

VIRTUAL CHAPTER POLICY FORUM

Boston & Phoenix NHMA Chapters

Diabetes in the Hispanic/Latino Population: Challenges & Opportunities

September 10, 2020 7:00 PM – 8:15 PM EDT www.NHMAmd.org









Elena Rios, MD, MSPH, FACP

President & CEO National Hispanic Medical Association Washington, DC

- Encourage your patients to enroll and inform others about the clinical trials for COVID-19 Vaccines
 - www.CoronaVirusPreventionNetwork.org
 - www.COVIDVACCINESTUDY1.com
- Insulin Affordability: Learn. Act. Share. campaign for insulin access for \$35/monthly prescription for Medicare beneficiaries (but you must enroll): 1.2021
 - www.InsulinAffordability.com
- Instructions to receive CME will be included in thank you email. Webinar recording & CME will be available for 1 year at www.NHMAmd.org/webinars



Overview

Diana Torres-Burgos, MD, MPH

Advisor on Hispanic Health
National Hispanic Health Foundation
Chair, National Hispanic Medical Association
NYC Chapter

Housekeeping

- Presentations to be followed by 10-15 minute discussion
- Microphones will be muted
- Type questions in chat box
- Recording available next week at www.NHMAmd.org

Learner Notification

National Hispanic Medical Association Boston/Phoenix – COVID – 19 Diabetes Date of CE Release: September 10, 2020 Date of CE Expiration: September 10, 2021

Location: Online



Acknowledgement of Financial Commercial Support

No financial commercial support was received for this educational activity.

Acknowledgement of In-Kind Commercial Support

No in-kind commercial support was received for this educational activity.

Satisfactory Completion

Learners must listen to each self-directed audio recording while following along with the visual slides/read the articles, an evaluation form to receive a certificate of completion. You must participate in the entire activity as partial credit is not available.

If you are seeking continuing education credit for a specialty not listed below, it is your responsibility to contact your licensing/certification board to determine course eligibility for your licensing/certification requirement.



Accreditation Statement

In support of improving patient care, this activity has been planned and implemented by Amedco LLC and National Hispanic Medical Association. Amedco LLC is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.

Physicians Physicians

Amedco LLC designates this enduring material for a maximum of 1.25 AMA PRA Category 1 CreditsTM. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

INTERPROFESSIONAL CONTINUING EDUCATION

Objectives - After Attending This Program You Should Be Able To

- · Describe the key biological, social, and cultural factors that increase the risk for type 2 diabetes among Latinos/Hispanics living in the United States.
- · Recognize the need to create comprehensive culturally and linguistically diabetes care programs for Latinos/Hispanics.
- Determine the importance of developing community engagement projects to decrease diabetes in Latino population.

Disclosure of Conflict of Interest

The following table of disclosure information is provided to learners and contains the relevant financial relationships that each individual in a position to control the content disclosed to Amedco. All of these relationships were treated as a conflict of interest, and have been resolved. (C7 SCS 6.1--6.2, 6.5)

All individuals in a position to control the content of CE are listed in the program book and have disclosed they have no relevant financial relationships.

First	Last	Commercial Interest
Enrique	Caballero	NA
Ricardo	Correa	NA
Vincent	Gearity	NA
Ben	Melano	NA
Elena	Rios, MD, MSPH, FACP	NA
Diana	Torres-Burgos	NA



Diabetes in Latino/Hispanic Americans

A. Enrique Caballero, MD

Endocrinologist/Clinical Investigator
Director Latino Diabetes Health
Division of Endocrinology, Diabetes and Hypertension
Brigham and Women's Hospital
Harvard Medical School
Boston, MA

Chair, Health Care Disparities Committee
American Diabetes Association

Boston Chapter Leader
National Hispanic Medical Association

1. Which of the following statements is CORRECT?

- A. Race and ethnicity are synonyms
- B. Latino and Hispanic are interchangeable terms
- C. 1 in every 4 children in the US are Latinos/Hispanics
- D. Latinos have a homogeneous genetic background
- E. Puerto Ricans represent the most common Hispanic/Latino subgroup in the U.S

Race/Ethnicity Definitions

Race

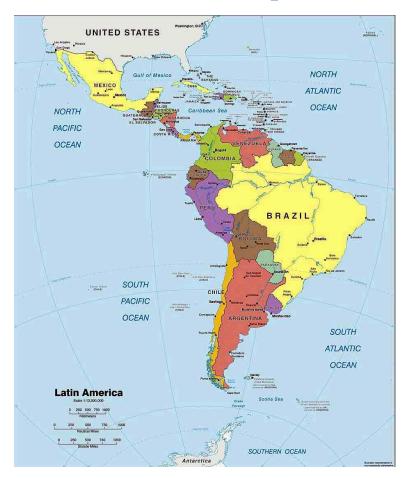
- Usually biological
- White, Black, American Indian (Native American)/Alaska Native (Eskimo, Aleut), Asian/Pacific Islander
- Often overlapping

Ethnicity

- Primarily social
- Independent of race
- Hispanic or Latino?

