

# Self-Perception of Unhealthy Weight Among Women on the US-Mexico Border

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# Presenter Disclosures

**Dyanne Herrera**

- (1) The following personal financial relationships with commercial interests relevant to this presentation existed during the past 12 months:**

**No relationships to disclose**

# Background

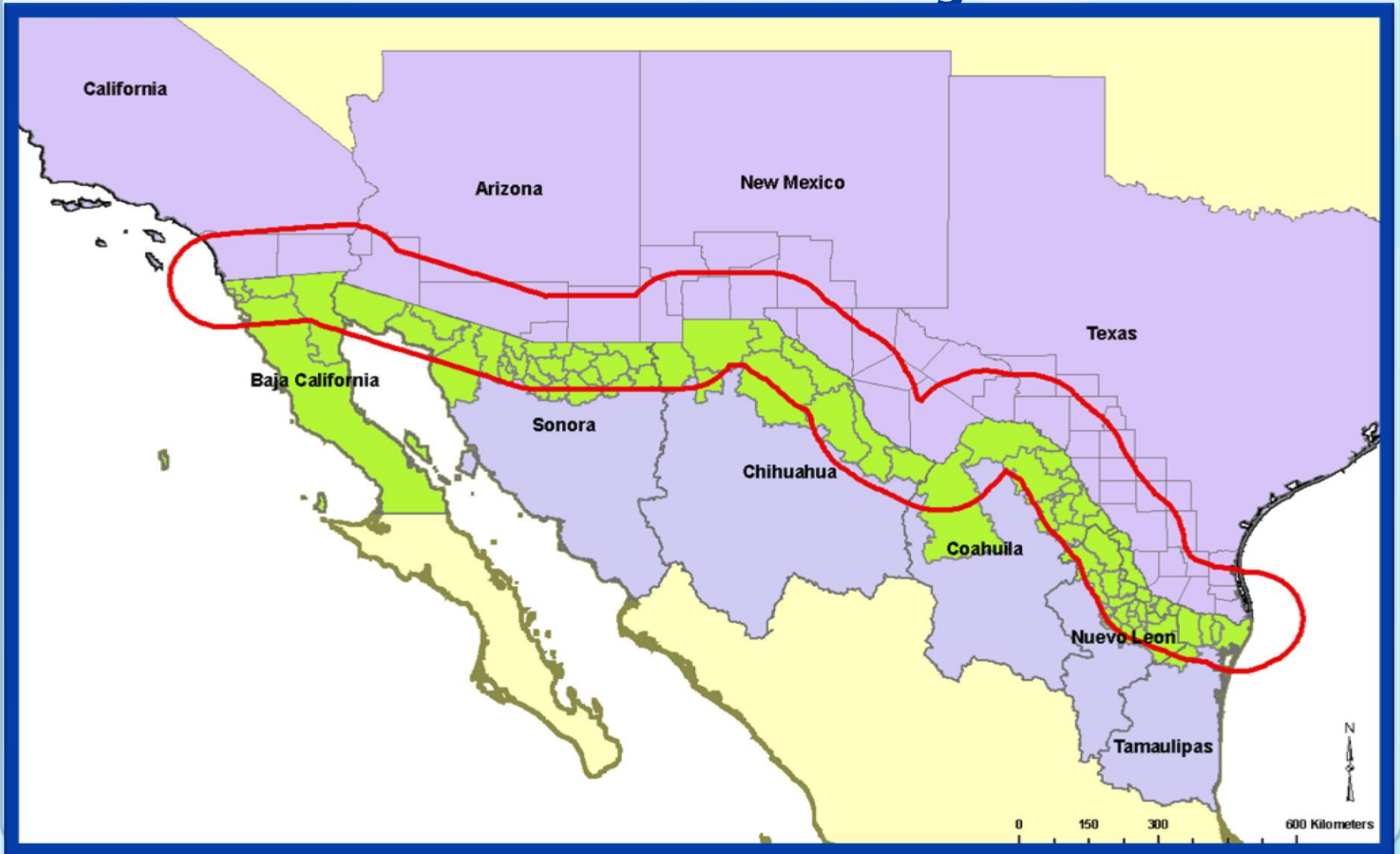
- ❑ **2.5 million adults in the U.S.-Mexico border region are overweight or obese<sup>1</sup>**
- ❑ **U.S.-Mexico Border Health Commission identified obesity as a top priority for the border region<sup>2</sup>**
- ❑ **The overall level of overweight/obesity in Mexico is 70%; 5 of 6 border Mexican states have levels over the national average<sup>3</sup>**

