Sociocultural Factors in Latinos' Cardiometabolic Health

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Research Interests

- Sociocultural factors in the etiology and progression of chronic disease – cardiovascular disease, diabetes - among Latinos and other minority groups

- Develop and test culturally appropriate interventions to reduce chronic disease risk and improve health outcomes in underserved groups, especially Latinos

Hispanic Community Health Study/Study of Latinos

- The Hispanic Community Health Study/Study of Latinos (HCHS/SOL) is an NIH multi-center population based longitudinal study of 16,415 Hispanic/Latino adults in four city areas (Chicago, Miami, New York, San Diego) (Talavera PI)

- "SOL Sociocultural" is an ancillary study of 5,313 participants from all sites who underwent a separate sociocultural assessment (Gallo/Penedo MPIs)

HCHS/SOL Design

- **Population-Based Probability Sample**
  - Households in selected census blocks
- **Sample Size 16,415 Hispanics/Latinos**
  - > 4,000 at each of 4 Field Centers (San Diego, Miami, Chicago, Bronx, NY)
  - Cuban, Dominican, Central & South American, Puerto Rican, Mexican
- **Ages: 18-74 years**
  - 9,714 participants 45-74 years (59%)
- **Longitudinal Study**
  - Thorough baseline clinical exam, 2008-2011
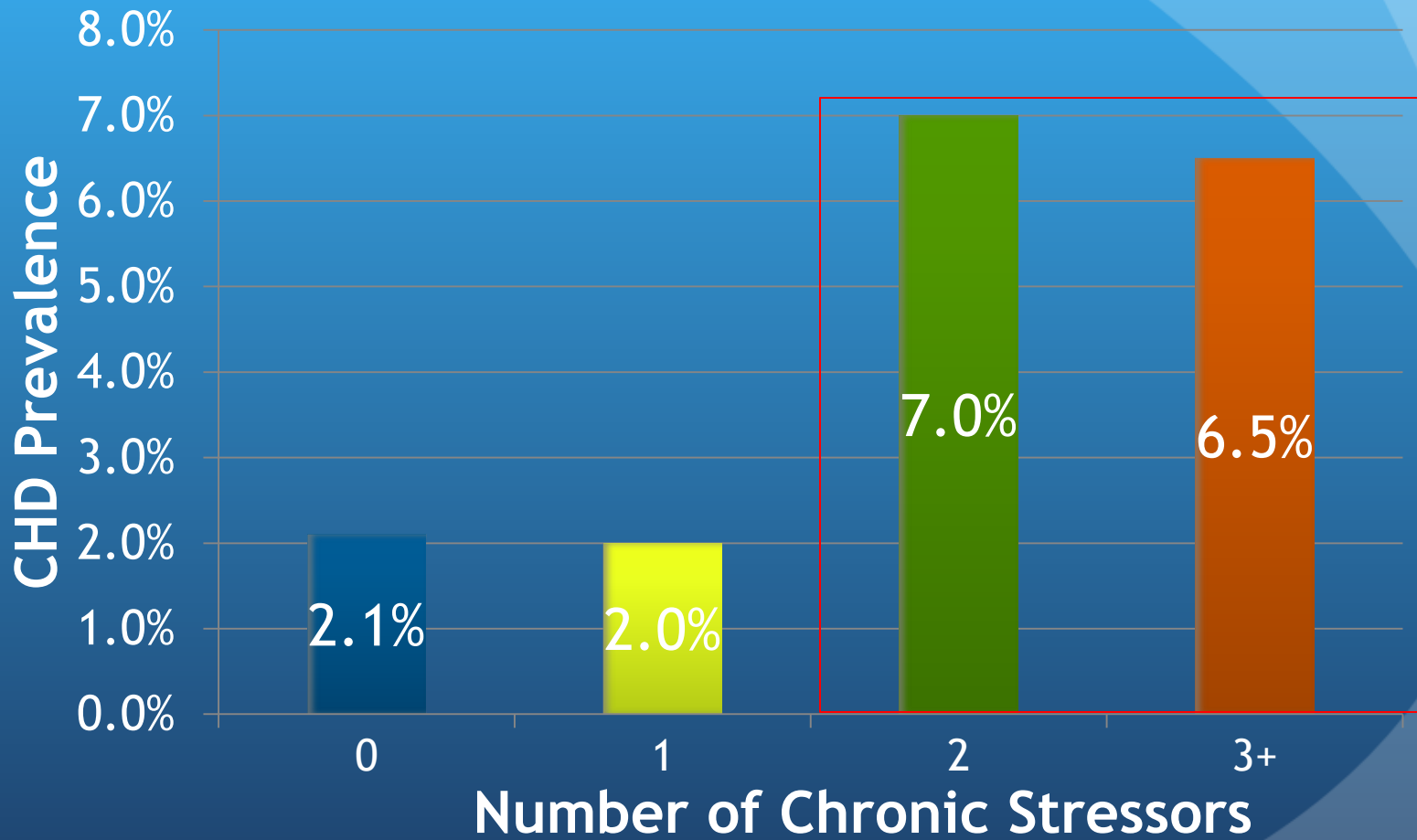 - Repeat exam in 2014-2017

