Evidence-Based Screening in Low-Income El Paso Households

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Evidence-based Screening for Obesity, Cardiorespiratory Disease, in Low-income El Paso Households

- The project is part of the larger Medicaid Transformation Waiver Project initiated by Border Public Health Interest Group (BPHIG), a collaborative among the three local universities (Texas Tech, UTEP, and UT-Houston), El Paso Department of Public Health, and other healthcare institutions.

- Overall the project aims to to evaluate the overall health status of participants who are uninsured/low-income status and to provide health vouchers for further examination for those who qualify. The project also collects a mandated questionnaire, named the REAL/demographic survey, to help evaluate the perceived health status of the participants.

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Bordering with Cd. Juarez, Mexico, the City of El Paso lies in the U.S.-Mexico border region.
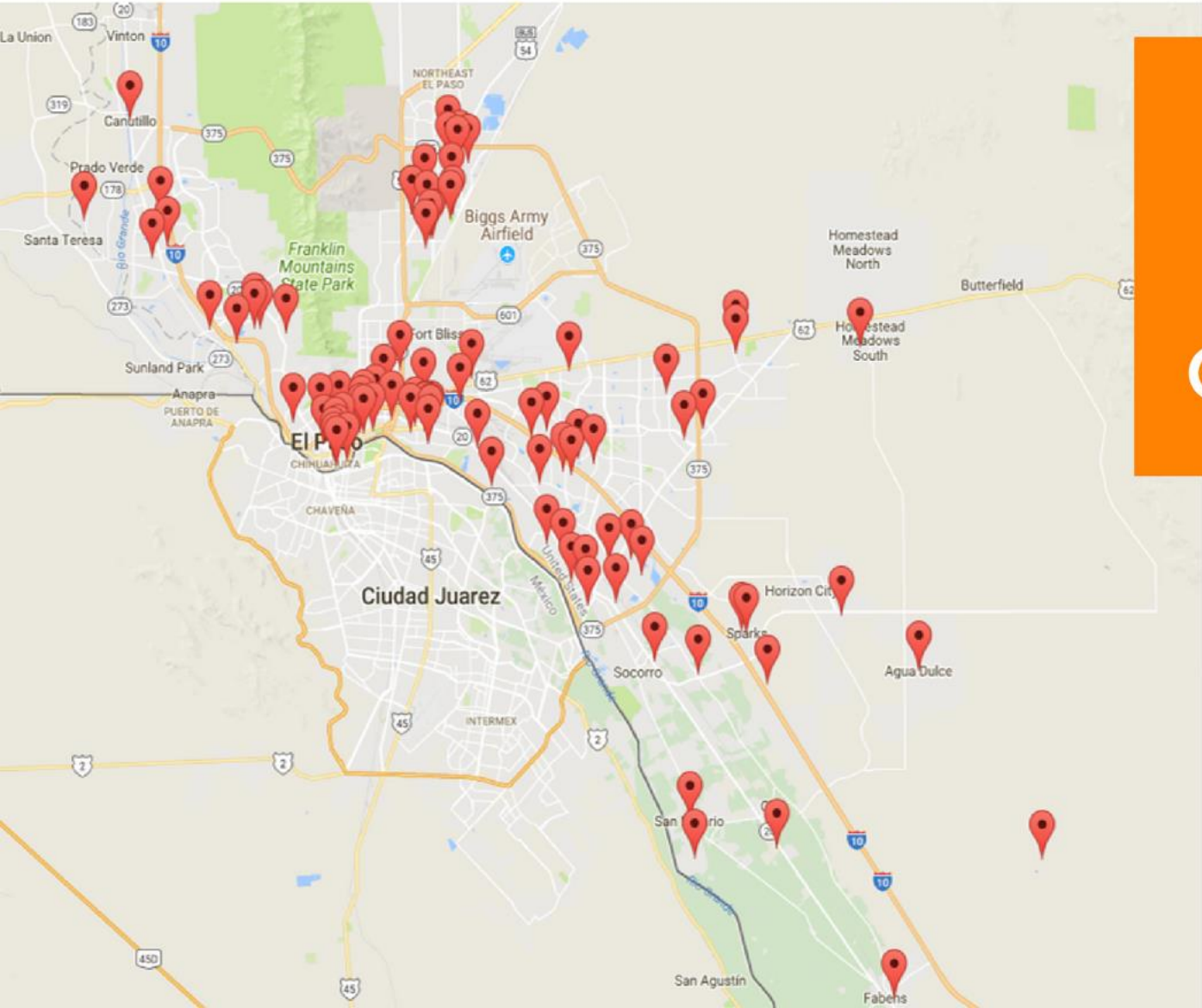
683,080 residents
52% were women
82.2% classified themselves as Hispanic or Latino (Census, 2016).