<sup>1</sup> Pan American Health Organization. *The U.S.-Mexico Border Diabetes Prevention and Control Project, First Report of Results.*

<sup>2</sup> U.S.-Mexico Health Commission. *Overview of Goals and actions for 2009-2010.* [www.borderhealth.org/files/res\\_1607.pdf](http://www.borderhealth.org/files/res_1607.pdf).

<sup>3</sup> Olaiz-Fernández, G. R.-D., Juan. Shamah-Levy, Teresa. Rojas, Rosalba. Villalpando-Hernández, Salvador. Hernández-Avila, Mauricio. Sepúlveda-Amor, Jaime. (2006) Encuesta Nacional de Salud y Nutrición 2006.

# U.S.-Mexico Border Region



## **Study Questions**

- ❑ What proportion of Mexican women of reproductive age who reside in the border region are overweight and obese?**
- ❑ What proportion of obese and overweight Mexican border women misclassify their weight status?**
- ❑ What covariates are associated with misclassifying weight status among Mexican overweight/obese women in the Mexican border?**

## Data Source

### □ Mexico's 2006 National Health and Nutrition Survey (ENSANut<sup>†</sup>)

- State level survey conducted every 6 years
- Multi-stage probability stratified and cluster sample
- Face to face interviews
- 5 Questionnaire
  - Household
  - Medical Services User
  - Adult (20+) → Diabetic (adult)
  - Adolescent (10-19)
  - Child (0-9)
  - Anthropometric measurements
  - Blood samples

<sup>†</sup>Encuesta Nacional de Salud y Nutrición, 2006. More information at: <http://www.insp.mx/ensanut/>

## **ENSANut Purpose and Response Rate**

### **❑ To obtain data on:**

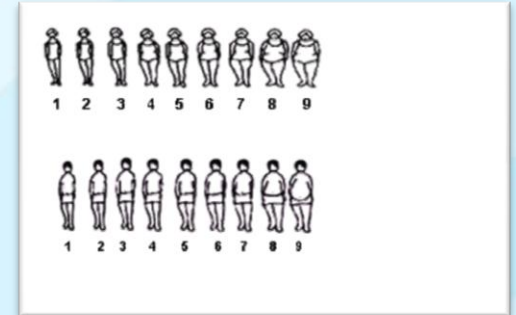
- Health and nutritional status of children and adults
- Prevalence of selected chronic and infectious diseases
- Demographic characteristics of homes and population
- Perception of quality and access to health care

### **❑ Response rate ranges from 88%-97% per state**

# ENSANut Weight Status and Perception Measurements

## □ Body Image

- Choose figure from among 9 figures in graduating sizes



## □ Weight Status

- Do you consider that you are: overweight, obese, underweight, or of appropriate weight?

## □ Clinical measurements of weight, height, waist circumference, and skin-fold thickness

- Calculated Body Mass Index (BMI)
  - Between 25 kg/m<sup>2</sup> and 29.9 kg/m<sup>2</sup> for overweight
  - $\geq 30$  kg/m<sup>2</sup> for obese



## Study Sample

- ❑ **Women of reproductive age (20-49)**
- ❑ **Residing in Mexican Border Region**
  - 80 municipios in 6 border states (Baja California, Sonora, Chihuahua, Coahuila, Nuevo Leon and Tamaulipas)
- ❑ **Excluded women with missing responses on key variables**
- ❑ **Sample size N=876**

# Statistical Analysis

## □ Descriptive Statistics

- Demographics (age, education, marital status), healthcare coverage, smoking, parity and diagnoses of HBP, diabetes, high-triglycerides, high-cholesterol, and obesity