- Caballero AE. Diabetes in minority populations.
- In: Joslin's Diabetes Mellitus. LW & W; 2005. 14th Ed. p 505-524.

Latino or Hispanic?





LATINOS IN THE U.S. ARE...



16.3%

OF THE POPULATION





56%

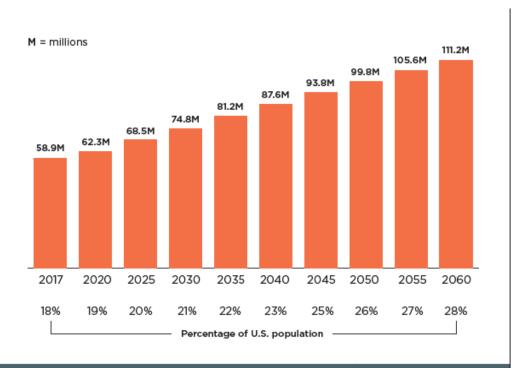
OF THE
POPULATION
GROWTH
FROM
2000 TO 2010

TRILLION
IN
BUYING
POWER

9.1% PUERTO RICAN
3.6% SALVADORAN
3.5% CUBAN
2.8% DOMINICAN
2.2% GUATEMALAN
1.9% COLOMBIAN
...AND MORE

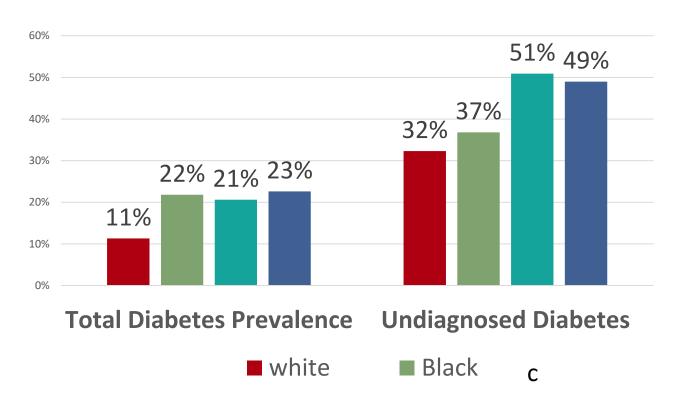


Projected Hispanic Population in the U.S.





Disparities by Race/Ethnicity



Acculturation

Biology

Clinicians' cultural awareness

Depression and Emotional Distress

Educational level

Fears

Group Engagement

Health Literacy

Intimacy/Sexual Dysfunction

Judging

Knowledge of the Disease

Language

Medication Adherence

Nutrition

Other Forms of Medicine

Perception of Body Image

Quality of Life

Religion and Faith

Socio-economic status

Technology

Unconscious Bias

Vulnerable Groups

Why?

Xercise!

You are in charge

Acculturation

Biology

Clinicians' cultural awareness

Depression and Emotional Distress

Educational level

Fears

Group Engagement

Health Literacy

Intimacy/Sexual Dysfunction

Judging

Knowledge of the Disease

Language

Medication Adherence

Nutrition

Other Forms of Medicine

Perception of Body Image

Quality of Life

Religion and Faith

Socio-economic status

Technology

Unconscious Bias

Vulnerable Groups

Why?

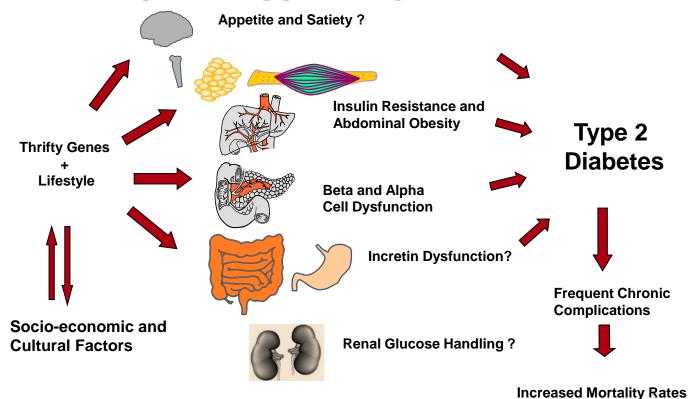
Xercise!