61.1% have any type of health insurance coverage is which is lower than the State of Texas average at 78.9% and the National average 86.6% (U.S. Census Bureau, 2014).
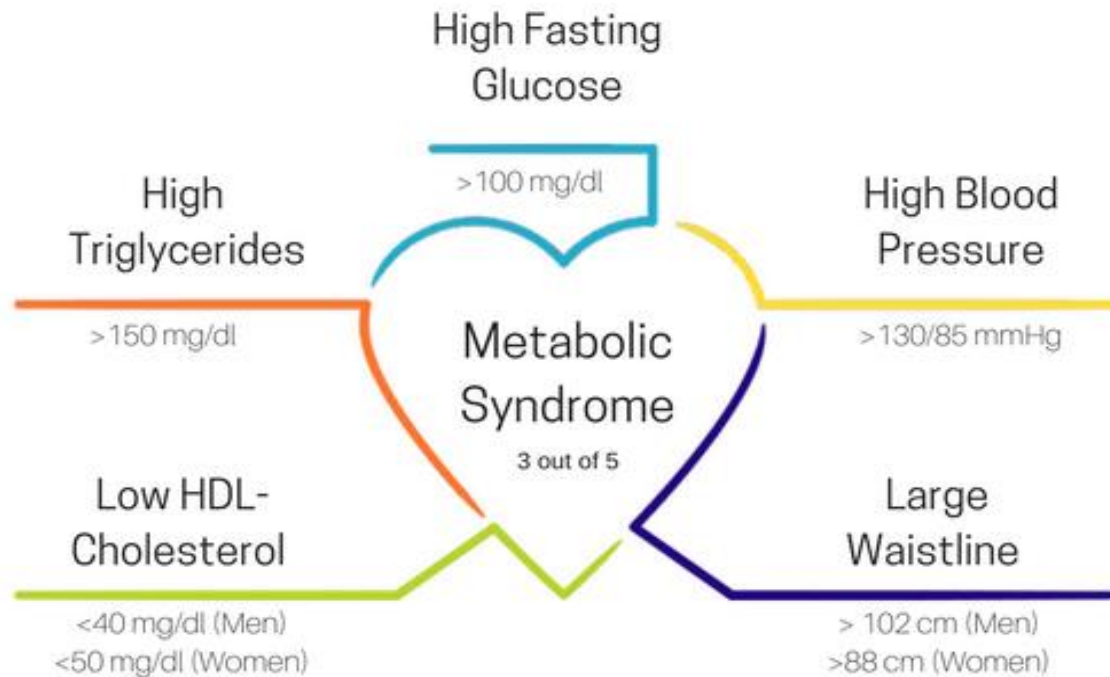
Collective Impact

120 Different Sites
About 250 Events
Over 3,500 Participants

Hispanics in U.S.

- Largest and fastest growing minority group in the United States
  - 17.37% of the U.S. population, or 55.3 million (US Census, 2014)
  - Estimated 6.8 million unauthorized immigrants (Hoefer et al., 2011)
- Hispanics of Mexicans origin in the U.S. have lower levels of formal education
  - At least a bachelor's degree [ages 25 and older] (Brown & Patten, 2013)
  - 10% of Hispanics of Mexicans origin
  - 14% of all U.S. Hispanics
  - 30% U.S. population

Risk Factors

High Fasting Glucose
>100 mg/dl

High Triglycerides
>150 mg/dl

High Blood Pressure
>130/85 mmHg

Metabolic Syndrome
3 out of 5

Low HDL- Cholesterol
<40 mg/dl (Men)
<50 mg/dl (Women)

Large Waistline
> 102 cm (Men)
>88 cm (Women)

Metabolic syndrome consists of a group of associated risk factors that occur together, increasing the risk of cardiovascular disease, and type 2 diabetes (Flegal 2012)

Metabolic Syndrome in Hispanics

Metabolic syndrome prevalence of 35% (33.7% in men and 36% in women)

More than 1/3 were from Mexican origin and the same prevalence was reported for this subgroup (Heiss, 2014)

El Paso TX, Population (What we know!)