SOL Sociocultural Aims/Design

- Aim: Examine associations of sociocultural and psychosocial factors with cardiovascular disease and metabolic syndrome prevalence and its component risk factors (i.e., obesity, diabetes, hypertension, dyslipidemia) among HCHS/SOL participants.

- 5312 participants across all four sites completed separate sociocultural interview within ~6 months after baseline.

- Comprehensive set of sociodemographic, psychosocial, sociocultural measures administered

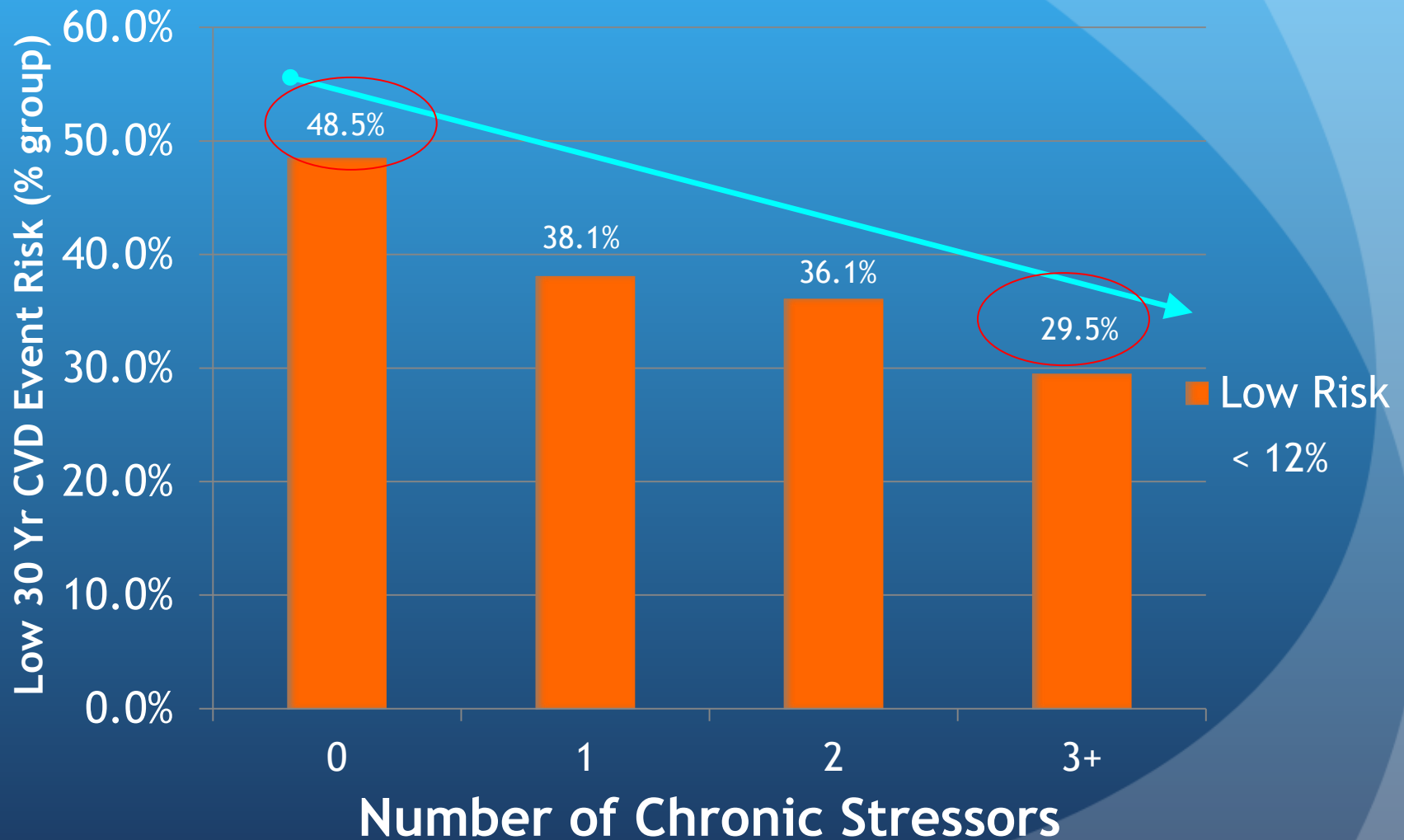- Linked with cinical data from baseline exam