## □ Logistic Regression

- Obese and overweight women who misperceived their weight status
  - Clinical measurement of BMI vs. self classification of weight status
- Age, education, marital status, parity, healthcare coverage and diagnoses of HBP, obesity, high triglycerides/cholesterol

# Selected Demographic Characteristics of Sample

	Frequencies (N=876 )	Weighted Frequencies (N=1,100,404)	Percent*
<b>Age</b>			
20-34	445	567,153	51.5
35-49	431	533,251	48.5
<b>Education</b>			
≤Elementary	367	437,641	39.8
Middle or Similar	321	394,776	35.9
≥High School	188	267,987	24.3
<b>Married</b>	646		73.3
<b>BMI</b>			
≤ 24.9 kg/m <sup>2</sup>	215	280,979	25.6
25 -29.9 kg/m <sup>2</sup>	267	318,555	28.9
≥ 30 kg/m <sup>2</sup>	394	500,870	45.5
<b>Perceived Weight Status</b>			
Normal <sup>†</sup>	337	415,709	37.8
Overweight	499	635,123	57.7
Obese	40	49,572	4.5

\*Weighted

†includes less than 1% from the sample that classified their status as underweight

## Selected Medical Measures of Sample

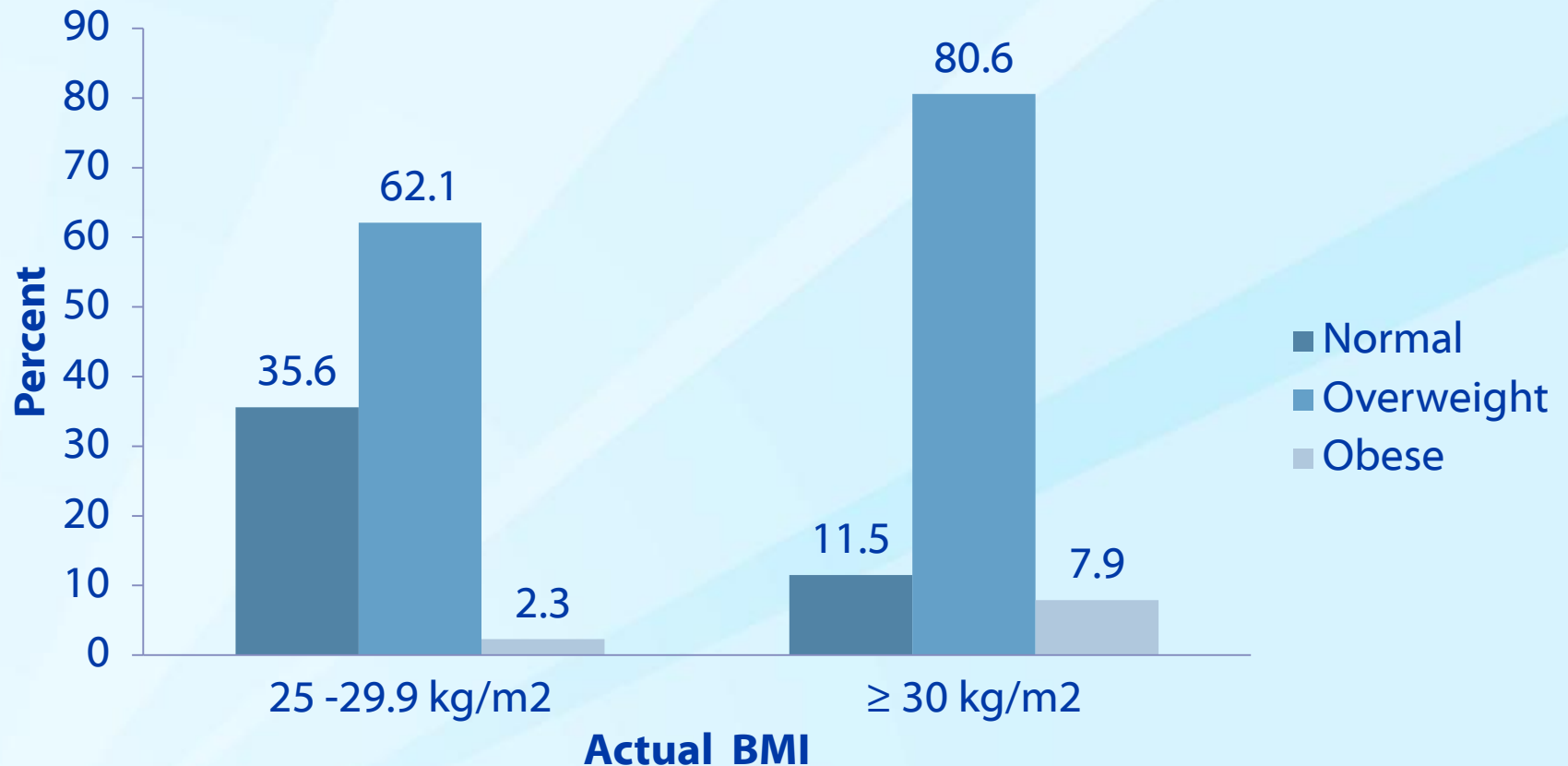
	Frequencies (N=876 )	Weighted Frequencies (N=1,100,404)	Percent*
<b>Told obese<sup>†</sup></b>	139	189,693	17.2
<b>High Triglycerides<sup>†</sup></b>	76	103,043	9.3
<b>High Cholesterol<sup>†</sup></b>	35	49,556	4.5
<b>Hypertension<sup>†</sup></b>	147	188,718	17.1
<b>Diabetes<sup>†</sup></b>	41	54,745	5.0
<b>Depression<sup>†</sup></b>	148	190,565	17.3
<b>Healthcare Coverage</b>	463	583,603	53.0
<b>Smoker<sup>‡</sup></b>	184	239,827	18.6
<b>Parity</b>			
0-1	234	342,346	27.0
2-3	426	495,616	40.9
4+	216	262,442	20.2