- 12% of El Paso County residents reported being told by a physician they had diabetes

- Diagnosed with diabetes:

  men 9.9% women 7.1%

- Adults classified as obese:

  men 25.9% women 21.7%

- Prevalence of heart disease: 3.5% for adults in 2007

- Nearly 42% of adults reported not having their cholesterol checked in five or more years (Mora, 2013)
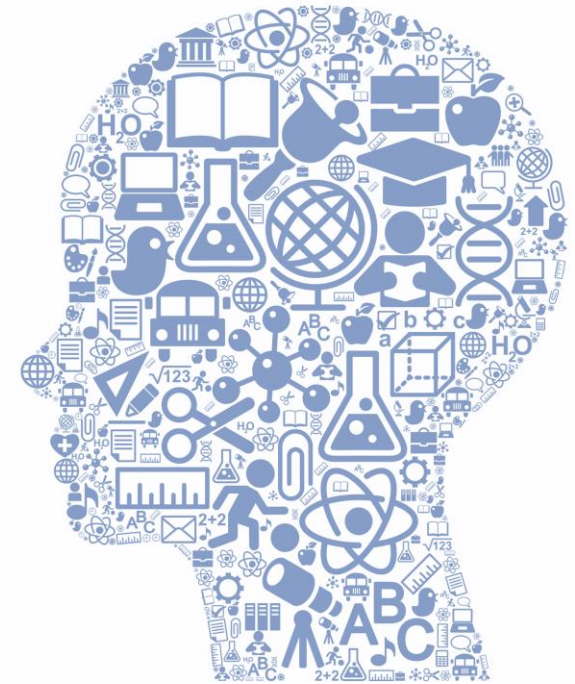
Data Collection

- Socio-demographic information was gathered face-to-face using a survey
- Biomedical measurements:
  - Blood pressure
  - Waist measuring
- Biochemical assessments:
  - Triglycerides
  - Cholesterol (Total, HDL, LDL)
  - Glucose

What is a Waistline?, wiseGEEK webpage, Conjecture Corporation 2003-2016, image accessed 05-05-16 from: http://images.wisegeek.com/waist-measurements.jpg

Clinical & Diagnostics Vital Signs Monitors Equipment, NEWS Medical Life Sciences & Medicine, INtelliSense Professional Digital Blood Pressure Monitor from Omron, image accessed on 05-05-16 from: http://www.news-medical.net/image.axd?picture=2010%2F5%2F907xl405x233.png
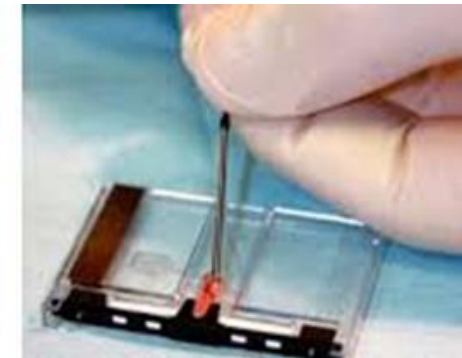
Cholestech LDX Starter Kit with Lipid Profile & Glucose Cassettes, Health Management Systems, images accessed on 05-05-16 from:
http://www.hmscweborder.com/images/products/detail/14204_cholestech_ldx_lg.jpg

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Risk factors for College Students

Presence of risk factor	OVERALL	FEMALE	MALE
	N=155, %	n=102, %	n=53, %
Large Waistline (F>88 M>102)	16.9	18.5	13.5
High BP (> 130/85)	21.4	11.5	<u>40.8</u>
High Triglycerides (> 150)	14.4	9.1	27
Low HDL (F<50 M<40)	<u>40.0</u>	<u>35.2</u>	<u>51.4</u>
High Glucose (> 100)	18.4	17	21.6
Metabolic Syndrome (3 or more risk factors)	**7.8**	**6.9**	**9.5**

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Risk factors for College Students

Risk factor and MetS prevalence (overall and by sex)