You are in charge

Zip it!

Caballero AE. Front Endocrinol Aug 2018; 9: 479

Pathophysiology of Type 2 Diabetes



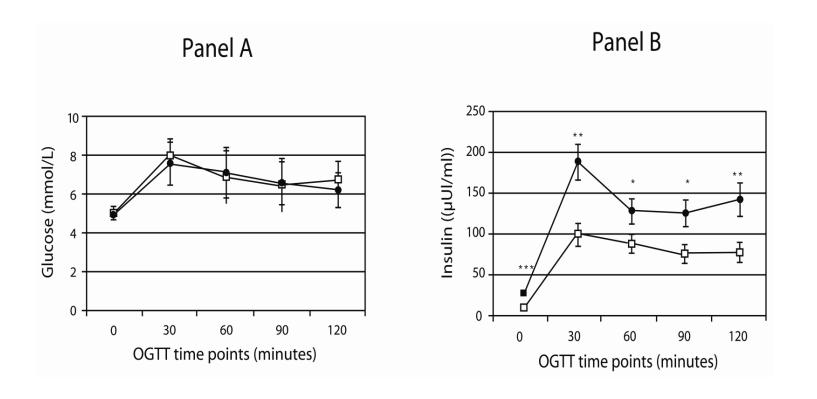
Caballero AE. Front Endocrinol Aug 2018; 9: 479

Metabolic and Vascular Abnormalities in Overweight children

Variable	Controls	At risk	P value
	(n=17)	(n=21)	
Age	14.18 <u>+</u> 2.3	13.33 <u>+</u> 2.7	0.31
Waist/hip ratio	0.79 <u>+</u> 0.08	0.88 <u>+</u> 0.11	0.003
Total % fat	24 <u>+</u> 6	42 <u>+</u> 9	<0.0001
Trunk fat	19 <u>+</u> 5	42 <u>+</u> 9	<0.0001
Systolic BP	101.5 <u>+</u> 7	116.6 <u>+</u> 12	<0.0001
Diastolic BP	68.6 <u>+</u> 6	70.9 <u>+</u> 6	0.23
Total cholesterol	142.06	149.76	0.318
Triglycerides	58.82	108.29	0.004
HDL	42.00	37.52	0.162
LDL	89.24	93.50	0.484

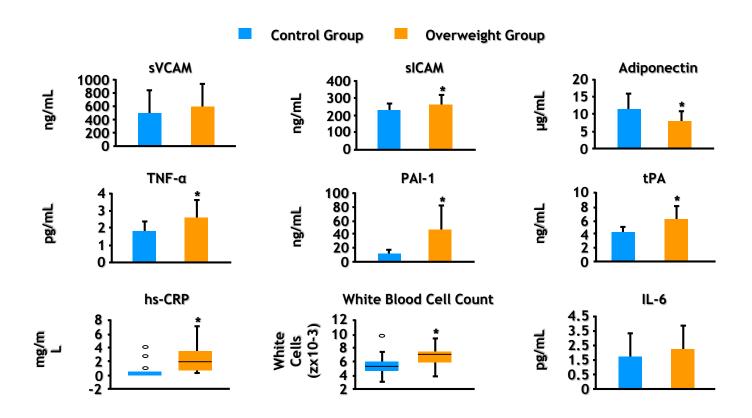
Caballero AE. Diabetes Care. 2008; 31:576-82

Metabolic and Vascular Abnormalities in Overweight children



Caballero AE. Diabetes Care. 2008; 31:576-82

Metabolic and Vascular Abnormalities in Overweight children



Caballero AE. Diabetes Care. 2008; 31:576-82

2. According to a CDC report, what is the estimated lifetime risk of developing diabetes for Latino/Hispanic children born in the year 2000 in the U.S.?