\*Weighted

<sup>†</sup> Ever told by doctor

<sup>‡</sup> Ever smoked 100 cig. in lifetime

# Perception of Weight Status among Obese and Overweight Mexican Women in the Border Region



# Adjusted Odds Ratios of Misperceiving Weight Status among Overweight and Obese Women

	Adjusted Odds Ratios (95% Confidence Interval)
<b>Age</b>	
20-34	Ref
35-49	1.7 (1.2-2.4)*
<b>Education</b>	
≤Elementary	2.5 (1.4-4.8)*
Middle or Similar	1.7 (1.0-3.0)*
≥High School	Ref
<b>Marital Status</b>	
Married	1.0 (0.7-1.6)
Not Married	Ref
<b>HBP</b>	
Yes	1.9 (1.1-3.2)*
No	Ref
<b>High triglycerides or cholesterol</b>	
Yes	0.8 (0.4-1.4)
No	Ref

\*p ≤ 0.5

\*\* p ≤ 0.10

# Adjusted Odds Ratios of Misperceiving Weight Status among Overweight and Obese Women

	Adjusted Odds Ratios (95% Confidence Interval)
<b>Parity</b>	
0-1	Ref
2-3	1.1 (0.7-1.7)
4+	0.9 (0.5-1.5)
<b>Depression</b>	
Yes	0.9 (0.6-1.6)
No	Ref
<b>Told obese</b>	
Yes	1.6 (1.0-2.8)**
No	Ref
<b>Healthcare Coverage</b>	
Yes	0.8 (0.5-1.1)
No	Ref

\*p ≤ 0.5

\*\* p ≤ 0.10

# Strengths and Limitations

## □ Strengths

- Clinical measurements of height and weight
- Question about perception of weight status
- Population based sample
- Adequate sample size

## □ Limitations

- Data from 2006



## **Conclusions and Discussion**

- ❑ The vast majority of obese and overweight Mexican women in the border region misperceived their weight status**
- ❑ Older, less educated and hypertensive women were more likely to misperceive their weight**
- ❑ Women who misperceive their weight status may be difficult to enroll in healthy weight programs**
- ❑ Interventions for this population may need to account for limited self awareness of weight status**

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# Questions?

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The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