Legend:
- Overall N=155
- Female n=102
- Male n=53

Risk factor	Overall N=155	Female n=102	Male n=53
Large Waistline	16.9	18.5	13.5
High BP	21.4	11.5	40.8
High Triglycerides	14.4	9.1	27
Low HDL	40	35.2	51.4
High Glucose	18.4	17	21.6
Metabolic Syndrome	7.8	6.9	9.5
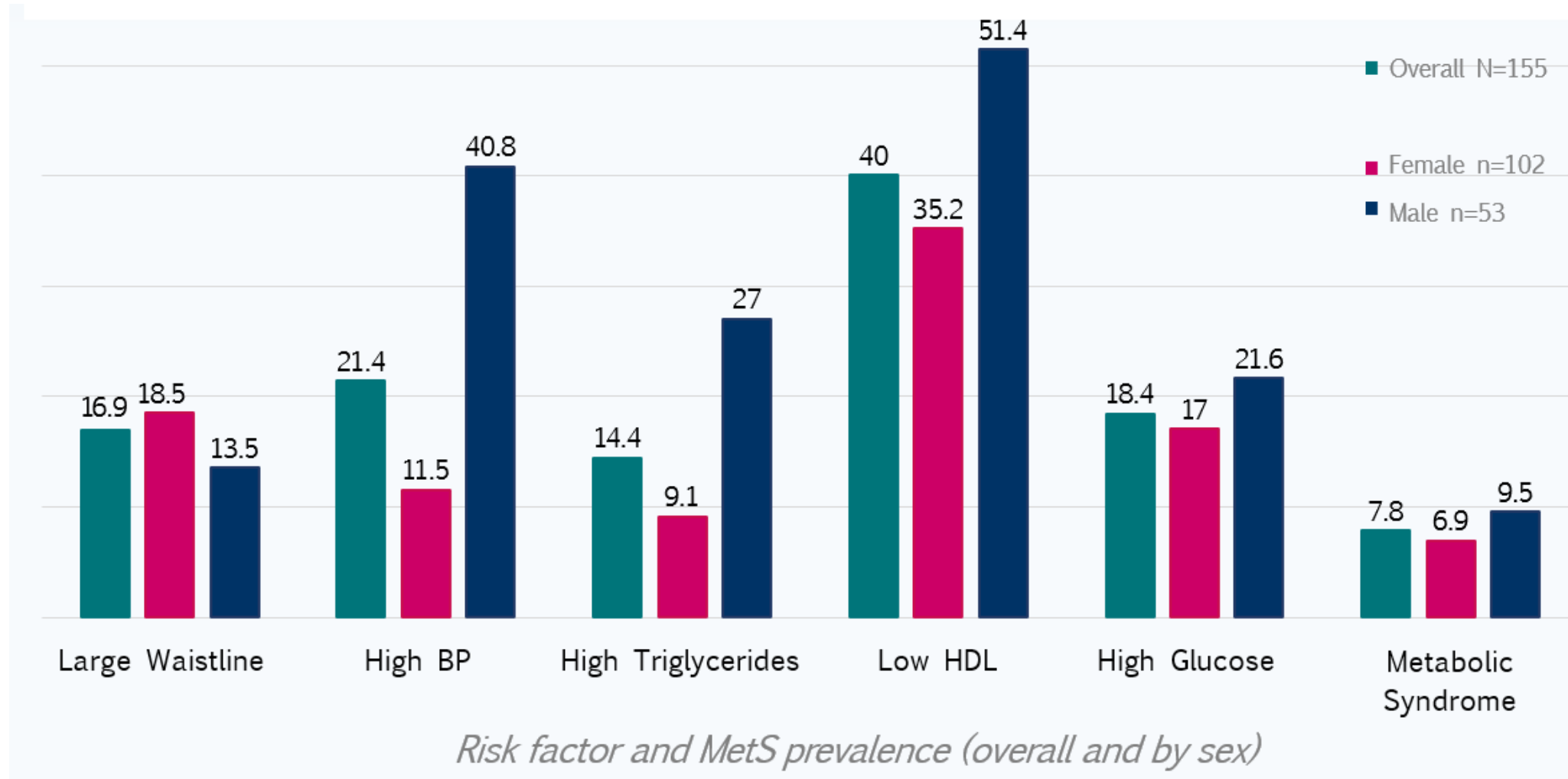
Logistic Regression

Being overweight/obese was associated with (p=0.005):
- Age (OR=0.12 p=0.021)
- Being male (OR=1.21 p=0.019)
- Fair or poor perceived health (OR=1.16 p=0.036)
- Large waistline was associated with:
  - Fair or Poor perceived health (OR=2.21 p=0.001)
- High blood pressure was associated with (p<0.01):
  - Being male (OR=2.38, p<0.01)
  - Never being married (OR=2.61, p=0.01)
- High triglycerides was associated with (p=0.03):
  - Being male (OR=1.87 p<0.01)

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Discussion

There was a low prevalence for MetS (10%)

     60% had at least one metabolic abnormality

     23% had two or more.

40% had low HDL-cholesterol (51%male, 35%female)

21% high blood pressure (41%male, 12%female).

In this population, the majority have at least one risk factor,

and males are at higher risk than females.

Further research among college students without access to healthcare is critical.

Program development is needed to raise awareness in this population.

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Future Implications

This study will have future implications for increasing awareness of MetS as a risk factor for developing CVD, and the current prevalence among uninsured Hispanic populations

       Awareness campaigns

       Lifestyle interventions

       Facilitate access to healthcare

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Networking

Final quote

"The health sciences are professions of lifelong learning, and research is the key. Only by working together we will find solutions to health problems and set standards of care and disease prevention for everyone"

-JA

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THANK YOU!