A. 19 %

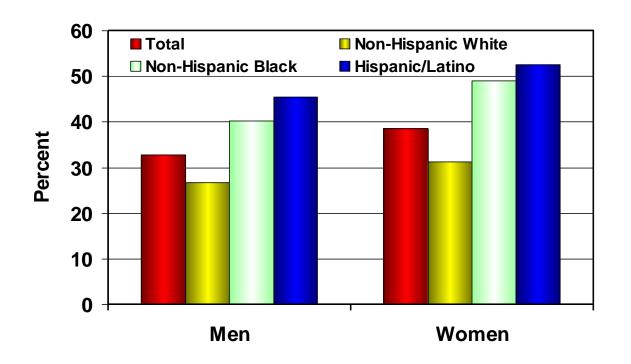
B. 24 %

C. 31 %

D. 38 %

E. 50 %

Estimated Life-time risk of developing diabetes for individuals born in the U.S. in the year 2000



Acculturation

Biology

Clinicians' cultural awareness

Depression and Emotional Distress

Educational level

Fears

Group Engagement

Health Literacy

Intimacy/Sexual Dysfunction

Judging

Knowledge of the Disease

Language

Medication Adherence

Nutrition

Other Forms of Medicine

Perception of Body Image

Quality of Life

Religion and Faith

Socio-economic status

Technology

Unconscious Bias

Vulnerable Groups

Why?

Xercise!

You are in charge

Myths and misconceptions about insulin

Among many patients, insulin use is:

- Associated with blindness and other diabetes-related chronic complications
- Linked with a more severe/advanced disease
- A punishment for not adhering to the recommended treatment plan
- Related to a more difficult and time-consuming self care management plan
- Addictive
- Not useful and expensive

Acculturation

Biology

Clinicians' cultural awareness

Depression and Emotional Distress

Educational level

Fears

Group Engagement

Health Literacy

Intimacy/Sexual Dysfunction

Judging

Knowledge of the Disease

Language

Medication Adherence

Nutrition

Other Forms of Medicine

Perception of Body Image

Quality of Life

Religion and Faith

Socio-economic status

Technology

Unconscious Bias

Vulnerable Groups

Why?

Xercise!

You are in charge

Group Medical Visits



Acculturation

Biology

Clinicians' cultural awareness

Depression and Emotional Distress

Educational level

Fears

Group Engagement

Health Literacy

Intimacy/Sexual Dysfunction

Judging

Knowledge of the Disease

Language

Medication Adherence

Nutrition

Other Forms of Medicine

Perception of Body Image

Quality of Life

Religion and Faith

Socio-economic status

Technology

Unconscious Bias

Vulnerable Groups

Why?

Xercise!

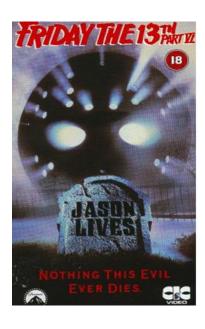
You are in charge

Language Barrier

A true story:

- 64 y/o Hispanic woman
- Patient does not speak English
- Treated for hypertension
- Received a prescription for:
 - Lisinopril 10 mg
 - Once/d
- Patient rushed to the ER due to severe hypotension

Culturally Appropriate Translations





Acculturation

Biology

Clinicians' cultural awareness

Depression and Emotional Distress

Educational level

Fears

Group Engagement

Health Literacy

Intimacy/Sexual Dysfunction

Judging

Knowledge of the Disease

Language

Medication Adherence

Nutrition

Other Forms of Medicine

Perception of Body Image

Quality of Life

Religion and Faith

Socio-economic status

Technology

Unconscious Bias

Vulnerable Groups

Why?

Xercise!

You are in charge

Improving Food Purchasing Selection Among Low-Income Spanish-Speaking Latinos

Baseline Evaluation:







Analysis of the grocery receipt:

- 930 calories per dollar
- 29 g of fat per dollar
- 150 g of carbs per dollar
- 5 g of fiber per dollar
- 21 g of protein per dollar

46500 cal - 50 USD



Other activities:

