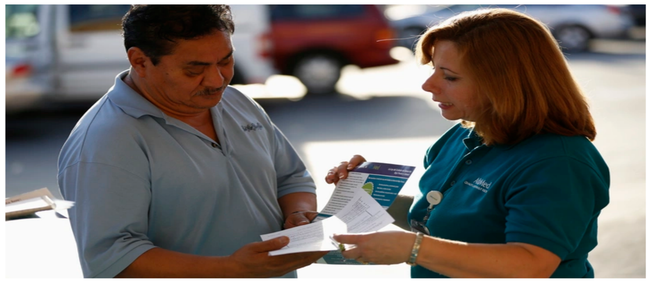
- Perception of unsafety in neighborhood (crime & gang activity) (D'Anna, et.al, 2018)
- Lack of infrastructure
  - No sidewalks = limited walking spaces (Adkins, et.al, 2019)
  - Absence of parks (Meyer et.al 2013)
    - Discourages Adult patients and children alike to not engage in physical activity

Barriers to Medication Adherence

- High cost of medication
- Language discordant provider
- Misunderstanding instructions
- Being underinsured or uninsured

Barriers to Glucose Monitoring

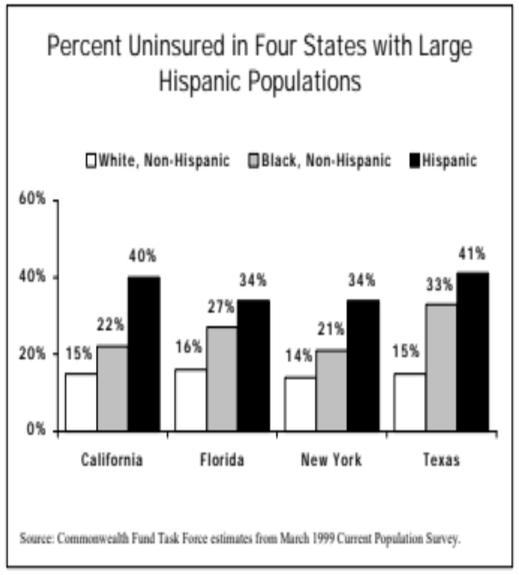
- No usual source of care (uninsured or underinsured)
- Low health literacy (Smith Miller et.al 2015)
- High cost of test strips



A patient care coordinator doing community outreach on Obamacare. (MARIO ANZUONI/REUTERS)

Discussion

- Addressing this urgent public health issue will require implementation of interventions that consider barriers to Diabetes management at both the **interpersonal** and **structural levels** of the healthcare process.
- Interventions such as **CoDE**, a community Diabetes Education program, that utilized local community resources for uninsured Diabetes patients and considered factors such as language, employment type, and personal dietary habits before designing a care regimen for each patient is one example (Culica et.al, 2017 p.112).
- This includes patients who do not have regular access to care and considers various aspects of the healthcare process that can deter patients from seeking future care.
- Given that Latinos remain the largest ethnic group in the U.S to be **uninsured**, this remains one of the biggest contributing factors related to higher rates of Diabetes complications that will require advocacy for increasing insurance enrollment among patients with low English proficiency (U.S Census 2019)
- An examination of the environmental characteristics of low-income immigrant neighborhoods utilizing the Community Needs Assessment survey can provide a general understanding of how urban and rural neighborhoods in the U.S reveal similar patterns of **unsupportive infrastructure** to engage in Diabetes management (D'anna et.al 2018 p.4).
- In order to provide maximum generalizability of results in culturally competent studies, it must be acknowledged that women are more likely to engage in preventive care, study participation, and occupying roles as Promotoras compared to men, revealing a significant gap in the literature where Latino men are underrepresented (Villa-Torres et.al 2015 p.7).
- Future research should explore the theoretical and cultural explanations behind the lack of participation among Latino immigrant men and how it can pose as a barrier for Diabetes management.



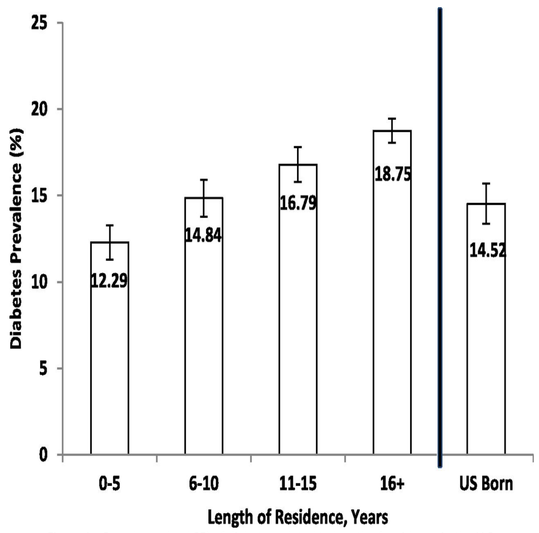


Figure 1—Prevalence (and SE) of diabetes related to length of residence in the U.S. or being born in the U.S. Data are weighted and age standardized using the 2010 U.S. population census.

References & Acknowledgements

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