Select findings to date

- Higher perceived social support and social integration relate to lower diabetes prevalence (total and newly recognized)

- Higher chronic stress burden relates to a higher prevalence of CVD (CHD, stroke), and to a higher prevalence of CVD risk factors including hypertension, diabetes and obesity.

- Greater family cohesion is associated with a lower likelihood of meeting criteria for the metabolic syndrome.

- Participants who value simpatía (social harmony, respect, conflict avoidance) have lower prevalence of hypertension.

Chronic Stress and CHD Prevalence (self-report or ECG)

CHD Prevalence vs. Number of Chronic Stressors:
- 0: 2.1%
- 1: 2.0%
- 2: 7.0%
- 3+: 6.5%

Chronic Stress and 30 Year CVD Risk (risk factor profile)

Chart: Low 30 Yr CVD Event Risk (% group) vs. Number of Chronic Stressors

- 0: 48.5%
- 1: 38.1%
- 2: 36.1%
- 3+: 29.5%

Legend: Low Risk < 12%

Next Steps for SOL Sociocultural

- New proposal to examine associations of sociocultural factors with progression of cardiometabolic risk (2/14)

  - Repeat assessment of key sociocultural risk and resource factors predictors

  - Add new measures of migration, community, and healthcare processes with possible relevance to health

Other directions: SOL Neighborhoods

- <u>Aim 1</u>: Examine neighborhood (street network buffer) built and social environment using primary (audit- or technology based) and secondary (external databases) data collection

- <u>Aim 2.</u> Examine relationships between built and social environments and CVD risk across 6 years.

- <u>Aim 3</u>: Examine stress, social processes, and health behaviors (diet, sleep) as intermediate pathways connecting environments with CVD risk over time

Proposal in Progress

•Thank you! - Questions?

- For more information:

- http://www.cscc.unc.edu/hchs/

- Sorlie, P. D., et al., (2010) Design and implementation of the Hispanic Community Health Study/Study of Latinos *Annals of Epidemiology*. Volume 20, Issue 8, Pages 629-41

- LaVange, L., et al., (2010) Sample Design and Cohort Selection in the Hispanic Community Health Study/Study of Latinos *Annals of Epidemiology*. Volume 20, Issue 8, Pages 642-9.

- Gallo, L.C., et al., (In Press) The Hispanic Community Health Study/Study of Latinos sociocultural ancillary study: Sample design and procedures. *Ethnicity and Disease*.