- Home visits
- Supermarket tours
- Photovoice
- Rosa's Story

Improving Food Purchasing Selection Among Low-Income Spanish-Speaking Latinos



1st Supermarket

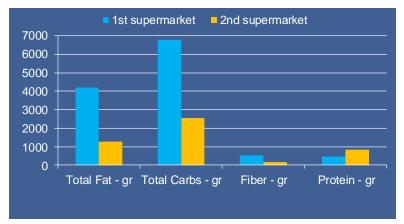
1320 Calories

84 grams of fat

135 grams of carbs

10 grams of fiber

9 grams of protein



2nd Supermarket

583 Calories

28 grams of fat

56 grams of carbs

4 grams of fiber

18 grams of protein

Improving Food Purchasing Selection Among Low-Income Spanish-Speaking Latinos











Acculturation

Biology

Clinicians' cultural awareness

Depression and Emotional Distress

Educational level

Fears

Group Engagement

Health Literacy

Intimacy/Sexual Dysfunction

Judging

Knowledge of the Disease

Language

Medication Adherence

Nutrition

Other Forms of Medicine

Perception of Body Image

Quality of Life

Religion and Faith

Socio-economic status

Technology

Unconscious Bias

Vulnerable Groups

Why?

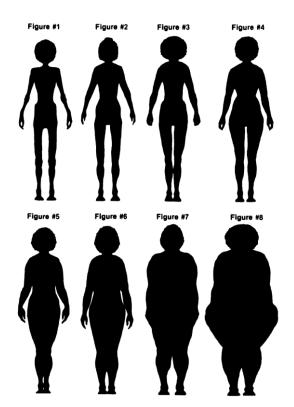
Xercise!

You are in charge

Zip it!

Caballero AE. Front Endocrinol Aug 2018; 9: 479

Ideal Body Image in Latinas With Type 2 Diabetes



3 or 4 – ideal shape for White women

5 – ideal shape for Latina

Weitzman PF, Caballero AE, Millan A. The Diabetes Educator. Sept-Oct 2013.

Acculturation

Biology

Clinicians' cultural awareness

Depression and Emotional Distress

Educational level

Fears

Group Engagement

Health Literacy

Intimacy/Sexual Dysfunction

Judging

Knowledge of the Disease

Language

Medication Adherence

Nutrition

Other Forms of Medicine

Perception of Body Image

Quality of Life

Religion and Faith

Socio-economic status

Technology

Unconscious Bias

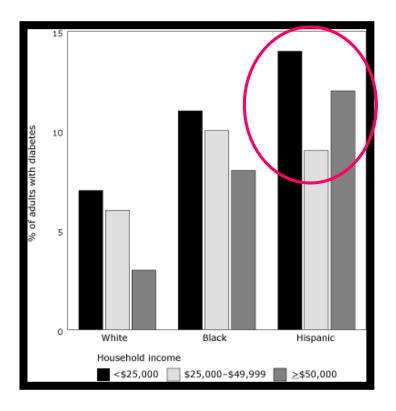
Vulnerable Groups

Why?

Xercise!

You are in charge

Diabetes hits lower income groups harder



Acculturation

Biology

Clinicians' cultural awareness

Depression and Emotional Distress

Educational level

Fears

Group Engagement

Health Literacy

Intimacy/Sexual Dysfunction

Judging

Knowledge of the Disease

Language

Medication Adherence

Nutrition

Other Forms of Medicine

Perception of Body Image

Quality of Life

Religion and Faith

Socio-economic status

Technology

Unconscious Bias

Vulnerable Groups

Why?

Xercise!

You are in charge

Telemedicine AND diabetes

• 2418 articles

Telemedicine AND diabetes AND Latinos or Hispanics

- 51 articles
- 18 RCT

Factors that influence Diabetes Clinical Practice

Acculturation

Biology

Clinicians' cultural awareness

Depression and Emotional Distress

Educational level

Fears

Group Engagement

Health Literacy

Intimacy/Sexual Dysfunction

Judging

Knowledge of the Disease

Language

Medication Adherence

Nutrition

Other Forms of Medicine

Perception of Body Image

Quality of Life

Religion and Faith

Socio-economic status

Technology

Unconscious Bias

Vulnerable Groups

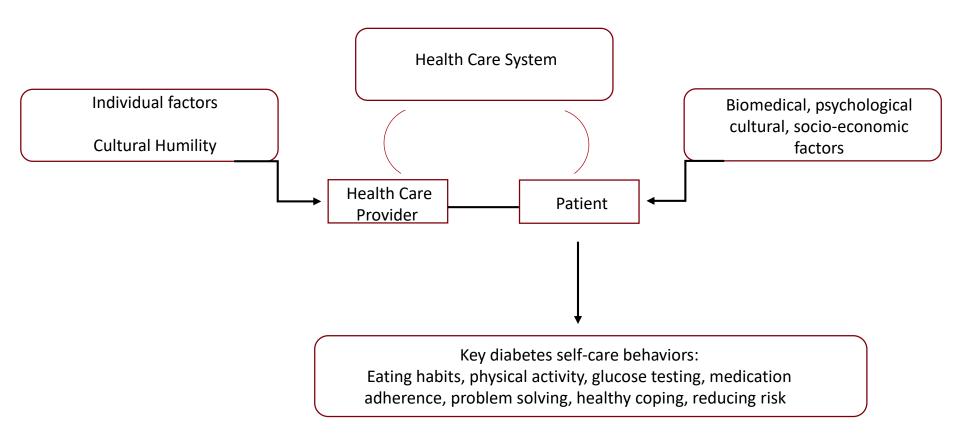
Why?

Xercise!

You are in charge

Zip it!

Health Care Provider-Patient Interaction



Adapted from Caballero AE. Endocrine Practice 2019; 25 (7): 766-768

Summary

- The growing Latino/Hispanic population in the U.S. represents a very diverse group of individuals
- Multiple patient, provider and health care system factors play a role in explaining the difficulty in achieving treatment goals in this population
- Effective cross-cultural communication may lead to better diabetes outcomes
- Culturally and linguistically oriented strategies are likely to help patients improve diabetes self-care behaviors and improve diabetes related outcomes.

THANK YOU

Helping the Latino Community: an example of a successful program

Ricardo Correa, M.D., EdD., F.A.C.P., F.A.C.E., F.A.P.C.R., F.A.C.M.Q., C.M.Q.

Program Director, Endocrinology, diabetes and metabolism fellowship

Director, Diversity on GME

University of Arizona College of Medicine, Creighton University and Mayo College of Medicine

Medical Director, AZ PACH

Editor Cureus, Dynamed, Journal of Investigative Medicine, Journal of General Internal Medicine

Outreach Unit Director, Endotext and Thyroid Manager

Board Member NHMA

LMSA Western Advisory Board

Disclosures

No conflicts of interest to report



Vida Sana/Healthy Life: Improvements in health literacy and risk factors for metabolic syndrome after participating initiative at a free clinic for low-income, uninsured inner-city patients.

An example on how to help



- Metabolic syndrome (MetS) is an increasingly common condition that can contribute to the development of type 2 diabetes (T2D) and cardiovascular disease
 - These individuals are twice as likely to experience adverse CV events, and are four times as likely to develop T2D
 - The prevalence is disproportionately affecting underserved and minorities communities
 - negative long-term outcomes
- The risk factors for MetS include HTN, abdominal obesity, IR, elevated fasting glucose and triglycerides, and decreased HDL

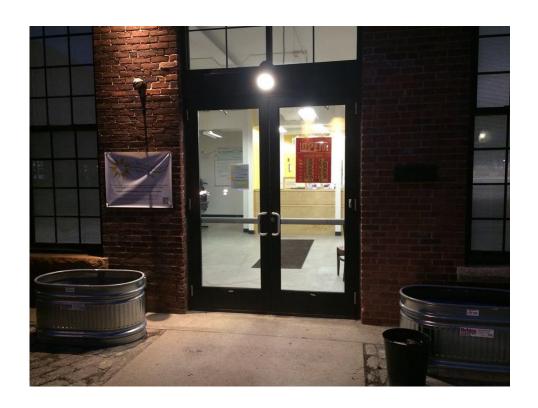
- US Hispanic populations
 - higher risk of behavioral and metabolic risk factors
 - higher risk for cardiovascular disease and diabetes due to the prevalence of metabolic syndrome
 - lower access to health screening and care than other groups
 - represents a variety of cultures, birth places and levels of socioeconomic status.
 - higher risk of hypertension, diabetes, obesity, and had higher mean total cholesterol, and triglycerides and lower mean HDL levels compared to non-Hispanic White populations (NHW)

- Among MetS criteria in 2007–2012 data compared with NHW/M
 - Mexican American women have higher risk of high waist circumference,
 lower HDL and higher fasting blood glucose
 - Mexican American men have higher risk of fasting blood glucose
- The prevalence of MetS rose approximately 38% from 1988 to 1994 to 2007–2017 among adults living in the United States
- More than a third of the population of US adults met the clinical criteria for MetS in 2012

- US Hispanic behavioral risk factor compared with NHW
 - Overall smoking and alcohol consumption are lower
 - Sedentary behaviors and physically inactive are higher
- Dietary habits of recent Hispanic immigrants are healthier than NHW, but become similar with acculturation
 - More than half (53%) of Hispanics drink sugary soda daily or weekly as compared to about a third (37%) of NHW according to a nationallyrepresentative bilingual survey
 - Hispanics were also less than half than NHW to report eating five or more servings of fruits and vegetables on average per day

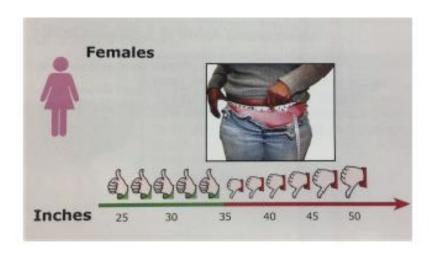
- Higher prevalence of diabetes among Hispanics compared with NHW
 - more problematic by the fact that as much as 40% of diabetes among this group is undiagnosed
- Community-based interventions inform and engage community members at risk for metabolic syndrome associated diseases about simple ways to manage their diseases and modify their diet and exercise regimens, which may result in lower risks of morbidity and costs of care

- Intervention connections to the community are especially important
 - Though behavioral risks for Hispanics are clear, these may stem from broader environmental factors.
 - Socioeconomic barriers, lifestyle and relative accessibility to grocery stores stocked with nutritious foods contribute to these disparities
 - 15.8% of Hispanic families experienced food insecurity
 - associated with poor dietary quality and higher rates of obesity overall



Clinic

- The Vida Sana/Healthy Life intervention is based on the tenets of social cognitive theory, a behavioral intervention model that has been recognized for its effectiveness in producing lasting change in similar populations with health disparities
 - uses materials developed by Dr. Susan Oliverio, of the Institute for Education on Health and Research
 - Dr. Oliverio's "Thumbs Up!" metabolic syndrome workbook and associated presentation and discussion materials were specifically developed for low English proficiency populations
 - Modified and adapted at Clinica esperanza to be administered by peer educators known as "Navegantes"



Vida Sana's visual depictions of healthy and unhealthy numbers in the Thumbs Up! materials.

- Vida Sana Program
 - entire program spanned 8-weeks
- Participants are screened for metabolic syndrome (at the initiation and close of the program)
 - They come from the clinic or refer from outside
 - participated in health focused social activities
 - Follow up by "Navegantes"
 - Received monetary compensation (\$10 at the beginning, end and follow up)
 - Childcare is available

- Program is provided in 2-h group sessions by Navegantes
- The groups involve approximately 70% discussion and 30% sharing of information, using Thumbs Up! course materials
- Offered in small groups (10–18 participants) in Spanish
 - designed to develop and sustain healthy social norms and support by integrating teaching, learning and motivation with the social and community setting





- "Navegantes" are trained community health-workers who live in the communities that the Clinic's patients also live in and represent similar ethnic backgrounds.
- Create a mutually supportive, engaging environment for participants, through the use of group games and story-telling, while also celebrating accomplishments with certificates
 - In preparation for their role as peer educators, the "Navegantes" participated in an extensive 10-week training program
 - teaches skills related to health care case management
 - medical interpretation
 - lifestyle coaching for Vida Sana program
 - diabetes prevention programs
 - Medical interpretation





Methods

- First visit
 - Navegantes administer a health literacy survey
 - survey assess participants' knowledge of chronic conditions such as T2D and cardiovascular
 - Navegantes record the weight, BMI, blood glucose, LDL cholesterol, waist circumference, and blood pressure
- Next meetings
 - Navegantes use the Vida Sana curriculum materials to introduce the participants to topics related to health issues and lifestyle choices
 - Social event
- Final session
 - assess the impact of the program on metabolic syndrome indicators

Methods

- 138 patients have participated in *Vida Sana (up to now)*
 - Majority of them Hispanic (Spanish speaking) and immigrant
- 47 % of participants who have completed the course were either prediabetic or diabetic.
 - Participants' weight, BMI, waist circumference, blood glucose, total cholesterol, and blood pressure were measured at the first and the last sessions

Preliminary Results

- Among the 138 patients who began the course,
 - 78 (57%) completed at least 6 of 8 sessions and provided data at the last session.
 - Among those who took the pre-test and the post-test, 69% scored higher on the post-test.
 - Among those who completed the course, 69% had maintenance or loss of weight and average weight change was a loss of 1.85 lbs.
 - Average change in BMI at 8 weeks was a loss of 0.34 kg/m².
 - 79% had maintenance or loss of waist circumference with an average change of a loss of 0.83 inches

Preliminary Results

- 67% had maintenance or loss of A1c with the average change being a decrease of 0.09%.
- 55% had maintenance or improvement of blood glucose with an average change of a decrease of 5.69 mg/dL.
- 70% had maintenance or improvement of total cholesterol with an average change of a decrease by 5.12 mg/dL.
- 74% had maintenance or improvement in systolic blood pressure with an average change of a decrease of 4.81 mmHg.
- 69% had maintenance or improvement in dyastolic blood pressure with an average change of a decrease of 1.42 mmHg.

Conclusion (preliminary)

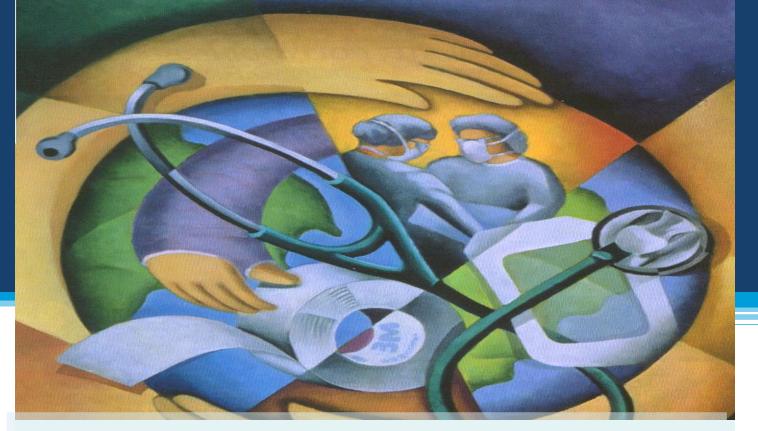
- The *Vida Sana* initiative at a free clinic in an inner-city population improved the health literacy of the majority of its participants
- At 8-weeks, more than half of participants had improved scores on a health literacy test and saw maintenance or improvement of
 - weight, BMI, waist circumference, A1c, blood sugar, total cholesterol, and blood pressure
- One of the limitation is that we don't have a comparison group
- Use of Telehealth to reach more people (working on)
- Plan to expand this program to 5 inner cities with high Hispanic population (working on)

Acknowledge

- Dr. Annie DeGroot (mentor)
- Alexandra Villasante
- Valerie Joseph
- Sravanthi Madala
- Christopher Tessier
- Navegantes
- Clinica Esperanza staff and providers
- Board and Staff of AZ PACH

Empowering yourself

- Expansion of the program
- Participation from medical student to physician in public health, research and community outreach
- Multiple opportunities to help
- Join together with other student group in the Phoenix Valley
 - Stronger together we can make the difference
- Get involved in organized medicine and advocate for our communities
- -NHMA, etc



Thanks for your attention

riccorrea 20@hotmail.com @drricardocorrea



VIRTUAL CHAPTER POLICY FORUMS

National Hispanic Medical Association

Thursday, September 10: Boston & Phoenix Chapters

Diabetes in the Latino/Hispanic Population-Challenges &

Opportunities

7:00 PM - 8:15 PM ET

Wednesday, September 16: Chicago & Indianapolis Chapters COVID-19 & Diversity in Health Care

7:00 PM - 8:15 PM ET

Wednesday, October 14: New York City & Philadelphia Chapters COVID-19 Impacts on Latinos & Reflections from the

Frontlines

7:00 PM - 8:15 PM ET

Thursday, October 15: Gulf Coast Chapter

Update on Latest Science on COVID-19: Results of Research

Trials from Academic Centers in the Region & Response of

Medical Training Programs

7:00 PM - 8:15 PM ET

Thursday, October 15: El Paso, Rio Grande Valley, & San Antonio Chapters

Impact of COVID-19 on Border Communities

2:00 PM - 4:00 PM ET

Tuesday, October 20: DC Metro Area Chapter **COVID-19 & Health Literacy** 7:00 PM - 8:15 PM ET

Thursday, October 22: Miami Chapter Physician Activists for Immigrants in Detention Centers 7:00 PM - 8:15 PM ET

Thursday, October 29: Northern & Southern California Chapters COVID-19, Heart Disease, & Health Care Workforce 6:00 PM - 8:00 PM ET

Learn more about NHMA chapters here: http://bit.ly/NHMAPolicyForums2020